Series of Publications of I.M.O.

Islamic Medicine
Organization
(I.M.O.)

Kuwait Foundation for
Advancement of Sciences
(K.F.A.S.)

Bulletin of Islamic Medicine
Vol. 2

Proceeding of
The Second International Conference on

Islamic Medicine

No. VI

Relationship of Curricula of Faculties of Medicine and Islamic Teachings and Present Situation and Future Prospects of Islamic Medicine

Supervised by
H.E. Dr. Abdul Rahman Abdullah Al-Awadi
The Minister of Public Health and
President of Islamic Medicine Organization

Edited by
Dr. Ahmed Ragai El-Gindy
Hakeem Mohammad Zahoorul Hasan

Jumada Al-Thani 1402/March-April 1982
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PART TEN

RELATIONSHIP OF CURRICULA OF FACULTIES OF MEDICINE AND ISLAMIC TEACHINGS

Part Ten: *Relationship of Curricula of Faculties of Medicine and Islamic Teachings.*

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REPORT ON THE FIRST SESSION

This session was held in the morning hours from 08.30 to 11.00 a.m., under the chairmanship of H.E. Dr. Yacoub Al-Ghoneim, Minister of Education, Kuwait. Dr.Mahmoud Ragai Al-Mustahi acted as moderator. It started with the opening remarks of the Chairman and then eight renowned academicians and professors presented their papers on "RELATIONSHIP OF CURRICULA OF FACULTIES OF MEDICINE AND ISLAMIC TEACHINGS". When the Minister left the session due to his other engagements, the session was conducted by Dr. Hassan Hathout. Before general discussion, two professors gave their comments.

Among the presented papers, one which was from Prof. Abdul Sattar Abu Guddah, could not be included in the proceedings for want of translation.

Editors.

OPENING REMARKS OF THE CHAIRMAN

H.E. Dr. Yacoub Al-Ghuneim

We begin today the fourth day of this Conference. The title of our session, as you know, is, "Relationship of Curricula of Faculties of Medicine and Islamic Teachings". I do not think I need to talk or introduce the subject. You are all experts in this field. If I have anything to say, it is just to thank my Friend, and Brother Dr. Abdul Rehman Al-Awadi, who has given me this chance to meet you this morning and he has given me this chance to listen your lectures and the debates at this meeting. I wish you all the success in your task.

THE PLACE OF ISLAM IN MEDICAL SCHOOL CURRICULA

Prof. Said Abdul Fattah Ashour

KUWAIT

It may be logical to begin such a topic by defining what is meant by Islam in this context on the one hand, and what is meant by medical school curricula, on the other hand.

By Islam here we mean the essence, the spirit, the conduct and the style of action rather than the belief and the rites. Never has Islam been merely rites to be performed and phrases to be recited. It is also an ideal conduct and dignified life style, both individually and collectively. When Muslims were guided by the spirit of Islam, adherent to its morals and observant of its essence and spirit, Islam could realize such gains, peaceful expansion and quiet spread that no Christian missionaries could achieve, however backed by churches, big powers, influence, money and facilities.

On the other hand, it is this honourable conduct that has urged many people to adopt Islam, especially in East and Central Asia and in other areas that no Islamic armies have ever reached, but where only Muslim traders called for buying and selling. The grandfathers of the millions of Muslims who lived in these areas did not adopt Islam when they saw Muslim traders pray and fast, but when they tested their conduct and delings and found in them such attributes as faith, truth, honesty, keeping one's promise and words and other morals of true Muslims.

When we discuss the place of Islam in medical school curricula, on the other hand, it is clear that we do not mean to convert the faculties of medicine in our universities to faculties of Sharia (Islamic Law) and Theology or to introduce religious studies such as Hadith' (Prophet's Traditions), Interpretation and Jurisprudence as separate courses within the faculty of medicine curricula. What is more important in our view is that medical students in our universities have some knowledge of the spirit, morals and ethics of Islam and its view of the medical science in the light of the study of the biographies of some renowned Muslim doctors, so as to be guided by their private and public life and their interest in performing their work within a clear Islamic framework.

If we want to establish a place for the morals, spirit, style and conduct of Islam in the faculty of medicine curricula, this can be achieved through setting an example and a good model rather than through instructions. When the need is strongly felt to introduce an "Islamic Medicine" course to medical school curricula in our countries, we should not make this subject limited to remembering the past glories of our ancestors and reiterating their achievements in the various branches of medicine. The purpose of such a course should also be to high-light the ethics of the medical profession as observed by Muslims at the heyday of Islamic civilization and state. It is not enough for medical students in our universities to know that al-Razi managed to diagnose pustule fevers, that Avicenna (Ibn Sina) wrote al--Qanoon, on which Western European universities depended as a textbook up to the eighteenth century, or that Abul Qasim al-Zahrawi successfully performed a number of unique surgical operations. Medical students should also know how they practised medicine, the ethics they adhered to in their private and public life, and the pieces of advice they gave to those wishing to practise medicine, and how all this is related to the spirit, teachings and ideals of Islam.

We cannot in fact deal with Islamic medicine in the Middle Ages without high-lighting the clear religious aspect of medicine at the time. Apart from the general religious aspect of those ages known in history as the "Age of Faith", Islamic medicine assumed a clear religious character, because medicine is concerned with people's well being and relieving them of their sufferings and of the agony of illness. About the medical science al-Shizri wrote: "Sharia has allowed knowing and practising it, because it aims at keeping health, fighting illness and ridding the honourable body of diseases".[1] Sharia, then, has attached considerable importance to ridding the honourable body of illness and disease by way of show-

ing mercy to man and preserving Muslims' entity and power. This is based on the belief that a sound mind exists in a sound body.

It has been historically established that health care in bygone ages was more of supplication to Allah and seeking His reward than of a state or government duty.[2] When someone established a hospital or bimaristan, he offered an endowment fund to guarentee a regular income for maintaining its task. This was entered in a legal document, which was registered and certified by witnesses, and in which was stated that the Waqf (endowment) and the institution should be supervised by Muslim men "who have the reputation of being pious and honest".[3] As for the medical profession itself, it was described as "one of the noblest professions and one of the most profitable trades. Holy Books and Sharia (legal) orders give details of it. Knowledge of the body is close to knowledge of religion".[4]

This interest in the medical science and profession was thus reflected in providing doctors with ample training and testing them carefully before allowing them to practice medicine. They were also provided with a lot of advice and guidance, particularly in the ethics of the medical profession. A supervisor or chief doctor was appointed in each country to ensure that they observed the practice and the ethics of the profession. *The Diwan Inshaa* issued decrees nominating the chief doctor and including some guidance and advice, which reflected how sacred the medical profession was regarded and the respect attached to its message.[5]

By studying the overall framework of the practice of medicine in the Muslim World and the biographies of renowned doctors many important data can be collected. If medical students in our universities assimilate these data, this can best indicate that Islam has found its place in faculty of medicine curricula in our countries. This would also contribute greatly to raising the standard of the profession in our Muslim World as well as in the whole world at large. The most important data can be pointed out as follows: —

1. Diligent learning and long, adequate training before being allowed to deal with patients: It is reported that Doctor Muwaffaq el-Din Abdul Latif al-Baghdadi, who was a contemporary of Salahuddin and his son al-Aziz Othman said, "I would teach people in al-Azhar Mosque from the early morning to about 4 o'clock in the afternoon. I used to work alone at night..." He also said, "You have to consult an authority on any subject you want to master. If you find any scholar lacking in knowledge, take from him whatever he has until you find a more competent one. You have to show reverence and respect to him. You have also to present your speculations to scholars and their works. Be careful and do not be in a hurry. Those who don't seek scholars' advice, don't establish virtue. Those who are not respected by people and those who can't bear the agony of learning, don't taste the pleasure of knowledge. Those who don't work hard, don't succeed..."[6]

Sheikh Ibn Sina said about himself, "I used to go home at night, hold a lamp in my hand and get engaged in reading and writing. Whenever I felt sleepy or weak, I would have a drink until I regained my energy, and I started reading once more..."[7]

In order not to deprive medical students of the knowledge of experienced scholars, endowments' revenue was spent on teachers and learners. The Husamul Din Lageen Endowment document included the appointment of a teacher of medicine at Tulun Mosque and provided for medical students who studied medicine under him. The teacher would sit in the said Mosque to teach medicine to ten medical students. He would make them learn medicine and clarify its problems.[8]

Meanwhile, Muslims never neglected the scientific aspect of teaching medicine. Al-Shizri said, "Medicine is a theoretical as well as a practical science"[9]. Therefore, they followed the system adopted by the modern world; attaching the study of medicine to a hospital or vice versa. When King al-Adel Noor el-Din founded the great bimaristan in Damascus, he entrusted medical affairs to Sage al-Shaheed

Abul Majd Ibn Abul Hakam, who would make rounds in the hospital to investigate patients' affairs, accompanied by supervisors and those in charge of patients' care. After that he would sit in the great hall of the bimaristan, which was fully furnished, and attend medical classes. The late Noor el-Din had donated this bimaristan a large number of medical books. A number of physicians would come and listen to him. Medical discussions followed. He would teach students and refer to books for three hours, then he went home.[10]

The part concerning the Shaheed Bimaristan, established in Cairo in the Sultan Qalawun endowment document also provided for the appointment of a sheikh[11] to practice medicine, and to be one of the doctors in the Bimaristan. A special place was set for him to give lessons to students. The Endowment director would give the appointed sheikh whatever money he deemed appropriate. The sheikh would sit on the great *mestaba* specified in the above mentioned endowment document to teach all branches of medicine.[12]

Thus anyone who decided to take up medicine as a profession was required to do his utmost to learn about "the composition of the body, the nature of organs and the causes and symptoms of diseases and the appropriate materia medica and how to prepare and administer them. He has to look for substitutes to these medicines if they are not available. In this way he can prescribe the correct medicines for each disease and in the correct quantity. He should also know the different uses of medicines. He who doesn't do that is not qualified to treat patients or to give a risky cure.[13]

This amount of burden on medical students goes parallel to caution in granting licences to practise the profession. Those who practised blood-letting and surgery[14] were required to experiment on beat leaves first so as to gain accuracy and precision and "to refrain from practising any prefession that would make his fingers stiff."[15] He was not licenced to practise the profession before passing a theoretical and a practical test. Bone-setters were tested in the sixth article in Paulus' book on bone-setting.[16] "He was required to know about the number of bones in the human body, which is 148, and the shape and location of each. He should also know how to deal with dislocations and bone-setting".

Surgeons were examined in Galin's *Qatagans.*[17] Oculists were examined in the ten articles on the eye in Hunayn Ibn Ishaq's book. He was required to be "abreast of the anatomy of the seven layers and the three folds of the eye". If he does not pass the examination, he is referred to the Mohtaseb to prevent him from treating people. "If he does not abide by that, he is punished and exposed to deter others".

In case the doctor did not complete the examinations successfully, "he had to resume studying and reading before dealing with patients, so as not to harm patients.[18]

2. Honesty in treating patients and keeping their secrets: It is well-known that Islam orders Muslims to be honest and faithful and keep trusts. Almighty Allah says:

> *WE DID INDEED OFFER THE TRUST TO THE HEAVENS AND THE EARTH AND THE MOUNTAINS; BUT THEY REFUSED TO UNDERTAKE IT, BEING AFRAID THEREOF , BUT MAN UNDERTOOK IT. HE WAS INDEED UNJUST AND FOOLISH.*[19]

This is also mentioned in the Holy Quran:

> *BETRAY NOT THE TRUST OF GOD AND THE APOSTLE, NOR MISAPPROPRIATE (KNOWINGLY) THINGS ENTRUSTED TO YOU.*[20]

Almighty Allah links honesty to keeping trusts. He says,

> *THOSE WHO FAITHFULLY OBSERVE THEIR TRUSTS AND THEIR CONVENANTS.*[21]

This implies not only keeping trusts but keeping secrets as well. Money comes and goes, but people's secrets are associated with faith, honour and safety. There is no cure for them once they are

breached. Medical students should know that patients' secrets are not to be revealed so as not to damage patients morally, or even materially. That is why Muslim physicians followed Hippocrates' message that physicians should keep their patients' secrets and not reveal anything about their diseases.[22]

Moreover, doctors enter houses and see private things that nobody else may see. That is why Muslim physicians were asked not to look at taboos when entering people's houses or to reveal their secrets.[23] Ali Ibn Rawdan urged the Muslim doctor to be "sound-hearted, chaste and faithful and not to recall anything related to the affairs of women or property he had witnessed in the houses of patients. He should never say anything about them".[24]

Further more, physicians are entrusted with preserving people's lives as well as keeping their property and secrets. Physicians then ought not to prescribe any medicine that clashed with the provisions of Sharia, such as those that cause abortion for women or impotency for men. In this respect Ibn Bassam says, "They should not give or suggest any deadly medicine. They should not give women anything that causes abortion or the ointment that kills the foetus. They should not give men whatever makes them impotent".[25]

Doctor Ali Ibn Radwan summed up all this in a clearcut phrase. "Doctors", he said, "should be trustworthy in terms of lives and property. They should not prescribe or suggest any deadly or abortion causing medicine".[26]

3. Medical students in our universities should know that Islam is the religion of mercy and equality. Islam has conferred honour on medicine and considered the knowledge of bodies equal to the knowledge of religions. This is so because this science shows mercy to people and attempts to relieve the sufferings of rich and poor alike without any discriminations. All people are human beings liable to be sick and seek the mercy of Allah.

Some righteous Muslim rulers, who were also reformers, realized this fact, and founded bimaristans or hospitals by way of supplication to Allah. They made such institutions open to all classes of society; kings and subjects, soldiers and princes, seniors and juniors, free and slaves, males and females.[27] In Sultan Qalawun's endowment document it was stated that he founded the bimaristan at Bein al-Qasrain in Cairo "to treat Muslim patients, men and women, rich and poor, in Cairo and environs, whether settlers or visitors from various areas and provinces, however different their races and origins are, and whatever their diseases and illnesses are. They enter the bimaristan in groups or individually, young and old, adolescents and boys, women and children. Poor sick men and women are admitted to the bimaristan for treatment till they recover. Medicines are given to all; visitors and dwellers, natives and nonatives, strong and weak, inferiors and superiors, rich and poor, rulers and ruled, blind and having eyesight, famous and obscure, etc., without looking for a substitute..."[28]

Apart from these concepts which are part of Islam's teachings and spirit, and which medical students should know, patients need psychological care. Muslim doctors always recommended raising patients' morale, keeping up their spirits and making them believe that they are in good health. Al- Razi said, "Doctors ought to make patients believe that they are in good health and promise them health, even if they are not certain of that, for the condition of the body depends on the psychological state".[29]

Linked to this is the provision of amenities for patients at all stages, inside and outside the bimaristan. Inside the bimaristan or hospital there should be provided what "patients need; iron or wooden beds, mattresses and pillows filled with cotton, and cotton blankets. For every patient, there should be a suitable bed with bed-covers. The endowment director should spend on patients' needs from revenues. Patients should be supplied with flowers' odours[30] food (such as yoghourt), drink, food covers and bamboo fans to use in hot weather..."[31]

Any poor patient being treated at home is provided with whatever he needs (drinks, medicines, ointments and other...). As patients are worthy of social care after their recovery, some financial aid for those discharged from the bimaristan after recovery was allocated, since those patients had not been earning their living for a long time. Al-Mansour Qalawun's endowment document stated that "patients and lunantics, men and women, who die in the bimaristan should be shrouded. Winding sheets should be provided and the cost of cleaning him, digging his grave and burying him according to Sunna should be paid".[32]

The spirit of Islam is at its peak: mercy to people, living and dead, in an atmosphere of equality, where the poor feel they are not disregarded because of their poverty and the weak feel relieved in spite of their weakness. The stranger and the native, the foe and friend are all alike; they are aqual. Ali Ibn Radwan stressed that doctors should treat their foes as if they were treating their friends.[33]

4. Religious tolerance: Medical students in our universities should realize quite well that there is no place for fanaticism or puritanism in Islam. Suffice it to say that the Islamic call depended on wisdom and good advice and that nobody was forced to adopt Islam. Islam has also determined the rights and duties of Christians and Jews living in the Islamic State.

With this Islamic spirit, Muslims never failed to cooperate with others for the benefit of humanity at large. Never has Islam been fanatic to the legacy of Christians and Jews, or even pagans. It is common knowledge that at the rise of Islam, Arabs' legacy, thought and traditions in the pre-Islamic era (Jahiliyya) were under review, some were approved or modified; others were banned. Guided by this spirit, Muslims took from the legacy of the Greeks whatever suited them and from Christian scholars' books what did not clash with Islam. Nothing can show Muslims' tolerance more than the fact that they made it a must for those wishing to take up medicine, and for all doctors to assimilate the Hippocratic Oath and to observe and adhere to its provisions.[34] In the *Hesbah* books, Muslims required oculists to be examined in the writings of Hunayn Ibn Ishaq (a Christian) on the eye; surgeons in the writings of Galen (a pagan) on surgery and bone-setters in *al-Kannash,* by Paulus of Agina (a Christian) on bonesetting.[35]

With this tolerant spirit the Prophet(ﷺ) summoned al-Hareth Ben Kilda, a non-Muslim, to treat Saad Ibn Abou Wakkas when he fell ill. He (ﷺ) said,

"Call al-Hareth Ben Kilda for him; he is a medical practitioner".

Likewise, Khaled Ben Yazid Bin Muawiya did not hesitate to call one of the Christian clergymen, Aryanus, to teach him the principles of medicine.[36]

Ibn Abou Osaibia mentioned in *Oyun al-Akhbar* the names of a number of non-Muslim doctors who treated the Caliphs and common Muslims without the least embarrassment.[37] When Muslims mastered medicine and excelled their teachers in all sciences and arts, they did not prevent non-Muslims from studying under them. Knowledge is a matter of give and take. Al-Rais Abou Omran Mousa Ibn Maimun of Cordova, described by Ibn Abou Osaibia as "a good Jewish scholar and rabbi", studied under Muslim sheikhs at Cordova Mosque in Andalusia. When he became brilliant and "the best doctor of his age" he went to Egypt and became one of Salahuddin's close company. He was also his "counsellor and doctor". He was also a confidant of King al-Afdal Ali Ibn Salahuddin. Ibrahim succeeded his father Mousa Ben Maimunides "He was a renowned and efficient doctor. He entered the service of King al-Kamel Mohammed Ben al-Adel Abou Bakr (al-Ayyoubi). He used to go from the palace to the bimaristan in Cairo to treat patients there".[38]

Ibn Maimunides was not the only alien doctor to find favour with Salahuddin in particular. Ibn Abou Osaibia mentioned a number of alien doctors like Abou al-Bayan Ben al-Madwar (known as al-Sadeed), who died in 580 A.H. He was a Jew. "He entered the service of Egyptian Caliphs[39] near the end of

their dynasty, and then entered the service of King al-Nasser and used to consult and depend on his treatment".

Another example is Abou al-Maali Tammam Ben Hebat Allah. "He was a learned Jew. He was famous all over the State and a meritorious person. He was thanked for his treatment. He lived at al--Fustat in Cairo. He entered the service of King al-Nasser Salahuddin Yusuf Ben Ayyoub as a doctor and found favour with him. He also entered the service of his brother King al-Adel Abou Bakr Ben Ayyoub..."[40]

Although Islamic medicine is proud of Abu-Bakr Mohammed Ben Zakaria al-Razi and considers him one of its masters, al-Razi himself admitted that his teacher of medicine was of Jewish origin but adopted Islam later under al-Motasem, to be renamed Abou al-Hassan Ali Ben Sahl Ben Ribn al-Tabari. He was born and raised in Tiberstan.[41] The opposite is also true. One of the famous Jewish doctors in the Middle Ages was Ibrahim Ben al-Zaffan. He studied medicine under the famous Muslim doctor Ali Abou al-Hassan Ben Radwan and became one of "his best students".[42] Abu al-Farag Geargus al--Bairoudi, a Syrian Jacobite in the fifth Hijra century, was described by Ibn Abou Osaibia as a meritorious, skilled doctor. He had correspondence with Ali Ben Radwan, the famous Egyptian doctor and other Muslim doctors dealing with medical problems.[43]

Thus, medical students in our universities should benefit from the spirit of Islam and know that knowledge has no bounds. They may also, if necessary, study and gain some skills under non-muslim teachers so long as they are armed in belief, spirit and thought against any adversary trends.

5. Combined with the above is belief in Allah and adherence to the spirit and morals of Islam and the provisions of Sharia. The medical profession depends first and foremost on conscience. He who has no conscience has no manners. Medical students should know that Muslim masters of medicine attained their status only through dependence on Allah and adhering to His orders and obeying Him. Al-Rais Ibn Sina said, "Whenever I found no solution to a problem, or the average in a measurement, I would go to the mosque to pray. I would address Allah, the Creator of the universe. Then I found a breakthrough to the problem..."[44]

The grandson Abou Bakr Ben Zahr al-Andalusi was described as "one who learnt the Quran and Hadith by heart. He was righteous, strong-willed, kind-hearted person..."[45] Doctor Abou al-Hassan Ali Ben Radwan was described as one "whose phrenology indicates that he is good-natured and kind--hearted".[46]

It is to be noted that being pious does not entail puritanism or self-deprivation. Medical students ought to know that Islam allows Muslims to enjoy life, with the limits marked by Alla and without excess. This can be demonstrated by the fact that Ibn Sina, who learnt the Quran by heart and wrote the greatest medical encyclopedia in the Middle Ages, wrote also on music "and on literature".[47] Grandson Abu Bakr Ben Zahr al-Andalusi, who was described as "the one who mastered medicine" is himself "the one who wrote and perfected poetry. He wrote famous *Mowashahats* which are sung". He was also described as pious, strongwilled and kind-hearted and a chess player".[48]

This leads to another point: Medical students ought not to limit their knowledge to their narrow field of specialization. They ought to diversify and broaden their culture and know something about humanities. This will polish them and make them successful, broad-minded doctors and enable them to interact with the society to which they dedicate themselves. Most famous Muslim doctors had a share of humanities; literature, philosophy or history, in addition to religious and linguistic studies. It was reported that al-Razi "mastered many subjects, including Hadith, which he was able to recount with people taking it down".[49]

Abu Jaafar Ahmed Ben Ibrahim Abu Khaled al-Jazzar, a renowned doctor in Qairawan in the fourth Hijra century, was reported by Ibn Jiljil al-Andalusi to have written many works on history.[50]

6. Caution in treatment and reason: Islam is against haste in many matters. Muslims are required to resort to reason. Man is accused of being hasty,[51] of having been created of haste[52] and of craving the immediate benefits of this short-lived world.[53] But haste in diagnosing diseases and prescribing medicines could be extremely harmful to patients. This is why Muslim doctors were careful in diagnosing and locating diseases before prescribing medicines.[54]

The famous Egyptian doctor Abu al-Hassan Ali Ben Radwan once wrote, "if you are called to examine a patient, give him something harmless,[55] until you detect the cause and location of the disease and then treat it". Abu Bakr Mohammed Ben Zakaria al-Razi said, "Doctors should set aside questioning the patient about the internal and external causes of the illness and then attach weight to the strongest."[56]

Precise diagnosis is related to this together with accurate examination of the general condition of the patient and the affected organ. About this Ali Ben Radwan said, "Identifying defects means examining organs, features, temperament, dermal condition as well as the condition of internal and external organs".[57] Ibn Abu Osaibia praised careful doctors. About Sheikh al-Sadeed Ben Abu al-Bayan he said, "While treating patients at the Nasseri Bimaristan in Cairo, he showed such care in identifying and diagnosing diseases and prescribing medicine as no words can describe".[58]

Hesbah books in Islam specified such system of treatment that secures lives, and set such rules that secures full supervision by doctors until the patient recovers. Doctors are held responsible for any mistakes in diagnosing diseases and administering the optimum treatment. Al-Shizri said, "When a doctor visits a patient he has to ask him about the cause of his disease and the pains he feels. After identifying the cause and symptoms and examining pulse and urine, he prescribes some syrups and other medicines. He is to take down notes of what the patient says and the system of treatment and gives a copy of this to the patient's family with the witness of those who were present during the visit. The following day he should visit the patient again, examine and ask him, modifying the treatment if warranted by developments and give a copy to his family. This recurs until the patient recovers or dies... In the event of the patient's death, his family goes to the famous doctor (the chief doctor) and present him the copies written by the doctor. If the copies are appropriate, he tells them so; if not he tells them to take the blood money from the doctor because he killed the patient through inefficiency and carelessness. So careful were they that only qualified and competent doctors could practise medicine.[59]

In this way Muslims set the principles of the practice of medicine for modern times. Among the aspects of care in treatment was reviewing the medical history of the patient and the medicine he had taken. It was reported that when Abbasid Caliph al-Nasser Li-Dinillah fell ill in 588 A.H., a famous doctor was called. The doctor refused to prescribe any medicine before he reviewed the patient's previous treatment. He said, "I hear and obey, but I need to know from my predecessor the symptoms, conditions and changes of the case, and the past treatment given so far". After he reviewed all that he said, "The procedures are appropriate and the treatment is sound".[60]

Many a time the doctor would review the patient's biography and past life so that he could trace the disease. King al-Adel Nouruddin Mahmoud once had a concubine in Aleppo Castle whom he loved very much. He sent for a doctor when she was seriously ill. The doctor told her "to answer all his questions without hiding anything". He wanted to know about her race, origin, homeland, religion and food and drink habits, until he found out the cause of her illness.[61]

It is obvious that the doctor's caution in diagnosing diseases was combined with studiousness, analogy, reason and experience. Sheikh Ibn Sina said, "When I was treating patients, my previous experience provided me with a great deal of a breakthrough in cure".[62] Rasheed al-Din Ali Ben Khalifa, a cousin of Ibn Abu Osaibia and a contemporary of Salahuddin said, "If you practise medicine, depend on Allah and do your best to apply what you are certain of; if you can't, try to come close to it". He also

said, "Most medicine is intuition and guessing; little is certain; analogy and experience, rather than sophistry and chattering, are important. The end result of medicine is keeping health, if it is present, and regaining it if it is lost. Medicine shows common sense and reason. It distinguishes between the hard--working and the ignorant or lazy; between those who apply analogy and experience and those who seek money and status".[63]

Islam has required all Muslims to listen carefully to the Quran and to consider the words of Allah. They are also required not to be dumb and blind when being reminded of the miracles of Allah, but to think deeply of phenomena and problems.

Therefore, Muslim doctors applied their minds to the new or unprecedented matters. They speculated on them using their intelligence, cleverness and wit. Abu Bakr Mohammed Ben Zakaria al-Razi said, "Truth in medicine is an unattainable end, and applying treatment as set out in books without deliberation is dangerous".[64]

Ibn Abu Osaibia gave an account in this respect: A man from Baghdad arrived at al-Rei spitting up blood. He developed that case during the journey. Abu Bakr al-Razi examined him thoroughly. He first examined his urine, but nothing in it indicated that he had tuberculosis or ulcer. Al-Razi, the intelligent and clever doctor, went on thinking and wanted to know about the water he drank during the journey. The patient told him he had drunk from marshes, which had a bad smell. "It occured to al-Razi that worms[65] in the water reached his stomach and caused the case". Al-Razi ordered two large cupfuls of green moss, which accumulates in water tanks, marshes and stagnant water and ordered the patient to swallow the green moss by force.

Al-Razi, then had him vomit and found in the spitting a worm of the same kind that lives on the green moss. The worm had settled in the patient's stomach membrane or intestines. When the green moss reached it, it desired it. The man spat the worm with the green moss he had swallowed. "The man recovered and went off "[66].

Together with intelligence and deliberation, doctors had to depend on the power of observation and wit. It was reported that Rasheed al-Din Abou Khalifa, whom Ibn Abu Osaibia met several times and described as "the best doctor of his time", was consulted once by a young man who came to him with his country woman. The young man was ill and nothing could cure him of his illness. While the doctor was examining him and taking his pulse, he felt cold. He told the young man to fetch him a "farjiyya'. The moment the doctor said that word, the young man's pulse and colour changed. The doctor repeated the word and again the pulse changed. The doctor was witty enough to discover that the young man was in love. The doctor addressed the mother and said, "His lover's name is Farjiyya". The mother confirmed this.[67]

7. Among the teachings of Islam is that Muslims should do any job in hand perfectly well. That is why Islamic medicine depended on a solid foundation of faith, accuracy and observance of the rules of hygiene, especially cleanliness, which is considered second to Godliness, as well as guarding against infection.

Doctors used to make rounds in the bimaristan to investigate each patient's case, prescribe the appropriate medicines and order suitable food and drink. Food was specially prepared for each patient; the number of foods prepared in the Mansouri Bimaristan in Cairo in one day amounted to three hundred. "Each patient's food was put in a separate bowl and was covered and delivered to him, until all patients had all their food for lunch and dinner and for the following day"[68]. If the patient had a fever, he would be isolated in a special ward for fear of infection. Leprous patients were isolated in special colonies outside cities. He who escaped was caught in town and threatened with murder.[69]

Punctuality was one of the aspects of sincerity at work. Doctors used to be present in bimaristans,

so that whenever patients went there they received medical care. Some doctors were also on all-night duty for emergency cases.[70]

As for educational institutions such as schools where a number of teachers and men of religion lived, they were provided with resident doctors including physicians,[71] surgeons and oculists.[72] Sultan Hassan's Endowment document stated that two doctors; a physician and an Oculist were appointed for his school. They would go there every day to treat workers, farmers in their places of residence.[73].

8. Medical students in our universities ought to know that the profession is not after quick profit, but rather after the good of the people and supplication to Allah through relieving the sufferings of patients. That is why Muslim doctors were known for their integrity and modest fees, which they recieved only after the recovery of the patient. Some of them even gave contributions to the poor.

Al-Shizri laid down some rules governing the practice of medicine that doctors should take fees from patients only after their recovery.[74] It was reported that Amin al-Dawlah (Secretary of State) Ibn al--Telmez, who was described as the best doctor of his age and who was the chief doctor at the organic bimaristan in Baghdad and a confidant of the Abbasid Caliph al-Mustadei Bi Allah attended to learned men when they fell ill and gave each two dinars when they recovered.[75] Abu Bkr Mohammed Zakaria al-Razi was described by Ibn Abou Osaibia as ''generous, kind-hearted and graceful to the poor and the sick, whom he treated and gave a lot of money.[76]

Doctor Abou al-Hassan Ali Ben Radwan also reported that he made a condition for doctors ''to be after the recovery of patients rather than charges, and to be after the treatment of the poor more than the rich".

About his own relationship with the sick he said, ''It was characterized by modesty, attention to the ill, relieving the sufferings of patients and saving the needy. My purpose was to enjoy good actions and emotions".[77]

A Syrian doctor, Kamel el-Din al-Homsy, who died in 612 A.H., was described as ''generous, chivalrous and kindhearted. He used to go to the great bimaristan which al-Adel Nour el-Din Zanki had founded to treat patients free of charge for many years".[78]

9. Muslim doctors knew how to respect themselves and their dignity on the one hand, and with their dignity and that of the profession, on the other. So that the doctor's character and prestige would be complete in the eyes of all. Ali Ben Radwan made it a condition for doctors to ''be good-mannered, healthy, intelligent; have foresight; be reasonable, pious and generous".[79] Doctors should also be ''handsom, odoriferous and clean in body and dress".[80]

As for the private behaviour of Muslim doctors, they should be of a good reputation; they should not lose people's respect by over-joking or over-talking. It was reported that Muwaffaq al-Din Abdul Latif al-Baghdadi advised doctors ''to talk briefly and clearly in a meaningful way, not to talk nonsense, not to abstain from talking in time of need and not to laugh while talking". He also said, ''Talking too much makes it worthless. Make your listeners feel that you can really say more than you have actually said".[81]

Doctors should not rush madly upon money. They should disdain materialistic objects and trifles. It was reported that when Fakhar al-Din al-Mardini, who died in 594 A.H. and who was termed ''the best scholar of his age in knowledge and wisdom', visited Damascus he had a wide audience. Sheikh Muhassab al-Din Abdul Rahim Ben Ali asked him to stay longer in Damascus, so as to complete reading Ibn Sina's al-Qanoon for a large sum of money to be paid every month. But Fakhr el-Din al-Mardini refused the offer and said, ''Knowledge is not originally for sale".[82]

Ibn Abou Osaibia wrote a biography of the learned Sheikh Abou Omar Othman Ibn Hebat Allah, known as Ibn Abou al-Hawafez and described him as ''the best doctor, the master of scholars, a unique

man". He lived and died in Egypt and was a contemporary of al-Aziz Othman Ben Salahuddin, then King al-Kamel Ben Adel al-Ayyoubi. Abou al-Hawafez set an excellent example of the Muslim doctor's interest in honouring medicine. He was riding his mule once and on the road "saw a boiled chick-pea seller sitting on a *Mastaba* and in front of him stood a Jewish oculist attending to his eye. He moved towards the oculist, hit him on the head and reprimanded him saying, 'If you are low, isn't the profession dignified? You ought to have sat down instead of standing before a chick-pea seller!'. The oculist promised not to do that again. Then he went off."[83]

The best quality of Muslim doctors was refraining from fawning upon rulers as flattering people of authority and influence. In the biography of Abou Jaafar Ahmed Ben Ibrahim al-Jazzar, the famous doctor of Qairawan in the fourth century A.H., it was mentioned that he "never approached any ruler in Africa or Abou Taleb[84], Maad's[85] uncle".[86] In praise of Doctor Saeed Ben Abd Rabbou it was said that he never put medicine in the service of any ruler.[87]

10. It must be noted that Muslim doctors' self-respect and interest in honouring their profession does not clash with what Islam has always stressed, that learned men should have; modesty. Muslim doctors always adhered to the principle of consultation. They consulted one another on medical problems. Consultations were in some cases almost compulsory. Sultan Qalawun's Endowment document stated that oculists had to consult physicians on the treatment of patients whose eye sickness was attributed to physical causes.[88] Ibn Abou Osaibia stressed the importance of consultation. "The benefit from their joint meeting, discussion, treatment and prescription would be doubled". In the 'al-Safa Brothers Letters', a large encyclopedia of which Islamic thought is proud, we read, "You have to know that if doctors are in agreement on the treatment of a patient, and if they have insight into the illness, and if they cooperate in giving him treatment without disputes, and if they show mercy and give advice, Allah may confer recovery on the patient in a short time and without difficulty.[89]

As Muslim doctors favoured the principle of consultation, they were against the shifting of the patient from doctor to doctor without giving each ample time to treat him. Al-Razi said, "He who was treated by many doctors, is about to fall victim of the faults of each".[90]

11. Muslims were in the strong belief that excessive medicines had negative or even adversary effects on the human body. Therefore, Islamic medicine stressed the principle of "Treatment by food rather than medicines". The Prophet (ﷺ) was reported to have said,

"Bear your illness as much as you can".

Abdul Malek Ben Abhar al-Kinani, who was converted to Islam under Omar Ben Abdul Aziz said, "Don't take medicines as long as your body bears the illness".[91]

If the doctor had no alternative but to give medicines, he would be aware of the negative effects and try to neutralize and alleviate them. Some *Diwan Inshaa* decrees nominating a chief doctor urged him to "avoid medicine so long as treatment by food is feasible. If he is obliged to prescribe the appropriate medicine, he has to be aware of the negative effects, however little they may be. He should give the appropriate quantities and be careful with the administration of the medicine, and what should be taken before or after it".[92]

Al-Razi was clear enough to say, "If the doctor is able to treat by food rather than medicine, this is definitely in the best interest of patients.[93] He even wrote al-Tib al-Molouki about diseases and cure by food.

Abou Bakr Sulaiman Ben Baj, a famous Andalusian doctor in the fourth century A.H., was praised "for not prescribing too many medicines".[94]

Those are some of the principles derived from the spirit of Islam on the one hand and the biog-

raphies of doctors in the golden age of Islamic civilization, on the other. When medical students in our universities assimilate them directly or indirectly, it can be said that we have succeeded in finding a place for Islam in medical school curricula in our countries.

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3. See "*Sultan Qalawun's Endowment document No. 1010*" (Ministry of Awkaf, Cairo Archives). Publication and Comment by Dr. Mohameed Mohammed Amin.

4. IBN ABOU OSAIBIA, "*Oyun al-Anba Fi Tabaqat al-Attiba*", p. 7. (authenticated by Nizar Reda). He refers to the Noble Hadith (Knowledge is two: knowledge of religion and knowledge of the body). For research see, "*Al-Madina al-Islamiya Wa Atharoha Fi al-Hadarat al-Osabiya*," p. 143.

5. MOHAMMED MOHAMMED AMIN, Op.Cit., p. 179.

6. IBN ABOU OSAIBIA, Op. Cit., p. 689.

7. IBID., p. 438.

8. HUSAM EL-DIN LAJEEN'S ENDOWMENT "*Document Nos. 17 and 18, archive 3.*" (Supreme Court of Islamic Law, Cairo).

9. AL-SHIZRI, Op. Cit., p. 97.

10. IBN ABOU OSAIBIA, Op. Cit., p. 628.

11. Any scholar who is at the top of the tree in knowledge and profession; the sheikh of his age.

12. See Sultan Qalawun's Endowment Document, already referred to and also, Mohammed Mohammed Amin, Op. Cit., p. 170.

13. AL-SHIZRI, Op. Cit., p. 97.

14. Al-FASD (blood-letting)

15. AL-SHIZRI, Op. Cit., p. 97.

16. He is Boulas al-Ajaneeti, who lived in Alexandria (Egypt) and died c. 680. It is said that he was an expert in women's.... He is the author of (al-Kanash) in Medicine. See "*al-Qifty, Tareekh al-Hukamaa*", pp. 261-262 and Ibn al-Nadeem al-Fihrist, p. 293.

17. A Greek name given to the first seven articles in Gallineus' book on medicine preparation. It was translated into Arabic by Hebeesh al-Aasam, Henein Ibn Ishaq's neice and student.

18. AL-*SHIZRI,* Op. Cit., PP. 108-122.

19. Surat AL-AHZAB. V. 72

20. Surat AL-ANFAL, V. 27.

21. Surat AL-MOAMINOUN, V. 8 and Surat AL-MAAREJ, V. 32.

22. IBN ABOU OSAIBIA, Op. Cit., p.565.

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28. SULTAN QALAWUN'S ENDOWMENT "*Document No. 1010.*"

29. IBN ABOU OSAIBIA, Op. Cit., p. 420.

30. Aromatic plants, flowers, odours, etc.

31. SULTAN QALAWUN'S ENDOWMENT "*Document No. 1010.*"
32. Op. Cit.,
33. IBN ABOU OSAIBIA, Op. Cit., p. 565.
34. HIPPOCRATES, a Greek doctor known as the father of medicine; born on Cos Island c.460 B.C.; practised medicine in Athens and elsewhere in Greece; the Hippocratic Oath which governs the professional and the social behaviour of doctors.
35. AL-SHIZRI, Op. Cit., pp. 100-101 and IBN BASSAM, Op. Cit., pp. 119-121.
36.
37. IBN ABOU OSAIBIA, Op. Cit., p. 161, ff.
38. Op. Cit., pp. 582, 583.
39. Historical references call Fatimid Caliphs in Egypt, "Egyptian Caliphs".
40. IBN ABOU OSAIBIA, Op. Cit., pp. 579-582.
41. Op. Cit., p. 414.
42. IBN ABOU OSAIBIA, p. 567.
43. Op. Cit., p. 610.
44. Op. Cit., p. 438.
45. IBID., p. 521.
46. IBID., p. 565.
47. IBN ABOU OSAIBIA, p. 437.
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49. IBID., p. 418.
50. IBN JILJIL AL-ANDALUSI, "*Tabaqat al-Atibbaa and Hokama*", ,pp. 88-91 (Cairo, 1955). Among the books by Doctor Abou Jaafar Ahmed Ibn Ibrahim on history, "*Akhbar al-Dawlah or Tarikh al--Dawlah*", which deals with the rise of the Fatimid State and quoted by al-Makrizi in Itiaaz al--Honafa and Maghazi Afrikiya, which deals with the Arab conquest of Africa. Al-Bakri also referred to it in "*al-Masalek*,". It is also referred to in other historical works.
51. Surat AL-ISRAA, V. 11
52. Surat AL-ANBIYAA, V. 37
53. Surat AL-QIYAMAH, V. 20
54. IBN FADL AL-OMARI, "*Al-Taareef Bel Mostalah al-Shareef*", p. 139.
55. He means harmless general sedatives.
56. IBN ABOU OSAIBIA, Op. Cit., p. 421.
57. Op. Cit., p. 565.
58. Op. Cit., p. 584.
59. AL-SHIZRI, Op. Cit., p. 98.
60. IBN ABOU OSAIBIA, Op. Cit., p. 403.
61. Op. Cit., p. 637.
62. Op. Cit., p. 438.
63. Op. Cit., p. 736.
64. Op. Cit., p. 420.

65. A worm in water which sucks blood *(Leech).*

66. IBN ABOU OSAIBIA, Op. Cit., p. 416.

67. Op. Cit., P. 590.

68. SULTAN QALAWUN'S ENDOWMENT "*Document No. 1010*".

69. See IBN AL-FURAT's History, 664 A.H., and 794 A.H. "*Chronicles and Iqd al-Joman*", (manuscript) by al-Aini, 664 A.H. Chronicles and SULTAN BARSBIA's ENDOWMENT "*Document No. 880*" (Ministry of awkafs, Cairo, Archives).

70. SULTAN QALAWUN'S ENDOWMENT "*Document No. 1010.*"

71. i.e. physicians.

72. AL-MAKRIZI, "*al-Mawwaiz Wa al-Ittibar*", Part II, pp. 422, 423.

X73. SULTAN HASSAN'S ENDOWMENT "*Document No. 881*" and SULTAN AL-GHOURI'S ENDOWMENT "*Document No. 883*" (Ministry of Awkafs, Cairo Archives).

74. AL-SHIZRI, Op. Cit., p. 98.

75. IBN ABOU OSAIBIA, Op. Cit., p. 349.

76. Op. Cit., p. 416.

77. Op. Cit., pp. 561-565.

78. Op. Cit., p. 682.

79. Op. Cit., p. 565.

80. IBID.

81. Op. Cit., p. 689.

82. Op. Cit., p. 402.

83. Op. Cit., p. 585.

84. He means Ahmed Ben Ubaid Allah al-Mahdi.

85. He means Caliph al-Moez lidin Allah Abou Tamim Maad, founder of the Fatimid State in Egypt.

86. IBN JILJIL, Op. Cit., pp. 88-91.

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90. IBN ABOU OSAIBIA, Op. Cit., p. 421.

91. Op. Cit., p. 171.

92. IBN FADL ALLAH AL-OMARI, Op. Cit., p. 183.

93. IBN ABOU OSAIBIA, p. 421.

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ISLAM'S CONCERN FOR MEDICAL☆ EDUCATION AND ITS PRACTICE.

Dr. Ahmad Sheraf Eddin

KUWAIT.

ABSTRACT.

In its concern for man, Islamic Law considers medical education and its practice by a number of people in the society one of the nation's collective duties, neglecting which would be risky to all members of this society.

In return, Islamic Law covers doctors with a number of guarantees Including licence to practice and immunity from any criminal proceedings in the event of injury or death to their patients.

This paper deals with all legal issues and safeguards given to licenced medical practitioners and also conditions to be met by them.

This paper also describes the necessity, importance and legal aspect of dissection of dead bodies for education and training of medical students and its legality.

This paper concludes that conditions for the legality of medical or surgical practice are only a reflection of broad rules and phrased in such general terms that they can accommodate any new situation arising from innovations in the fields of medicine and surgery.

☆ As the English translation of the full text could not be made available, we are publishing here the abstract only.

Editors.

ISLAMIC HEALTH SYSTEM AN INTEGRATED APPROACH

III. MAKING OF A MISSIONARY MUSLEM PHYSICIAN

Dr. Maher M. Hathout,

U.S.A.

INTRODUCTION

Among the important roles of the needed Islamic health system in the United States is (1) to offer the process and the environment necessary for the making of the Moslem Missionary physician. (2) To be a vehicle of missionary work "Dawa".

The Moslem physician is one brought up and trained to seek knowledge in the Supreme Divine truth, and to be a sign of God's mercy extended to humanity. With this perspective, he can, while caring for the human being as a whole: body, intellect and soul, lead him to the Supreme truths and leave him with impressions that draw him closer to God. By virtue of the medical profession's unique position in society, and the intimate contact it lends with the human being, the Moslim physician has a unique opportunity, and responsibility to carry on missionary work, leading patients to spiritual as well as physical well being.

The fact that medicine is indispensable and that sickness and health are universal concerns, makes the physician capable of communicating to, and so affecting people in any area of the world, and in Islam the availability of opportunity means the burden of responsibility. To orient you and emphasize the deficiency of our effort in this area I will briefly highlight the successful experiment of the Seventh Day Adventist church as pertains to medicine and missionary work.

I certainly should have hoped that I could have quoted our own success, being the nation that is in vicegerency for God on earth and whom God has honoured by the inspiring Quran and the leadership of Mohammed (ﷺ) But in the complete absence of such a contemporary Islamic experiment I have to study the example of less than three million people, through organization and determination they could achieve what we should have achieved a long time ago.

HISTORY AND DEVELOPMENT:

This group, a population of less than three million people, were formed around 1850. Their inspiration was a lady by the name of Ellen White, who stated that she saw a vision, which she considered as a revelation, ordering her to guide people to the real Christianity depending on the original scriptures, observing the Sabath and preaching that the body is the temple of the soul, which in turn is the breath of God. So you glorify God by taking good care of the body. This is to be achieved by:

(1) Preventative measures which include abstinence from harmful food including meat, alcohol, smoking, etc.

(2) Treatment of disease by natural methods before resorting to artificial medicines.

(3) Mental health.

(4) Spiritual health, by guiding the soul to God.

These ideas were immediately enhanced and propagated in the writings and talks of the leaders of the church. However, they felt that unless these ideas are implemented through organized teaching, they will be futile. So the church directed its effort into building their own educational system.

Why separate school systems? Because "True education means more than the pursual of a certain course of study. It means more than the preparation for life that now is, it is the harmonious development of the physical, the mental and the spiritual sources. (Godliness and God likeness is the goal to achieve). [1] Only 11 years after inception, the church built the first college in 1874. In 1906, the Loma Linda school of Evangelists opened. The Evangelistic medical course included standard medical school classwork plus Bible classes. Ellen White has counselled "The healing of the sick and the ministry of the word are to go hand in hand". [2]

This had to gradually develop into an official recognized school representing that same philosophy. However, the work in this area was not considered complete until "it became possible for a child to attend a Seventh Day Adventist school, full time for over 26 years, from kindergarten through a residency in neurosurgery. [3]

In 1976, the Seventh Day Adventist church served 442,000 students in its 3,762 elementary schools, 447 secondary schools, one correspondence school, 82 colleges and three universities in California, Michigan and Mexico owning and utilizing 394 hospitals. This gigantic educational institutions channeled activities in two directions. [3]

(1) Research that is directed to support and substantiate the ideology.
Examples: Studies in longevity
Hazards of smoking, alcoholism.
Benefits of vegetarian diets, etc.

The Kellog multinational foundation is a brilliant example of such productive research. Dr.John Harvey Kellog who was a surgeon and a devout member of the church who wrote about 50 publications including a comprehensive book called "The New Diatetics".[4] His enthusiam and practical approach led to the discovery of the famous peanut butter, the development of cornflakes, and 88 types of cereals that we are eating today and that supply the church with lucrative sums of money.

(2) An active missionary work reaching out to many areas of the world including activities in the Gulf area, Saudi Arabia, Pakistan and Indonesia.

Suffice it to say that by 1960, the school of medicine had already graduated more missionary physicians than any other school in the world.[5] And as of today, the school is growing , functioning in full capacity with the core of combined faculties consisting of approximately 900 full-time teachers , part-time and voluntary teachers, especially clinicians in the proffessional curriculum, bring the total post to 1,685 men and women from as many as 80 nations represented in the annual enrolment of over 5,300 students.[6] Stating in its motto, the fundamental purposes of Loma Linda University are:

(1) "To make man whole"

(2) To enable and encourage the teachers and students to be creative and constructive members of the Seventh Day Adventist church and society. [6]

From the previous description, the result of any comparative study to Islamic institutions is both clear and embarrasing. If we take the largest Islamic medical institution which is Al Azhar school of medicine, we will notice that it suffers the impact of bureaucracy, takes students that have no previous exposure to or concern about Islamic missionary work. Gives religious curriculum that is meager, and almost totally lacking any missionary activity.

In this vacuum, we feel the urgent need for an Islamic health system in the United States that can contribute to the "Dawa". While the task is not easy, it is both mandatory and feasible. A plan for a project in stages should be initiated now.

(1) To organize Moslem talents in the field of medicine in an incorporated structure, identifying the

resources, expertise, time and money that should be dedicated for the Islamic mission.

(2) To buy a hospital that can offer multidisciplines of care, generate an income, perform research, and train Moslem young physicians, locally and from the Moslem world.

(3) This hospital with proper management and with financial support similar to what the Jewish community from all over the world gives to Mt. Sinai Medical Center can develop into a medical school.

It is a shame that trainees from Moslem nations now suffer tremendously to be accepted in any training position, and starting 1981, they have to pay for their internship and residency rather than collecting salary as usual and as it should be. I think that with the same amount of money spent on Moslem students, trainees, and Moslem patients referred to American clinics and institutions, what I have just mentioned is feasible and is not just a dream and will enable the Islamic health system to work in the following parallel directions:

(1) Establish educational institutions that will prepare the Moslem medical doctor; who has the knowledge of medicine and of Islam and who can work to heal the body and the soul while propagating the word of God.

(2) Enhancement of research that will reveal the truth and wisdom in the Islamic instructions and Doctrine.

(3) Contribute to the strength and financial stability of Islamic organizations in America, hence enabling them to acquire Islamic schools and build a comprehensive Islamic system of education.

(4) To exercise and guide the role of the Moslem doctor in the community focusing on him as a model of the divine values of Islam and supplying him with the saying of Islam in the different problems he has to deal with.

(5) To engage in exchange of informations and extend dialogues with other medical organizations that will result in offering Islamic views on medical issues and will attract the attention to the wealth of truth encompassed in Islam, which is an added proof that it is the eternal word of God.

It is inexcusable that we did not offer any suggestions or initiated any discussions about venereal diseases, genetic integrity, homosexuality, test tube babies, etc.

(6) To offer interpretations and explanations to be used by Moslem theologians on issues they deal with and preach, while still relevant to medical science.

(7) Last, but not least, is to start right now the overdue missionary work for Islam which is the duty of each Moslem individual up to his capacity and within his domain.

This missionary work should start at home, by regaining the self confidence, the identity and the faith in Islam to Moslem students and scholars of medicine. Should expand to Moslems in the East who are intoxicated by the Western civilization believing that from the West rises the sun of science and wisdom, to American people who are eagerly looking for a substitute to fulfill the spiritual needs and bless the materialistic advances; then to every place in the world where medical care is needed, and when offered, can introduce the word of Allah.

At the end, I know of no better closing statement than the order issued to us in the Holy Quran:

> *"AND SAY WORK: SOON WILL ALLAH OBSERVE YOUR WORK, AND HIS APOSTLES AND THE BELIEVERS. SOON WILL YE BE BROUGHT BACK TO THE KNOWER OF WHAT IS HIDDEN AND WHAT IS OPEN: THEN WILL HE SHOW YOU THE TRUTH OF ALL THAT YE DID".*[7]
>
> (S9: V 105)

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ISLAMIC HEALTH SYSTEM IN U.S.A. AN INTEGRATED APPROACH:

II. EDUCATIONAL OPTIONS AND RESEARCH CHALLENGES.

Dr. Omar S. Alfi,

U.S.A.

DEFINITION:

The Islamic Health System (I.H.S.) is an *integrated* health system that incorporates *Islamic* thoughts and ideals into the practice of *modern* medicine.

GOAL:

Its goal is to develop a health system that benefits the Nation of Islam.

OBJECTIVES:

1) To develop health facilities that provide high quality medical care, under a financially successful business setting.

2) To provide a vehicle for the increasingly difficult educational and research needs of Moslem physicians.

3) To provide an unprecedented approach to Da'wa.

The first objective is addressed by Dr. Khaja, and the third by Dr. Hathout. In this presentation we will only discuss the second objective of education and research.

BACKGROUND:

The following facts provide a background for the subsequent discussion:

1) Historically, Islamic medicine was the greatest during the glorious days of the Nation of Islam. Though it is important to look backwards to that era in an analytical way in order to learn a lesson, yet the future course is definitely more important.

2) The civilization of mankind evolved from the First, or agricultural, wave (in which all Islamic countries are still living), through the Second, or industrial, wave (in chich most of the west is living), to the Third, or electronic-computer, wave that is expected to be the dominant civilization in the near future. Few countries, including U.S.A., are having the lead in this Third wave [1]. The rate of scientific progress in these countries is astounding. In the medical-scientific field, for example, it is expected that the amount of knowledge to be gained in the next five years, will probably exceed all the knowledge gained in that field in the preceding 2000 years.

3) There is a large number of Moslem physicians and scientists in U.S.A., who are actively participating in this astounding new wave.

4) Islam has gained much visibility in U.S.A. during the past 10 years.

5) The health problems in the Islamic countries are staggering, and need more than just "importing" medical knowledge from the West. Establishing a direct, and strong, link with the source of this new medical and scientific technology is a must at this stage.

With this background, it becomes apparent that an Islamic Health System in U.S.A. may provide the means to bridge the technological gap between the Islamic countries and the West. Without an innova-

tive approach, this gap is expected to widen very rapidly.

PRE-REQUISITES:

For an I.H.S. in U.S.A. to fulfill a role in education and research, three pre-requisites must be fulfilled:

1) The I.H.S. must have at least one hospital that provides a high quality medical care, and at the same time be financially successful.

2) The hospital should receive accreditations indicating that its programs meet the requirements of the essentials of accredited residencies. [2]

3) Full cooperation, and coordination between the health professionals in the I.H.S. and their colleagues in the Islamic countries. Without such coordination the proposed education and research programs cannot proceed.

EDUCATIONAL OPTIONS:

The educational options that may be provided by an I.H.S. in U.S.A. are numerous, and can be discussed under 4 areas: exchange programs, residency training, public education and formal education. It should be emphasized again at this stage that medical education in the Islamic countries will remain incomplete without a strong interaction with the source of technology, and even an actual participation in *making* the progress in this technology.

1) Exchange programs:

a) An ongoing exchange of experiences between Moslem physicians in U.S.A. and in Islamic countries is vital to the educational programs. Such exchange is two-directional. Specialists from U.S.A. may provide lectures, workshops, panels, consultations, or short-term (2-4 weeks) work-visits, to hospitals, medical associations, or medical schools in Islamic countries. In the other direction, specialists in the various health problems that are indigenous in the Islamic countries can educate their colleagues in U.S.A. in their specialties.

b) Sabbatical leaves: Scientists and experts in subspecialties, from U.S.A., may spend one-year long sabbatical leaves in an Islamic country to help establish a *new* program. The physicians who would be running the new programs may also spend a sabbatical leave in U.S.A. to get adequate training in the new specialty. Sabbatical programs were shown to be very important in building up technology in Israel.

2) Residencies:

In medical technology, the gap between the Islamic countries and the West is increasing. At the same time training opportunities and residency positions available for foreign medical graduates in U.S.A. are becoming more and more scarce. [3] An I.H.S. in U.S.A. can provide the needed residencies and other training opportunities to graduates from Islamic countries. At the present time it is very difficult to get a clinical training position for a young Moslem doctor graduating outside U.S.A., and this will be even more difficult in the near future, unless an alternate approach such as I.H.S. is developed.

3) Public Education:

An Islamic Health System in U.S.A., fully aware about the Islamic values, and how they can provide solutions to a number of ailments in the Western society, may work to influence the Public Health Education in U.S.A. into the direction of adopting some of these values.

4) Formal Medical Education:

The presence of a successful I.H.S. in U.S.A. can provide the stepping stone towards the establishment of an Islamic medical school in U.S.A. The value of a religion-oriented medical school has been recognized by other religious communities in the United States, including Catholic, Baptist, Adventist, or

Jewish. Each of these communities has innumerable hospitals, and many medical schools all over the United States. The latest in these is the Oral Roberts medical school that was started this year, and for which $ 150 million were collected in a single fund-raising drive. These communities realize that a religion-oriented medical school enhances the religious values of the community members, and adds a political arm to the sponsoring community.

An important point should be considered at this stage. For any education or training in U.S.A., that involves a clinical aspect, a graduate of a foreign medical school must meet at least one, out of four, requirements to be eligible [3] (see appendix). This is in contrast to involvement in medical research which depends on the ability and qualifications of the candidate, rather than on specific requirements.

RESEARCH CHALLENGES:

1) An astounding increase in new medical knowledge is now being witnessed. Innumerable new techniques and tests have been developed. We see great advances in prenatal diagnosis, in recombinant DNA techniques and in changing the genetics characteristics of bacteria, animals and even man, in organ transplantation, test tube babies, cloning techniques, surgery on the fetus, slowing the process of aging, and many many others. What is the Islamic position regarding each, or any, of these? How can we cope with that? What type of mechanism that could be established to interact with the future developments?

Through the I.H.S. in U.S.A. Moslem scientists and theologians can develop the appropriate research body that has the knowledge, and the vitality, to keep abreast of the scientific medical developments.

It is of interest to mention in this respect that the challenge of modern technology and its impact on religious beliefs and values is of great concern to almost all religious groups in the United States.

2) The second challenge deals with the many health problems indiginous to the Islamic countries. Joint research projects, involving physicians and scientists from Islamic countries and U.S.A. must be arranged. In this respect it must be re-emphasized that the solutions to these problems, and to many other problems, can never completely depend on importing a medication or technology. Unless the concerned country is actually, and conscientiously, participating in the making of the scientific progress in that area, there will be no real or lasting solution. Research in medicine provides a golden opportunity for Islamic countries to have a share in scientific progress, since it is not technology-intense as, for example, space research.

3) A third area is research in the history of Islamic medicine. This area has been ignored by our historians for years. Workers in it have been mostly western orientalists, many of whom were not neutral to say the least. Research in that area needs to analyse the factors that lead to the great scientific progress at that time, and the factors that lead to the subsequent decline. Research in this area should also aim to acknowledge the historic achievements of the pioneer Moslem physicians. It is very gratifying to see that The International Organization of Islamic Medicine is appropriately attending to this area.

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2. Directory of residency training programs, published by American Medical Association, Chicago, Illinois, 1978.
3. Health Professions Educational Assistance Act of 1976 (PL 94-484, amended by PL 95-83).

APPENDIX

ADMISSION REQUIREMENTS FOR GRADUATES OF FOREIGN MEDICAL SCHOOLS

It should be emphasized that in order to maintain accreditation of a residency program, foreign medical school graduates admitted to the program must meet one of the following conditions:

a. Certification by ECFMG on the basis of satisfying the ECFMG educational requirements, as well as passing the ECFMG examination; or

b. Obtain a full and unrestricted license to practice medicine, issued by a state or other United States jurisdiction authorized to license physicians; or

c. In the case of the United States citizens, successfully pass the complete licensure examination in any state or other licensing jurisdiction in which the law or regulations provide that a full and unrestricted license to practice medicine in that state or jurisdiction will be issued to the physician after satisfactory completion of his internship or residency in that state, without further examination. To be eligible for this route, the foreign medical graduate must have completed all educational requirements that would make him eligible for ECFMG certification should he choose to apply; or

d. Complete a "Fifth Pathway" available only to American students in foreign medical schools.

A SCHEME FOR TEACHING ISLAMIC MEDICINE IN THE FACULTIES OF MEDICINE

Dr. Ahmed Shawki Al-Fanjari

KUWAIT

INTRODUCTION

Our Need to Connect Medicine and Religion:

When the era of modern scientific renaissance commenced in Europe after centuries of dark middle ages, a great clash took place between science and religion and hence between scientists and clergymen.

This conflict intensified over centuries and reached its peak when the Church ordered that scientists should be burned alive with their books.

The struggle between religion and science culminated with the agreement to separate science from religion.

This historically European move was benificial to the field of science in that it paved the way for freedom in research and scientific thoughts. At the same time separation of science and religion had the ill effect of discouraging scientists from pursuing their interest in religion and from all associated ideals and morals.

It was unfortunate that when the Islamic World commenced into the era of modern renaissance (Beginning of the 20th Century) we blindly imported principles and ideologies originated in the West which dissociate science and religion.

This was a serious error since Islam respects and commends scientific thought and research to the benefit of humanity.

At this point there was a great need to link science and religion not only in the field of medicine but in all the branches of sciences such as pure science, social science, geography, psychology, philosophy and so on.

Aim and Benefits of this Link Between Science and Religion:

1. To build up a new generation of Muslim scientists that can behave according to religious principles and morals.
2. To raise scientific standards among Muslim scientists there by giving them a motive to serve their religion through surpassing in science.
3. To abolish the attitude of perversion between Muslim physicians and scientists.
4. To serve Islam as a religion through scientific research that supports faith.

Type of Religious Study in Scientific Institutes:

The first contemporary trial to teach religion besides Medicine was in the Faculty of Medicine el--Azhar University. But this trial has failed to achieve its aim because of the type of study and selected programme.

It is merely a classical religious study taken from the faculty of fikh and Sharia: Composed mainly of principles of prayer, fasting, Zakat, Pilgrimage, marriage, divorce and other things not related to medicine or science.

We believe that religious study in any scientific Institute must be well selected in order to be in

close relation to the type of science:-

- In the Faculty of Commerce we must teach Islamic Finance.
- In the Faculty of Science we should teach the Scientific miracles in the Quran.
- In the Faculty of Social Sciences we should teach the Social sciences in Islam.
- In the Faculty of Medicine we should teach Islamic Medicine. It is true that the studies in these fields are little and that building up a new science as Islamic Finance and Islamic Medicine is something that requires great effort and time, but we must proceed to develop a nucleus for these Sciences now.

A PROJECT TO STUDY ISLAMIC MEDICINE

Islamic Medicine comprises four main items:

A. Islam and Medicine
B. Islamic medical heritage
C. Applied Islamic Medicine
D. Modern technology applied to Islamic Medicine.

A. ISLAM AND MEDICINE:

This includes all the teachings that are related to medicine and medical profession

1. *Character and Behaviour of a Muslim Doctor:*

This must be taken from Quran and Hadith of the Prophet (ﷺ) It includes:

a. Islamic behaviour and social relations in general.

b. Specific orders concerning medical practice as maintaining Doctor-Patient confidentiality, refraining from passionate looks to female patients etc.

2. *Islamic Medical Oath:*

Uptil now we apply the Hippocratic oath although we have in our religion many teachings that can replace it.

3. *Islamic Opinion concerning new medical procedure:*

Such as test tube babies, implanting organs, evacuation.

4. *Preventive Medicine in Islam:*

It includes Islamic orders to:

a. create a hygienic society through practice of cleanliness.

b. To avoid and control epidemics.

5. *Wisdom of Prohibition:*

Every Muslim Physician must understand medical reasons for Islamic Prohibitions on blood, meat of dead animal, pork, alcohol, narcotics etc. and must be able to give Scientific reasons for each order.

6. *Islamic Mental and Psychic Hygiene:*

Orders of Islam to eradicate all causes of tension and violence in the Islamic society by prohibiting centers of corruption which lead to gambling, alcoholism, adultery, wisdom to encourage patience, contentment, removal of jealousy in order to create a peaceful society and prevent psychological complications.

7. *Sex Hygiene in Islam:*

Teachings of Islam concerning sex and hygiene in sexual relations, state that one must bathe after

sexual contact (Tahara), circumcision for men and not for girls, prohibition of sexual deviations, medical reasons to allow divorce and polygamy.

8. *Fasting:*

Its effects on human physiology, its medical benefits and also medical reasons that prevent someone from fasting.

9. *Scientific and Medical Miracles in Quran:*

A study of Medical facts in the Quran that have been proven true by modern technology such as the foetal development and origin of living beings etc.

B. ISLAMIC MEDICAL HERITAGE:

1. *History of Islamic Medicine:*

Since gahilia and the merits of Islam in separating or purifying medicine from sorcery and its merits in progress of medical profession.

2. *Branches of Islamic Medicine:*

In terms of surgery, medicine, ophthalmology (KAHALA) herbal medicine and pharmacy. Comparison of this progress to Europe in the same period of dark ages.

3. *Islamic Hospitals i.e. "Bimaristans":*

Sections of the hospital, luxury, of buildings, kinds of medical services, quality of nursing.

4. *Life History of Muslim Scientists:*

In the fields of Medicine and Pharmacy-Such as Rhazi, Ibn Sina, Ibn Bitar, Zahrawi, etc. and fields of their specialisation.

5. *Contribution of Muslim Physicians to Medical Progress:*

Discovering of diseases and new medicines, and new theories and new instruments.

6. *Making an historical introduction to each disease known in our age:*

In this, Perhaps we can display the merits of Muslim scientists and their role in evolving human knowledge about it. As an example: Discovery by Rhazi of Measles, and types of Jaundice and Allergy to Pollen grains. Discovery by Ibn Nafees of circulation and exact anatomy of the heart. Discovery by Ibn Haitham of the theory of vision, Ibn Sina of syringes and Gut Stitches etc.

C. TREATMENT IN ISLAMIC MEDICINE:

1. *Theory of Achlat:*

"Mixtures" and its fallacies.

2. *Herbal Medicine:*

Important medical herbs and their chemical composition and uses in treatment and forms in which they were introduced to patients.

3. *Value of Medical plants:*

In local areas of Islamic lands.

D. MODERN TECHNOLOGY IN SERVICE OF ISLAMIC MEDICINE:

Applied modern researches to serve Islamic Medicine as:

1. Honey, Mushroom water, dates, and their benefits.

2. Medical herbs.
3. Applied rural medicine in Islamic world.
4. Islamic orthopedics: Benefits and fallacies.

That was a rough scheme for teaching Islamic Medicine. The course of this study is between 3-6 months.

ISLAMIC MEDICAL EDUCATION

Prof. Allie Moosa

SOUTH AFRICA

The purpose of medical education is to produce the necessary manpower required to improve and maintain the health of individuals and communities. For centuries the goal of medical education was to produce doctors who had undergone a specific course of training and fulfilled certain basic requirements, whereafter he/she would be certified as fit to practice medicine.

The specified course of training usually lasted 5-6 years and consisted of a study of the basic sciences, starting with chemistry, physics, biology, going on to anatomy and physiology in 2nd year, followed by pathology and pharmacology. Clinical bed-side teaching usually starts in the 4th year and continues through to the final year.

The relevance of the subjects studied especially in the 1st year, has been questioned recently and in an attempt to make the curriculum more relevant, subjects such as psychology, sociology, behavioural science, etc., have been introduced into the curriculum in 1st year. Moreover the method of teaching has also been questioned in recent years. A number of universities in Europe, America and Australia have introduced the integrated system whereby clinical medicine is integrated with the basic sciences.

During the Colonial era, the curriculum of most of the medical schools in the 3rd World, followed very closely those found in the parent country.

This is still the case in many countries even to this day. However, more and more of the 3rd world nations are questioning the relevance of the medical curricula to the needs of their people. The doctor produced is a highly skilled person with detailed knowledge of all branches of clinical medicine and capable of providing an excellent curative service on an individual basis. Yet the health problem of most of the 3rd World nations cannot be solved by these people. So the concept of medical auxiliaries, "bare foot doctors", "nurse practitioners" has evolved. Moreover, 'the discipline' of "community health" has been introduced into the medical curricula even in the so-called developed nations of the world. How far then do the curricula and training in our medical schools today meet the requirements of an Islamic medical school.

In order to answer this we need to define the purpose of Islamic medical education.

The purpose of Islamic medical education is as I see it, to produce the necessary manpower to improve and maintain the health of people, but with one important difference viz. that such individuals are imbued with the spirit of Islam and whatever they do, for the sake of Islam.

The goal then of Islamic medical education can be said to be to produce health workers who:

1. will serve mankind as enjoined by the Holy Quran,
2. will undertake research into the illness that afflicts man, as the Holy Prophet (ﷺ) says:

   "For every illness there is a cure".

   It is our responsibility therefore to find this cure. This means we must train our health worker in modern research techniques so that he may undertake research into various aspects of medicine,
3. will excel in their respective fields — so that they may truely be an example of "the best of creation".

Although many of the current medical schools produce men and women who serve humanity, do research and excel in their respective disciplines, none of them can claim to produce men and women

who can do these and at the same time are imbued with the Spirit of Islam.

How then do we set about structuring our curriculm to achieve the stated goals? Having stated that the purpose of Islamic medical education is to produce health workers imbued with the Spirit of Islam, it is obvious that the entire curriculum must be permeated by Islam and Islamic teaching. To this effect:

1. The environment in which the teaching occurs must be conducive to the practice of Islam e.g. there must be a Jamaat Khana for prayers, debate and discussion. The time table must be structured around the 5 daily prayers. It is of interest that the early teaching hospitals in Islam were founded in association with the establishment of a Madressa.

2. Courses in Islamic history (especially medical history), Islamic jurisprudence, Islamic ethics, Quran and Hadith studies, Islamic philosophy, and Prophetic medicine must be essential components of the curriculum, and must be compulsory for all students in an Islamic Medical school.

In this regard it may be of interest to note that one of the requirements for entry into a medical school during the early Islamic era was that the student be pious besides being patient and intelligent.

3. The teachers must be selected on the basis of their knowledge and research experience in their respective discipline, but above all on the basis of their Islamic knowledge and character.

4. There must be complete freedom of thought and expression within the bounds of Islam. A healthy atmosphere of open frank, sincere discussion must prevail. Deductive reasoning and logical teaching must be encouraged. Critical analysis of information must be stimulated. This is best done by small group teaching than formal didactic lectures and by the submission of a thesis (a distinctly Islamic invention) on a particular subject by students.

5. Throughout the curriculum attempts must be made to observe, interpret, but above all to have "tafakkur" i.e. to ponder. His knowledge of the human body and its intricacies should bring him closer to his Creator. He should be made to "see the signs for those who want to see" by all those who teach him. To this effect the medical text used must convey the same message. Unfortunately there are no texts that do so. I believe the International Organization of Islamic Medicine has an important role to play in encouraging eminent muslim scholars to rewrite the medical texts, giving the proper emphasis and perspectives.

Finally the question of whether the progressive curriculum or the integrated one should be used is open to debate. It would seem that the integrated system is more appropriate. In fact the modern teaching hospital developed out of the early Islamic "maristan" in which both health care and medical instruction occurred, something which developed in Europe only in the Eighteenth century. It was this combination of theoretical and observational skills that permitted al-Razi to make his outstanding contribution to medicine. I believe the subject of Islamic medical education is such a complex one that a separate seminar/workshop should be organised by the International Organization of Islamic Medicine, to discuss this.

PAST AND PRESENT STATUS OF MEDICAL EDUCATION AT AL AZHAR UNIVERSITY

Prof. Dr. Fouad Al-Hefnawi

EGYPT

I. FOREWORD:

It is a great occasion to see such a distinguished gathering of physicians and scholars who have come from every corner of the Islamic World to participate in the Second Conference on Islamic Medicine.

It is my pleasure to attend this conference on my own behalf and as a representative of the International Islamic Centre for Population Studies and Research at al-Azhar University. The topic of my contribution is: "Past and Present Status of Medical Education at al-Azhar University". The relation between al-Azhar and medicine is not so farfetched as to have to be spuriously established. Medicine is closely related to al-Azhar's main objective of promoting Islam as a religious and secular doctrine for all people in all ages and in all places.

2. THE EARLY BEGINNINGS OF AL-AZHAR:

When the Fatimids seized power in Egypt they built the city of Cairo to be the capital of their Fatimid State. In 972 A.D. a great mosque was constructed to be the platform of their Shiite denomination just as Cairo was the symbol of their sovereignty. The mosque was called al-Azhar, a word derived from "al-Zahraa" which was an attribute of Fatima, the Prophet's (ﷺ) daughter, from whom the Fatimids are descended.

The first "circle of study" was opened in al-Azhar Mosque in 975 A.D. toward the end of Mu'ezz Li Din-Allah's reign, only three years after the mosque had been opened for prayer. Chief Justice Ibnul No'man took his seat in al-Azhar to lecture on the Shiite Jurisprudence. He was reading from a book on the subject written by his father and entitled "al-Ikhtisar" (The Briefing). The lecture was attended by a large number of scholars. Their names were recorded in an attendance sheet. More and more lectures by al-No'mans followed in regular succession. They were based on political propaganda for the Fatimid State and religious propaganda for the Shiite denomination. These lectures were mostly attended by the elite of the society. However, the audience eventually expanded to include public people who came to pursue their studies at al-Azhar.

In the early days of al-'Aziz Bellah Ibnul Mu'iz Li Dinillah's reign in 980 A.D. his vizier, Ya'coub Ibn Kalas, surnamed "The most Eminent Vizier", sat in al-Azhar to give lectures on Shiite jurisprudence based on a book he wrote on the subject entitled "al-Risalah al-Wazeeriyah" (The Vizierite Message). His course was attended by a large public and private audience.

Ya'coub Ibn Kalas was a prolific author who wrote on a wide range of subjects including Quranic readings, jurisprudence, the Prophet's (ﷺ) manners, Shiite jurisprudence, and physiology and health. This "Most Eminent Vizier" must be credited for his leading role in developing al-Azhar mosque into a university with its own systems and study programmes. In 988 A.D. he recruited for this university a teaching staff of 37 jurisprudents with a chairman to organise their course schedules. He also arranged for them to have salaries, accommodation and transportation, which in those days depended on beasts.

On feasts and religious occasions they were presented with new clothes by way of paying them tribute.

3. AL-AZHAR AS AN INTERNATIONAL UNIVERSITY:

It is wrong to view al-Azhar as a local institution or a place delimited by its physical facilities. Throughout its long history it has always figured in the minds of Muslims as a theme and a notion, or a spirit and a meaning. Its system and admissions policy allowed students from everywhere in the Islamic world to join it and enrich it with their intellectual contributions. Therefore, its most distinguished graduates did not belong to one particular country but to many countries across the Islamic world, and the works based on studies conducted in it had an international Islamic status. This is attributed to the fact that al-Azhar was an open university that was accessible to anyone from anywhere who had the motivation and drive to learn. Consequently, it has become the bastion of knowledge, the guardian of the intellectual movements and the keeper of the cultural heritage in the whole of the Islamic world.

4. THE EDUCATION SYSTEM OF AL-AZHAR:

Education at al-Azhar university was based on the course system, each Sheikh (old master or jurisprudent) offering a certain course. In form, there were no classes in the modern sense, but students would sit on the carpeted floor of the mosque encircling their Sheikh who sat on a cushion or a low wooden chair near one of the many columns of the spacious mosque. That is why those "classes" were called "circles of study" or "academic rings". Now, students would not just sit anywhere in this circle. They followed a strict order. The Sheikh's assistants and the notable visitors would sit to his right and left while the rest of the students filled the remaining part of the circle leaving space for late comers or students of irregular attendance. The normal practice was that everyone knew his fixed spot in the circle and would not change it from one session to another. At the beginning of each lecture, the Sheikh would say, "In the name of God, Most Gracious, Most Merciful", then praise God and pray for the Prophet (ﷺ) and for his family and Companions. In most cases, this would be followed by reciting some verses from the Holy Quran and some Hadith (Prophet's (ﷺ) sayings) that urge people to seek learning and good manners.

After this systematic introduction the lecture itself began. The Sheikh would dictate either from memory or from notes he had already prepared. The course was usually based on a textbook which he would read out to the students explaining and elaborating along the way what he felt might pose difficulties in understanding. A student might ask questions whenever he wanted. The only constraint on exercising this right was that questions should be asked deferentially for the real purpose of seeking clarification of a certain point and not for the mischievous one of making fun or embarrassing the lecturer.

Interruption, either of the Sheikh or a student asking a question, was also strictly forbidden. On his part, the Sheikh would encourage intelligent questions that expressed deep thinking and a true spirit of curiosity for knowledge. Sometimes, the Sheikh himself would pose a number of questions by way of stimulating his students and testing their grasp of the ideas under discussion. He never hesitated to answer a question if the students failed to do so. This attitude in the "study circle" created a relaxed atmosphere that was most favourable to useful discussions and debates involving the lecturer and his audience. The Sheikh would always wind up by reciting the "Fatiha" (the opening verse of the Quran).

Some of the academic systems in modern universities are in fact adaptations from al-Azhar early practices, These include professorial chair, assistant lecturers, and the gathering of students inclassrooms and auditoriums.

Sitting on the teacher's chair at al-Azhar was not an easy matter. A nominee for that chair would have to pass difficult tests in the subject matter he intended to teach. In order to finally make it to that

coveted chair he had to spend long years teaching in less prestigous "study circles" in smaller and less prominent mosques across the country. Appointment to the professorial chairs of al-Azhar was considered the highest of educational posts at the time.

Al-Azhar followed a course-based certification system whereby each Sheikh gave a student who had completed the study of the course he taught a written statement certifying that this student had met the course requirements and had satisfactorily passed the necessary tests. This certificate would "License" the student to practice what he had learned. Therefore, the certificate was called a "licence" as obtaining it after completing studies at the other "circles" would enable the student to secure a job that suited his line of specialization.

It was customary in those days to hold a kind of farewell ceremony usually including reciting poems of congratulations and verses from the Holy Quran, while the whole place glittered under candle-light. Arabic coffee would also be served to everybody.

As for students accommodations, there was the system of "Arweqah" or dormitories. Each "Ruwaq" or dormitory would be set aside for indigenous students coming from a certain province in Egypt or expatriate students coming from a certain country. Thus there were dormitories for the Syrians, the Turks, the Moroccans, the Kurds, etc... Allocation was also based on the four orthodox rites of Fiqh such as the Hanafis and Hanbalis.

Al-Azhar students were supplied with food rations in addition to being provided with medical care. The uniform costume worn by all Azharites consisted of a gown and a white turban.

Al-Azhar had a rich library with holdings during the reign of the Fatimid al-Hakim Bi Amrillah amounting to 50,000 books according to some historians. The librarian was a man next in office to the Chief Justice.

Besides government funds, al-Azhar depended for financing its educational activities on donations and entails granted by rich and devoted people.

Due to the academic status of al-Azhar Mosque and its flexible admissions policy, a large number of students from all parts of the Islamic world, besides those from Egypt itself, were attracted to it. According to the historian, al-Maqrizi, the number of expatriate students during the 13th century was put at 750 students who were all treated on equal footing without any discrimination because of colour or race.

Though women were not entitled to get a "licence" from al-Azhar, they were allowed to attend special study circles to be enlightened about their religion and worships.

Study at al-Azhar was academic in nature, systematic in form, and characterized by its objective and methodological approach.

Judging by these systems we can safely say that this old mosque of over a thousand years of sustained educational activity has had all the necessary properties of a university since its inception, though in its early days it was considered a private and independent institution.

5. AL-AZHAR'S VOCATION IN RELATION TO MEDICAL SCIENCES:

There is no exaggeration in saying that medical studies are part and parcel of the Islamic Sharee'a in its fullest sense. In ordering the individual's life, whether he is on his own or dealing with others, the doctrines of Islam necessitate adequate knowledge of medicine and call for practising it and conducting research with a view to developing it for the good of all humanity so that people may lead a happy and disease-free life on this earth.

With this open-minded attitude al-Azhar shouldered its spiritual and religious responsibilities giving due attention to medical studies which had a large share in its programmes throughout the different

stages of its development. History tells us that the Azharite scholars were deeply interested in medical sciences especially as research facilities were available to them. In the Fatimid era the Library of Cairo alone had over 6,000 books and references on medicine.

6. OUTSTANDING PHYSICIANS IN AL-AZHAR OF THE PAST:

During the period from the 10th century, when al-Azhar was established, up to the 18th century there was a long list of graduates who made their mark in the field of medicine. The list included such big names as Ya'coub Ibn Kalas, al-Hassan Ibnul Haytham, Ali Ibn Radwan, Musa Ibn Maymoun, al--Hassan Ibnul Kateer, Abdul Lateef al-Baghdadi, to name only a few. Let me present here in some detail only two of al-Azhar's renowned physicians who later occupied the highest post at this prestigious institution, namely, the post of Sheikh al-Azhar (Rector of al-Azhar).

The first is Sheikh Ahmed Ben Abdul Mun'im al-Damanhouri (1689-1778). He was born in Damanhour, a city in the Nile Delta of Egypt, and studied Jurisprudence, Legal sciences, Methodology of Fiqh and Medicine. He was an authority on the four orthodox rites of fiqh and adopted them all. In the words of his contemporaries he was a unique scholar and a great author who went steadily up the professional ladder until he became Rector and held that post for 10 years. He was thus the first physician in the history of al-Azhar to reach that honourable position.[1]

About his studies he said:

"Under my master Sheikh Ahmed Al-Qurafi, the physician at Darul Shifaa (Hospital), I read a number of Books on medicine including 'Al-Moujaz' (the summary), 'Al-Lamha Al-Afeefah Fi Asbaab Al--Amraad wa 'Ilajuha' (a short account of diseases: causes and ways of treatment), 'Alqanoun' (the law) by Ibn Sina, a part of 'kamel al-Sina'ah' (all About Practice), a part of 'Manzoumat Ibn Sina Al-Kubra' (Ibn Sina's Great Poem.)."

Under Sheikh Salama al-Fayyoumi I read 'Ashkaal al-Tasees' (ways of laying a foundation) in architecture, and part of Jaghmimi's 'Ilmul Hay'a' (astronomy), and part of 'Raf'ul Ishkaal 'an Misahatil Ashkaal' (solving the problems of areas) in surveying. I also read under Sheikh Mohamed al-Sheheemi 'Manzoumat Al-Hakeem' (al-Hakeem's poem), and a treatise on the three kingdoms of nature: animals, plants and metals.

This Azharite professional physician who later assumed that post of Rector is credited for many works on medicine. According to historians he is the author of 'al-Qawl al-Sareeh fi Ilm at-tashreeh' (straightforward words about the science of anatomy), and the book entitled 'al-Qawl al-Aqrab fi 'Ilaj Las' al-'Aqrab' (more plausible ways of treating the sting of a scorpion) whose manuscript is still well preserved at the Egyptian Public Library. Here is an excerpt from the introduction of this book:

"Praise be to Allah who has bestowed existence (Life) upon us. Here are a few words of immense benefit. (The book) begins with a background about the various shapes and names of the scorpion. Then the main theme of showing ways of healing poisonous stings in which there is a mention of some prescriptions including those which contain common cinnamon that heals a scorpion sting, and menthol and garlic cooked in fats for healing stings by wasps, bees and snakes. The closing chapter of the book is about applying methods of psychic medicine in treating poisonous stings".

The other one is Sheikh Hassan Ben Muhammad al-'Attar (1766-1834) He was born in Cairo. His father, a perfumer and druggist with some interest in science, apprenticed him at the shop in buying and selling. The little boy, who was fond of learning, used to sneak to al-Azhar Mosque behind the back of his father. There he learned the Quran by heart and studied industriously under the leading Sheikhs. When the French invaded Egypt he fled to Upper Egypt. But on learning that the French army was

1. Sheikul Azhar is the equivalent in the Islamic culture of the Pope in the Christian culture (Translator).

accompanied by a number of renowned scientists he hurried back to Cairo and got in touch with them offering to teach them Arabic in exchange for their knowhow. Then he moved to Damascus and stayed there for some time before leaving for Albany where he got married. During his stay there he gained a lot of experience and learned a number of languages. When he finally returned to Egypt he became Editor-in-Chief of 'al-Waqae' al-Masriyyah' newspaper in its early days of publication. In 1830 he became Rector of al-Azhar and remained in that office until he died four years later.

In 'al-Khutata al-Tawfiqiyyah' (The Tawfiqqiyyan Layouts) by Ali Mubarak, we read this about Sheikh al-'Attar: "He was such an assiduous student that he learned much in a short time which qualified him for a professorial chair at al-Azhar. But he tended to carry on with his studies and was active in such unconventional fields as medicine, astronomy and mathematics. He used to say, 'a lot of things have to change in our country and new branches of knowledge have to be introduced and thoroughly acquired'. He was obviously amazed at the high cultural level attained by the French and admired their prolific production of books and their advances in applied sciences".

He wrote several treatises on medicine and anatomy, and was the author of "Kitab fil Saydalah" (A book on pharmacology) in which he answered some of the points raised by the classic work 'Tazkarit Dawoud al-Antaki' (The recipes of Dawoud al-Antaki). The manuscript of "Kitab fil Saydalah" is available at the library of the Morroccan 'Ruwaq' at al-Azhar. In addition, Sheikh al-'Attar had many works on mathematics, astronomy, legal sciences, and linguistics. These include comments on 'Sharhil Azhariyyah fin Nahw' (Azharites Explanation of Grammar). comments on 'Sharh Esaghogi fil Mantiq' (Isagorath's Explanation of Logic), comments on 'Jam'il Jumou' fil Usoul' (All about Methodology of Figh), and a treatise on how to use the astrolabe. He used to draw the day and night sundials with his own hands.

Sheikh al-'Attar is considered an avant-gardist in his age as he advocated the scientific innovations and cultural advances he witnessed during his travels. It was he who nominated Sheikh Rifa'a al--Tahtawi to lead al-Azhar's batch of scholarship students sent to study in Paris and advised him to take note of those aspects of the European civilization that might be usefully applicable in Egypt.

When Tahtawi responded with a book on the subject entitled 'Takhleesil Ibreez fi Talkhees Pareez' Sheikh al-'Attar recommended that the government foot the bill of publishing it. His enthusiasm for medical studies was apparent in the speech he gave at the School of Medicine at Abu Za'bal in Cairo in which he hailed the benefits of these studies to all humanity.

The status of medical studies in al-Azhar was thus confirmed as Sheikh Hassan al-'Attar was the second medical figure to be appointed to the highest and most honourable post of al-Azhar Rector and Imam (leader) of the Muslims.

7. AL-AZHAR AS THE NUCLEUS OF THE MEDICAL RISE IN EGYPT:

Following the departure of the French invaders from Egypt, a new era of national awakening was dawning in the country. One of the most serious problems that faced the new government was the spread of diseases and epidemics that claimed the lives of thousands of people. The victims of cholera and plague far exceeded those who died in the wars.

In those days, medication was the monopoly of a small group of quacks who practised medicine without any scientific basis. So, the government brought in a French physician, Klut Bey, who laid the foundation of the medical rise in Egypt. The key solution to the health problem, he said, was the establishment of a school of medicine to provide the country with the required numbers of indigenous doctors instead of relying on foreigners.

In 1827, the school he had envisaged became a reality. At Abu Za'bal near the army barracks, a school of medicine was established and within five years, over 400 Egyptian doctors graduated from it.

The school's Faculty was multinational comprising members from France, Spain, Italy and Bavaria. The medium of instruction was naturally the foreign languages spoken by the lecturers, but the students were dictated translated versions of the lectures. The first batch of students admitted to the School of Medicine came from al-Azhar as it was considered the most enlightened academic community in the country. As for the educational programme of the school, it included courses in physics, chemistry, botany, anatomy, physiology, public health, drugs, poisons, pathology internal and external diseases, and pharmacology.

Thus, the Azharites were the pillars of the medical rise in the modern history of Egypt, and the nucleus of the teaching staff at the School of Medicine after the return of al-Azhar's scholarship students from Paris where they had spent six years of training and hard work. Famous names in that period included: Muhammad al-Shibasy in anatomy, Muhammad Ali al-Baqli in surgery, Muhammad al-Shaf'i in internal diseases, Mustafa al-Subki in opthalmia, Ahmed al-Rasheedi in gynaecology and paediatrics, and Muhammad Ali-Harrawi in public health.

The efforts of those Azharite pioneers were not confined to the study and practice of medicine. They also bore the brunt of writing and translating. In collaboration with their other Azharite colleagues, they undertook the onerous job of finding and establishing the appropriate Arabic medical terms equivalent to the foreign ones. Their duties also included writing up the teaching materials for the above courses and editing other translated materials. The fruit of their hard work was over 50 translated books on medical subjects.

Al-Azhar's most important contribution to promoting medical education in Egypt was perhaps the crucial issue of bringing the values of that education in harmony with religious considerations. In the newly established school of medicine, dissection for purposes of study was an unavoidable part of the curriculum. Some students, however, felt uneasy about it and strongly opposed any tampering with dead bodies no matter what the motive was. The climax of that opposition would have cost the French doctor, Klut Bey, his life. One day, a fanatic student assaulted him with a dagger while he was working on a body at the school's dissection room and nearly hit him twice had it not been for the other students who rushed to his rescue. The incident could have dealt a deadly blow to the growing medical education in Egypt. But al-Azhar stepped in strongly at the right moment to quell the mushrooming opposition when the Rector himself, Sheikhul Azhar Hassan al-'Attar, vociferously established that Islam was not in contravention of medical education which served the progress of humanity. His undaunted support was the point of departure for the advancement of medicine in Egypt.

8. REVIVAL OF MEDICAL EDUCATION IN AL-AZHAR:

In 1961, al-Azhar witnessed a major change when it was decided to develop it into a modern university with secular education going side by side with theological studies. New faculties of medicine, engineering, agriculture, etc.. were created. The Faculty of Medicine was opened for study in 1964.

Some people viewed the decision with no little surprise and scepticism. They saw that the development entailed the danger of dragging al-Azhar into fields that were alien to its nature and felt afraid that the resulting effects might prove harmful to its long established reputation. These people seemed to say, 'What has medicine got to do with an institution which is theological and spiritual in nature with an objective to purify creeds and provide guidance in this world in quest for the rewards of the Hereafter?

In fact, the fear and scepticism were baseless whether from the point of view of theory or from the realistic and historical point of view . Theoretically, al-Azhar was the centre of theological studies and the lighthouse of Islamic teachings. Historically, it was a centuries-old institution that has passed through successive phases of evolution and undergone practical experiences in developing educational prog-

rammes implemented throughout its thousand years of uninterrupted practice.

It was said that the establishment of modern secular faculties of medicine, engineering, agriculture, etc.. in al-Azhar was an innovation in its traditional educational policy. But this is an exaggerated way of stating the facts as there was really nothing new about the development. Rather, it was a kind of infusing al-Azhar with new life and reviving its glorious past. When al-Azhar carried the banner of advocating Islam it also implied a commitment to pursue all kinds of scientific and secular studies, which it did all along, more or less in accordance with the surrounding circumstances of the immediate Egyptian society in particular and the wider Islamic society in general.

There was nothing new, then, about creating a faculty of medicine at al-Azhar University except, perhaps, that the system of 'study circles' was replaced by auditoriums and lecture rooms; the Ruwaqs by the full-fledged hostel; the word 'Bimaristan' by the modern term 'university hospital'. A new feature is also the policy of giving girls an equal opportunity as boys to carry on their higher education at al-Azhar university, though on a separate campus. In the 'Islamic Faculty of Medicine for Girls' female students can study, obtain university degrees, and later join the teaching staff just like their male colleagues. In fact, some outstanding female physicians managed to make it to full professorship and even to the office of deanship.

The revival of medical education in al-Azhar has proved to be a guiding experience in graduating doctors who combine science with religion. The educational programmes at the two faculties of medicine for male and female students contain the same courses and require the use of the same equipment as those to be found in the corresponding faculties of the other purely secular universities. In addition, the programmes provide for the study of Islamic subjects so that the graduates may be able to serve al--Azhar's purpose of expounding the Islamic teachings and highlighting their humanitarian implications while keeping abreast of the latest trends in medical sciences. In this way, the Azharite physician is equipped to be a true advocate of Islam.

Al-Azhar's twin faculties of medicine are not replicas of their corresponding faculties in the other universities. They have the distinctive features of including Islamic studies into the curriculum and placing male and female students in separate campuses. Besides, their policy of admitting a large number of expatriate students from all over the Islamic world and recruiting members of the teaching staff from all Islamic countries without any racial discrimination has given these two faculties an international touch in spite of their recent date of establishment.

In view of the graduates' high standard of academic achievement and commendable level of refinement true of their deeply-rooted institution, one rests assured that the aims set for reviving medical education in al-Azhar university have all been satisfactorily realized. These graduates will hopefully keep up the efforts exerted by al-Azhar throughout its glorious history for the service of science and religion not only in Egypt but also in the whole of the Islamic World.

COMMENTATOR'S SPEECH

Prof. Hamdi Al-Sayyed

EGYPT.

I know how it is difficult to comment on what has been said this morning i.e. on the part of distinguished professors. But I would like to comment on what Dr. Allie Moosa has said. He has tried to define the meaning of Islamic medicine and during the meetings and discussions of yesterday and of what we have seen in the papers, I think that Dr. Saeed Ashour has read the part of what has been said. I do not think that it is retrovation in our efforts. It is very contemporary and new sciences can be controlled, teachings and behaviours can be controlled under the wings of al-Shariah. So, if we agree on that principle, our discussions will be much easier.

First of all in the Islamic world, today we have more than hundred faculties. Medicine is taught there as a replica (copy) of what happens in the West. Now, from the discussions we found that the teachings of medicine should follow the Islamic example and the curricula should be changed and be impregnated with the Shariah as well as the Fiqh . All these specialities in schools are fixed. This would enable the physician to understand the principles that should guide his actions and there is a more difficult question that is Islamic morals. We recieved the Kuwait Document, which had been issued last year. I commend the authors of this Document and we are trying to introduce it in the faculties. We used to teach 'The Code of Medical Ethics' and in some faculties this was replaced by the Kuwait's Declaration or Document. This can be generalised to be as part and parcel of the teachings of medicine.

Now, regarding the behaviours, patterns of behaviour, Dr. Allie Moosa spoke about its moral aspect, regarding the organization of studies, creating social and religious activities, but what is difficult to do is, to be the paragon of such practices and in fact practices, be it in hospitals or else where, are not humane enough and this should be supported.

Now, another topic was 'Research'. Dr. Maher Hathout and Dr. Omar Alfi spoke to us about the idea of creating Islamic Centers in the U.S.A. Of course, this is very important and we will appreciate it very much, but why not in the Islamic countries themselves? There are some efforts undertaken and exerted in some Muslim and Arab countries that are carried out now. I think it should be supported, because it will be directly linked to the health problems of the Islamic World. This does not mean that we will not be creating other centers in Europe and the United States, without speaking here, about priorities and the needs to support and cement the relations between our physicians and the physicians all over the world and this can be one of the objectives of the Islamic Institute at Kuwait.

Now, another issue was Islamization of sciences, as has been used by one of the delegates. What is the relationship between that and Islamic thoughts? We should be concentrating about the power of the creator and to rewrite the sciences, scientific research. We will be facing another problem, that is conducting research in Arabic. This has been mentioned and we said that the majority of Muslims are not Arabs and this is a point to be discussed. Is it needed? Do we need to teach medicine in Arabic for those who speak other languages? I think that civilization cannot be divided and this is a point that applies for medicine and other fields of specialization.

Further issue is, as Dr. Maher Hathout said that we can build up a new kind of physician, a missionary physician and he thinks that perhaps the physicians in U.S.A. can carry out this mission in a better way, because our experience in al-Azhar University was not conclusive and the situation was very complex indeed. When we looked into Africa, where there are lots of minorities, which are not given chances for education and they are not trained. When we started discussing or studying the possibility of sending physicians there, we found out that due to the difficult situation in these countries, we

did not have many volunteers and if the physicians believe in solidarity among human beings, this is very important and we should take into account the experiments mentioned by Dr. Maher Hathout for preparing such missionary physicians.

COMMENTATOR'S SPEECH

Prof. Hassan Hathout

KUWAIT

Studying medicine is in itself an Islamic legal duty. But, as Ghazali said, it is a duty of sufficiency, meaning that it is not required of all Muslims but sufficiently of those who are capable of undertaking it. It follows that exceptions from the general legal rules necessitated by discharging this duty, especially in matters related to studying the human body whether alive or dead, sound or ailing, are legally permissible; for that without which a duty cannot be done is also a duty. I believe that all this is currently in practice in all Islamic and other countries. Why, then, should Islam have a special role in the programs of medical schools? This is the topic of our present thesis.

My work as a university professor has given me the chance to see with my own eyes what is going on whether in those universities where I took up my teaching duties or in others with which or with whose student bodies I had established contacts. Pondering the conditions in these universities I came to the conclusion that four requirements should be met if we want Islam to have a role in our medical institutions:

First: Things to be rejected.

Second: Things to be adopted.

Third: Things to be injected.

Fourth: Things to be taught.

Let's now deal briefly with each of these requirements.

1) What should be rejected is atheism and infidelity. There is nothing new about them, but like sea waves they have their ups and downs. Until recently, the contemporary wave of atheism was covert and concealed. But lately, it came out into full light, first there in the West and later here in the East.

In the applications for admission into a School of Medicine that I know the phrase "none" would be written in answer to the item seeking information about the student's religion. The phrase would pass almost unnoticed though the applications would otherwise be thoroughly scrutinized, and the "none" phrase would hardly preclude admission. In another School I once attended a seminar on "The Sanctity of Life". Taking part in that seminar was a female faculty member who introduced herself at the very beginning as a non-believer in a Creative Power, a Supreme Existent in full control of everything, or any other such attributes of God. On another occasion, I was appalled by an application for a university post in which the applicant not only mentioned that he was agnostic but he also recommended the appointment of a female colleague with whom, he said, he was emotionally involved through long years of co-working in research.

I am not citing these examples in exasperated condemnation or vehement protest; for neither I nor even my betters should have control over people's beliefs. People are free to think as they like without any constraints. It is only that atheism today is no longer passive or self-absorbed. It is active and bent on proliferation and invasion of minds at a time when our young people are still green and vulnerable. I do not contend that wisdom is the ultimate goal of the believer; wherever he finds it he is most entitled to it. But it seems to me that the authorities concerned might see fit to bar such atheists from taking up teaching positions in the universities except after complete failure to find counterparts of equal qualifications and efficiency who believe in God and His apostle (ﷺ), or at least in God. If appointment of these atheists is really unavoidable we should at least bring to their notice that traffic laws prohibit driv-

ing against the red signal; that travelling regulations stipulate that a passenger should obtain a visa before entry to a foregin country; and that the laws of a Muslim community impose imprisonment of atheism in the mind of its perpetrator so that it may not show its ugly face, foul the air with its obnoxious odour, or pollute the intellectual environment with its abject fallacies.

2) What should be adopted is the good model. The most eloquent piece of preaching has always been an exemplary conduct to be imitated and not a rhetorical statement to be untiringly reiterated. The Muslim teacher is he who is not only well versed in his subject but also well entrenched in his faith. However, scientific standard should not be underrated on the plea of piety and godliness; for the credit of a pious person goes only to himself, whereas the brunt of his deficiency is borne by his fellow Muslims. As we should beware of the atheist, the prodigal and the deviationist, we should equally beware of the semi-theologian who is stern in his views and hard in his judgement. A narrow-minded preacher may scare people away thinking that he is only winning them over to the right path. And a zealous advocate of Islam may inadvertently be lured by the form of the Islamic teachings away from the core of their content. Now more than at any earlier time effective work for Islam depends on intelligence as much as it depends on devotion. And devotion alone without being bolstered by intelligence means less gains and more losses. That is why the Prophet (ﷺ) described the believer as discreet and clever; and that is why advocating Islam is best done through wisdom and good counsel. The real worth of a missionary can be appraised by the extent of his appeal to the people that makes them willingly embrace what he advocates.

3) By things to be injected I do not mean materials to be crammed into one particular course of study, but rather relevant pieces of information to be injected into various courses. They should not be incongruently forced into the courses but rather be made to permeate them naturally and unaffectedly. They would add to the lectures a special agreeable flavour as a hair-breadth's measure of salt does to food. In the meantime, they would get the intellectual message across without much ado. What teacher of us would teach the pulmonary or minor blood circulation without being proud to mention that Ibnul-Nafees was its original discoverer, challenging with it Galin's doctrine which said that blood passed from the right side of the heart to the left side through invisible holes in the partitioning wall between them; and that when the Spanish Servitus arrogated to himself the credit of this discovery and then published it under his own name the Church considered his disagreement with Galin a kind of heresy and burned him alive with his book; and that William Harvey who is credited for this discovery, came three full centuries after Ibnul-Nafees? Who would lecture on allergy without wanting to quote al-Razi in this connection when he said, "That disease which comes in spring when the flowers blossom."? Who would take up the anatomy and physiology of the eye and neglect to mention the famous Arab ophthalmologist, Ibnul-Haytham, whose terms for the parts of the eye are still adopted, and who was the first to point out that vision results from rays sent from the visible object to the eye and not vice versa, and whose work on lenses has been the basis for the manufacture of microscopes and eye-glasses? In the field of gynaecology, who would speak about paracyesis and how it may change into celiocyesis which ends up in cadavernization that on contamination even after long years bursts out of the ventral wall releasing decaying bones with the pus, without adding that it was al-Razi who first described the case? Who would feel content with his coverage of obstetrics and gynaecology without instructing his students on the Islamic rules concerning menses, menstruation, pregnancy, puerperium, breast-feeding, the major ritual ablution, cleanness, etc. in terms of what is prohibited and what is permitted as well as in terms of the relevant rules under the conditions of fasting, praying, the official Muslim pilgrimage to Mecca, etc.?

Analogous examples in all other branches of medicine could be found where medical counsel is organically combined with related counselling on Islamic Shariah. A committee may be set up to compile all such materials in a little pamphlet Arabic and English versions of which should be made available to the faculty members with clear directions that the content should somehow be incorporated into the

courses given.

4) We come now to the things that should be taught. These should be assigned special contact hours of a separate course. Whether it is to be called "Islamic Medicine" or be given any other name, this course should comprise the following components:

First component:

A historical review of Islamic inception and its distinctive features that served to make it the basis of a towering civilization in the various fields of knowledge. Of these features the most important are:

a) The Islamic attitude towards learning and how it is considered a duty. As man is God's vicegerent on earth he is required to reconstruct it and find out God's ways in creation. Islam says that of all God's creatures, scientists and scholars are the most God-fearing and equates the ink with which they write their books with the martyrs' blood. Islam also exhorts Muslims to seek learning wherever it may be available even if it takes them as far as China. Man is challenged to look into the horizons and contemplate signs of God's creation.

b) Liberating the mind and lifting off man's intellectual mandate over man. Islam knows of no intermediaries between man and his Creator, because there is no priesthood, tyranny, confiscation of thought or the products of thought in Islam.

c) Non-Muslim subjects living in Muslim countries are entitled to protection, safety, dignity and honoured promises. They are treated on a par with Muslim subjects having the same rights and duties in an atmosphere of utter justice that does not confine the Islamic identity to Arabs alone, and according to which an Arab is not considered better than a non-Arab except inasmuch as he is God-fearing. It was that same sense of justice that made Muhammad (ﷺ) say that if even his own daughter, Fatima, was ever convicted of stealing he would have to cut off her hand. Thus, the Muslim nation's energies were not used up in attempts and designs to flee for safety or dodge the ruler's oppression but freed for full-fledged creative activities and productive pursuits.

Second Component:

A review of the medical rise in the tide of Islamic civilization with reference to the achievements and innovations of the leading Muslim physicians together with their biographies, works, methods of treatment, prescribed drugs and their role across the centuries in educating the whole world and in getting Europe out of the dark ages into the light of the Renaissance.

Third Component:

Islamic jurisprudence covering Islamic injunctions and prohibitions concerning individual or community health either directly or through control over environment, comestiblesd and potables, or control over physical or psychical instincts. The well-being of the individual and the community can also be realized by stability of mind and soul, putting the world down to its right size with all its attractions and hardships in the knowledge that nothing whatsoever in this world, good or bad, will last for ever, and that in the final analysis our life on this earth is just our gateway to the Hereafter which is the real fruit of what man has grown on earth and the real reward of his well established contact with God.

Fourth Component:

A series of seminars guided by the Islamic Code of Ethics for the Medical Professions issued at the turn of the Hijri 15th century. Topics for discussion by faculty members in conjunction with their students should cover vital issues in medical practice such as the sanctity of human life, birth control and its

underlying medical and non-medical purposes and reflections on Islamic and non-Islamic countries at present and in the future; the philosophy of permissiveness in sexual relations and its medical and non-medical effects and what plans we have about it; the use of faith in helping to bring about recovery from disease or increase one's ability to bear its pains. Other topics should include such biological issues as exfoetation, abortion, foetal transplant from one uterus to another with the consequent overlap of genetic traits.

I have intentionally overlooked such fundamental issues as Islam's legal attitudes towards dissecting the human body or the examination of a patient by a doctor of the opposite sex and similar issues which have already been settled by our preceding jurisprudents many centuries ago.

Yet, I would like to point out that there will always be new issues that have never crossed our minds, been covered by any existing text, or preceded by analogous cases. For dealing with such matters a working-team of medical specialists should be formed to study them and try to come to an agreement about the most plausible Islamic views about them. The findings should then be widely published for the benefit of the whole Islamic nation. They should also be incorporated into the proposed course as part of its components.

This is only a general outline of the course I propose to be offered as part of the programs of our Medical Schools. These Schools should first approve it and then abide by it. A committee may then be set up to chalk out the details of its description and objectives.

I would put the number of contact hours required for the course at anything between 15 and 60 depending, first, on willingness, secondly on feasibility, thirdly on chance snags that may pop up, and fourthly on obstacles deliberately put in the way.

However, lack of support, slumbering consciences, intentional neglect by those who can see, or stepped up reproach by those who disapprove are no excuses for inertia by the able or neglect by the faithful. In Islam, there is a great deal of difference between a Muslim by action and a Muslim only in name; and the sadness of a hired female mourner is not as genuine as that of the bereaved mother. An intelligent missionary would do everything in his power to get his divine message across, even through the tiny eye of a needle.

I pray that this would gladden hearts and spread some more light. Praise be to God the Almighty.

GENERAL DISCUSSION

H.E. Dr. Yacoub Al-Ghoneim (Chairman)

Here, we come to the second part of our session, this morning. As you know, the second session deals with comments and debate. Allow me to give the floor to Dr. Hassan Hathout to preside over this session. Thank you for your attention and thank you for your participation. I thank the lecturers for the important papers, they have presented and from which we have learned a lot and I hope we will do more work and more research, in order to continue this trend.

Dr. Ahmed El-Kadi

I would like to speak in the language of Quran, but I will speak in English, so most of you would understand without translation. I have two comments to make regarding certain definitions relating to Islamic Medical Education and the other one is relating to the Islamic Medical Institution in America.

The first comment is regarding the differentiation, strict differentiations between three areas of work in the field of Islamic medical education. One is the revival of heritage and I like just to add to what was already mentioned by the commentators and speakers, that our heritage should not be called Islamic Medicine:

Number one, because it is only one part of much more, which is Islamic medicine of 1982. Second, because not all of the heritage is necessarily Islamic.

Second, the area of Islamization of the Muslim physicians and that is the area we have heard most about, with introduction of the course in Islamic studies, Jurisprudence and Code of Islamic Ethics etc.

The third area which is not quite clear in the minds of most Muslim physicians, is the Islamization of health sciences, which are already mentioned by Dr. Hamdi Al-Sayyed and others and I hope that within the next year or two, we will have clear-cut, specific criteria and features regarding any text which would qualify as Islamic Medical Text with its basic science or clinical science. When we have these features and criteria, we can also re-assess and re-evaluate our heritage and see which part of it was Islamic and which part was not.

About the Islamic Medical Institution in U.S.A., I fully agree as to the need of it. My comment is regarding two modes of realization; one which would be the immediate or instant realization, if we have a few hundreds of millions of dollars and we can build a building and recruit the teachers and the big provision which I have to stress, if we have the material and the curricula to teach, whether this to the under-graduate or post-graduate students, it would be quite embarrassing and defeating the purpose, if we have a Muslim Institution and teach what we are teaching at Harvard, or U.C.L.A. The other experience is what we have at the Akbar Institute of Health Sciences, which is gradually growing, initially due to the lack of funds, but now we realize, it may be a blessing and fortunate. We can exchange this experience later.

Dr. Osama Abdul Aziz

I would like to thank the Chairman for giving me two minutes and I want to comment on what has been said by Dr. Saeed Ashour. With regard to the teaching of the Islamic History in the Medical Faculties and what I am calling for is to translate the great works of Islamic Scientists, so that it could be available in a very simple manner for the teachers as well as the students of Faculties of Medicine. And as Dr. Hassan Hathout has said, before giving any piece of information, we should add historical dimension to this piece of information and these books could be simplified for the students of the Faculties of Medicine, so that it could be easily acknowledged and understood. Of course, we are responsible for the bringing up of such students, either in the house or in the hospital or in the faculties. With regard to these Islamic Organizations in U.S.A., I hope that there could be a collaboration and co-operation bet-

ween these centers, provided that the main Center should be established here or in any of the Arab countries. So that the Muslim physicians in these Islamic countries, could take care of those who are sent for training to these countries and I think this could be very valuable.

Dr. Atta-ur-Rehman

There are two or three brief comments that I wish to make. The first one is that, when one is talking about the curricula, the key word is 'Candid'. The greatest service that we can do, both to Islam and to medicine is to ponder about what we can do about the standards of education. In an august body like this, I think there exists a certain degree of confusion between a good Muslim and a good scientist. The two are not necessarily synonymous. What has to be done in the early stages of education is to create in the child, at the home, at the colleges and universities, the spirit of Islam. So that, when he grows up, he can see things through the eyes of a Muslim. Being a good medical doctor or a good chemist or a good physicist is an entirely different affair. Here, we are talking about real merit, real scholarship and this can not be achieved simply by Islamization of books. This can be achieved by concentrating upon standards. This was the first point I wished to make; high standards, Institutions, compatible with M.I.T. or Harvard or Houston, so that we have over here out-standing centers of learning.

The second point is that there are already many active groups, working in the Islamic world, on different aspects of medicine and if the Islamic Medicine Organization could support the activities of these groups, then that would be doing a great service to medicine.

The third and the last point is that we have to remember that al-Zahrawi, Ibn Nafees and Ibn Haithem are remembered today for their scholarly works that they have done during those days and what we should be concentrating on, is to create the working environments in Muslim countries to create more Ibn Haithems, more al-Zahrawis and more Ibn Nafees .

Dr. Hassan Hathout

We still have ten seconds. These Islamic Organizations which should be established in U.S.A., they should not be governed by the Arab countries only, because we faced many problems when we came to establish a mosque in U.S.A.

Part Ten: *Relationship of Curricula of Faculties of Medicine and Islamic Teachings.*

CHAPTER TWO

(Some Selected Papers — Not Presented)

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THE JURISPRUDENCE OF MEDICAL EDUCATION — THE RELATIONSHIP BETWEEN THE CURRICULA OF THE MEDICAL FACULTY AND THE MUSLIM TEACHINGS

Dr. Haji Ali Akbar

INDONESIA

Since the Renaissance, the age when the western scientists freed themsleves and their thinking from the pressure of the Church, science, including the medical science, showed tremendous progress. Freedom from the Church meant also freedom from God, from the Almighty God, so that science was seen as the product of the human mind and became secularly directed. In their conceit, scientists thought that they were able to control nature, and that it was they who healed the sick. In developing the medical science, they frequently violated Muslim laws and doctrine, such as in committing abortion, artificial insemination through donors other than the lawful husband, considering homosexuality as normal, viewing the patient as a source of finance, determining that euthanasia is a patient's right and its implementation rightful and allowed. These phenomena are also seen in Muslim countries where doctors receive their medical education. Because these doctors receive their medical education as dichotomy, they still are Muslim, but they do not relate their medical science to the Muslim doctrine. In the mosque a doctor will be a devout Muslim, yet in his practice room, in the hospital, he is a secular doctor. The medical faculty does not include religion as a teaching subject, as science must be free from from the influence of religion.

How unlucky the secular Muslim doctor! He is one of the disadvantaged persons, for as a doctor he does much good, yet his medical performance, his medical good deeds are not in accordance with the Muslim teachings as has been spoken by God in the Holy Quran:

« والعصر ان الانسان لفى خسر الا الذين آمنوا وعملوا الصلحت وتواصوا بالحق وتواصوا بالصبر » .

ON BEHALF OF THE TIMES VERILY MAN IS TRULY AT A DISADVANTAGE EXCEPT THOSE WHO HAVE FAITH AND DO GOOD WORKS AND GIVE AND RECEIVE COUNSEL IN TRUTH AND WITH PATIENCE.

(S. 103: V 1-3)

Equally great is the number of Muslim students who enter these secular faculties and abandon their religion, the more so when they study outside their own countries, and are sent to western countries.

It is our responsibility now to:

1. include the subject of Muslim religion into the curriculum of the Medical Faculty,
2. integrate medical science with Muslim doctrine,
3. train the professors of the medical faculty in integrating all fields of science found as components of medical science such as physics, chemistry, pharmacy, and others, with the Muslim doctrine,
4. prepare books in which the above fields have been integrated with the teachings of the Muslim religion.

To this purpose, a committee will be needed for integrating the components of medical science with the Muslim doctrine. In this way it can be expected that our medical institutes in the future will produce Muslim doctors whose personalities combine the teachings of the Muslim religion with the medical science. They will be good Muslims and at the same time doctors who are carrying out their duties as physicians hoping for God's blessing in treating sick people, so that they will recover physically, and be

strengthened in their faith. Such integrated medical science should be taught them from the time they enter the faculty untill they leave it as a fulfledged physicians.

It would be best if the students accepted at the Muslim medical faculties are students who have been studying the doctrine of the religion since elementary school and in high school, so that the study of the Muslim religion at university would comprise advanced studies as related with the component sciences of the medical science. The studies of the Muslim religion prior to entrance to the medical faculty, would consist of basic study of Islam for every Muslim, which includes knowledge of the Quran, reading and memorizing as necessary, interpretation *(tafsir),* knowledge of the *Sunnah, Tauhid, Usul Fiqh,* and *Fiqh,* as already suggested by World Conference for Muslim Education I, II, III.

Producing a doctor is not so difficult compared to producing a *Muslim, Mumin,* because developing faith is not something man can determine by himself. Man must increase and deepen his studies of the Muslim teachings and execute these as well as he can. Therefore it is logical that the studies of the Muslim religion should be continued at the medical faculty so that the teachings of the religion will be established deeply and truly in this breast.

Concerning faith, God speaks in the Holy Quran:

« وما كان لنفس أن تؤمن الا باذن الله ويجعل الرجس على الذين لا يعقلون » .

NO ONE SHALL HAVE FAITH, EXCEPT WITH THE WILL OF GOD, AND GOD SHALL HURL HIS ANGER TO THOSE WHO DO NOT USE THEIR MIND.

(S 10: V 100)

If faith has already been established in the hearts of such medical student or doctor to be, he will, when he has become a doctor in the future, also become a human being full of love, in particular towards the sick who are feeling unsure. He will be able to soothe the patient and increase patience of the sufferer and strengthen his faith.

Such faith will also enable such doctor to carry out all medical treatment activities in accordance with the Muslim doctrine and carry them out while hoping for His blessing. This faith will also enable the doctor to integrate his knowledge of the medical science with the teachings of the Muslim religion with the result that in his personality science and the Muslim religion are forged together, science and faith.

Therefore, every professor should make an effort to integrate the teachings of Islam into his lectures. A professor in physics will give his lectures while relating them to God, the Creator of all nature, He must implant into the mind of his students the magnitude of nature and the greatness of the Lord who created nature and safeguarded it with all the laws of nature, laws of nature, laws of physics. He should, for instance, quote the Word of God:

« أو لم ينظروا في ملكوت السموات والأرض وما خلق الله من شيء وإن عسى أن يكون قد اقترب أجلهم فبأي حديث بعده يؤمنون »

DO THEY NOT OBSERVE THE KINGDOM OF SKY AND EARTH AND EVERYTHING THAT GOD CREATED, AND THE POSSIBILITY OF DESTRUCTION BEING NEAR? AND IN WHAT TIDINGS SHOULD THEY PUT FAITH AFTER THE QURAN.

(S 7: V184)

« الذين يذكرون الله قياماً وقعودا وعلى جنوبهم ويتفكرون في خلق السموات والأرض ربنا ما خلقت هذا باطلا سبحانك فقنا عذاب النار . » .

NAMELY PEOPLE WHO THINK OF GOD WHILE STANDING AND SITTING AND WHILE LYING DOWN, AND THEY PONDER ABOUT THE CREATION OF EARTH AND SKY, SAYING: OH GOD, OUR LORD, THOU CREATED THIS NOT IN VAIN. MOST HOLY ONE, SPARE US FROM THE FIRES OF HELL.

(S 3: V 191)

A professor in the science of anatomy will give hislectures while making a comparison between the human body and the bodies of other creatures, and declaring that the organization of the human body is the most perfect, and he will relate it to the Word of God in Holy Quran:

« لقد خلقنا الانسان في أحسن تقويم »

VERILY WE HAVE CREATED MAN IN THE BEST POSSIBLE FORM.

(S 95: V 4)

A professor in physiology will give his most admirable lectures concerning life and the organs inter-cooperating through a system of nerves, activated by electricity, while relating all this to the Word of God:

« وفي أنفسكم أفلا تبصرون »

AND IN THYSELF ALSO, DOEST THOU NOT OBSERVE IT.

(S 51: V 21)

A professor in pharmacy and pharmacology will give his lectures concerning plants, leaves and chemical substances which can be used as medicines to cure diseases, while relating these with the explanation of Muhammad, (ﷺ) God's Only Prophet, that both sickness and medicine are given by God, and He will give man directions how to find these medicines for up till today there are still many illnesses the medical science has not been able to explain, and therefore man has not been able to determine its cure.

The One and Only Prophet, Muhammad, (ﷺ) spoke as brought over by Abu Darda':

عن أبي الدرداء قال رسول الله صلى الله عليه وسلم : ان الله أنزل الداء والدواء وجعل لكل داء دواء فتداووا ولا تتداووا بحرام رواه - أبو داود الجامع الصغير .

"Verily God hath descended diseases and medicines, and He has created a cure for every sickness, but ye shalt no take unclean cures". (History of Abu Daud, Book of Jami' Shaghir).

A professor in forensic medicine will give lectures by explaining that operating on corpses is done in order to seek the truth and establishing rights and justice, for instance in the case of a corpse full of wounds, it should be proved whether it is a case of suicide or murder, while mentioning the Word of God in the Quran concerning justice as a sign of Taqwa:

« يا أيها الذين أمنوا كونوا قوامين لله شهداء بالقسط ولا يجرمنكم شنأن قوم على الا تعدلوا اعدلوا هو أقرب للتقوى واتقوا الله ان الله خبير بما تعملون » .

OH YOU PEOPLE WHO HAVE FAITH, YOU SHOULD BECOME PEOPLE WHO ALWAYS MAINTAIN THE RIGHTFUL, FOR GOD SHALL BE WITNESS IN JUSTICE. AND LET NOT YOUR HATE TOWARDS INSTIGATE YOU TO DO INJUSTICE. BE JUST, FOR JUSTICE IS CLOSER TO TAQWA. AND FEAR GOD, FOR TRULY THE ALMIGHTY GOD KNOWS WHAT YOU ARE DOING.

(S 5: V 8)

In this way every branch of science which is taught at the faculty of medicine shall always be related to the Almighty God and the Muslim doctrine, therefore the medical science is integrated with the Muslim teachings.

Before the students enter the clinic and start examining patients, they should be provided with training concerning the ethics of medicine, so that they shall not consider the patient as an object of clinical education, but shall appreciate him as a human being who should be honoured as the highest servant of God who is of the same level as anybody in this world including doctors and students of medicine.

God Himself honours man as He speaks in Holy Quran:

« ولقد كرمنا بني آدم وحملناهم في البر والبحر ورزقناهم من الطيبات وفضلناهم على كثير ممن خلقنا تفضيلا » .

AND VERILY WE HAVE ALREADY GIVEN THE SONS OF ADAM GREAT HONOUR. WE HAVE GUIDED THEM ON THE LAND AND ON THE SEAS, WE HAVE GIVEN THE FORTUNE OUT OF THE GOOD THINGS, AND WE HAVE MADE THEM SUPERIOR WITH PERFECT SUPERIORITY OVER THE MANIFOLD OF CREATURES WE HAVE ALREADY CREATED.

(S 17: V 70)

They must cherish the patients because they have been given illness by God, and they are restless, afraid to die and afraid of disability caused by the illnes.

The One and Only Prophet (ﷺ) taught us to love them as He said:

« ارحموا من في الأرض يرحمكم من في السماء » -

(رواه الترمذي)

Cherish them on this earth, and surely thou shalt be cherished by He Who is in the Heavens. (History of Tirmidzi).

Students must soothe the sick and strengthen their faith by explaining to them that, in the Muslim faith, each misfortune has its own purpose, as clarified by the Prophet (ﷺ).

عن أنس: قال سمعت رسول الله صلى الله عليه وسلم يقول قال الله سبحانه وتعالى اذا ابتليت عبدي بحياتيه (يريد عينيه) فصبر عوضته عنهما بالجنة

(رواه البخاري)

Anis said that he heard the Prophet (ﷺ) of the Lord say: "If I try my servants by blinding their two eyes, by sickness, and they bear it with patience, I will reward them with Heaven", (History of Bukhari).

Concerning the soothing of the sick, the Prophet (ﷺ) gave an example and spoke:

« اذا دخلتم على مريض فنفسوا له في أجله فان ذلك لا يرد شيئا وهو يطيب نفسه »

(رواه الترمذي وابن ماجه عن أبي سعيد) .

When thou visit sick people, remove the fear in his heart concerning death. Verily such will not change anything but will bring peace to his mind. (History of Trimidzi and Ibn Majah of Abu Said, Book of Mishkatul Mashabih).

The patient should be honoured through an examination as thorough and as considerate as possible, while guarding their sexual organs. The Prophet (ﷺ) said:

قال رسول الله صلى الله عليه وسلم « لا ينظر الرجل الى عورة الرجل ولا تنظر المرأة الى عورة المرأة ولا يغري الرجل الى الرجل في الثوب الواحد ولا المرأة الى المرأة في الثوب الواحد » .

(رواه أحمد ومسلم وأبو داود والترمذي)

No man shall see another man's shame and no woman shall see another woman's shame, nor shall any man be touching the body of another man under one cloth nor shall any woman rub her skin against another woman under one cloth". (Narrated by Ahmed, Muslim, Abu Daud and Tirmidzi).

It is recommended that when a male student examine a female patient, a nurse be present, for the Islam forbids *khalwat* and takes guard that no slander is incited. The Prophet (ﷺ) said:

عن أبي امامة عن رسول الله صلى الله عليه وسلم : « قال اياك والخلوة بالنساء والذي نفسي بيده ما خلا رجل بامرأة الا دخل الشيطان بينهما »

(رواه الترمذي ـ للترهيب والترغيب)

From Abu Umamah, the Prophet (ﷺ) of the Lord spoke: "Avoid being alone with a woman; by God in whose Power I am, if a man isolates himself with a woman, undoubtedly the Devil shall slip in between them". (History of Tirmidzi, Book of at-Targhib wat Tarhiib).

It is highly important that a professor of clinics who teaches students in hospital nursing rooms, shall set a good example, talking to patients with a serene and clear face, creating real contact between the examining doctor and the patient. In hospital treatment such contact between doctor and patient is essential, in order that the patient feels appreciated and attended as a human being, not just an object in clinical education.

In order to establish this integrated education a close relationship between students and teachers is required, it would be better if teachers and students were to stay in one boarding house where the teacher can control the students' life in the field of learning, worship and at the same time mould their discipline.

All prayers or *salats* shall be obligatory in communion, where teachers and students together execute their prayers, and the teachers serve as leader each in their turn, so that the teachers factually serve as examples for their students. The lecture hours shall be arranged in such a way as to enable students and faculty teachers to establish obligatory joint prayers.

These integrated lectures shall be set up by a body or council where religious leaders and scientists discuss methods in which to integrate the teachings of the Muslim religion with the sciences required for the training of doctors so that we will have integrated textbooks which later shall be introduced into the curricula and syllabi of the Muslim medical science.

If this has been achieved, the lecturers involved shall be trained to be able to carry out integrated medical education. The branches of medical science which have to be integrated with the Islamic teachings, are: —

1. Medical biology
2. Medical physics
3. Medical chemistry
4. Human psychology
5. Biochemistry
6. Anatomy including histology
7. Pathological anatomy
8. Clinical pathology
9. Microbiology
10. Parasitology
11. Pharmacology
12. Internal diseases
13. Paediatrics

14. Chirugy
15. Obstetrics and gynaecology
16. Neurology
17. Psychiatry
18. Eye diseases
19. Ear, nose and throat diseases
20. Radiology
21. Skin and venereal diseases
22. Medical forensics
23. Medical pharmacy
24. Stomatology
25. Behaviour, and
26. Public health.

In order to go deeper into the study of the Islam and to ensure a future mainstay, students should be provided with the following books:

1. Al-Quran and a simple interpretation
2. Hadiths (Bukhari & Muslim)
3. Fiqh
4. Tauhid
5. Akhlaq
6. History of the Prophet Muhammad (ﷺ) and Khulafa'ur Rasyidin
7. On Muslim scientists of the golden age of the Islam, such as Ibn Sina, Ibn Rusyd, and others,
8. The doctor's pledge as determined by the First Conference of Muslim Doctors in Kuwait, 1981.

ISLAMIC HEALTH SYSTEM IN UNITED STATES AN INTEGRATED APPROACH

I. ORGANIZATION AND MANAGEMENT

Dr. Nazir Khaja

U.S.A.

INTRODUCTION

Historically Islam has played a significant role in the art of healing. Unfortunately, up to this point, it has rarely been acknowledged or discovered by the Western World. While there are recent attempts in Muslim countries to provide a focus on Islam by rediscovering the contributions of Muslim scientists to medicine, this only remains a historical perspective. Without minimizing the contributions of Islam in the past, it is time to define a future course of strategy which will help reconcile the Islamic point of view with modern medicine. Incorporating Islamic thought, history and heritage, into the practice of modern medicine is a challenge which should be met.

The above task can be accomplished with greater ease if the efforts abroad in the Islamic countries are coordinated with efforts of organized body or bodies of Muslim physicians living, teaching and practicing in the Western World.

The idea of promoting the concept of a cost effective Islamic Health Care System, owning and operating a hospital or hospitals coordinating with other Islamic countries, and providing for them a readily accessible source for exchange of ideas, research, education, technology, equipment, personnel and health care planning needs to be examined closely. Recognizing the trend in this country (US) towards creation of systems for delivery of health care and the broad success that other religious groups have been enjoying, the idea of an Islamic Health System seems not only realistic but pivotal in weaving Islamic values with modern technology and medicine.

BACKGROUND INFORMATION

In order to understand the above concept fully a basic understanding of any hospital system is necessary and closely examining a model of this nature is essential.

What is the definition of a Health System?

Basically it may be defined as a corporate entity that owns, operates and manages a system of delivery of health care with a hospital or hospitals as its operating base.

There are several corporate models depending upon ones resources and needs. These include a parent holding company or a joint venture model.

The essential elements of any of these, from an organizational point of view, are not only management and control, operation accountability to the parent corporation, but also identity and commitment. The latter two elements, though necessary from the point of view of any sound organization, are even more essential for a religious body. Some background information on religious groups, owning and operating hospitals in U.S. and abroad, will not only help in the understanding of such a project, but will also illustrate their capacity to influence through their religious values, beliefs and attitudes of the large population they serve.

There are several religious groups who are serving the health care needs of people in the US. They do so not only by owning and operating hospitals, but they also operate clinics, own nursing homes for the care of the elderly, organize drug rehabilitation programs and run alcoholism clinics. For example, the Adventist Health System which operates currently on a regional basis, is promoting national consolidation. The system would operate 68 acute care hospitals with 9300 beds.

The Adventists, the Baptists, and the Jews are all very active in the delivery of health care and own and operate several health centers. All these religious groups have done great service to the com-

munities they have served and in turn have reaped large benefits in different ways.

Considering the fact that health is the second largest industry in this country, and its budget is only exceeded by that of defense, it is easily understood that a successfully operated health system can reap large economic rewards. It is hard to conceive that these systems would continue to operate and expand if they were incurring financial loss. Besides the financial angle, other equally vital reasons are socio--political. Socially and politically the image of each religious group is enhanced and strengthened in the community. Job opportunities are provided for their qualified respective congregation members who can further their careers within the system through various training opportunities to learn management and other skills. With economic prosperity, there is usually political awareness. Though overtly political fallout from such a system may not be apparent, still it stands to reason that an economically sound community deeply involved in secular health care issues will impact on local political issues. The largest religious sponsored health system in the US is the Catholic Health System.

THE CATHOLIC HEALTH SYSTEM

Catholic Health System is the largest religious model in the US; deeply committed to the church values, and also to delivery of health care. It operates more than 700 hospitals in the US with an aggregate bed capacity of 161,000 providing for 50 million annual patient days.

From its beginning as a single hospital to a well organized national network with global operation, it has gone through distinct periods of growth and development which are as follows:

1. Period of Development
   In the late 19th and early 20th century the first Catholic hospital was started by a group of enthusiastic church members who were inspired and directed by a single member with charismatic qualities of leadership. They worked hard as a team to gain acceptance and financial support from the community where the hospital was to be located.

2. Period of Stability
   In this period which extended from early 20th century to about the 1950's, these hospitals consolidated their position in the community. Operating along traditional and authoritative lines strictly in keeping with the values of the church, required most of the management key administrative positions to be filled by religious clergy.

3. Period of Innovation and Change
   Around 1960 the professional people with new ideas from the outside started to move into management positions and thus there appeared more formalization of the organizational structure.

The socio-economic factors have continued to further direct these changes along the lines of creating mergers with other hospitals, and establishing statewide regional and national networks. A central body has been delegated the task of long-range planning for delivery of cost effective health care and also to provide strategies at the national and international level, complimenting and enhancing the church activities and mission.

After an understanding of the above model, one can proceed to examine the concept and structure of the Islamic Health System.

STRUCTURE AND ORGANIZATION

The management of any health system involves decisions concerning priorities and resource allocation that are based on the health needs of the population to be served.

Considering the above statement, an Islamic Health System would have to gear its management and operations to not only cater to the local needs, but also to provide valuable service to the Muslim countries. Sharing of expertise and other human and financial resources, fulfilling educational and

research needs, and other activities are all complimentary to the interest of Islam.

The functional areas of expertise of the Islamic Health System are identified as follows:

1. Master Planning
   a. Local
      At the local level strategic planning will work towards analyzing all the environmental factors impacting on the growth and operation of the health system, eg. local regulations and laws, assesment of community needs and identification of resources to develop a set of alternative plan of action for the future.
   b. International
      In collaboration with responsible bodies, it will develop a model which will pinpoint long range planning concerns applicable to the area and provide reliable and practical alternatives and resources to come out as an effective policy for the future.

2. Building and Development
   Through its team of experts with an extensive background of health industry, it will oversee the current and future needs in building and construction. This will include architecture, all aspects of engineering - structural, mechanical, electrical, environmental building and interior design and construction management both locally and abroad.
   Concurrently all the needs of the developing Islamic Countries are contracted out to mostly. American Companies providing "turn-key" service for very handsome financial rewards. The Islamic Health System is expected to capture part of this market. This is an important goal and a challenge for the health system, since it will provide for them the necessary opportunity to establish credibility with Muslim Countries in need of such services.
3. Equipment and Supplies
   As a regional purchasing body, it will provide a cost effective delivery system for all participants' needs in this area. Many Health Systems in the US are looking at centralized purchasing to cut costs. In fact, these systems are beginning to use a computerized approach where any of the participants' needs are fed into the computer which not only identifies the price, make and availability of any given object, but also analyzes the need of all equipment. Considering the amount of equipment being purchased in Muslim countries, bulk purchases through a central body would produce substantial savings. All aspects of purchasing market analysis, equipment delivery and in-service education will be provided.
4. Manpower Recruitment and Retention
   Islamic Health Systems will play a major role in this regard. Being based in the US which will continue to maintain the lead in technology, one of the main objectives of the Health System would be to identify the Key Personnel who will lay down the ground work for hiring of manpower locally and abroad with full analysis of the amount and type of needs. This will be further discussed under educational options.
5. Hospital and Medical Management
   Simiraly, management teams with wide expertise and background in health care will provide the backbone of the system. These experts will cover all aspects of operations of the hospital and health system both locally and abroad.

The backbone of any health system is a hospital. However, to obtain or purchase a hospital is a major undertaking requiring major capital outlay. Therefore at the outset of any such endeavor

resource identification is necessary.

RESOURCES

A. National

1. Financial

Since this idea has surfaced only recently the estimate of financial resources may not be accurate. However, organized efforts by the IAMA along this direction have been encouraging. The local Physician community seems keenly interested in picking up the challenge. As the project is being publicized, more and more physicians are expected to make their capital investment. The subsequent step would be sale of common stock or share to the Muslim community at large. This is a financially profitable venture and therefore return on the investment is expected.

2. Manpower

Manpower resources nationally are abundant. There is a highly talented pool of health care professionals which could be easily mobilized to form the core management group. These committed individuals already sense the need for such a challenge and activity.

B. International Resources

1. Private sector

It is hoped that the idea would find acceptance in the private sector, if not from an investment point, then at least donations and charity. Sale of common stock, with guarantees of return income, could raise substantial funds.

a. Islamic Investment Banks offering interest free loans.

b. Governmental aid or purchase of stock will certainly bolster the effort immensely.

CONCLUSION

Although the health systems main objective remains the same as that of any other health system — that is to provide cost effective quality health care, enhancing the image of Islam, at best, in the Western World also remains a priority.

The full impact of its value locally and abroad cannot be under-estimated. With sound planning, a system of provider units, locally linked with development construction and management of new provider units locally and in other Muslim countries, can provide a very clear advantage in many respects to all participating members.

Such a system could then conceivably accomplish the following:

1. It will be tailored to serve specific needs of the participating members.
2. Extension of the technological capability from one institution to another or to put it another way, a sharing of expertise and other human, financial, and technical resources. Training of management personnel and creating a readily available pool of qualified health care personnel, including management, nursing, physician and technicians.
3. A more responsible conservation and administration of assets.
4. Economies of scale in areas such as centralized purchasing of equipment, health man power, drugs etc. This alone would lead to an enormous saving of financial resources for all participating members.
5. Coordinating and planning health needs of participating members. This will include data analysis and projection for future health needs and hospitals, hospital construction and operation and operation of clinics.
6. Educational opportunities and research challenges.

7. Role of such a System in Daawa.
8. Last but not least is the economic reason. In the US, health is the second largest industry. Government budget for health schemes is only exceeded by that of the Defense budget. The economic incentives have already begun to attract investors and large insurance companies which are buying up hospitals purely for the reason of financial profit. With capable systems of delivery, of health care and management at their disposal, they are indeed reaping large profits. Therefore, it appears that the current market conditions, both locally in the US and abroad in the Muslim countries, are most favorable for survival and growth of the Islamic Health System.

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WHAT IS AN ISLAMIC MEDICAL TEXT BOOK?

Dr. Ahmed El-Kadi
U.S.A.

Islamization of the sciences is to formulate and present the various sciences in a way reflecting and enforcing Islamic values and teachings. This applies to natural sciences, social sciences, health sciences and any other branch of knowledge. The interest in this subject is relatively new, and many Muslims scientists are not familiar with the idea and may not be able to imagine how such a goal can be achieved. It is, therefore, necessary to clarify the idea and to establish criteria and requirements for the Islamization process.

In the area of health sciences, it is essential to define first what Islamic Medicine is. This was the subject of a previous study presented at the first International Conference on Islamic Medicine. This paper is dealing with the Islamic Medical text book, i.e. what is it, and what does it contain.

First of all it will not carry the title "Islamic Medical Text Book". It will carry the title of the particular speciality to be presented, such as text book of physiology, text book of pathology, text book of medicine, or text book of surgery and so on. It will, however, present certain features and fulfill certain criteria which will qualify it as Islamic although it may not necessarily be labled as such. The main purpose of this paper is to define these features and criteria of such a text book.

The following standard features and criteria are to be followed by all authors and co-authors.

1) The historical background and development of the particular field of knowledge is reviewed, reflecting the contributions of Muslim scholars, if any. This part should not be presented just as a heritage to be proud of and pleased with. It should rather be presented as an honest and critical analysis which will broaden the horizon of the student and give him or her a better weight in the matters to be studied. It will also refer the student to some of the classical texts which usually contain a wealth of wisdom related to the particular field of knowledge. These classical texts should of course be reproduced and made available to our libraries.

2) The various scientific facts are presented as the manifestation of the creation and knowledge of God. There are hundreds and thousands of scientific facts to be taught to the student of science, particularly the student of health sciences. These facts may be physiologic functions, biologic entities, physical and chemical properties or reactions and the like. Contemporary scientific texts present these facts without giving any credit to any creating power. Consequently, a scientist indulged in his scientific studies and not having the fortune of extra-curricular spiritual education will grow more and more agnostic. On the other hand, however, if credit is given to God for all the marvelous elements of creation the scientist will grow closer and closer to God. Living with the wonderful signs of creation day in and day out, the scientists' faith will become increasingly solid and unshaken.

3) The divine laws, usually referred to as natural laws, to which all created matter is subjected, and which govern the function and behaviour of the different organ systems and the different categories of matter, are looked for, recognised and stressed. There are fascinating similarities between the functions and behaviour of various organ systems or various categories of matter. To give a few simple and obvious examples, observe the flying of a bird and the flying of an aeroplane, the flow of water in the river and the flow of blood in the vascular system, the motion of particles within an atom and the motion of planets within the solar system. There are also similarities between many physical and psychological responses within a human being. These and many others are not just the result of coincidence. These similarities are one of many evidences proving that all organ systems and all categories of matter are created by one and the same Creator and that they all follow the same laws established by the one

Creator. I call these "the fingerprints of the Creator". He left them everywhere for us to find and recognize. By realizing this fact and recognizing these laws the concept of oneness of Creation becomes obvious. Besides, the horizon of the scientist is broadened to have better understanding of the function of the various systems. The scientist thus becomes a better believer and a better scientist as well.

4) The most up-to-date opinions, approaches and techniques are presented together with comparative evaluation of the available ones of ancient scholars, particularly the Muslim ones. This way, whatever wisdom is contained in the old studies is not missed, and whatever error therein is not repeated.

5) All opinions, approaches and techniques are reviewed in light of Islamic philosophy and attitude in general, and in light of specific Islamic injunctions if applicable. Even in areas where it appears tha Islam has nothing specific to say, the presented material still has to comply with general Islamic criteria of being ethical, excellent, oriented, comprehensive, universal and scientific.

6) Islamic standards of ethics, moral values and logic are the only standards upon which to base acceptance or rejection of any opinion, approach, or techniques.

7) A mission oriented attitude is adopted in presenting the various aspects of knowledge. This implies that all information presented is complemented with some idea about its practical application or at least the potential for its practical application.

Some of the above criteria are more applicable to basic sciences while others are more applicable to clinical sciences. However, various degrees of all criteria will be applicable to all sciences.

Any text book manifesting the above listed features would qualify as an Islamic text book although the word "Islamic" may not appear in the title or anywhere in the book. It goes without saying that the authors of such books must possess adequate knowledge of Islamic philosophy and teaching in addition to their professional expertise with a good deal of common sense and understanding.

EL-HAWY AND EL-QANOON REVIEWED ☆ ON THE BACKGROUND OF RECENT THEORIES.

Prof. M.E. Fadly

EGYPT

ABSTRACT.

This paper reviews the methodology of medical writings of "Rhazes" through his successive books especially "el-Hawy" and of "Avicenna" in his el-Qanoon. It also discusses the relation of these writings to those of the Greek Pioneers. The paper stresses the educational trends of Rhazes that can be considered early pointers to the sound educational trends recommended by recent studies e.g. integrated approach and learning by problem solving.

These early Arabic contributions are reviewed on the background of the recently introduced theories of medical education.

☆ As the English translation of the tull text could not be made available, we are publishing here the abstract tract only.
Editors.

PART ELEVEN

PRESENT SITUATION AND FUTURE PROSPECTS OF ISLAMIC MEDICINE

Part Eleven: *Present Situation and Future Prospects of Islamic Medicine.*

CHAPTER ONE

(Papers Presented).

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4. THE FUTURE OF ISLAMIC MEDICINE.
   Prof. Ihsan Dogramaci.
5. CONTRIBUTIONS OF ISLAMIC MEDICINE: ITS PRESENT STATUS AND FUTURE PROSPECTS.
   Dr. Yousuf Ahmed.
6. PRESENT STATUS AND FUTURE PROSPECTS OF THE ISLAMIC MEDICINE.
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7. PRESENT STATUS AND FUTURE PROSPECTS OF ISLAMIC MEDICINE.
   Dr. Gholam Mohammed Karim.
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REPORT ON THE SECOND SESSION

The session was conducted from 11.30 a.m. to 1.30 p.m., by H.E. Dr. Abdul Rahman Al-Awadi, Minister of Public Health, Kuwait, as chairman and Dr. Ahmed Ragai El-Gindy as co-chairman. Mr. Fouad Tawfiq acted as moderator. This important session discussed "THE PRESENT SITUATION AND FUTURE PROSPECTS OF ISLAMIC MEDICINE". Six eminent scientists and professors presented their papers, on which one commentator gave his comments. The general discussion was allowed and many delegates expressed their learned views. The chairman also gave his remarks. Then the session ended.

Prof. Ihsan Dogramaci could not attend the Conference, but as per policy his paper is published in the concerned chapter.

Editors.

OPENING REMARKS OF THE CHAIRMAN

H.E. Dr. Abdul Rahman Al-Awadi

We commence this seminar, and you know that this seminar is concerned with the present status and future prospects of Islamic medicine. By any means, this seminar requires that we take a stand and look at the future of it with patience and try to device the means and see how we can make it a success. I request that we always follow the same principle till we achieve our required goal, which is based on our true religion, trusting the Almighty Allah. We are confident that with His help, we will achieve the accomplishment of this task and we pray for the success of Islam and every Muslim, who follows that.

DEVELOPMENT AND SCIENTIFIC RESEARCH ARE THE MOST URGENT NEED OF ISLAM

Dr. Ibrahim Gameel Badran

EGYPT

I start my speech in the name of God, the one and only God, Who said in His Book, Holy Quran:

FEAR HIM WHO HAST PROVIDED THEE WITH KNOWLEDGE.

When I was asked to specify a topic for my contribution I deemed it God-fearing to talk only about what I know and what might be of use to the Islamic Nations.

The main theme of this conference is Islamic medicine. However, health is defined as a state of psychological, mental and social equilibrium. Thus, it is part and parcel of the individual's overall condition that qualifies him to lead a prosperous and productive life proportionate with the life style of the age. Therefore, the topic I have decided on is in the order of the day, namely, the scientific research and the role it plays in development. Our ultimate objective is the right citizen in the right society.

Social and economic development, especially in the developing world where we belong, tops the list of problems and constitutes a phenomenon that baffles planners and thinkers because of the various intellectual and ideological allegiances of the developing countries. Some of these countries have aligned with totaliarianism and communism; others have adopted the methods of free capitalism; still others have been absorbed in a maze of new systems in a bid to hit upon the right track and have thus been drive into dual economy plagued by wide class differences and characterised by the co-existence of very high and very low life styles in the same community. In such a community, people living in squalid conditions would be dismayed by provocative aspects of greed and prodigality.

This state of affairs has resulted in a situation where many parts of our Islamic World must find a way out to safety and security.

An examination of the problems besetting our developing countries, whether rich or poor, would reveal three interacting factors in either case. In the case of poor countries these factors are hunger, un-employment, and emigration. In rich countries there are affluence, lavish consumption and agitation.

In the first set of factors, the problems can be analysed along the following lines:

Hunger: The danger of hunger looms when the rate of population growth exceeds the rate of food production. This will be phenomenal in world economy in the foreseeable future when one day, nearer than we would like to think, money will fail to obtain our needs of food. In future wars, starving out the enemy will be the basic weapon in the hands of those in control of foodstuffs, and it may well prove to be much more lethal than conventional or even atomic weapons.

Unemployment: This may be direct and overt or indirect and covert un-employment including over-staffing with little productivity which constitutes one of the major ailments of the developing world. There is also the problem of unplanned expansion in education without linking it to a development plan. In our present age, education is not a luxury or a source of self-complacence. Rather, it is an essential and a pragmatic means of earning one's living through the acquisition of skills and abilities required by the community for its welfare. Otherwise, education would be a bad investment.

Emigration: It is a serious phenomenon identified in two domains:

A. *From rural to Urban areas:* The village that loses its population to the city is usually characterised by scarcity of job opportunities and poor living conditions. Therefore, the villager would make for the city in the hope of securing a job and enjoying a better standard of living. But in most cases these hopes thin out especially when emigration goes beyond a certain limit rendering the city unable to accommodate large numbers of immigrants.

B. *Brain drain:* This happens when highly skilled and qualified people emigrate to other countries where success is achievable, self-assertion is possible and jobs are available. A manpower-exporting country may benefit from emigration in the form of remittances sent back home by the expatriates. But when it goes beyond a certain point, emigration must be entered on the debit side of this country's final infrastructure balance sheet.

These three factors; hunger, un-employment and emigration must reflect upon the individuals activating militancy in the society breeding political unrest and social pressure.

In the second set of factors, the problems can be analysed along the following lines:

Affluence: *Unless a rich society is well fortified by education and values, its affluent individuals may drift into all kinds of life styles some of which could be acceptable, but again some would predictably be obnoxious.*

Lavish consumption: This obtains when man uses himself up in pursuit of the so-called modern living. Thus he ends up physically wane and mentally dependent on others getting into the surfeit syndrome. It also obtains when a country unwisely converts its potential resources into un-replenishable commodities, whereas the real challenge of the age is to convert the extracted underground resources into perennial sources of revenue.

Agitation: In a society of affluence and overconsumption, individuals are prone to turning away from what is available in their avid pursuit of what is prohibited. External factors then begin to bite deep into the internal structure of the society shattering contentment and creating mental agitation and disturbance.

Now, agitation in a society would engender rebellions giving rise to suppression and conflict between the ruling authorities and a large section of the young and privileged population. In this respect it is worth noting that individual as well as collective cases of suicide, especially among teen-agers, are phenomenal.

In a report about psychiatry in the U.S.A., it has been established that suicide rates decrease with the increase of faith and rise when faith is on the decline.

Therefore, the organized scientific approach and the well oriented applied research work covering faith, thought and behaviour are the ideal answers to the problems of development.

Development has been defined as growth in revenues, abundance of life amenities and greater ability on the part of society to produce a given amount of commodities and services, but this definition must be stretched out to include a process resulting into a comprehensive development of the social and economic structure of the whole population. This, however, is only part of truth. There are other criteria that should be taken into consideration, so that development may not be confined to more possession of funds. The main issue for those entrusted with safe-guarding the interests of their people has always been to identify the appropriate frame work of their country's progress and calculated growth. Any mis-

use of a nation's abilities and potential material, manpower, or human resources will inevitably lead to social disorders with grave consequences that reflect in the first place on the youths who are highly sensitive to any imbalance as it may jeopardise their aspirations for a better and happier future. The tendency of our developing world, rich or poor, to imitate the developed countries, whether Eastern or Western, is quite risky. Indulging in this imitation may result in social disintegration and political unrest. Therefore, we should work hand in hand to find a way to progress that could guarantee close links with our pure and noble origin, interaction with the developed world, and condensed experiences to make up for the lost time. In our efforts to be on our feet again we should steer a middle course between shunning other civilizations and melting away into them.

Ladies and Gentlemen!

1. We are living at a time when science has become the only means of making the right decision especially if based on experience with a foresight of the possible results and ability to envisage the outcome of application. The fact to be underscored is that progress is contingent upon the individual's capability to assimilate knowledge, add to it of his own invention, and use it for the welfare of mankind.
2. Since the modern definition of politics is that, it is the profession of coping with the problems of life and solving them in a scientific way, science has therefore become a political commodity through which progress is sold and abilities are controlled.
3. Imperialism has developed its methods from military subjugation by launching wars, economic subjugation by extending conditioned loans, and moral subjugation by exporting revolutions, to the subtler methods of invading minds and overwhelming people by scientific feats and technological innovations.
4. Looking at the world around us, we see various models. Some countries, like Japan, Korea, India and Brazil have realised their progress through science and thus crossed the gap of underdevelopment and joined the club of developed nations. Other countries are still trying with slackening steps on the road to progress. Such countries might get lost along the way and run into political upheavals. A worse model is those countries which leave things as they are without any attempt at change. Such countries are on their way down and out. The world has no mercy for them. It may help for a while, but it will soon turn its back on those who do not help themselves or think of their future.

Our real assets, therefore, are our minds and intelligence, our ability to invent and create, the extent to which we can grow and develop and at the same time adhere to our values and faith. These are the weapons for the up-coming battle. Are we really prepared for it?

Genuine development must begin with the basic resources of the society:

— Natural resources: These have to be explored, extracted, invested and maintained.

— Human resources: These have to be educated, trained and employed.

— Moral resources: Represented by values, religion and national loyalty.

Past experiences have shown that development is a calculated process that cannot be imposed but has to be embraced. It is not the kind of process that swings into action overnight, but rather a gradual process of upgrading and evolving and a sustained effort that proceeds slowly in order to keep pace with the social circumstances.

Development emanates from good education, flourishes in an atmosphere of political stability, faith and values, and ultimately aims at mass production. Its permanent occupation is to find better methods

of production through science and technology that may combat un-employment by providing work opportunities to the largest possible number of people. This reminds me of Ghandi when he said, "We do need production by masses and not mass production".

Changes made by development must affect the roots of the society in the first place as it has been established that viable improvement must begin at the populous rural areas where development plans should be geared to the fundamentals of land reclamation and upgrading crops both quantitatively and qualitatively which enhances food security. Fundamental development plans should also encourage cottage and intermediate industries which give the opportunity for the emergence of outstanding technicians with long experience, creative abilities and great skills who can later reinforce advanced technologies.

STAGES OF DEVELOPMENT:

1. *Need:*
   The drive behind this first stage is the economic need and political conviction of that need. It is a political duty to make sure that this first stage does not take long.
2. *From Need to Objectives:*
   The stage of determining the objectives of development starts when belief in the need to develop the country is well established. The objectives themselves should be ambitiously geared towards fulfilling the consumer's hopes so that these hopes may be sustained giving momentum to creative abilities.
3. *From Objectives to Criteria:*
   Determining the criteria, trends, possibilities, circumstances and methods of development is the task of scientists and thinkers.
4. *From Criteria to Planning:*
   It is here that the government steps in when the objectives and criteria are turned into a definite plan. This plan should lay down the appropriate means of implementation, describe the features of the envisaged goals and determine the alternatives in every field from which choice can be made.
5. *From Planning to Programming:*
   This stage entails the following tasks: —
   a. Describing a problem in detail and laying down a sub-plan for each field taking into account the political, social and economic constraints.
   b. Determining relations among the various institutions.
   c. Evaluating local facilities, importing the required quota and making it complaint with the existing opportunities.
   d. Setting training programs and tailoring them to the needs of the project in hand.
   e. Setting a system of financial and moral incentives.
   f. Integrating the various development programs so that they may be closely linked both internally and externally in consonance with the market needs and national production. This role should be undertaken by the institutions in collaboration with chambers of commerce, professional associations and workers' unions.
6. *Factors of Success:*
   a. Management and production control.
   b. Information system. Handling information has become such an important issue in our modern time that there are now wired nations enabling the decision maker in a certain country to be advised about the development and levels of information in the other countries connected to the same network.

c. Evaluating the economic, social and political returns of the project. The way of calculating the returns in each of these field differs in accordance with the nature of the field itself. But these different calculations are essential for the policy makers to control the trend of development and the dynamics of progress as the growth of the community should be governed by certain guidelines.

7. *Beneficiaries of the Return:*

Every one should have his relative share in the returns of a project. To see that this happens, is the responsibility of the political and economic leadership. Development, after all, is not only an economic issue; it is a social issue in the first place. Its ultimate goal is not only more income but more comfort for the citizen as well. If a balance is not carefully struck between the economic and social returns of development, the consequences could be grave.

DEVELOPMENT, SOCIETY AND TECHNOLOGY:

Technology is defined as the process of putting pure science into the service of makind through finding practical applications of theories born in laboratories. Thus, a theory eventually becomes a commodity or a service that can further be improved, through research and experiment, by using better materials, easier and cheaper methods of production, under the control of organised management. We do not challenge this definition, but we have to add that technology should basically be linked with the needs of society and keep pace with its various stages of growth.

The relationship between development, science and society has opened up new horizons for study. Consquently, several new schools of thought and specializations have emerged.

Examples of these are:

* Social System of Science and Technology
* Technology and Social Reforms.
* Sociology of Science.
* Sociology of Technology.

All these specializations are concerned with using science for development and creating the right atmosphere for scientific and biological creativity. They consolidate co-operation between scientists, producers and consumers. They also open up new horizons for scientific research to gauge the material and cultural effects of science on society, determine the social and cultural values for the development of technology, evaluate and control the impact of technological advance on the social and religious values of the community, and prescribe the safe and feasible doses of developing behavioural trends in the village community. Before proceeding to elaborate the above, I deem it necessary to mention the following three facts:

1. Land resources are depletable except in the area of agriculture if it is well exploited.
2. The human environment is doomed to be polluted with the advance of science, especially if status quo is maintained.
3. In the long run, man will reject inhuman progress.

An anlysis of the national revenue in the area will reveal that over 80% of this revenue depends on sources that cannot be described as permanent such as oil, ports and water-ways, expatriate's remittances, and tourism. Permanent sources of production, such as agriculture and industrial production. This quest can be realized in the following ways:

1. Horizontal and vertical expansion of the arable land by increasing the productivity of existing areas and continually adding to it new reclaimed areas.

2. Increasing the productivity of available capital through fresh investments.
3. Upguarding the productivity of the currently employed manpower and continually adding to it.
4. Improving the efficiency of the organizational and managerial staff. Managerial efficiency should include group control without stifling competitiveness.
5. Associating success with national pride and failure with shame and misery.

The issue, then is a social and political one in the first place. Its productive and economic impacts are the basis of progress.

The question now is: How we use technological advance in development plans?

1. Developing manpower productivity by raising the standard of their performance through education, training and encouraging creativity. (The technological revolution in Japan started in 1929 by developing the primary school).
2. Phasal choice of appropriate projects beginning with available resources.
3. Sustained improvement of mechanization through research and experiment, developing management, and trying to be competitive at world level.
4. Greater ability to improve existing products and develop new ones and developing services with a view to increasing returns as a means of creating the incentive for the change to the better. In other words, improving the production as a means of increasing the workers' income directly and genuinely and not as a political means of appeasement.
5. Improving work environment.
6. Changing life style through better production.

Another question: How can we stimulate research and increase the resulting benefits?

1. Adhering to the national objectives.
2. Being vigorous in demanding an excellent standard for scientific researches and economic competition.
3. A minimum of contraints on scientific researchers.
4. Securing psychological and material stability for them.
5. Making sure that results are positive, socially, phasally and politically.

A number of indisputable facts are now in order. It has been the fortune of the Islamic World that its resources are staggered between its various component countries rendering co-operation between them a matter of pure necessity and survival.

If it was possible for a group of Western European countries to take a long leap from an era of conflicts in the 19th century and first half of the 20th century to the era of the European Economic Community (EEC) and European parliament, we might just as well do the same in the name of religion, science and the future. If such a thing could be achieved the Islamic World may evolve as a great power in International politics at a time when only big entities can hope to be safe and secure.

The question now is:

What is the stand of Arab and Islamic countries with regard to the stage of comprehensive development? They have extensive lands, energy resources bestowed upon them by God, abundant labour and bright minds. What more do we need to embark on a developmental unity that does not hinge upon certain individuals or politicians, but depends on enlightened minds, strong arms and closely related facilities exploited for a better life for our future generations.

We have no alternative but to accept this awesome challenge if we are not to live as slaves on our own land and if we are not to remain captives of a past glorious history from which we have not even learned our lesson. In accepting this challenge our weapons are science, confidence and adherence to a well defined target.

Finally, let us review our gains from scientific and technological research work in the field of medical sciences.

In public health, the death rate of children has plummeted to less than ten in a thousandth; deaths caused by heart diseases are 25% less than before and those caused by cerebral haemorrhage are down by 40%.

Concerning cancer, it is considered as the most promising of incurable diseases in terms of research results. The life chance in over 70% of the cancer cases has increased by five years, whereas 40% of the cases are now considered curable. Cases of lukemia among children have been under complete control and are now curable.

With the use of Interform and the D.N.A. Recombinant techniques there will soon be a series of breakthroughs for curing a wide range of diseases.

The studies conducted in the field of genetic engineering have led to great improvement in the production of vaccines and hormones and big reductions in their prices. Measles has almost been wiped out with a high percentage of 97%. The horror caused by Polio, Diphteria and Titanus is over and cases of parotid gland have decreased by 56%. Viruses causing urinal diabetes in children have been detected and identified.

Modern technological equipments have been used in diagnosis and remedy such as the laser in surgery and curing ophthalmia, the use of radiology, sonar waves and programmed rays as well as the computer in probing the inner diseased organs of the human body. All these blessings have been made possible thanks to scientific research and the great progress that has enhanced medical education and linked it to the needs of the community and the requirements of man's safety.

THE FUTURE OF ISLAMIC MEDICINE

Prof. Ihsan Dogramaci
TURKEY

Through a study of the history of Islamic Medicine it becomes evident that it was at least a thousand years ahead of its times. In Baghdad, Cairo and Cordoba, when London and Paris were still relatively untouched by civilization, there were hospitals staffed by male and female attendants and patients of both sexes were served by these hospitals. In less than a century after the death of the Prophet Mohammed, (ﷺ) the Moslems proved their originality and productivity as scientific innovators. As early as the 9th century, Islamic medicine had set aside talismans and theology and had developed hospitals with wards. The innovations adopted by the Baghdad General Hospital at that time attest to the fact that they were avant garde. Amazingly, near the wards of patients suffering from fever they had devised fountains to cool the air. The insane were treated with kindness — which, even to this day in most parts of the world is a rare occurence. At night soft music and story-telling eased the pain of the restless. Rich and poor alike received equal care. Upon release from the hospital the destitute were given 5 gold pieces to assist them during their recovery.

Libraries and pharmacies were attached to these medical centers which were fully staffed by interns, externs and nurses. The disabled, the disadvantaged and those living in inaccessible areas were served by mobile clinics. With the current world-wide interest in primary health care, these early mobile clinics are especially noteworthy.

Most people tend to think that quality control of drugs is a recent innovation, but in Islamic medicine there were regulations to control the quality of medicine. The pharmacists were licensed professional and were required to prepare the medicine according to the physicians' prescriptions. Through legal measures the doctors were restricted from either owning or holding stock in pharmacies-no conflict of interest was permitted.

Medieval Europe was enlightened with knowledge from the east; Persian and Arab knowledge in fields such as medicine, anesthesia, bacteriology, hospitals, surgery, pharmacy, opthalmology, psychosomatic diseases, psychotherapy and medical education was renowned.

Islam, since its beginning, was in contact with the Byzantine civilizations. The Arabs were blessed with three characteristics of great importance: Intelligence, activity and spirit. First of all they possessed a sharp creative intelligence which they used to seek beneficial results; second, they were spiritually gifted through their religious fervor and finally, they had a natural love of the beautiful which, when combined with imaginative and expressive power, led them to highly appreciate both the intellectual and the spiritual.

After such an illustrious past, my thoughts for the future would be as follows:

There should be at least one or two centers of excellence in the Islamic region, perhaps one in an Arab country, probably Kuwait, and a second one in a non-Arab country, Pakistan or Turkey, for example. In those two centers basic research of the highest quality should be undertaken as well as community-oriented research to realize the application of the results of the basic research in the shortest time possible. It is necessary to set an example for the many developing countries on how the health situation of the population can be improved as quickly as possible. I believe that with good planning and application wonders can be achieved.

Efforts in these two areas should be published in several International languages and widely dis-

tributed throughout the world. These Islamic centers should have strong ties with other centers in the Islamic World. The activities of these two main centers should include exchange programs covering many aspects of health and medicine at the student, teacher and researcher level. Such programs will be a great help in boosting the standards of medicine and health in many parts of the Islamic world. In addition, these two centers, as well as others in Islamic countries should establish common seminars, symposia and workshops to exchange views and to benefit from advances in technology in the more developed world. We should encourage more and more regional centers of international organizations to be established in Islamic countries by providing them with facilities and benefits that will make the sites as attractive as possible. Such regional centers in the Islamic world would help in developing a climate that would inspire scientific activities in the region.

In addition, close collaboration with International professional associations as well as leading medical centers should be encouraged and strong ties should be established with agencies of the United Nations and especially with the World Health Organization. The fact that Arabic is one of the official languages of the World Health Organization should be utilized to the greatest extent, and teaching courses in Arabic abroad should be encouraged. An *Index Medicus* compiling references of medical periodicals published in Islamic countries and especially those published in the native languages of the respective countries such as Arabic, Indonesian, Persian, Turkish and Urdu should be envisaged.

With the glorious past as mentioned above, contemporary Islamic medicine deserves an equally prestigious position and with all the potentials and resources and especially the initiative taken by the Center of Islamic Medicine created in Kuwait, realization of such as ambitious program in attaining the goal should be possible and feasible.

CONTRIBUTIONS OF ISLAMIC MEDICINE: ITS PRESENT STATUS, AND FUTURE PROSPECTS

Dr. Yusuf Ahmad

PAKISTAN

Medicine, like all other branches of science, is the sum-total of human effort since antiquity, in explaining various phenomenon as observed, their codification through explainable theories at the time of their enunciation, their experimental verification leading to laws for universal application for the advancement of knowledge and for the benefit of human race. Such laws stand as long as the new, more refined and more plausible evidence replaces them with better laws. In this respect, science has not remained a monopoly of any country, continent, nation or race. Scientists have mastered and continuously improved upon the contributions made by their predecessors, and the greatness of the contributions of scientists made at a given time in history should be judged by what was globally known at that time, and to what heights did the great minds then take the torch of knowledge in a particular field. So the great contributions the Islamic Medicine (or the advances made in medical sciences in the Muslim era) should also be viewed in this context.

Medicine comprises the knowledge of human (or animal) body in its state of health and disease; the causes of disease, and when afflicted how can it be restored to its normal or workable functioning. With this pragmatic approach the science of medicine is as old as the human race, and is the mother of all sciences, and the contributions made by Muslim scholars and scientists in this field are, by any standard, no mean achievements.

The Islamic medicine started with the advent of the Prophet Mohammed (ﷺ) in the first quarter of the seventh century A.D. He laid great stress on cleanliness, prevention, moderation, abstinence, and nutrition through natural foods and herbs. The medicine of the Holy Prophet (ﷺ) principles enunciated by him regarding preservation of health can be gleaned from the collections of Traditions[6].

A look at the maps of the "Atlas of Islamic History" shows a unique phenomenon. So dominant was the influence of Islam that within the first century the whole of Arabian penninsula, Sasimid Empire (Iran upto Balkh), Byzantine Empire (Syria, Egypt, North Africa) came under its control. From 661 A.D. Ummayed dynasty ruled this area with capital having been transferred to Damascus. Muslims conquered whole of North Africa, Sind and Turkistan. Spain was made way into and a foothold of Muslims was established in Sicily.

In 700 A.D. (or 2nd Century Hijra) the 'Abbasids' displaced the Ummayads, the first Caliph was Abu al-Abbas. The capital was shifted to Baghdad from Damascus. The Abbasids took as much interest in academic pursuits as the Ummayads took in Military matters. The cosmopolitan outlook of the 'Abbasids', their fraternal attitude towards other nations and their patronage of even the non-Muslim scholars raised the 'Abbasid' Caliphate to the highest pedestal in the world of learning, with the Caliphs at Baghdad attaining international reputation as the patrons of wisdom and knowledge. By whatever means possible, e.g. spoils of conquests, treaties and special purchases, books from India, Syria and Greece were acquired and their translations effected. The nobles and the rich of the empire also participated in this movement and Arabic became the most respectable, and effective language of the age.

Orientalists tend to regard the century, 750-850 A.D., as the period during which toleration towards all kinds of disciplines prevailed, and from the stand point of the patronage of knowledge, fervour with which intellectual disiplines were sought, and the importance given to academic pursuits, it has been ranked as the equal of the golden age of Greece. But in fact, this period was the period of translations, during which considerable work was done, but one which was taken from other civilizations and for which generous compensation was given. The patronage extended to scholars of other races is such

that it remains unsurpassed in the annals of man.

The century closed with the Abbasids in firm control, under the celebrated Caliph Harun-al-Rashid, of a tremendous and prosperous empire. Translators from Greek as well as from Pahlavi and Sanskrit, furnished basic material for later Muslim achievements, already foreshadowed by competent works on genealogy, Islamic traditions (Hadith), jurisprudence, grammar, astronomy, medicine, and alchemy. This international Muslim culture, in Arabic but not all by Arabs, reflected increasing Persian and others participating in the Abbasid state and society.

In the 3rd Islamic century Arab culture prospered amazingly, completely out-stripping all rivals. Translations from Greek was accelerated and broadened, including Aristotle, Hippocrates, Galen, Ptolemy, Euclid and others. Most of the translators and some of the original thinkers were Nestorian Christians, Jews, or pagans who flourished in the tolerant court at Baghdad, but outstanding contributions came from Muslims, usually from Persia. Important works in Arabic included geometry, algebra (al-Khwarizmi), trigonometry, astronomy (al-Battani), geography, mineralogy, chemistry, optics, botany and medicine (al-Razi) among the sciences and history (al-Yaqubi), biography, philosophy (al-Kindi), physiology and music in the humanities.

The Muslims have always been generous in acknowledging what they learnt from the predecessors, Romans and Greeks. So much so that Arabic, Greco-arabic or Islamic Tibb in many parts of world is still known as Tibb-e-Unani or Greek medicine.

Kingston,[5] a celebrated authority on the history and philosophy of medicine observes:

> *"For a long time it was assumed that the Arabs were the intellectual slaves and followers of the Greeks and far from contributing to the progress of medicine, led to its fossilization. But this assumption is basically erroneous. The actual situation was that at the time of their appearance on the horizon, Greek medicine had virtually disappeared and everywhere reigned supreme talismans and magic remedies. At this critical juncture the Arabs not only performed the thanktul task of salvaging the Greek learning from consignment to oblivion, but also towards making them appealing and amenable to reason. By commenting upon them and also criticising them where necessary, the Arabs created an atmosphere conductive to the study of science in East and West, and by furthering its cause rendered a singular act of kindness to the world. Even if the Arabs only concentrated on salvaging the Greek treasuries of knowledge, this would not have been of less importance. But they added so much to investigation and addition that we should feel grateful to them".*

Abu Bakr Mohammad Ibn Zakariya al-Razi (865-925 A.D.) was undoubtedly one of the greatest physicians of all times. He wrote several remarkable manuals of medicines which are characterised by striking originality and brilliance. He contributed 200 books over half of which are medical. He practiced medicine for more than 35 years and yet found time to write such monumental works as "Kitab al--Mansuri", the latter comprised ten volumes and dealt with Greek medicine. Razi took 15 years to compile al-Hawi, a comprehensive encyclopaedia in medicine written in 20 volumes. It was one of the nine works which made up the whole library of faculty of medicine of Paris University in 18th Century. He contributed vastly to ophthalmology, obstetrics and gynaecology. His other works deal with common diseases in the East like stones in the kidney and bladder. He wrote a monograph on diseases of the children which is the first known monograph in Paediatrics. His outstanding work "al-Judari wa Hasbah" deals with small-pox and measles. This was the earliest authentic work which differentiated small-pox from the measles. The description and details of these diseases were so comprehensive that modern researchers can hardly add anything to it.

Al-Razi was the first to discover the use of alcohol for medical purposes. Muslims used anaesthesia during operations. He was also the first to give an account of the operation for the extraction of

cataract and describe the pupil reflex to light. The use of animals (apes) for experimentation was first started by al-Razi. The modern concept of the digestive system has also its link to the observation of al-Razi, who first described the presence of sour matter in the stomach.

In this century among the foremost Muslim thinkers were geographer and historian al-Mas'udi, the annalist and exegete al-Tabari, the poet al-Mutanabbi, the encyclopaedist and musicologist al-Farabi, the anthologist al-Isbahani, the bibliographer al-Nadim, the astronomer and mathematician Abu-al-Wafa, the surgeon Abu-al-Qasim, the physician Ali ibn-al-Abbas. This broadly Muslim cultural progress, still expressed chiefly in Arabic, was unquestionably far ahead of any contemporary efforts, as Muslim cities outshone all tenth century (C.E.) rivals.

Islam was at the summit of its scientific and cultural achievement, of which it had a virtual world monopoly in the fifth Hijra century (11 C.E.). Al-Biruni, geographer and scientist, Ibn-Sina (Avicenna), physician and scientist, ibn-al-Haitham, physicist specialising in optics, al-Ghazzali, theologian and philosopher, ibn-Yunus, astronomer and trigonometrician, al-Karkhi, mathematician, ibn-Hazm, theologian, al-Bakri, geographer, and many others produced books in Arabic of the highest quality. Abu Ali Hussain Ibn Abdullah Ibn Hasan Ibn Ali Ibn Sina (Avicenna, 980-1037 A.D.) a renowned author of Qanun-fit-Tibb (Laws of Medicine), known in Europe by the name Canon of Medicine, was in fact the very founder of Greco-Arabic school of medicine and contributed a tremendous amount of new knowledge.

Ibn Sina wrote 8 large medical treatises, one of which deals with the treatment of colic in which he was a specialist. The Canon, with its encyclopaedic content, became the text-book for medical education of Europe and remained so till the 17th century. According to Dr. Osler, "It was a medical bible far longer than any other work". Its popularity can be judged from the fact that it was printed some 50 times during the last half of 15th and 16th centuries. Avicenna's definition of medicine (Tibb), as "knowledge of the state of the human body, in health and decline in health; its purpose is to preserve health and endeavour to restore it when lost", is the most comprehensive definition, and even today remains unsurpassed.

Ibn Sina and Razi, no doubt, were responsible for elevating medicine to its zenith, and the portraits of both of these great men, even today, adorn the grand Hall of the faculty of medicine at the Paris University. It was the greatness of Ibn Sina which prompted Sir William Harvey to observe, "go to the fountainhead, read Aristotle, Galen and Avicenna".

Arabs also discovered certain surgical methods which later became the foundation of modern surgery. Abul-Qasim al-Zahrawi (936 A.D.), a physician to the Caliph Abd-ar-Rahman of Cordova (known in Europe by the name of Abulcasis) wrote a book entitled as "Kitab al-Tasrif" which was primarily devoted to surgery. He also described those instruments which were invented and used by him during his surgical operations. This encyclopaedic work in 30 volumes on surgery is considered to be the greatest advancement in that era.

During the 6th-7th Hijra centuries (12th & 13th C.E.) Muslim intellectual activity continued powerful and important. For two previous centuries Europe would rely on Islam for knowledge and ideas, and Muslim prestige thus stood high in Christendom. In Spain a great, though belated, flowering of culture, surpassing the routine efforts of the eastern Muslims, was led by the philosopher-physicians, ibn-Rushd (Averroes), ibn-Tufayl, and ibn-Zuhr (Avenzoar). The joint importance of Spain and Sicily in transmitting Muslim culture to Europe is symbolized by the geographer al-Idrisi.

The discovery of the circulatory system of blood as known today is attributed to Harvey but the fact is that it was discovered three centuries before Harvey's discovery by Ibn al-Nafis (1200-1288 A.D.) who was a great physiologist of the Middle Ages.

In the 7th Hijra (13th C.E.) internal strifes had started weakening the Muslim predominance in science and culture. However, great minds were not yet scarce. In the natural sciences ibn-al-Baytar, herbalist and botanist, Nasir-al-Din Tusi, mathematician and philosopher, Qutb-al-Din al-Shirazi, Physicist and astronomer; in the social sciences Yaqut, ibn-al-Athir and al-Juwayni, historians and geographers, al-Qazwini, cosmographer and geographer, ibn-Khalikan, biographer, in the humanities Sadi the poet and Jalal-al-Din al-Rumi the philosopher - these men would have graced any age and culture.

During 8th to 12th Hijra Centuries, (14th to 18th C.E.) in the West, Spain was lost, but Eastern Europe, a large part of African Sahara and almost the whole of India were still under Muslim rule, the most prominent amongst which was the Ottoman Empire being controlled from Constantinopole (Istanbul). However, the Europeans were slowly gaining their superiority in every field and were becoming imperialistic powers. The centres of culture and science were now getting established in Europe.

The influence of Arabian medicine went deep into all Europe, but especially into France. The Arab works were the real asset of medicine. Till the 7th century A.D. Muslims' books remained the linchpin of the course of study there.

Roger Bacon was deeply influenced by Ibn al-Haitham and al-Zahrawi.

Islam had lasted as a world force, then, for about a thousand years. No other civilization has lasted that long as a dominant force.

THE PRESENT STATE OF ISLAMIC MEDICINE AND CAUSES OF ITS STAGNATION

Due to internal strifes in the Muslim world, and intrigues of European powers and their imperialist on-slaught, the Muslim political power was lost. It very seriously affected their progressive thinking in science and medicine. Muslim scientists and doctors (tabibs) became secretive, static, and empirical in their approach. Economic interests of the imperialist powers also greatly impeded their progress, and purposely induced in them a sense of inferiority complex, which is persisting even now. The knowledge of science, including medicine, is no nation's monopoly. Any nation which acts on the universal and immutable Quranic injunctions will progress, be it Muslim or otherwise. Deep and careful observations, followed by rational theorisation, supported by repeatable experimentation, with the use of all available help from various other disciplines of sciences and engineering, have put the modern medical science on a superior pedestal . There is always a place for further and more accurate refinement. Four forces governing the universe have very recently been reduced to three.

In view of the awe-inspiring progress which Modern Medicine has made since the turn of this century, a question now is often asked: is there any place left for Tibb-e-Islami (the Traditional Medicine)? Will it not be a retrograde step to use a static, unprogressive system? Will it not jeopardise the health of the people of a country, where it is allowed to be practised? In this space age must we travel in a bullock cart?

It is well established that the present day modern medicine has grown upon the edifice built up by the great Masters of the noble art of healing in the Middle Ages. With the decline of the great Muslim Empire, and rise of European colonial powers, and subsequent lack of state patronage the scientific activity in the Middle East - the cradle of medical science - and other subjugated countries became static, and it slowly shifted westwards. Traditional systems of medicine prevailing in Muslim (and almost all Third World) countries even now use herbs, medicinal plants minerals and products of animal origin as drugs for the treatment of disease. Early in this century Europe did the same. However, since the last few decades Europe has turned more to the synthetic drugs on account of the simplicity and surety of their molecular structures; and as a corollary their easy amenability to testing against artificially produced disease conditions in experimental animals, and also to precise quality control procedures; and above all purely to economically profitable production of such drugs and pharmaceuticals in factories on a large

scale. In this process, the great science of healing, although it has made great scientific and technological progress, however, it has been relegated from a noble human service to a purely materialistic business.

FUTURE PROSPECTS OF ISLAMIC MEDICINE

The fundamental function of any system of medicine should be to cure disease, and to alleviate human suffering, and it should be the aim and duty of every Government to provide such a service for its citizens either at a cost which the person can afford for himself and for his family, or at the expense of the State within its means. There is no doubt that Modern Medicine which includes surgery, has made, tremendous and commendable progress. However, Modern Medicine with all its awe-inspiring progress, has unfortunately lost its human-touch, which it once possessed in common with Tibb-e-Islami (Traditional Medicine) from which it has actually descended. Today the modern medicine, with all its well-equipped hospitals, sophisticated research institutes, beautiful health-care centres, and multi-million and multi-national pharmaceutical industries, has gone out of the reach of the poor common man who needs it most, and it caters well only for the more affluent sections of the society even in the developed countries, and the condition is simply deplorable in the developing and poorly developed countries in the Third World.

As an example from my own country, Pakistan, we consume annually drugs worth 2000 million rupees, and perhaps a much larger amount on health delivery services, and the training of medical personnel. About 300 million are spent on the import of raw materials for drugs alone, and perhaps an equal amount is spent on indirect related imports. All of this huge expenditure can take care of less than 20% of the population, and that too, living mostly in big cities and towns.

WHAT NEEDS TO BE DONE

In the past, great masters have used herbs, medicinal plants, minerals, and animal products to cure disease and to alleviate human suffering. All these products are locally available, or can easily be cultivated right in the villages, where they would be needed. We will not have to spend precious foreign exchange to procure them. Quite a sizeable number of people, even now, voluntarily go to Tabibs (traditional doctors), and many of them do get cured.

The superiority of modern medical science lies in its method of diagnosis of disease, and quantification of its severity. For it has taken help from all sciences, and developed accurate instruments and machines, laboratory tests and techniques, whereas the Tabib still relies on his empirical method of visual examination. It is imperative that the Tabib, if he wishes to rise to the level of modern medical doctor, must also learn and be able to apply all these methods. He must learn Chemistry, Bio-chemistry, Micro-Biology, Pathology etc.. and seek assistance from experts in other sciences, as does the modern medical man. In fact, he must at least study all the subjects which a modern doctor has to study, so that he is in a position to explain the theories of his own system of medicine, or do research to find such explanations. One must remember that Razi and Ibn-Sina also learnt all the known sciences of their day and made use of them in their practice. In fact they were also the masters, and inventors of other sciences of their day.

To the western trained doctors (working in Muslim and Third World countries), I would like to address a question: has anyone of their profession during the last 100 years invented or discovered any drug which is on the market today? Should we always remain dependent for drugs, drug raw materials, instruments, machines, laboratory techniques? In the present state of affairs do they see any hope of providing a total health-cover for their nations? Would things improve by calling Tabibs quacks? Why not sit with them and the scientists in other related disciplines, and plan and do the clinical evaluation of drugs used by Tabibs. In the drugs used by Tabibs we have a "Treasure House" available to us. If, as

a result of such joint efforts of Tabibs, Scientists and Doctors, we can sort out Tibbi drugs which prove to be useful after scientifically planned clinical trials, then we shall be able to provide these drugs to our vast rural population, as these drugs would be available (or could be grown) right in the villages where they would be needed. As a result of this effort we might be contributing new drugs to the world. Later, quality control procedures could be evolved for such drugs, and their standardized production undertaken on a commercial scale whenever needed. More promising drugs (single herbs or compound prescriptions) could then be subjected to closer examination. Their active principles could be isolated, and their structures determined. In this effort everyone would benefit. Our Tabibs will acquire all the modern knowledge. Our Western trained doctors would discover new and indigenously available effective drugs. Our nations would be in a position to plan for a total health-cover in a foreseeable future.

I quote below some of the work we, and others, have done on these lines with success:

1. American N.I.H. delegation which visited China quotes in its 1974 report[8] entitled "Chinese Herbal Medicine".

   "From October, 1970 through the beginning of 1972, the Chungshan Hospital in Canton treated 103 cases of coronary heart disease with Maotung-ching (a Chinese herb, *Ilex pubescens*). The treatment consisted of one course of one month or more, and the analysis of the results is as follows:

   A daily dose of 4 oz. of Mao-tung-ching was given to each patient orally. Most received supplemental muscular injections twice daily, each providing 20 mg of an extract of the drug equivalent to 8 g. of raw material.

   It was found that 101 cases out of 103 showed significant improvement with a total effectiveness of 98.1 percent. Before the treatment, 98 cases suffered agonizing precardial pain. After treatment in 95 of the 98 cases the pain disappeared completely or was reduced significantly, giving a 96.9 percent effectiveness. All cases showed varying degrees of improvement in their heart function after treatment, and in 22 out of 38 cases of hypertension the blood pressure returned to normal or was lowered significantly (57.9 percent). In around 70 percent of the cases, signs of numbness in limbs, headaches and dizziness disappeared after treatment. There were 60 cases with high blood cholesterol level at the beginning of treatment. In 30 of these the cholesterol returned to normal or was markedly lowered after treatment (50 percent). Among 89 cases with abnormal electrocardiogram, 32 cases returned to normal or were much improved (36 percent) and 53 cases showed no change (59.5 percent)".
2. From Ghana Dr. Oku Ampofo,[2] himself a Western medical doctor quotes: "Plant screening has often yielded poor results because traditional healers were not involved; but the advice of good healers ensured at least a 50/50 chance of success". He has demonstrated complete elimination of guinea worm with decoctions of *Combretum mucronatum* roots. The traditional treatments of herpes zoster with *Hoslundia opposita, Piper quincese,* roots of *Picralima nitida,* and most effectively with the root barks of *Balamites aegyptiaceae, Hilleria* and *Securidaca longropedunculata.* Guinea worm and herpes zoster are some of the diseases for which modern medicine has so far no effective remedy. *Myrianthus arboreus* bark has been proved to be useful in the management of diabetes mellitus.
3. To quote a few examples from Pakistan we have found that total root of *Rauwolfia serpentina,* or "Serpajmaline" a complex isolated from it, is more effective in the management of high blood pressure and has little side-effects than reserpine, long use of which develops suicidal tendencies in the patients. Decoction of the leaves of *Moringa oleifera* have profound effect on the management of ischemic heart condition, and the use of *Trigonella foenum-graecum* lowers the blood cholesterol, and blood lipids.

   At present we are working with *Rhazya stricta* and *Fagonia cretica,* which are showing promise

against leukemia and other forms of cancer.

During a 21-day trip in 1978 to the People's Republic of China as a member of Pakistan Government delegation, I had a chance to visit their hospitals, research institutes, medical schools, pharmaceutical industries, and communes. They have achieved almost total national health-cover, and complete self-reliance in this important sector. They have, and they are, raising their traditional medicine to a higher scientific level through such an approach.

CONCLUSIONS

For the success of such an approach it is essential that:

1. In each regional country a glossary of medicinal plants, and well tried prescriptions, should be prepared to collect up-to-date all available literature on this subject, including proper identification of plants, and what has been achieved so far on chemical, clinical and other related fields. It would serve as a compendium for further research.

2. Establish Traditional Drug Corporations, who should take the responsibility of collection (from forests or through cultivation) of authentic herbs and medicinal plants, and then supply such standardized materials for use in traditional medicine wherever needed. For proper taxonomic identification they may also be given the responsibility for the establishment of federal, provincial and regional herbaria.

3. Establish research teams, each consisting of a tabib, a doctor (physician /pharmacologist) and a scientist. A panel of patients (initially from tabib's practice) of a particular disease should be selected. The patiens should be examined with the help of instruments, laboratory /pathological tests, and the disease and its severity well-established and documented. Then authentic traditional drugs (single or prescription) considered to be efficacious for this disease should be administered according to the way the tabib usually uses it on his patients. The course of the treatment should be monitored by this team as a whole, without any bias, and purely on its scientific merit. This exercise can best be done if at a later stage a separate fully equipped Traditional Medical Hospital is established for this purpose, or a certain number of beds are reserved for this purpose in hospitals. The involvement of tabib, in such scientific observations, is very essential. As in the past such researches have been carried out in isolation by scientists or doctors and have mostly failed. On the other hand, tabib's approach has been emprical, and he has lacked the use of modern instruments, and laboratory support for proper diagnosis, and also for scientific monitoring and documentation of his valuable experiences in a more acceptable scientific form. This is also corroborated [2] now by W.H.O.

4. The above approach will scientifically establish the herbs or prescriptions, which are really effective. These could then further be standardized, and where possible made into tablets, aqueous preparations, syrups, or ampoules for injections. Reasonable quality control procedures could also be evolved.

5. Such scientifically established herbs could also be extracted to isolate the pure active components, their structure determined by chemical methods, instrumental analysis, and finally,if necessary, by synthesis.

In the past, we have undertaken such researches without first establishing whether a particular herb is really effective or not, and have achieved little success in discovering new and novel medicinal agents.

Through this approach we shall be making original contributions to the medical profession, instead of always remaining dependent, and on the receiving end only.

6. Teaching standards in traditional tibbia colleges should also be improved. The students should learn most courses of modern medicine in the national language in addition to their courses of traditional

medical subject. Western doctors should extend a cooperative hand in this effort. This at present is very much lacking. If possible western medical schools should also include in their curricula some portion of traditional medicine. Traditional hospitals and colleges should have all the modern equipment, and they should be trained to use them for diagnosis and treatment. Efforts should be made to learn and understand each others' point of view purely on its scientific merit. This will slowly lead to integration of the two systems.

7. Admission to tibbia colleges should be of the students from their respective rural areas, so that after qualification they should have no hesitation to go back and serve their own people. It will be easier as such students would have learnt medicine in the national language, and there will be less tendency of a brain-drain.

8. Preventive and educative measures are more important to achieve a total health-cover. Reasonably qualified tabib should be given special training in the proper sanitation procedures, testing of pure water, and education of people in the use of clean and germ-free water in imparting education on population planning; and in the techniques of immunization against common epidemics. They should then be used in rural areas as providers of primary health-care. A standard kit of safe and effective drugs about 50 each from modern and traditional systems could be provided to such persons, with which they should be able to treat patients of common disease. This would perhaps take care of about 80 percent of cases, the rest 20 percent could then be referred to specialists in the nearby hospitals. The same persons could also be trained in identification and cultivation of medicinal herbs for their local use.

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PRESENT STATE AND FUTURE PROSPECTS OF THE ISLAMIC MEDICINE

Dr. A.R. Hijazi

FRANCE

Up to the end of the 15th century, the Islamic medicine was regarded as the best existing medicine. The Islamic doctors had an international reputation. The hospitals and schools of Islamic medicine were masterpieces from the organizational point of view: for instance the hospital Al-Adhodi in Baghdad, El--Nouri in Damascus and al-Mansouri in Cairo[1]. The westerners did organize their hospitals and schools on the same lines. The treatises on the Islamic medicine were the foundations of teaching in schools in Salerno, Montpellier, Paris and many other schools[2]. Such was the reputation of the Islamic medicine, that Avicenna was called "The Prince of Doctors"[3], that the treatise "The Continens" of al-Razi was invaluable[4]; in the same way, when Richard Lion Heart fell ill, he was looked after by by a Mohammedan doctor, who was attached to the service of Salah el-Din al-Ayoubi.

Since then, the Western medicine has taken the lead. Pasteur discovered the microbes, Fleming the penicillin and, from this discovery, the medicine did develop. Ibn Sina, al-Razi and the other ones have been forgotten. Today, the great masters are: Barnard, Charnely, Kakkar. The few faculties of medicine existing in the Mohammedan countries look like the Western faculties and the same subjects are taught. No Mohammedan notable goes to Baghdad, Cairo or Tunis to be looked after, but to London, Paris, New York, Chicago or Boston.

We must admit, that nobody is responsible for this situation. A historical, social, economic and political background did prevent the Mohammedans from taking part in the medical renewal. From the end of the 19th century, some attempts have been made in the Middle East to reach an efficient medical organization, to solve this dilemma. Unfortunately, all of them have failed.

But this situation is not irreversible. The Westerners do not have the monopoly of science. In the West, there are Mohammedan doctors and research workers working within western teams. In the Muslim countries, there are high-quality medical equipment and doctors of outstanding merit. Nevertheless, it is generally admitted, that the equipment is not always complementary; sometimes, it is conflicting. The fact of speculating on the future prospects of the Islamic medicine constitutes the first step towards a sudden awareness of the existence of this medicine and of its force. This first step can lead to overcoming the difficulties, and smoothing out the contradictions and improving the structures, so that the Islamic medicine can attain two objects in the future:

1. to be a high-quality medicine in the service of the Mohammedan people, who will be looked after by qualified doctors practising in advanced hospitals.
2. To have research workers and clinicians, who will contribute to the progress of medicine thanks to their works and researches, and make it possible for the Mohammedans to have a place among the peoples taking part in the progress of humanity.

We do not intend to turn this paper into a program or a list of measures to be taken to attain these objects. The future prospects of the Islamic medicine must fit into a wider frame. Medicine cannot develop alone, that is to say independently of the other sciences. Nevertheless, we shall try to give some ideas about three elements. These elements seem important to us, if we want to draw up a plan or a project to attain both these objects.

These ideas are related to:

- the structures and organization of the hospitals
- the medical teams

- the research and promotion institutes

1. **Structures and organization of the hospitals:**

The future prospects of the hospital organization imply the existence of two sectors:

1. A sector consisting of hospitals, out-patients' departments and infirmaries intended for the diagnosis and treatment of current medical and surgical diseases.
2. A second sector called "Medicine and Research Centers" (M.R.C.). Each M.R.C. will include several services or units, which will be highly qualified. They will have the most advanced equipment and the latest instruments at their disposal. The medical attendance will be of first quality, even in the most advanced fields such as transplants of organs or open-heart surgery or treatments of cancers. Furthermore, it will train future generations of doctors and research workers, who will practise, in their turn, in other centers, thus creating new scientific groups.

   The establishment of several M.R.C. would be desirable. This could be carried out within ten or fifteen years, step by step. At the beginning, the most important point will be the quality of the first teams, because it will condition the quality of future teams.

2. **The medical teams:**

Each department of these M.R.C. will include a top team. These teams will be recruited by a special institute (see below the part played by the research institute). Each team will be presided over by a head of department, who will be entrusted with the supervision of the works, the synthesis of the ideas and the harmony of the researches. The remaining part of the team will be renewed at regular intervals. This change could be carried out by the arrival, each four or five years, of young assistants coming from the best faculties (Western faculties at the beginning, then Mohammedan ones), having done periods of probation in famous departments, having acquired important experience and being in touch with the research workers of these departments. These young assistants will thus bring new ideas and new blood to the M.R.C. They will make it possible for the department to know the works carried out in other centers and to follow the advancement of these works. The regular change of these assistants will make it possible for the department to develop, to innovate and to improve the quality of the medical treatments

These medical teams will be complemented by other teams carrying out researches about fundamental sciences. The problems of the treatment team will be solved by the team of rescorch workers and, inversely, the discoveries of the research workers will be of interest to the treatment teams. A team dealing with histo-immunology is complementary to a team carrying out transplants or organs; in the same way, the discoveries of haemodynamics will be of interest to the team of heart surgery.

Besides these medical teams, it is very important to have ancillary medical services. The efficiency and the quality of these ancillary medical teams will depend on their initial training. But refresher courses and further training are necessary to keep up this efficiency. Because of the daily tasks to be carried out, the theoretical fundamentals may finally be forgotten and the work of the staff becomes the repetition of reflex gestures. Refresher courses and further training can take place within the departments or they can be given by specialized organizations.

The technical departments are also very important. Medicine, like any other field, has more and more recourse to electronics and data processing. Consequently, teams of technicians well informed on the latest technical developments and on the researches under way are necessary. This will enable them to offer suitable technical solutions to the problems set to the research workers. Furthermore, these technicians will work in conjunction with other teams of scientists such as chemists, physicists, etc.... Medicine cannot develop alone. It can develop only if the other sciences make the same progress and the history of Islamic medicine can be regarded as a very good example, because chemistry, physics, medicine, mathematics, astrology and many other sciences progressed at the same time.

3. We shall dwell a little more on the part to be played by the INSTITUTE FOR RESEARCH AND PROMOTION OF THE ISLAMIC MEDICINE.

   This institute can play several parts:

   a) search for the brightest Islamic students in the various faculties and help them. This help can take on several forms: moral, scientific and financial.

   b) Offer to those, who will reach a high scientific level, an office corresponding to their competence, in a country and in the M.R.C. chosen by them. But this implies first the establishment of several centers of this kind in several countries, as well as the creation of scientific, social and economic conditions making it possible for this grey matter to come back to the Mohammedan centers.

   c) Establish co-operation with the foreign scientific research institutes. This co-operation can take on two forms: one or several Mohammedan research workers chosen by the institute can take part in the research programs of the foreign institute, or they can start together a common research program controlled by the Mohammedan institute, or some foreign research workers can take part in the works of Mohammedan research workers in the M. R.C. with the help of scholarships offered by the institute.

   d) Finally, create a high-value "scientific prize". At the beginning, this prize will be intended to reward the work of a research worker, of a scholar or of a clinician, preferably foreign and famous. The prize giving will be announced by the mass media everywhere in the world and at any level. After becoming famous all the world over, this prize will be awarded step by step to Mohammedan research workers that will give them a reputation and a favourable reception all over the world and young research workers will thus be encouraged to follow their example*.

Once this system works normally, it will result in the creation of a scientific team of research workers, clinicians and technicians who, in their turn, will establish new teams, thus granting the attainments of present medicine to the future generations. The multiplication of these teams will result in the creation of a scientific stream and history did prove that, in such a stream, there are always intellects of the first order, brightest doctors, who innovate, invent and describe their experiments. Such doctors will thus take part in the progress of medicine. They will make it possible for the Islamic medicine to rank equally with those peoples, who did enable humanity to progress.

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* The details of the composition of the M.R.C. and of their function, as well as the ones of the research and promotion institute can be given to you on demand. They reply to the various questions about these elements.

PRESENT STATUS AND FUTURE PROSPECTS OF ISLAMIC MEDICINE

Dr. Goolam Mohamed Karim

SOUTH AFRICA

INTRODUCTION

Islamic medicine is one of the best known of the heritages of the Muslim world to the West, since by the ninth century of the Hijra, the Arab world could boast of sophisticated medical schools, specialised hospitals and wards for the treatment of the different diseases, and for the origin of pharmacology and the introduction of the experimental method in medicine by the use of animals[1].

The profound truths contained in the Quran and the Hadith were the impetus to the development of medicine in Islam due to the fact that medicine was regarded as being sacred since it originated from the Prophet (ﷺ) himself[2].

Since the cultural and intellectual development of a society depends on its political stability, its economic progress and its commitment to an ideological cause, i.e. religious fervour, medicine in Islamic countries suffered the same fate as did the society i.e. with the decline of political hegemony, there was a period of withdrawal, recession, followed by stagnation for the last seven centuries.

With progress and industrialisation of the third world countries, it is inevitable, that with the modernisation and many of its technological benefits, many of the failures of the western systems will also become manifest. This is particularly evident in the prevalence of disease and disease patterns which are being inherited by the underdeveloped countries from their more advanced counterparts.

Under foreign and colonial rule most of the Muslim countries had to resort to western systems of education and had to rely on foreign systems of training of medical and other personnel.

In the field of medical treatment too, it is but natural that therapies will be borrowed by the new countries, many of which would be contrary to the principles of treatment prescribed by the Quran and the Sunnah — the Tibb al-Nabawie. Since most of the medical practitioners and health workers are being trained in the modern or western countries, the entire world-view (weltanschauuing) of Western medicine is homocentric, whilst that of Islamic medicine is theocentric, in accordance with the directives contained in the Quran and the Prophetic Traditions (Hadith).

A - MEDICINE

It is well recognised that many of the diseases which lead to the major causes of death in the West are iatrogenic, i.e. produced by man himself. These causes could be classified as follows:

1) *Cardiovascular*
   Heart Attacks, Strokes, Hypertension

2) *Metabolic*
   Diabetes, Gout, Kidney and Gall stones Hyperlipedemia

3) *Respiratory*
   Emphysema and Chronic Bronchitis due to environmental pollution.

4) *Neoplastic*
   Cancer has been shown to be caused by external stimuli such as:

Cancer of the colon due to lack of fibre in the diet. Stomach cancers predominate in the Japanese probably due to dietary factors as in Cancer of the Oesophagus in the Transkeins in South Africa. Cancer of the liver has been traced to an aflatoxin contaminated wheat and maize products:

Cancer of the tongue due to betel chewing in Indians and Pakistanis. Lung cancer due to cigarette smoking and air pollution; Cancer of the pancreas has lately been shown as being due to coffee drinking in excess[3]. Cancer of the ovaries have even been shown by a S.African researcher to have dietary links[4] Food additives and coloring have also been implicated in cancer causation.

5) *Infective*

Infections have been attributed in many countries where there are dietary deficiencies and imbalances to cause a high incidence of respiratory illnesses and deaths due to gastroenteritis as also cirrhosis of the liver.

It will be seen that the major causes have a dietary link, which led Imam Zahabi[5] to state that the entire medicine is contained in half an ayyat (verse) of the Quran which states:

EAT AND DRINK BUT NOT TO EXCESS

(S7: V31)

The fact that disease is due to faults in nutrition has been mentioned in the six essentials of Prophetic Medicine, which was recognised since the earliest of times in Islamic Medicine[6].

As late as this decade, the Western definition of a 'balanced diet is given as follows: "A balanced diet is that which consists of foods and maintenance of sustained good health"[7].

This definition was considered unsatisfactory because it did not refer to either proportions of the various nutrients, which led the author to redefine a balanced diet as follows:

"A balanced diet is one in which all the necessary (and no unwholesome) items of nutrition are present, in proportions and amounts best suited for growth and the maintenance of sustained good health".

This definition, however, does not accord with the Sunnah, where the Quran lays stress on under--eating and which is confirmed by the Hadith which states that the stomach is divided into thirds, each containing solids, liquids and air, in equal portions.

The Hadith also elaborates on this aspect of eating in moderation, by stating that the stomach is a tank of disease, that over-eating leads to slothfulness and dulls the intelligence.

There remains much work to be done in publicising the dietary rules according to the Sunnah in the prevention of disease, including the posture of eating, i.e. that one should not lean against a wall whilst eating, or be in the recumbent position, that one should drink water in sips etc., that shoes should be removed, and that the saying of the Bismillah before eating, whilst acknowledging the bounteousness of Allah was also to seek protection from the deleterious effects of food. Refinement in eating was brought about by the Noble Prophet (ﷺ), since before Islam, the custom was to gulp food and to overeat.

Fasting which was enjoined in the Quran in the earliest Surahs, and certain foods were forbidden to humans, e.g. pork which only lately have been elucidated to contain 'hard fats' which are deleterious to health (S2: V174, S5: VS4, 6, 119, 120, 146 VS16: V116). Aerated drinks are also unnatural and contain caffeine (coca cola etc.) which are no superior than pure clean water, which the Quran states is a mercy to mankind[8].

B — PAEDIATRICS

Dietary factors in paediatrics have lately been recognised to play a leading role in even the prevention of heart attacks, and other related diseases, and breast-feeding is acquiring a new found status in the west after its advantages had been proven to show a lesser incidence of illness, its immunological role and also that breast fed infants did better than artificially fed infants both physically and intellectually.

The importance of this is stressed in the Quran in Surah Baqarah (S2: V234) where a child should only be weaned after 2 years and foster mothers were recommended for cases where breast milk was unavailable from the baby's own mother.

The glut of artificial foods and the advertising that is taking place in the third world should be curbed.

C — DENTISTRY

The use of miswak is sufficient indication of the role played by hygienic habits. The Hadith from Ibn Abbas (RDA), on the benefits of the miswak which can be summarised as follows, that it perfumes the mouth, strengthens the gums and teeth, dissolves plaque and phlegm, and opens the stomach, i.e. increases appetite. It is an act of ibadah whidh pleases the angels as well as Allah, could not be improved upon by modern day dentists[9].

It does not have to be bold to say that the fluoridation of drinking water as practiced in the developed countries, with its possible harmful side-effects, would be entirely unnecessary if proper dental hygiene as enjoined by the Sunnah is practiced. Here we have an ideal example of the West treating symptoms resulting in harmful effects from treatment, and not regarding causes.

D — DRUGS INTOXICANTS, ALCOHOLISM AND SMOKING

The scourge of alcohol and habit forming drugs is all too evident in the West, where these have wrought more social havoc and destroyed more lives than any of the wars which have plagued mankind, yet the West fails to heed the Quranic injunctions that all intoxicants are harmful and should be prohibited.

The miracle of the Quran as a medium of effecting social change is evident when we consider the circumstances of the ayat prohibiting alcohol. At a single command, the streets of Medina were flowing with spilled wine. This was achieved on the basis of faith alone, whilst the West spends millions in trying to rehabilitate alcoholics, and drug addicts, it does nothing to alter the spiritual condition to the addicts, or the social un-Islamic environment. This latter factor accounts for the large number of relapses amongst alcoholics since no treatment is given for the underlying sociological factors.

Muslims can justifiably be proud of this achievement which should serve as a beacon to the entire world on the handling of this problem which is destroying countless lives at the peak of their existence, yet it is tragic that Muslim doctors are still advocating western methods of treatment for the addicts.

Calls for bans on smoking in the West are gaining momentum, since it was realised that smoke and pollutants are the cause of severe disabling pulmonary diseases, including cancer of the lung. In a fatwa by the Saudi Sheikh Muhammad bin Ibrahim, cigarette smoking is contrary to the Sunnah[10] and Muslims are falling prey to Western media which advertise smoking. Muslim governments should immediately halt the importation and manufacture of cigarettes.

E — GERIATRICS

Many illnesses amongst the elderly are due to faults in nutrition. Indeed the process of ageing can be considerably influenced by a proper diet.

Many of their ills can also be caused by their being dumped in old age homes and the lack of a family unit, isolation and loneliness are situations which should not be present in Muslim society if due attention is paid to the injunctions of the Quran on the attitude and care of parents and the elderly, that not even a word in anger is to be directed at them that paradise lies under a mother's feet etc.. (S6: V152, S17:V24, 25, S29: V9, S31: V15.)

F — GYNAECOLOGY

Cancer of the cervix has been shown in many centres to be less amongst Muslims due to circumcision of males. The Quran has also prohibited sexual relations during menstruation. Prof. Badri states that the Quran is the most advanced manual on Sexology extant and has freed Muslims from many inhibitions which are harmful to the development of a healthy society, as well as curbing licentious and all immoral behaviour[11]. Prof. Ansari states that in the protection of society, Islam regards immorality, and more practicularly sexual immorality as being greater in magnitude than murder or theft[12].

G — THANATOLOGY

This is a subject which has received scant attetnion[13] in medical schools in the west whereas the Prophetic medicine and Muslims have centuries ago prescribed proper care and preparation of the dying and the terminally ill[14].

H — DERMATOLOGY

Personal hygiene and cleansing of the skin is considered to be of such importance that it is mentioned in the Book of Allah from the earliest of Revelations[15], since it is the largest organ in the body. Ibn Qayyam states that the act of *wudu* is for the removal of external impurities, and the face or skin is the mirror of man, whilst the *salaat* is for the removal of internal disorders.[16]

I — EXERCISE AND REST

In the *Sittah Durruriyah** exercise and rest have been mentioned in the causation of disease and its prevention.

Centuries ago, the *ulama* (doctors) knew of the physical benefits of the *salaat* and the various postures of the *salaat* were analysed and commented upon:

> The *ruku* and *sajda* have an effect upon the venous return to the heart and thus stimulate the heart whilst the spinal and abdominal muscles which were used during the *qiyam,* gave tone to the blood vessels. The *sajda* served to cure headache (by assisting drainage) and this principle is still used in the treatment of congestive sinusitis.

However, the main benefits of the *salaat* are psychological and will be shown in this paper to contribute to a very large extent to the mental well-being of Muslims.

Imam Zahabi states that prayer was to 'remove bad thoughts, and put out the fire of anger, frustration and conflict and calls upon one to submit in humbleness to one's Creator'. Prayer submerges ones ego with all its subhuman or evil tendencies, i.e. it assists in erasing the 'programmed memories of stress 'stimulus response' situations which if repeated often enough and given no opportunity of erasure cause a permanent chemical reaction to be set up in the body, which releases the 'stress hormone' cortisone, which has been shown to cause raised blood pressure, excess insulin is secreted and abnormal demands on the body are effected.

Prayer thus will not only prevent physical illness, but by achieving 'homostasis' or stability leads to the creation of developing positive attitudes: i.e. one has to depend upon Allah to solve our problems, to ask Him for assistance. These positivistic attitudes remove most of the negative attitude of helplessness,

* The six principles are:
1 Air, including effects of climate, water, soil.
2 Food: its quality and quantity and times of eating.
3 Bodily rest and exercise.
4 Sleep.
5 Emotions.
6 Excretions including sex.

of isolation, uncertainty and mental confusion, which are the major factors in the causation of neuroses and later depression — the most common of the milder mental illnesses afflicting mankind[17].

That the emotions have a profound effect upon health was well known to the Prophet Muhammad (ﷺ) which is evident from the Hadith, that when a man came to the Messenger for advice, he was told never to be angry. This is also confirmed in the Quran where those '*who restrain their anger*' are promised the reward of Paradise. (S3: V134). A Hadith also states that anger is Satanic and since the Devil is created from fire, the antidote is water. Thus the performance of a '*wudu*' is prescribed for the treatment of anger, a most effective and cheap remedy, available to all for resolving nervous tension without resorting to drugs, which in themselves cause immense harm.

It was a prophetic principle that the remedy of any illness was to be firstly by diet, by following the Sunnah, then by drugs and lastly but not exclusively by prayer. The act of the *wudu* and the *Salaah,* plus the mental preparation and participation, leads to the development of one's personality, since it entails forbearance, forgiveness and nobility.

Resorting to tranquilisers, so prevalent in the West, for the resolution of minor conflicts, nervous tensions, and mental problems, only creates further problems, and does not solve the situation at all. Indeed drug addicts are being produced and doctors are guilty of having an inadequate and un--uniformed response to the whole problem of the minor mental illnesses.

The Prophet (ﷺ) also prescribed unique remedies for the treatment of sorrow, apprehension and fear, two of the major causes of the neuroses. He prescribed that the reading of the two *Surahs, the Mu"awaidhatan* which teach man how to seek refuge in Allah and to ask for His protection. These are anchors in the present day treatment of the neuroses, whose base is insecurity and helplessness. The Quran states that the remembrance of Allah lends tranquility to the heart;

أَلَا بِذِكْرِ اللهِ تَطْمَئِنُّ الْقُلُوبُ

FOR WITHOUT DOUBT, IN THE REMEMBRANCE OF GOD DO HEARTS FIND SATISFACTION.

(Quran S13: V28)

However, the greatest role of the Quran would be in the prevention and treatment of the psychoses, the major form of mental illness. To enable us to appreciate better this statement regarding the scope of western psychology, the domain of abnormal psychoses, one would have to outline the structure of the consciousness, according to Islamic derivations.

PSYCHOLOGY AND PSYCHIATRY

The Prophet (ﷺ) was the first to observe mental illness objectively in a Jewish youth[18] and Muslims have the credit for establishing the first mental hospital in the world[19], where music was played for those confined to these wards[20].

Muslims were also the first to discard the demonological theories concerning mental illness and therefore lifted the study of these two disciplines to a scientific level[21].

It would suffice to review briefly the theories of Western psychology to better understand the Islamic viewpoint which is in complete contrast.

Originating from the Greek word 'psyche' which was equated to the soul, to the modern definition of psychology which is the study of human behaviour, one can perceive that modern psychologists have deviated from the earlier views which were more in accord with the Islamic conceptions, to the latter views which are materialistic.

Freud had derived most of his views from the Talmud, and 'consciously or unconsciously secularised Jewish mysticism', since it is beyond dispute that it played a role in his thought[22].

Since Freud was made out to be a materialistic and his teachings met with some opposition, he personally chose his successor to be Jung, who modified Freud's teachings to give an appearance of a reconciliation between psychology and religion. Modern psychology has now supplanted Jung and the contemporary exponents of psychology, Murray, Skinner and Rogers, hold beliefs which are completely secular, and thus far from the truths as expounded in the Quran and the Sunnah concerning the mind, the soul and human behavoiur.

According to Ansari[23] human personality is tridimensions:

1. a physical component,
2. a psychical component,
3. a transcendental part.

Using the Quran as a source for the elucidation of the structure of Consciousness, a term which is more suited than the current terminology of personality, we can postulate the following:

> Human consciousness is divided into three levels, which are not separate or distinct, but rather confluent, interacting, and interpenetrating, co-existent 'phases' of the soul.

The soul also is not a static, confined or material in composition, but consists of intense energy centres. These centres are three in number:

The *Nafsul Amarah* according to Surah Yusuf

« ان النفس لأمارة بالسوء » .

THE HUMAN SOUL IS CERTAINLY PRONE TO EVIL

(S12: V53)

would be lowest rung of human consciousness, devoted to all animal instincts and passions like eating, sex, violence, greed and all the emotions, like love, anger, hatred, etc.

The middle rung would correspond to what is termed the '*qalb*' or the *Nafsul Lawwamah,* according to the Surah al-Qiyamah, the 'conscience' or rational level of human consciousness.

« ولا أقسم بالنفس اللؤمة » .

AND I DO CALL TO WITNESS THE SELF - REPROACHING SPIRIT.

(S 75: V2)

The highest level would correspond with the *Ruh,* is closest to its Divine origin, as described in Surah al-Hijr, where man is stated as being composed of clay, and with the *RUH* being breathed into it by Allah.

. . . « إني خَلِقٌ بَشَرَ من صَلْصَلٍ من حما مَسْنُوْن»

؛ واذا سويته ونفخت فيه من روحي » .

.... I AM ABOUT TO CREATE MAN. FROM SOUNDING CLAY, FROM MUD MOULDED INTO SHAPE WHEN I HAVE FASHIONED HIM (IN DUE PROPORTION) AND BREATHED INTO HIM OF MY SPIRIT,.....

(S 15: V28, 29)

The *Ruh* and *Nafs* are often mistakenly equated as being synonymous. It will be apparent from the table that this is not so and that they are of opposite natures, whilst the *Ruh* is light, ethereal and nearer the Divinity, the *Nafs* is nearer to a primitive state of man, i.e. animal, it is compared to ballast which is heavy and keeps dragging the *qalb* netherwards.

This study has been adapted from the work of al-Muhasibi [24] who equates the *nafsul amarah* to being 'heavy' or a mass of very high energy, almost a fire, with its resulting fires of passion, anger, love, violence. This amarah urges if unchecked by the *qalb* or rational mind could easily destroy itself and the world if unleashed.

The function, then of the Rational Self or *Qalb* is to direct the lower *nafs* to superior behaviour i.e. its function is Regulatory and by its direction it assists in converting or sublimating the *nafsul amarah* to its higher stages the *Nafsul Lawwamah* and the *Nafsul Mutmainah* is the highest form that a Muslim could achieve in the living state whilst being possessed of all his senses, i.e. in a temporal state.

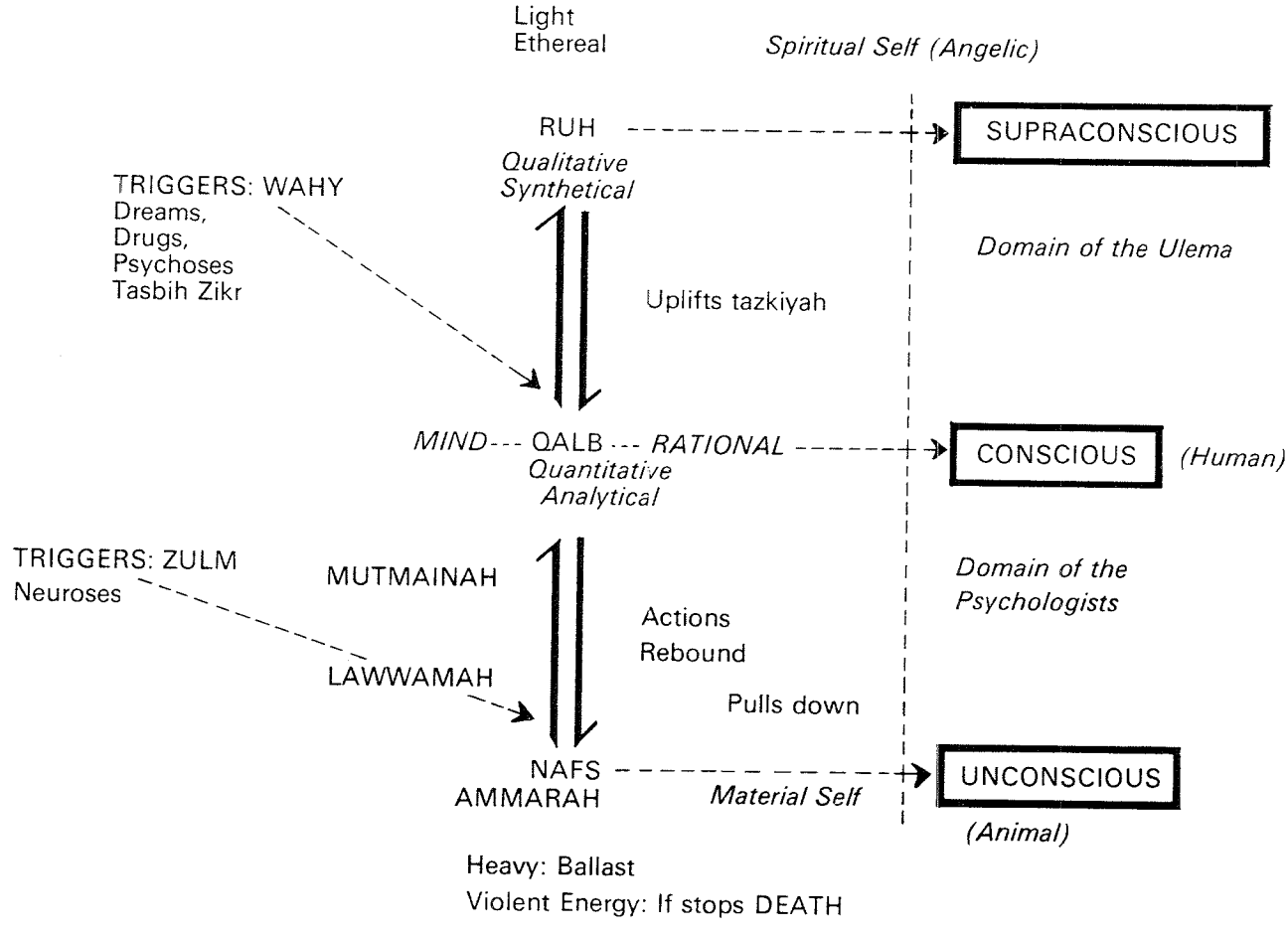
The function of the *Ruh* is to pull upwards, which process is termed by Ansari[(2)] as *'tazkiyah'* exerting a force in converting a human to the angelic or Divine level. It operates *on* a Supramundane level and beyond the Time-space barrier*

Nasr defines human knowledge into three types which operate at the three levels of consciousness:

1) Acquired: which is based on a stimulus response type of reaction, it is possessed by animals and most living matter, including the vegetable kingdom, and is also equated with the *Naqliya* type of Knowledge, or knowledge passed down;
2) Rational Knowledge, or knowledge that is based on processing by the mind, formulating concepts etc.. This is also termed *Agliyyah* knowledge, mediated by the *Qalb.*
3) Intuitional Knowledge which is performed by the *Ruh* and takes the form of Revelation, Dreams, etc.. This knowledge is of the supramundane form, and cannot be described in finite terms, it is termed the *Zawq,* or Sapiential Knowledge[26].

* It is important to note that the personality or consciousness is not destroyed at death and persists, in a different space time continuum.

THE STRUCTURE OF CONSCIOUSNESS



The *QALB* represents the central core of consciousness. The *Nafs* represents the mundane and is the seat of emotions.

The *RUH* exists in the trancendental dimension, it never dies, but is readily transformed by the process of '*tazkiyah*' to higher status. (Surah as-Shams: V 9-11). Its media are the *salaat,* the *zikr* and the *tasbih.*

Adapted from the Psychological Theory of al-Muhasibi[27] the above hypothesis would accord with the plea of Fazal Rahman, a geneticist[28], whose plea for a holistic model of the effects of the contemporary technological model on the genetic regulation of inner human faculties. He concludes that psycho-cultural forces operate through the mediation of chemical substances like hormones on the level of individuals as well as populations. Perhaps we have here an explanation of the dynamism exhibited by the earliest of Muslims who made vast strides and conquered distant lands. His theory would also fit in with our view that human behaviour can be regulated by *tazkiyah.* (Active development of the intellect through acts of *ibadah).*

There is a constant interaction between the three levels of consciousness, each imposing itself for supremacy, but mediated by the *Qalb* or Rational self.

The *nafs* acts as a ballast which prevents the *qalb* rising towards the *Ruh,* and influences man in the lower forms of behaviour, i.e. aggression, survival etc.

The *qalb* or rational mind moderates this overt behaviour to a humane and compassionate level..

Where dissociation between the *qalb* and *nafs* occurs, either due to disease, injury, drugs, or

ZULM, which in the Quranic sense means 'living in darkness and also disbelief, or *kufr,* results in '*Jahil-liyah*' behaviour with all its barbaric and inhuman practices, i.e. man leads the life of an animal. This behaviour is also termed neurotic behaviour, and this is the domain of contemporary psychologists.

There is also a reaction in the direction of the *qalb-nafs* axis, i.e. the rational mind, in so far as it is capable of thinking, also influences the *nafs* to activity, either good or bad, which is also in the domain of the psychologists.

Where there is dissociation between the *qalb* and the *Ruh,* which is termed a major psychological illness, or the psychoses, the causation of which is under intense investigation in the West, both from a psychological level and also a biochemical level.

The commonest and most problematical of the psychoses, Schizophrenia, was earlier investigated along genetic lines; one of the difficulties in its investigation being the problem of an adequate definition of the disease, since its symptoms and presentation vary from culture to culture and there are disparities in the criteria for its diagnosis[29].

Of the various biochemical approaches to the study of schizophrenia, the investigation of brain neurotransmitter interactions, with psychotropic drugs has been the most productive. Certain drugs have been found that mimic the symptoms of the disease, e.g. Amphetamine, whilst there are other drugs like the phenothiazines which lead one to implicate dopamine reactions in the brain[30].

It is long known amongst the mystical practices of Islam that certain *Tasbih* and *Zikr* lead to mental dissociation[31]. Since this was first described by Dr.Subud of Indonesia [32] in Western journals, it has acquired the term SUBUD pschosis. This would imply that the *Tasbih* acts upon the *Ruh-Qalb* axis, the same axis upon which *Wahy* and dreams operate.

It is lately realised that dreams have a vital role to play in the mental stability of an individual, a fact which was known to the Prophet (ﷺ) through the Quran that the night is made for rest, and whilst the study of the interpretation of dreams is still in its infancy stages, Muslim servants had long ago written innumerable treatises on this subject.

The fact that dreams are communication from Allah to his *Khalifa,* man having been created for the purpose of ruling the universe as a vicegerent, and having responsibilities not only to Allah, but to the rest of His creation, including his fellow men, should deserve the attention of Muslim researchers into this subject. Dreams have been mentioned on several occasions in the Quran e.g. Surah Yusuf (S12: V5 and S12: V45), the vision of Ibrahim (S37: V105). Latest work by Rossi shows that dreaming is a state of altered consciousness[33].

Other factors acting upon the *Ruh-Qalb* axis is the *Salaat,* which is described in the Hadith as the *Me'raj* of the *Mumin,* i.e. the higher level of a Muslim or one whose *Ruh* is the dominant aspect of his Consciousness. The action of the words of Allah or the Quran have a decided action on the *Ruh-Qalb* circuits, as proved in the conversion of the Caliph Umar (RDA) when the Surah Ta-Ha was recited to him by his sister, as also the meaning of the verse: '*ALLAH GUIDES THOSE WHOM HE WILLS*' and the meaning of the term which has proved enigmatic to Orientalist scholas, '*AND LEADS, TO ERROR THOSE WHOM HE WILLS*' would mean that definite reaction has to occur between the Supramundane and the Mundane levels of consciousness before a person becomes an active and dynamic Muslim.

FUTURE PROSPECTS

Research in this field is of the utmost importance, since the treatment of the mentally ill according to Western concepts has not resulted in much success.

Treatment of the mentally ill is confined to the masking of symptoms by the prescribing of sedative drugs, and other drastic measures, such as ECT (shock) have been largely abandoned due to the une-

quivocal results obtained.

According to the Sunnah, Muslims have a far superior mode of therapy of the mentally ill, which results in not only relieving the patient of his symptoms, but also of re-directing the centres of energy contained in the *nafs* to its higher levels in the *Ruh.*

The *qalb-ruh* circuit requires that the individual en-noble himself with the actualisation of the Hadith:

« تخلقو بأخلاق الله »

Imbibe yourself with the qualities of the divinity

i.e. that he should direct all activity according to the dictums of the Noblest *E*xemplar according to the Quranic injunction:

« لقد كان لكم في رسول الله اسوة حسنة » .

WE HAVE INDEED IN THE APOSTLE OF GOD A BEAUTIFUL PATTERN (OF CONDUCT)

(S33: V21)

You have in the Noble Messenger of Allah, the best Exemplar and in so doing to act in harmony with the rest of creation, to radiate peace and goodwill, and to serve others rather than crave attention to himself and his symptoms.

A *mumin* operating on the proper *Ruh-Qalb* circuit will not overeat, thus his health will be safe-guarded, to enable him to save his fellow men in the removal of injustices, want, poverty and hunger.

Allah states in the Holy Quran that:

« ونزل من القرآن ما هو شفاء ورحمة للمؤمنين » .

WE SEND DOWN (STAGE BY STAGE) IN THE QURAN THAT WHICH IS A HEALING AND A MERCY TO THOSE WHO BELIEVE.

(S17: V82)

'We reveal the Quran of which there are parts which are a healing and a mercy to the *Mumins*', (i.e. a higher status than Muslims) proves that the Quran is the Book of Healing.

According to the injunctions contained in Surah al-Maidah, it is incumbent on Muslims to save life, and whoever gives life to one, it is as if he has given life to all mankind.'

« ومن أحياها فكأنما أحيا الناس جميعا » .

AND IF ANY ONE SAVED A LIFE, IT WOULD BE AS IF HE SAVED THE LIFE OF THE WHOLE PEOPLE.

(S5: V35)

Muslim medical men and women have thus also the Hadith to inspire them to greater efforts:

«لكل داء دواء » .

"For Every disease there is a cure "

(Hadith)

Dr. Muti al-amin Kilaji states that it is this statement which led to the search for new medicines after which the foundations were laid down by Muslims for pharmacology, and it should still serve to stimulate the present and future generations to greater effort[34].
effort(34).

Similarly more effort is needed in propagating the wisdom contained in the six prophetic principles of medicine, which will lead to better and more complete therapies of illnesses, as well as their prevention.

Finally, mental illness is bound to increase as the underdeveloped countries advance technologically and adopt western norms, and it is a unique challenge for all Muslims to alleviate the sufferings of all humanity for which the Quran and the Sunnah are destined to play a leading role, Inshallah.

The Quran repeatedly enjoins the feeding of the hungry, and evoked the greatest social revolution in the history of mankind, and urges man to unite in calling others to the Truth, for the suppression of evil, and for lowering the wing of forbearance and mercy to those who cannot see the light.

A similar revolution in medical care is also in the offing, Inshallah.

SUMMARY

With progess and industrialisation of the Third World countries, it is inevitable that with modernisation and many of its technological benefits, many of the failures of western systems will also become manifest. This is particularly evident in the prevalence of disease patterns which are being inherited from the advanced countries.

In the field of medical treatment too, it is but natural that therapies will be borrowed by the new countries, since most of their health personnel have been trained in western concepts, which are contrary to the principles of treatment prescribed in the Quran and the Hadith, and as enshrined in Prophetic Medicine (Tibb un-Nabawie). Medicine as practiced in Islamic countries is secular, homocentric and westernised.

The paper examines the causes of mortality in order of frequency, and shows that the majority of deaths are iatrogenic (caused by man himself).

These are classified into the following groups:

1. *Cardiovascular*
   Heart attacks, strokes (hypertension)
2. *Metabolic*
   Diabetes, Gout, Renal stones, Gall stones.
3. *Respiratory*
   Emphysema, Bronchitis due to industrial and chemical pollution
4. *Cancer*
   Reference to dietary imbalances causes cancer: e.g. liver, gullet, stomach, colon, ovarian, mouth
5. *Infective*
   Higher incidence of infective illnesses in malnourished communities, e.g. Gastroenteritis, Bronchitis.

Quranic basis of prescription on food. Zahabi (673-748 A.H.) stated six centuries ago that the entire medicine could be summarised in half an ayat of the Quran:

EAT AND DRINK BUT NOT TO EXCESS.

(S7: V31)

The six essential principles of Prophetic Medicine are listed with diet being the foremost, and comments are made on the inadequacy of modern medicine in defining a 'balanced diet' contrasted with the

statements in the Hadith and Quran concerning eating and food, and the relationship between solids, liquids and air in the stomach.

Role of fasting, the role of the *Tarawih* prayers during fasting is postulated. The role of the *tasmiyah* before eating is in prevention of the deleterious effects of food as well as thanks-giving.

DRUG ABUSE AND ALCOHOL

The scourge of alcoholism and drug taking has claimed more lives than any of the wars which have plagued mankind. Men and women at the peak of their years are lost to humanity for having failed to heed the Islamic prescription on alcohol and drugs. The Quran evoked a social change amongst a primitive people, whilst the West is still grappling with this problem at immense financial and administrative costs, whilst a mere few verses caused people to pour wine in the streets.

Smoking is today being equally adopted by Islamic countries, despite a religious prohibition and which also causes much ill'ness-emphysema, cancer.

EXCERCISE AND REST

Jogging has become a recent fad in the West, whilst the Quran and the Sunnah have prescribed exercise and rest in the prevention of illness.

Imam Zahabi had earlier commented on the medical benefits of the various postures of the *salaat,* which are still valid today.

Ibn Jauzi had commented on the benefits of the *wudu,* stating that the face is a mirror of man which benefits from repeated cleansing.

PAEDIATRICS

Most Muslim countries are falling prey to the sophisticated methods of advertising baby foods used in western countries and abandoning breast feeding whilst the Quran had enjoined breast feeding until the child was two years of age.

The Sunnah deals with the psychological upbringing of a child which is not only valid, but prevents many of the social evils present amongst the youth in the developed countries.

DENTISTRY

The role of the *miswak* has been demonstrated in Zahabis book, and the ten benefits obtained thereby could not be bettered today by the most modern of dentists.

GYNAECOLOGY

Breast feeding has a built-in family planning, clearly shown that Cancer of the cervix is less amongst Muslim women due to males being circumcised, whilst recent work shows that even ovarian cancer can be traced to diet.

Menstruation and sex were clearly demarcated, and Badri states that the Quran is the most advanced book on sexology extant today.

GERIATICS

Many of geriatic illnesses are due to faulty social conditions, old age homes, isolation etc.., and errors in diet, whereas the Quran has prescribed adequate rules for the treatment of the elderly within a family unit to prevent many of their afflictions.

PSYCHOLOGY AND PSYCHIATRY

The greatest potential for correcting the invalid and atheistic concepts prevalent today exist in these two fields, and for which Islamic concepts and precepts from the Sunnah provide adequate answers as

well as proper therapy.

A large part of the paper is devoted firstly to the definitions and concepts of personality in Islam as constrasted to currently held concepts and practice. The psychological theory of al-Muhasibi is referred to an illustrated diagramatically to outline the three dimensional nature of personality and the various disorders are located in the diagram, contrasted with western concepts. Therapy will also then differ according to the different origins of mental disorder.

It is postulated that Islamic approaches to the treatment of the mentally ill will lead to better results than are being realised currently.

The paper also deals with various other fields which are also neglected in the West e.g. the attitude to death, suffering and pain, the psychological role of the *salaat* and its influence on mental well being and social realisation, the role of dreams in mental stability, their interpretation with illustrations from the Quran.

The paper concludes by outlining research areas in the different fields to place Islamic medicine in the forefront once again and also to assist in alleviating in a positive and theocentric manner, the sufferings of mankind for which the Quran and Hadith are destined to play a leading role, Inshallah.

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SOME PROBLEMS OF RESEARCH AND TEACHING OF ISLAMIC MEDICINE IN MODERN TIMES

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INDIA

Medical science was a very popular and important study in the medieval Muslim world. Every educated person was expected to take some interest in medicine. This may be shown by a curious story of a talented slave girl in the Arabian Nights [1]. The girl is offered to the Caliph Harun al-Rashid for an enormous price and the Caliph agrees to pay provided she can answer satisfactorily any question put to her by the most learned men in the branches she claims to excel. Therefore, the notable scholars of Theology, Law, Exegesis of the Quran, Medicine, Astronomy, Philosophy, Rhetoric and Chess examine her in succession and in each case she not only gives satisfactory replies to all their questions, but ends by putting to each of them a question which he is unable to answer. The medical portion of the examination includes the outline of Anatomy and Physiology, diagnosis from signs and symptoms, Pathology, Hygiene, Dietetics and the like. This speaks volumes about the general interest of the Muslims in the Medical Science.

This story is valuable as indicating what was regarded as good all-round education.

Another valuable evidence is provided by Nizami Aruzi Samarqandi, the author of Chahar Maqalah composed[2] about 551A.H. who treats of four classes of experts who were indispensable at a court to wit, secretaries, Poets, astrologers and Physicians, for the business of the king cannot be conducted without competent secretaries; their triumphs and victories will not be immortalised without eloquent poets; their enterprises will not succeed unless undertaken at seasons adjudged propitious by sagacious astrologers; while the health, the basis of all happiness and activity can only be secured by the services of able and trustworthy physicians.

This factor was alone responsible for producing thousands of physicians and scholars of Islamic Medicine. And this phenomenon has well been elaborated in the works treating of lives and accomplishments of physicians and experts in several branches of medicine. The Chief Arabic biographical and bibliographical sources such as Ibn Nadim's Fihrist[3] (composed in 377A.H.), Qifti's Tarikhul Hukama [4] (624A.H.), Ibn Abu Usaybi'a's[5] *Tabaqatal Attiba* (640A.H.) at once show the huge number of medical experts and even more enormous medical literature produced by the Medieval Moslem Scientists. Some idea of the vast literature in Persian alone may be formed from Adolf Fonahn's *Zur Qullen Kunde der Persischen Medizin,* Leipzig 1910, the author of this excellent work enumerates over 400 Persian books (very few of which have been published) dealing entirely or partly with medical subjects. This literature could not be explored with advantage until a more thorough examination of the Arabic literature has been done.

The Islamic Medical literature, besides its vastness is characterised by the following:

1. It has been produced in various Islamic languages such as Arabic, Persian, Turkish[6] and Urdu[7].
2. It has been produced in various regions of Africa, Europe and Asia, and in the last in a vast region from Turkey to India and from Transoxiana to Arabian Peninsula.
3. It takes its origin in Greece and received impetus through Syriac[8], Iranian[9] and Indian[10] sources.
4. It has been the result of the efforts of scholars of various races and religions such as Semitic, Aryans, Iranians, Muslims, Christians, Zoroastrians and Hindus.

The medical literature of medieval Islam has relevance to the modern times, for the chief sources of the modern scientists of Islamic Medicine are Razi's Hawi[11], Majusi's Kamilus-sinaat [12], Ibn Sina's

Qanun[13] and Ismail Jurjani's Zakhira -i - Khwarzam- shahi[14]. A careful comparison of these works with those of the subsequent medical writers would show that by and large no departure from the original system has been made by the later physicians. This phenomenon justifies a thorough research which will answer, at the first instance[15], a very important question - 'Whether the Arabs did more than transmit the wisdom of the Greeks, and whether they added much to the original! While at the second instance it will ensure better and effective results in the art of healing.

But for such research a combination of qualifications not easily available in a single individual, is required for example, a scholarly knowledge of Greek, Latin, Syriac, Arabic, Persian and even Sanskrit. And besides knowledge of Medicine adequate proficiency in Philosophy, Logic, Physics, Metaphysics, Chemistry and other biological sciences, is the other qualification required for a researcher in the field of Islamic Medicine, for we know for certain, that the medieval scholarship was not so specialised as it is today. A medieval scholar would always excel in most of the branches of science and arts and hence no scholar in modern sciences, is generally capable of examining any of the classics of Islamic medicine unless he is well-versed in several branches of knowledge.

It may be admitted that the fuller study and profound research which involves so much labour, energy and scholarship is not likely to repay so adequately because even the profoundest study of the subject would not yield practical results to the satisfaction of one having a narrow utiliterian point of view.

Some outstanding Islamic medical classics such as Abu Bakr Mohammad b. Zakariyya Razi's Kitabul Hawi and Ibn Sina's Qanun etc.. were translated into Latin as early as the 15th century A.D., and had been used as text books for medical education in Europe for many centuries together. It is in this way that Islamic medicine has exercised immense influence on the development of modern science. And this factor alone would amply show that a thorough study and research in Islamic medicine would not be a futile task which may be set on the following directions:

1. Preparation of a biobibliographical work respecting all the works written on Islamic medicine in any language.
2. A review of the Arabic translations from direct Greek and indirect Syriac sources, and the Latin translations of the Arabic classics.
3. Discovery of unknown works.
4. Introduction and edition of unique MSS.
4. Re-edition of the edited and a critical edition of the printed works.
6. Translation of medical books from one language to the other.
7. Preparation of a comprehensive history of Islamic medicine.

I shall now elaborate these points briefly. Of the vast medical literature produced in the eastern land of Islam only a very small part of it has survived because the major part has been destroyed in several calamaties that befell this land specially the Mongol invasion. Professor Brownes remarks[16], "In the *Fihrist,* an Arabic work composed in A.D.987, more than a century after the Golden Age, we have at once a mirror of the learning of that time, and an indicator of the appalling losses which it afterwards sustained for the books there enumerated, it would hardly be an exaggeration to say that not one in a thousand now exists even in the most fragmentary form. The hateful Mongols did their work of devastation only too thoroughly and the Muslim culture which survived the sack of Baghdad in A.D.1258 was but a shadow of what it preceded".

Needless to say that Islamic Medical literature met with the same fate as any other discipline. Consequently the existing works on medicine are only an insignificant portion of what has been destroyed.

Further, these works are generally not represented by very authentic and reliable MSS. No autograph or even contemporary MSS of any of the most outstanding Medical classics in Arabic or Persian such as the *Firdausul Hikmah*[17] of Ali b.Rabban Tabari, or the *Kitabul Hawi*[18] of Razi, or the *Hidayatul Mutallimin*[19] *fit Tibb of* Akhwaini or the *Kitabus-Saidanah*[20] of Biruni, or the *Kamil us Sinaah*[21] of Majusi, or *Zakhira - i - Khwarzamshahi*[22] of Ismail Jurjani has come down to us.

This phenomenon fully justifies the need for the establishment of a great centre for literacy research in Islamic medicine with an object to arrange and execute the various research programmes envisaged in this paper the first being the preparation of biobibliographical work.

It is a well known fact that during the early Abbasid Caliphs[23] Greek medical classics were translated into Arabic. These translations have grown still more important because some original texts in Greek are lost. But it is unfortunate that comparatively fewer of these translations are available even in manuscript. This dearth hampers the task of judging the accuracy and fidelity of these translations. Some of these translations were made directly from Greek and some indirectly from Syriac. The standard of the latter is not so high. However, the task of a needer is to have a comparative merit of the direct and indirect translations. Besides, the Latin renderings of the Arabic works done some centuries later, are not of so high order and a serious student of Islamic medicine should also take note of it. In the unique Ms. of Tabaris's *Firdausal Hikmah*(24) there occurs twice a word for headache faultly written in both the cases (once asسنوریاand again as سنورتا which was identified as Svriac 'Sanwarsa'. Prof. Browne regards it the Persianسربندor سروند and with the transposition of ر and ن and the addition of Syriac emphatic a, *Sanwarta is* obtained. This may serve as an instance of the kind of trouble which the reader or translator or still more the editor of the old Arabic medical works is apt to meet with.

As seen earlier the major part of Islamic medical literature is lost. A number of physicians and writers of medical works is known to us but no work of theirs has survived. Similarly, there are some scholars whose one in two works have survived while the majority is lost. There is hardly any one whose all work have been preserved. Hence the most important task of those interested in Islamic medicine is to make concerted efforts for the discovery of missing MSS, and the supply of the missing links. This is an up-hill task but laborious research in this is an up-hill task but laborious research in this direction is bound to bear fruitfut results. Some scholars have no doubt succeeded in discovering some unique MSS, and even some of these have lately been edited and published. One such instance is of the *Firdausul Hikamah* which was edited by the late Prof. Muhammad Zubair Siddiqi in 1928. The *Hidayatul Mutallimin* of Akhwaini has been edited on the basis of an old MS. dated 478A.H. (the third oldest MS. in the Persian language). A third instance is that of the *Kitabul Abniah* whose two critical[25] and one Facsimile editions have been effected on the basis of a splendid MS. copies in 447A.H. by the eminent Persian poet and writer Asadi Tusi (d.465A.H.) Several unique MSS. of the medical texts both in Arabic and Persian exist in different libraries of the world and efforts should be made to introduce them and to prepare their critical editions.

Now I come to the proposition of re-editing edited and printed texts. A text edited on the basis of a single MS. or some defective MSS, may be improved further on the availability of more MSS. The outstanding Turkish scholar, the late Prof. A. Zeki Validi Toghan edited a portion of Biruni's *Saidanah* giving geographical information in a monograph called *Biruni's Picture of the world* صفة المعمورة على البيروني), Memoire of the Archaeological Survey of India No.53, Delhi, on the basis of the MS, of the Kurshunlu Gami Library, Brussa which was copied in 678A.H. at Qunya by the Physician, Ghazanfar[26] at-Tabrizi, a contemporary of Maulana Jalalud-Din Rumi. It has great gaps at least at five places resulting in the absence of the passages fromباتنكانto بقلة العرس , from تين o جندبيدسترfromالدموامto زيت from سويق to صبر and fromقطرانto كرم

Later the discovery of two more MSS, one in Egypt and the other at Baghdad resulted in filling the

above gaps[27] in the edited text of the *Kitabus-Sayadanah* printed at Karachi, Pakistan 1973.

It is to be noted that certain special features of the letters in Arabic and Persian alphabets, to wit, dots varying from one to three, upon and below the letters, (letters changing their shapes when joined, some letters joining and some not joining, some joining if following), and not joining if preceding, uncertainty about the end of a word etc. have played havoc with the Arabic and in a greater degree with the Persian manuscripts with the result that no two MSS, agree in all respects. Hence the more popular the book is, the more different it is from the original. This phenomenon justifies the re-editing of all the medical texts without exception. And this process should continue till such time as one be quite sure of the authenticity and fidelity of texts. In short, the stage of finality in respect of printed medical texts in Arabic and Persian has not been reached so far. One may well realise the gravity of incorrect text of a prescription. Once I was collecting the printed text of a well-known Persian work called *Ikhtiarat - i - Badii* [28] with a valuable MS. thereof. At one point the printed text had the words ینح درم which were a corruption of the words بیخ وي . The result of the prescription based on corrupt text may well be imagined of.

In the Arabic printed text of the Qanun there occurs the name of a mysterious disease as qaranitus (قرانیطس) a corrupt reading of '*firrenitis*' (فرانیطس) which is available in an old MS. consulted by Prof. Browne[29].

The translation of medical texts from one language to another would extend the scope of utilisation. This tradition of the old masters ought to have continued in our times. However, the preparation of an exhaustive history of Islamic medicine on modern lines should be delayed till such time that sufficient field work in the form of authentic editions of most of the classics and monographs on the lives and achievements of all significant physicians and medical writers, has been completed.

Now I would like to refer to one of the major problems faced by modern institutions imparting instructions in Islamic medicine specially in India and perhaps in Pakistan as well. It is a sad confession that brilliant students are not attracted towards such studies. Besides, they are not fully equipped to pursue them. In seldom cases, they know more than one Islamic language. Similarly, they have scanty knowledge of other disciplines, though in fact adequate knowledge of a number of other disciplines is a pre-requisite for a correct undersatnding of the classical Arabic or Persian books. Hence they fail to have full grasp of the subject and as such profound research is quite improbable. In olden days scholars had learnt the original language before they acquired profound knowledge of the subject. Qifti quotes [30] how one day Hunayn [31] b. Ishaq was reprimanded by Yuhanna[(32)] b. Maswayh, "What have the people of Hira to do with medicine? Go and change money in streets". On this Hunayn, was more resolved than ever, on pursuing knowledge to its source. When he finally returned, after having mastered Greek Jibrail[(33)] b. Bakhtyishu was delighted with his greek scholarship and to become a miracle of learning. Later on he gained high favour with the Abbasid Caliph of Baghdad.

I shall now quote the views of Nizami Aruzi about the qualities of a physician and the books that the student should require to go through.

"The physician, says Aruzi[34], "should be of tender disposition, of wise and gentle nature, and more especially an acute observer, capable of benefiting every one by accurate diagnosis, that is to say, by rapid deduction of the unknown from the known. And no physician can be of tender disposition if he fails to recognize the nobility of man, nor of philosophical nature unless he be acquainted with Logic; nor an acute observer unless he be strengthened by God's guidance; and he who is not an accurate observer will not arrive at a correct understanding of the cause of any ailment... When the physician knows Logic and is an acute observer and knows what is the fever (the patient suffers from) and what is the matter of the fever, compound or simple, he would readily get himself engaged in the treatment. But if he fails to recognise the ailment, he should turn to God and seek His blessings. Even if he fails in

treatment he should turn to Him and seek divine favour because ultimately all things are to return to Him.

After developing this thesis, and relating the case of a sick man healed by prayer, Aruzi remarks, "I knew it (the recovery) is due to the blessings of the opening Sura فاتحة الكتاب and this syrup has been obtained from the divine hospital. I gained this experience and hereafter prescribed it in so many cases and it proved agreeable and the patient was cured. Hence, the physician should be of firm belief and should hold in respect the divine commandments and prohibitions". Then the author gives the following list of books which should be read by the aspirant to medical science.

1. *The Aphorisms of Hippocrates*[35] فصول بقرط, the "*Problems of Hunayn bin Ishaq*" مسائل حنين بن اسحق, *the Guide*[36](مرشد)of Muhammad b. Zakariya - i - Razi and Sharb - i - Nili[37]. After studying these books with a kind teacher, the student should deliberately study with a sympathetic teacher from amongst the intermediate works to wit, the *Thesaurus* (ذخيرة) of Thabit b. Qurrah[(38)] or the Mansuri[39] of Muhammad b. Zakariya Razi, or the Direction of Abu Bakr., Akhwaini or the Sufficiency[40] of Ahmad b. Faraj or the Aims[41] of Sayyid Ismail Jurjani. Then he should get hold of one of the following extensive and comprehensive books and study it in the hours of leisure.

Sixteen Treatises of Galen[42] or *Continens* of Muhammad b. Zakariya, or *Liber Regius* or of Ali B. Abbas Majusi or the *The Chapters* of Bu Sahl Masihi[43] or the *Qanun* of Bu Ali Sina, or *The Saurus.* "But" he concludes, "if the student desires to be independent of other works, he may rest satisfied with the Qanun of Avicenna "Whom he puts second to Aristotle, and praises in the highest terms as the only thinker during the fifteen centuries who has won to the inmost essence of the Aristotelian philosophy.

The scholars trained vigorously on the above lines are capable of undertaking deep research in Islamic Medicine specially in its literary branch. Their efforts are, I am sure, bound to show that the importance of this system lies not only in representing the faithful tradition of the Greek wisdom and its transmission to the future generation, but also in its originality the form of some original contribution and new interpretations several existing notions and traditions.

Lastly, it is worthwhile to note that the composite courses introduced in some modern institutions of Islamic medicine in India are not properly serving the cause of this medicine in the sense that most of the physicians trained at these centres resort to the easier course of adhering to the modern system which unfortunately they are not fit for with the result that neither they prove to be good physicians of modern medicine nor capable Tabibs.

It is high time that the modern institutions of Tibb should adopt such courses of study that the medical graduates coming out of these institutions should have full confidence in the old systems and adhere to this system only in which they have received vigorous training. This is expected to serve better the cause of Islamic medicine.

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4. ALI B. YUSUF B. IBRAHIM SHAIBANI QIFTI (d.646 A.H.) was one of the most reputed scholars whose "*Tarikhul Hukama*" is a very popular work available in a printed form, Cairo, 1346A.H.
5. MUAFFAQUD-DIN ABUL ABBAS AHMAD B. QASIM B. KHALIFA popularly known as Ibn Abi Asaybia (d.668) was the author of "*Uyunul Anba fi Tabaqatil Atiba*" which gives the biographies of four hundred physicians of Islam besides many physicians of other lands including Greece. It is available in a printed form, Cairo ed. in two vols. 1882A.D.

6. Some idea of the Medical literature in Turkish may be formed by an article published by JULIUS GERMANUS in the *Islamic Culture,* Hyderabad, No. 8 1934, pp. 1 - 14.
7. Though Urdu is not a very ancient language, hundreds of books on Islamic Medicine had been written in it in the past and the tradition is still continuing. It is used as a medium of instructions in those institutions of India and Pakistan in which instructions on Tibb are still imparted. Some of the medical classics were translated into Urdu quite early, for example, besides the *Qanun,* the "*Kamilus-Sinaah or Zakhira - i* -Kharazamshahi" in 1883.
8. The Greek medical classics were translated into Syriac as early as the 6th century A.D. Of this literature from which most of the Arabic translations were made, not much survives, but M.H. Pognon's edition and French translation of the Syriac version of the *Aphorisms* of Hippocrates and Dr. Budge's Syriac *Book of Medicines,* enable us to form some idea of its quality *(Arabian Med.)*, pp.21-22).
9. Before the birth of our Prophet (ﷺ) the tradition of the Old Sassanian school of Jund-Shapur was predominant and at the time of the Prophet, the school was at the height of its glory. The medical teaching of the school was in main Greek, but there was an underlying Persian element specially in Pharmacology (Ibid). See also PHILLIP K. HITTI: "*His. of the Arabs.*", New York, 1968, p.309.
10. The influence of Indian medicine may be judged from the 4th and the last Discourse of the 7th Part of the *Firdausul Hikmal* of Ali b. Rabban Tabari which gives a summary of Indian medicine in 36 chapters (Berlin ed. 1928, pp.557-600). Abu Mansur Muraffaq b. Ali Herawi mentions in his "*Kitabul Abniah*" (Inter p.4) that the Indian system is preferable to the Greek system of medicine. It is to be noted that it was in India that the Tibb-i-Yunani came in close contact with the Indian system with the result that several scientists of Islamic medicine wrote books on Indian system of whom the names of Mian Bhuva, the minister of Sultan Sikander Lodi (894-923A.H.) and Muhammad Qasim Firishta are very conspicuous.
11. "*The Kitabul Hawi*" of Razi (d.313A.H.) was actually compiled by Razi's pupils after his death. But on account of its enormous size its complete MSS are rarely found. Ali b. Abbas Majusi who wrote within fifty to sixty years of Razi's death knew only of two complete copies (the *Kamilus-Sinaah,* Cairo Ed. Vol.I, pp.5-6). It has been recently edited, and published by the Dairatul Maarif, Hyderabad, on the basis of the unique Escorial MS. However, incomplete MSS. are available in Indian and foreign libraries. But its Latin translation was published in 1486A.D. at Brescia and again at Venice in 1542.
12. Its author was Ali. b. Abbas called Majusi (d.386) who wrote it in the name of the Buwayhid Prince Azudu'd--Daulah Fanakhusrau (d.338-372). According to Qifti "*Tarikhul Bukamah*" p.232) it enjoyed great popularity in its days until the appearance of Ibn Sina's Qanun. It is available in printed form while its Latin translation appeared as early as 1523A.D. See also, Browne: *Arabian Med.* pp.53-54.
13. Ibn Sina's *Qanun* is the most important and most popular work on Islamic medicine. It was published in Rome as early as 1593A.D.; while it was translated into Latin in 1544A.D.
14. Its author was Saiyid Ismail Jurjani (d.531A.H) who composed it in 504A.H. in the name of Qutbud-Din Mohammad Khwarzamshah (d.522). It is a very popular work and rivals Ibn Sina's *Qanun.* It has been translated into Arabic, Turkish and Urdu.
15. Dr. MUHAMMAD ZUBAIR SIDDIQUE in the preface to his edition of the "*Firdausal-Hikmah*" refers to the same problem and suggests that for a right solution of the problem a good deal of the Arabic medical literature, extent only in manuscript form, has to be explored, important works have to be edited and published, and their value and originality has to be determined.
16. "*Arabian Med.*", p.6
17. ALI B. RABBAN TABARI was one of the teachers of Abu Bakr b. Zakariyya Razi who wrote his book, "*Firdausul Hikmah*" in 236A.H. for the Abbasid Caliph al Mutawakkil (d.247A.H.). It is the earliest extant book on Islamic medicine. It has been edited by Dr. M. Zubair Siddiqui on the basis of five MSS, one in British Museum, London, another in Berlin, one at Gotha, one at Lucknow and another at Rampur, and published from Berlin in 1928. But none of these MSS. is old, the earliest being dated 1003A.H. For the summary of its contents refer to the "*Arabian Med*" pp.41-43.
18. For the farity of the "*Kitabul Hawi's*" MSS see, Majusi: "*Kamilus-Sinaah*" V.I, pp.5-6. It has been published on the basis of the Escurial MS. and some fragments available in various libraries, by the Dairatul Maarif, Hyderagad.
19. It was completed about 373A.H. by Abu Bakr Akhwaini now available in an edited form, edited by Prof. Matini and published by Mashhad University 1973, see Nazir Ahmad: "The earliest work on Islamic Medicine in Persian". "*Islamic Medicine*", kuwait, 1401/1981, pp.151-161.
20 Only three MSS. are known to exist, one at Brussa, Turkey, the other in Egypt and the third at Baghdad. It has been edited by HAKIM MOHAMMAD SAID, "*translated into English and published by the Hamdard Trust*", Karachi, 1973.

21. The "*Kamilus-Sinaah* or *al-Maliki*" has been published several times including one published in two volumes from Egypt in 1294A.H. But it is not a critical edition. Its Urdu translation by Hakim Ghulam Husnain Kanturi was published in two volumes at Lucknow as early as 1889A.D. But in all these cases it is not known what MSS. on which the printed text or the translation is based.

22. The "*Zakhira - i - Khwarzamshahi*" has not been edited so far. It was, however, printed in India at Jaipur in 1282A.H. and was translated into Urdu by Hakim Hadi Hussain Khan Tabib, Muradabadi and published in ten volumes at Lucknow, Newal, Kishore, 1883.

23. HITTI: "*His. of the Arabs*", pp.311-316; *Arabian Med.*, p.2.

24. "*Arabian Med.*" p.35. Dr. ZUBAIR'S edition is based on five MSS. but none is old, the earliest being an eleventh century MS. (See Arabic preface of the *Firdaus-Hikmah*, pp.

25. It exists in an unique MS. in the handwriting of Asadi Tusi and produced at Vienna by Seligmman in 1859 A.D., re-edited by Husain M. Ardakani, Tehran, 1967 who has used another defective MS. in its collation.

26. According to Prof. Toghan "*(Biruni's Picture of the World*", p.IV) his grave lies near the Konya Railway Station. Ghazanfar prepared an index of Biruni's works (Sachau *Chronology,* Introduction XV). He has also been mentioned by Rashid ud-Din Fazlullah Tabib "*(Biruni's Picture of the World IV).*

27. Even the printed copy has some gaps (see pp.195-196), which may be filled only when some better MS. is available.

28. Its author was ZAID UD-DIN ALI, popularly known as Ali b. Husain Ansari, also called Haji Zainul Attar, who stood in high favour with shah Shuja, the ruler of Fars (760-786A.H.). The "*Ikhtiarat*" was composed in 770A.H. "*(Rieux British Museum Cat. of Per. MSS.*", Vol.2., p.469)

29. "*Arabian Med.*", p.113

30. QIFTI: "*Tarikhul Hukamah*", p.174

31. HYNAYN B. ISHAQ was the most productive translator of the ten Hippocratic writings mentioned in the *Fihrist* as existing in Ibn Nadim's time, seven were his books and three of his pupil, while the sixteen books of Galen were all translated by him or his pupil "*(Arabian Med.*", p.26). For his career see, Qifti: *op.cit.* Hitti: "*His. of the Arabs*", pp.312-313, Sami K. Hamarneh: Introduction, "*Al-Biruni's Book on Pharmacy and Materia Medica*", Karachi, 1973, P.119.

32. YUHANNA B. MASAWAYH was born in Jund-Shahpur about 776A.D. "*who served as court physician of several Abbasid Caliphs at Baghdad*". He authored more than thirty works (see, Sami K. Hamarneh: *Op.Cit,* p.125).

33. He was one of the celebrated physicians from a Nestorian Christian family of Jund-Shapur who served several Abbasaid Caliphs and died in 827A.D. *(Op.Cit.)*

34. NIZAMI ARUZI: "*Chahar Mag.*", Lyden ed. IVth Discourse.

35. Hippocrates (460B.C. - 377B.C.) was the author of about sixty works on medicine. His *Fusul* was translated into Arabic by Hunayn b. Ishaq and published from Calcutta, 1832 (Hamarneh: *op.cit,* p.118).

36. It is not available.

37. Nothing is known about it.

38. ABUL HASAN THABIT B. QURRAH (221-288A.H.) was from Harran who served the Abbasid Caliph, al--Mu'tamid as a court astronomer. He translated some medical classics from Greek and Syriac into Arabic. Qifti is not certain about the authorship of Zakhirah to Thabit, but Ibn Abi Usaybi'a holds a different view (Deh Khoda: "*Lughat Nama*" .under Thabit), see also Hitti: "*His. of the Arabs*", p.314, Hamarneh, *op.cit.* p.135

39. It was written for Mansur b. Ishaq, the ruler of Khurasan (290-296A.H.) whose patronage and friendship Razi enjoyed for some time "*(Arabian Med.*" p.45). Obviously Nizami Aruzi's and Ibn Khallikan's view about its authorship to the Samanid Prince Mansur b.Nuh (350-365A.H.) is incorrect.

40. This book is not available but is mentioned in the "*Mujiz - i - Kummi*,", British Museum, London, MS. No. Add. 23560.

41. It is a selection from Jurjani's own *Zakhirah,* and dedicated to Majdud-Din Bukhari, the minister of Atssiz Khwarazmshah (521-551A.H.) It exists in several MZZ. For Jurjani's other works, namely, the "*Khuffi - i - Alai*" written for Ala ud-Daula Aesiz and the *Yadgar* on Materia Medica and Pharmacy, refer to the *Tatimah - i - Siwanul Hikmah (Hawashi)*, pp.216-219 and *Chahar Mag.,* (Hawarshi) ed. pp.233, 237-238).

42. Arabic جالينوس , born about A.D.129 and died about A.D.200 was a prolific writer. Most of his medical works

were translated into Arabic whereby he exerted great influence on the medical teaching and practice throughout the laws of Islam.

43. 'ISA B. YAHYA JURJANI MASIHI was one of the most notable scholars of medical science and philosophy. He was a friend and companion of Ibn Ali Sina. The author of the "*Chahar Magalah*" has recorded how they fled from Abul Khwarzimshah because they were afraid of being deported to the court of Sultan Mahmud. It is said that Abu Sahl died in the desert of Khwarzm at an young age in 401A.H. He is the author of many works on medicine and philosophy the most important book is "*Kitabul Miat*" which exists in three MSS, in Paris and Oxford (See, Deh Khode: *Loghat Nama* under Abu Saha and *Chahar Magala* IV Discourse, Anecdote No.5).

ISLAMIC PERSPECTIVES ON PHILOSOPHY AND POLICY OF HEALTH

Dr. Ahmed Aroua

ALGERIA

The fundamental question we have to ask in connection with the attempt to revalue and reaffirm the Islamic Medicine is: "Is it sufficient for us to reach the level of the Western Civilization in the scientific, technical and moral aspects so as to evolve together with it and to integrate in it? - Or does the Islamic Medicine possess its own fundamental characteristics on which the concept of health and policy of medicine should be based?"

We shall try, first of all, to make a brief comparison between the concept of health and medicine according to the existential beliefs in the old and modern societies. Then, we shall deal with the doctrinary, moral and methodological principles which confer to Islamic Medicine its own qualities.

1. THE DIVERSITY OF CONCEPTS IN THE PREVIOUS AND CONTEMPORARY SOCIETIES

The concepts relating to health and the practice of medicine are often linked to the existential beliefs prevailing in the human communities according to their scientific, civilizational and social evolution. That is the reason why we have considered that before dealing with Islamic conception, we should briefly compare the most important beliefs which were prevailing in the previous societies and the contemporary ones, and which have an effect upon the concept of health from the methodological, moral and practical points of view.

1. We notice for example, that the primitive conception of medicine was closely linked to the idolatrous beliefs which were making health and illness submitted to mysterious occult forces or to gods who were continuously in conflict between themselves and who were interfering with man's life so as to make him happy or unhappy, healthy or ill. It involves that the profession of healer regarding magic or witchcraft practices or the curing thanks to nostrums are interventions aiming at contacting gods or cosmic souls in order to get into their good graces and to repulse their angers.

2. But the concepts evolve with the advance of knowledge of the natural laws of the universe. Then they progressively free themselves from magic and idolatrous beliefs, to be focused on the laws of nature to which man is submitted by his origin, the constitution of his organs, the interaction with the human and natural environment. Let's give three of the numerous stages of the medical sciences.

a. *The ancient greco-latin medicine*

Although medicine has definitely put an end to the idolatrous influences and to the ancient philosophical theories, Greco-Latin have drawn scientific and experimental methods to medicine.These made it start from a practical and logical basis according to the discoveries achieved by the different natural sciences. The Greek medicine has raised the profession of medicine to, its high moral levels, Hyppocrates said it should be based on the loyalty principles and the respect of the human existence, the relief of the weak, the secret of the privacy,

b. *The Islamic Medicine in the Middle-Age*

The Islamic medicine inherited, during its evolution in the Middle Age, medical sciences from the Greek and other ancient civilizations, but it improved its own properties:

— Medicine has got completely free from the idolatrous remains, the witch-craft and magic, and adopted the way of research and experimentation in order to go further in the knowledge of the human body, in its constitution as well as in its relation with the natural and human environment and to reach the knowledge of pharmacological properties of drugs and other medical and surgical therapeutics.

— Medicine has imparted to science and to the practice of medicine a complete meaning on the plan of the delimitation of general objectives of medicine combining the prevention with the treatment of diseases as Ibn Sina quoted it in his definition of Medicine:

"Medicine is a science which teaches the conditions of human body concerning what makes it healthy or unhealthy, in order to protect the health and to restore it when lost".

By the same token, health is linked to environmental and social influences, as we find it in Ibn Sina's Canon of Medicine: "The effective causes are those that modify or maintain the health conditions of human body, such as: air, food, water and other drinks, elimination and retention (organic), countries, housing, physical and psycological activity and rest, including sleeping and waking, the getting on in years and age, sex, profession, traditions, and all things contacting or getting into the body, that may be fitting or damaging to it".

— Medicine laid a stress on the main lines of the moral commitment of medicine and connected it to Islamic religion which endowed it with unshakable social character and made it true through social mutual aid, the spreading of establishments for assistance and medical care, among them free of charge hospitals.

c. The Western medicine in its first stage

During the Crusade and the European Renaissance, the Occident inherited the Islamic sciences, along which medicine. But doctrinary and social conflicts prevailing in Europe then, froze the evolution of natural sciences that hampered the experimental methods. Medicine has taken a conservative shape and the domination of dogmatic churchmen restrained its evolution. It lost its scientific, social and practical characteristics, whatever the discoveries which were made during these centuries, discoveries that generally had been made earlier by Islamic scientists. The obscurity continued to prevail until the modern conditions of modern civilisation.

d. The Western medicine in the modern centuries

The medical sciences have evolved with the concept of health and the policy of medicine under the effect of the civilizational and political changes undergone by Western societies. Here are the main changes:

— the outstanding discoveries in the fields of natural and technical sciences;

— the radical change of the concept of the human existence since it has been dominated by the materialistic philosophies;

— the change of the social and economic conditions, including the different political systems.

If the scientific, technical and experimental characteristics of medical sciences are not different with the divergences existing between the liberal and the socialist societies, it is because there is a gap in the political and practical aspects between the liberal society which is protecting liberties, properties and desires of the individuals, and the socialist society which gives priority to the general interest and to the demands of the economic system, placing them before the interest and the ambitions of the individuals.

Regarding medicine in the capitalist Western society, we notice that personal initiative as well as private institutions are prevailing over medicine, and health is considered as the right of any person to aspire to the well being of the body, happiness and material wealth. Meanwhile, the policy of medicine within the socialist society reflects the attention devoted to the health of the population not in the context of individual ambitions and personal choices, but as the productive power of the economy. Therefore, this society completely bears the expenses of health sanitary services, through the Community health system.

Remark: This general distinction between the policies of health does not exclude numerous interferences according to the political option. the World Health Organisation (WHO) has tried to give to health a definition which will reconcile between the conflicting concepts.

"Health is not merely the absence of disease or infirmity, but also a state of complete physical, mental and social well-being".

This definition may involve a misunderstanding as to the meaning of the words, because the social well being may mean for some the adaptation of the individual with his social environment and for others the health of community as a whole.

This definition calls for a long theoretical polemic which is not necessary here. The real discussion lies in the fact that if one is convinced that medical sciences in both societies have reached a prominent advance in the knowledge of human being and in prevention and treatment of disease, we notice that this evolution has been achieved in a human conflicting environment; in which materialistic intents, individualism and egoism are dominating. Besides, this evolution has removed man from the natural and human environment and encouraged corruption and depravity. So, the man is still questioning himself about the significance of happiness and health.

2. ISLAMIC PERSPECTIVES ON CONCEPT AND POLICY OF HEALTH

The previous comparison between the different concepts leads us to the second part of the introductive question: "Is there a concept of health which characterizes Islam as a revealed religion?" The Quran has not been revealed to teach people how to take care of physical health, and the Prophet (ﷺ) was neither a magician nor a medical man who was practising medicine or teaching it to the people. Meanwhile, we find indeed, that in The Quran and in the Sunna, before they had produced any civilization or culture, there is fundamental teaching about the existence and the place of man on earth as well as his function and destiny in the Universe.

These existential concepts give to health a deep and a complete meaning at the same time.

Doctors, even the Moslem ones, rarely think of it and we are trying to explain that:

On the basis of the doctrinary principles that distinguish between societies and devote to health in its fundamental concept and scientific methods, different dimensions, it is possible for us to clear up the basic principles of the Moslem doctrine. This may help us to draw the significance and qualities conferred by Islam to the concept of health and policy of medicine.

1. The general doctrinary ground-lines according to which the philosophy of the Islamic Medicine are based on 4 existential dimensions which may be distinguished:

a. *The human dimension,* which considers man as a superior creature in relation with the scale of creation.

> *WE HAVE HONORED THE SONS OF ADAM... AND CONFERRED ON THEM SPECIAL FAVOURS, ABOVE A GREAT PART OF OUR CREATION.*
>
> (Quran S17: V70)

God created man from earthly matter of his natural environment:

> *WE CREATED YOU OUT OF DUST...*
>
> (Quran S22: V5)
>
> *WE CREATED MAN FROM SOUNDING CLAY, FROM MUD MOULDED INTO SHAPE.*
>
> (Quran S15: V26)

IT IS HE WHO HAS CREATED MAN FROM WATER.

(Quran S25: V54)

AND GOD HAS PRODUCED YOU FROM THE EARTH GROWING.

(Quran S71: V17)

WE INDEED CREATED MAN IN THE BEST OF MOULDS.

(Quran S95: V4)

b. *The intellectual dimension,* which determined the promotion and sovereignty of man on earth, is expressed through the capacity of the human brain to acquire science which gathers the knowledge of laws of the universe and the nature, as well as the creative power by subduing and using natural forces:

HE TAUGHT MAN THAT WHICH HE KNEW NOT.

(Quran S96: V5)

HE HAS CREATED MAN. HE HAS TAUGHT HIM SPEECH (AND INTELLIGENCE).

(Quran S55: V3-4)

c. *The dimension relating to the human and the natural environment.*

Within the vital relationships between mankind and his social environment, on one hand, and between man and the natural environment, on the other hand, including its living creatures and inert matter all subdued to life.

THERE IS NOT AN ANIMAL ON EARTH, NOR A BEING THAT FLIES ON ITS WINGS, BUT COMMUNITIES LIKE YOU.

(Quran S6: V38)

IT IS HE WHO HAS CREATED MAN FROM WATER; THEN HAS HE ESTABLISHED RELATIONSHIP OF LINEAGE AND MARRIAGE.

(Suran S25: V54)

O MANKIND! WE CREATED YOU FROM A SINGLE PAIR OF A MALE AND A FEMALE, AND MADE YOU INTO NATIONS AND TRIBES, THAT YOU MAY KNOW EACH OTHER.

(Quran S49: V13)

d. *The spiritual dimension,* which has been elevated through God's inspiration.

HE FASHIONED HIM IN DUE PROPORTION AND BREATHED INTO HIM SOMETHING OF HIS SPIRIT

(Quran S32: V9)

God has also conferred on him the mission of faith and charged him with worship and earthly vicegerency:

I WILL CREATE A VICEGERENT ON EARTH.

(Quran S2: V30)

I HAVE ONLY CREATED JINNS AND MEN, THAT THEY MAY SERVE ME

(Quran S51: V56)

2. The moral principles resulting from doctrinary ground-lines

a. *The first principle* is relative to the human dimension and imposes the reverence of the human being and respect for life as long as man is abiding by the sacred law of existence and co-existence.

TAKE NOT LIFE, WHICH GOD HATH MADE SACRED, EXCEPT BY WAY OF JUSTICE

(Quran S6: V151)

IF ANY ONE SLEW A PERSON — UNLESS IT BE FOR MURDER OR FOR SPREADING MISCHIEF IN THE LAND — IT WOULD BE AS IF HE SLEW THE WHOLE MANKIND

(Quran S5: V35)

Such dimension emphasizes the concept of physical health and the necessity to protect it and take care of it — as to protect it against any harm or nuisance:

HE ALLOWS THEM AS LAWFUL WHAT IS GOOD AND PROHIBITS THEM FROM WHAT IS BAD

(Quran S7: V157)

— or to provide relief or indulgence:

THERE IS NO BLAME ON THOSE WHO ARE INFIRM, OR ILL, OR WHO FIND NO RESOURCES TO SPEND.

(Quran S9: V91)

NO BLAME IS THERE ON THE BLIND, NOR IS THERE BLAME ON THE LAME, NOR ON ONE ILL

(Quran S 48: V17)

— or to restore it by medicinal means as we can do with honey thanks to its healing properties:

THERE ISSUES FROM WITHIN THEIR BODIES (THE BEES) A DRINK OF VARIOUS COLOURS WHEREIN IS HEALING FOR MEN

(Quran S16: V69)

b. *The second principle* is relative to the intellectual dimension which cannot be separated in the concept of health from the health of body.

This dimension includes the psychological health which means mind health since it is considered as a vital function, and intellectual health as it is the fundamental basis of knowledge, i.e. the science which endows man with virtue and moral, practical and intellectual faculties. That was the case of king Talout (Saul) as God Says:

GIFTED HIM ABUNDANTLY WITH GREAT KNOWLEDGE, AND BODILY POWERS

(Quran S2: V247)

Therefore, the real value distinguishing some from the others lies in the level of reason:

WE RAISE TO DEGREES (OF WISDOM) WHOM WE PLEASE

(Quran S12: V76)

ARE THOSE EQUAL, THOSE WHO KNOW AND THOSE WHO DO NOT KNOW

(Quran S39: V9)

THOSE TRULY FEAR GOD AMONG HIS SERVANTS, WHO HAVE KNOWLEDGE

(Quran S35: V28)

c. *The third principle* is relative to the vital relationship existing between the individual and society, on the one hand, and between the individual and the natural environment, on the other hand. Man is living in a human society just like an organ is living in the body. Any part is in a good condition only if all the body is healthy. The Quran emphasizes the unity of mankind particularly within a nation committed to faith which encourages its health and its harmony, by ordaining fundamental individual morals and psychological virtues such as sincerity, patience, compassion, and by advising him the intellectual qualities such as science and wisdom.

THOSE WHO ENJOIN PATIENCE AND CONSTANCE, AND ENJOIN DEEDS OF KINDNESS AND COMPASSION

(Quran S90: V17)

THOSE.. WHO JOIN TOGETHER IN THE MUTUAL TEACHING OF TRUTH, AND OF PATIENCE AND CONSTANCY

(Quran S103: V3)

The social morals and relationship link the individuals as to constitute a family, peoples and nations based on principles of brotherhood, friendship, justice and mutual aid.

There should be a fight against social scourages which affect both health of both the individual and the community, such as spirits, games of chance, adultery, etc.

COME NOT NIGH TO SHAMEFUL DEEDS, WHETHER OPEN OR SECRET

(Quran S6: V151)

SATAN'S PLAN IS TO EXCITE ENMITY AND HATRED BETWEEN YOU, WITH INTOXICANTS AND GAMBLING

(Quran S5: V94)

NOR COME NIGH TO ADULTERY FOR IT IS SHAMEFUL (DEED)

(Quran S17: V32)

EAT NOT UP YOUR PROPERTIES AMONG YOURSELVES IN VANITIES

(Quran S4: V29)

TAKE NOT LIFE WHICH GOD HATH MADE SACRED

(Quran S6: V151)

The Holy Prophet (ﷺ) has cited a medical image to express the social health:

" *The believers are in their mutual affection and mercy, like a single body. When an organ from it is ill, the whole body is overcome by sleepless-ness and fever.* "

Health of mankind is also closely linked to the natural environment through its various components such as: animals, plants, water, air, energies, etc... The Quran refers to the vital relationship between man and nature that God has made subdued to him.

AND HE HAS SUBJECTED TO YOU, AS FROM HIM, ALL THAT IS IN THE HEAVENS AND ON EARTH.

(Quran S45: V13)

AND THE RIVERS HAS MADE SUBJECT TO YOU

(Quran S 14: V 32)

IT IS HE WHO HAS MADE THE SEA SUBJECT THAT YOU MAY EAT THEREOF FLESH THAT IS FRESH AND TENDER

(Quran S16: V14)

IT IS GOD WHO HAS SUBJECTED THE SEA TO YOU, THAT SHIPS MAY SAIL THROUGH IT BY HIS COMMAND

(Quran S45: V12)

In the same way, God condemn the human enterprises that cause mischief in the world:

MISCHIEF HAS APPEARED ON LAND AND SEA BECAUSE OF WHAT THE HANDS OF MEN HAVE EARNED, THAT GOD MAY GIVE THEM A TASTE OF SOME OF THEIR DEEDS. IN ORDER THAT THEY MAY TURN BACK

(Quran S30: V41)

IF THE TRUTH HAD BEEN IN ACCORD WITH THEIR DESIRES, TRULY THE HEAVENS AND THE EARTH AND ALL BEINGS THEREIN WOULD HAVE BEEN IN CONFUSION AND CORRUPTION

(Quran S23: V71)

DO NOT MISCHIEF ON THE EARTH AFTER IT HAS BEEN SET IN ORDER

(Quran S7: V85)

d. *The fourth principle* deals with the spiritual level in which the existential function of man is achieved and completed. So, health is not considered as complete if it loses the spiritual and moral dimensions whatever could be the benefits and the physical appearance. That is the case of the "hypocrites" as described in The Quran:

> *WHEN THOU LOOKEST AT THEM, THEIR BODIES PLEASE TO YOU, AND WHEN THEY SPEAK, THOU LISTEN TO THEIR WORDS... THEY ARE AS PIECES OF TIMBER PROPPED UP*
>
> (Quran S63: V4)

In the same way, the Quran goes on further by using medical terms to describe the health of mind in its faith dimension:

> *WHO BELIEVE NOT, THERE IS A DEAFNESS IN THEIR EARS, AND IT IS BLINDNESS IN THEIR EYES*
>
> (Quran S41: V44)
>
> *GOD HAS SET A SEAL ON THEIR HEARTS AND ON THEIR HEARING, AND ON THEIR EYES IS A VEIL*
>
> (Quran S2: V7)
>
> *IN THEIR HEARTS IS A DISEASE, AND GOD HAS INCREASED THEIR DISEASE*
>
> (Quran S2: V10)

These images relate to the unconsciousness and wandering mind when it deviates from the solid foundations of faith and loses its existential balance:

> *THOSE WHO WILLETH TO LEAVE STRAYING - HE MAKETH THEIR BREAST CLOSE AND CONSTRICTED, AS IF THEY WERE CLIMBING UP TO THE SKY*
>
> (Quran S6: V25)

The same images are used in the Quran verses that show the better way for spiritual health:

> *WE SEND DOWN IN THE QURAN THAT WHICH IS A HEALING AND A MERCY TO THOSE WHO BELIEVE*
>
> (Quran S17: V82)
>
> *NOW HAVE WE REMOVED THY VEIL, AND SHARP IS THE SIGHT THIS DAY*
>
> (Quran S50: V22)
>
> *THERE HAS COME TO YOU A DIRECTION FROM YOUR LORD AND A HEALING FOR (THE DISEASES) IN YOUR HEARTS*
>
> (Quran S10: V57)
>
> *SAY IT IS A GUIDE AND A HEALING TO THOSE WHO BELIEVE*
>
> (Quran S41: V44)

This spiritual dimension completes the meaning that we can give to the health from the global Islamic point of view.

3. The methodological principles of the policy of medicine

Considering the previous analyses of the doctrinary and moral principles of the health concept, we reach a brief account of the methodological principles which could be studied and deepened so as to be used as an experimental basis for setting up a well founded plan for the policy of the Islamic medicine.

a. The health of the body as regards its biological and psychological dimensions, is focused on the scientific and experimental methodology through the knowledge "of the conditions of human body in concerning what makes it healthy or unhealthy, in order to protect the health and to restore it when lost (Ibn Sina), through the knowledge of "the causes that modify or maintain the health conditions of human

body" (Ibn Sina), and finally through the knowledge and the practice of the different means of prevention, treatment and care.

The experimental and scientific approach is required not only by reason and logic, but also by the Islamic way of knowledge which demands observation and study of universe, nature and human being.

b. The close link existing between health of the individual and the qualities of his natural and social environment, must be based on wisdom and vigilance so as to promote the physical and intellectual health of man.

c. The main doctrinary principles demand a continuous attention to our health including moral, social and spiritual dimensions, but not only by educating man and providing him with vocational training, but by providing him with spiritual , cultural and moral education, which makes him conscious and committed in his existential responsibility and his universal mission.

d. The numerous methodological and moral problems which face the contemporary societies (birth control, adoption, sexual education, euthanasia, alcoholism, drugs, social violence, old age, biological experiments, confrontation with death...) can be solved only thanks to a just balance between the rightful man's ambition for an earthly happiness and the moral and spiritual aspects of life which are looking after the general social interest in the light of faith in God and in man's destiny.

CONCLUSION

Such are some doctrinary, moral and methodological characteristics of the concept and the policy of health in Islam as we have noticed it in its superiority over the current principles in the present world. However important is the evolution achieved by modern medicine in the field of techniques, sciences and experimentation and however extraordinary are the means used in the field of research, prevention and treatment as well as the brilliant results reached in the field of health services, this does not ensure the psychological and intellectual well being of man. The contemporary medicine is suffering from serious deficiencies particularly on the conceptual, political and methodological level as it is shown in the judgment of the most distinguished experts in medicine and social sciences.

Meanwhile, we notice that Islam according to its doctrinary principles provides man and man's health with a broader, a deeper and a more global signification than the concepts which are prevailing in other ideologies. The direct consequence of all this is that new moral and practical prospects may be imbued by the Islamic virtues in accordance with the aspirations of the modern world's man.

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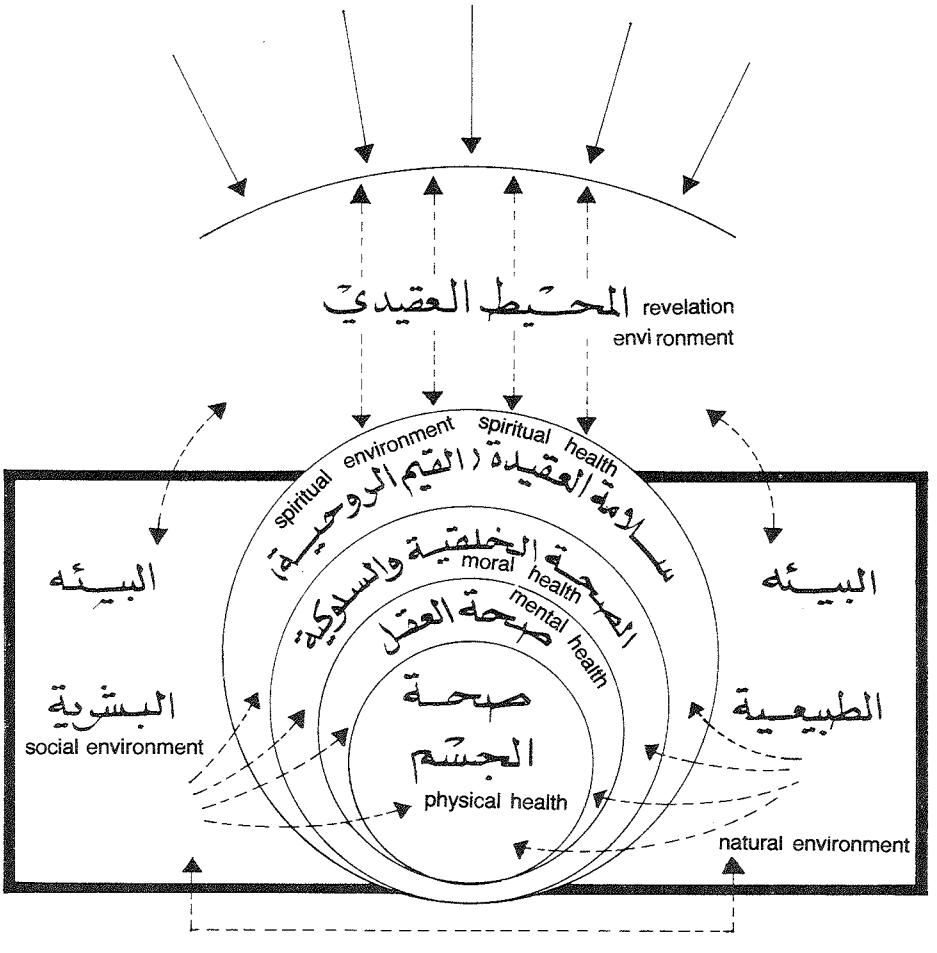

الصحة الإنسانية في مضمونها المتكامل وارتباطهما مع البيئات الطبيعية والبشرية والعقيدية.

The man's health in its full meaning and in its connections with its natural, sociel and ideological environments

COMMENTATOR'S SPEECH

Hk. Abdul Malik Mujahid

PAKISTAN

The papers presented in this session, dealt with all the aspects of Islamic Medicine. The problems of Islamic Medicine were also freely discussed.

I want to take no more time in repeating what was said by my predecessors. But I would try to discuss only one question to remove the doubts in the minds of those who think that Islam is inconsistent with sciences and philosophy, because they think that the scientific view insists on material considerations alone and refuses to look beyond the world of matter. Such an attitude does not entertain moral and spriritual values. The present life, according to the scientific view is the only life and there is nothing after this. Nature has no effects, and does not recognise good from bad. It has its own laws. Man, whether created by God or by dead matter has to create conditions by himself, conduce to help in happiness. Without the intervention of any superior power, they say.

Science deals with the particulars of knowledge, not in its Universal, hence the necessity of philosophy or rather of philosophical synthesis. Philisophy thus interpreted, becomes the compliment of our sciences. It gathers up threads of all sciences and weaves them back again into the whole of which they are parts and where they always remain.

"I am unable to distinguish between philosophy and religion", Says Dean Inge.

"Philosophy is the attempt at a rational interpretation of reality as a whole", is the opinion of Houben.

"Philosophers", says William Temple, "Perpetually trace out a new rule from the finite to infinite, from the upper end to the rear, from the world to God". But then they stopped. They do not return to tell us how their vision of God leads them to the God of this world. "Behind all philosophy, lies human nature and every philosophy, there lurks a man", Says Sherington.

God says in the Quran,

> *SO SET THE PURPOSE FOR RELIGION AS A MAN BY NATURE UPRIGHT. THE NATURE OF ALLAH IN WICH HE HAD CREATED MAN, THERE IS NO ALTERING ALLAH'S CREATION, THAT IS THE RIGHT WAY, BUT MORE MEN KNOW NOT.*

« أقم وجهك للدين حنيفاً فطرة الله التي فطر الناس عليها لا تبديل لخلق الله ، ذلك دين قيم ولكن أكثر الناس لا يعلمون » .

Auguste Comte and his two great disciples in England; George Henry Lewis and Fredric Harrison, who based their philosophy on experience, are as enthusiastic in their worship of the cult of humanity as any Muslim was or is, in the worship of God.

Science meditates itself from religion, but philosophy never can, unless it ceases to be philosophy. The positivists do not deny that all their problems are beyond the reach of science, but they either leave them alone as did Auguste Comte or they detach the scientific part of such problems and treat them scientifically as did G.H. Lewis. But recent advances in the scientific theory of matter and Einstien's conception of time and space have made positive philosophy somewhat out of it. The cult of humanity founded on positivism will, we hope in the future, be found to be no different from that of the Islamic revealed book, that is the Quran. And all those who wish to be proved philosophers, must find comfort not only in the theories of great men, but in their actual lives; like the Prophet (ﷺ). No one can say how this complex existence known to us as a man, is capable of deriving such wonderful moral and spiritual powers out of mere matter, if he is no more than a physico-chemical combination of 92 ele-

ments of chemistry, nor can any one say if man has something more than the mere combinations of elements. Where this something more comes from? Where it resides and what happens to it after death? We call this 'Something' as "SOUL" and we say that it is immortal. The scientist, pure and simple, who measure things by his perception can honestly come to only one conclusion, i.e. that the 'Soul' is a function of the body and its organ, just as the motion of a clock is a function of the mechanism of a clock. But the mechanistic theory of life fails even to account for the facts of biology; evil.

The theoretical problems of philosophy and religion are the same. The approach to reality is, however, different in the two cases, but the reality is the same in both cases. Thus if science is to be guided by a workable philosophy, it must be guided by a religion also or else philosophy without a religion is an empty shell.

Quotation from Quran,

WHEN ALLAH MADE COVENANT WITH THE PROPHETS, 'BEHOLD IT— WHICH I HAVE GIVEN YOU OF THE BOOK AND THE PHILOSOPHY

« إذ آخذ الله ميثاق النبيين لما أعطاكم من كتاب وحكمة » .

It means that the Book and the philosophy of the Book are indispensable from one another and that is why medicine is being attributed with Islam.

Medicine is also a part of the general culture and its development cannot be understood without knowledge of the past traditions. It may often be that such traditions do not prove to be valid and correct, but there is the motto; "Those who do not remember the past are condemned to repeat it".

The Western system of medicine arose from the Greek medicine as transmitted by the Arabs. The rare goods of modern knowledge and great minute details have obscured the general principles of medicine, and led the Western Health system to many problems; such as high costs and tremendous manpower requirement, for which there is as yet no satisfactory answer.

In U.S.A., National Survey has repeatedly shown, that one of the most important concerns of the average American citizen is the fear, that he will not enjoy a good health. Ivan Illich, a renowned social scientist asserts that medicine unquestionably injures more than it cures. Dr. H. Mahler, Director General of the World Health Organization, concludes his address on Health, "The medical establishment is in real trouble. Not only is it caught in the worries of rising costs versus finite budgets, but it has the problem of defining its own image and philosophy".

The W.H.O. defined health as "The complete physical, mental and social well-being of the individual and not merely the absence of disease or infirmity".

"It has made medicine lean heavily towards emotional satisfaction to the great neglect of the intellectual and spiritual aspect of mind and its non-reflective sympathetic compassion for fellow men".

In the 4th Mary Hemmingry's Memorial lecture, it was pointed out that Islam makes a holistic approach in meeting the physical, intellectual, social and spiritual aspects of the human constitution, and strives for the fulfilment of human needs according to the personal condition, environmental situation of the individual.

GENERAL DISCUSSION

Dr. Abdul Rehman Al-Awadi, (Chairman)

Ladies and Gentlemen! I like to remind you that in this morning's session, we were not able to proceed with the comments and as I said this morning, we decided to meet at 6.30 this evening. I think there was a mis-understanding, because some people thought that there is going to be one meeting only at 6.30. But, it is not really a problem. We have been discussing the 'Present Status and the Future Prospects of Islamic Medicine. We invite the speakers to come up to the stage to present himself or herself and start making his or her comments. The first speaker on my list is Dr. Ahmed El-Kadi. So, he is kindly invited to take the floor.

Dr. Ahmed El-Kadi

I have two comments to make. One; on some of my Friend, Dr. Hijazi's statement . Although I do agree with him that the Muslims, as a whole do not have the leadership position in the world of science. However, I do disagree with his challenging statement, that today there is no famous name, as he said it, in any branch of science or medicine. I am sure we have hundreds of world renown scientists and medical specialists. Even I can just recall from one country, i.e. the United States, from one branch of medicine like surgery. I can just quote a few examples; Hassan Najafi, Qazi Mobeenuddin, Khalid Butt, Rahim Moosa and many others. You can have a list of at least one hundred of top-notch scientists in the U.S. alone, probably more and there are many others in other countries. It is true that these Super Stars are individuals and they are not representing Islamic Medical Institutions and they have to be pulled and organized and utilized in a much better way. So, there is a lot to be done.

I have other comment regarding a question, which was asked during the morning session and repeated again during the early afternoon session. This was about the need for Islamic Medical Institutes in the West in general, or in the U.S. in particular. I feel that there is a need, not only for one but for many such higher centers of learning in the East as well as in the West. Now, as to reasons for having one or more of these centers in the United States; in addition to several reasons given by Dr. Omar Alfi and Dr. Maher Hathout during their presentations, I will just give two simple reasons, which are quite obvious. One; Although we have medical Institutions in the Muslim countries, some of them are even labelled as Muslim or Islamic Institutions, we still have hundreds of Muslim physicians and hundreds of thousands of patients, who go to the West and to the United States for either education, training or treatment. There is no reason on earth, why not have Islamic Medical Institutions to provide the educational services or the Medical services for these hundreds of Muslim physicians and patients. Now, if in the near or far future we reach that perfected stage, that we do not have to send anyone to the West; there is still another reason which is of a permanent nature; which is the local need of the American Muslim Community. When we ask for a Medical School in Kuwait for Kuwait, or in Beirut for Lebanon, or in Amman for Jordan, or in Tripoli for Libeya, it makes sense. Now, realizing that there are several millions of Muslims in the United States; I say several, because there were three millions about ten years ago and there is a considerable increase. They have their own needs for the higher centers of learning, not only one but probably several and it has to be at the most up-to-date level within the Islamic understandings. So, these are couple of reasons for Dr. Hamadi Al-Sayyed's question and Dr. Hijazi's question and many others about the need for such centers in the West.

Dr. Abdul Rehman Al-Awadi (Chairman)

Thank you Dr. Ahmed. May be the commentators can collect all the comments and express it at one time. Dr. Adnan Jaljoli wants to give us a view of the Islamic Hospital at Amman, Jordan as an example to these centers to be established. He is the representative of the Islamic Hospital at Amman and as far as I know, this Institution has 300 beds and has a Faculty of Nursing and has started very

interesting activities indeed. And all we hope for is that we are not unable to create such Institutions in our own countries, because we think that, we find actually, that Muslims in the Western countries and United States in particular are suffering a great deal. This institution is required, first of all, to provide Services. In the United States itself, you know there are Jewish hospitals, there are Adventists hospitals, etc. So, why not an Islamic hospital also for all those Muslims who are settled in the States. Of course, these people can be further useful in giving training to our own doctors, especially now that the training courses are fewer and fewer in the Western countries. Any how, these are the points that should be appreciated. This does not mean at all, that we do not intend or want to create the Institutions. As Dr. Adnan said, the activities of the Islamic hospital are very valuable indeed. So, we are in touch with them and if the people incharge are real Muslims and not Muslims only in name, I think it can be very valuable, as far as providing services to the Muslims is concerned. And I find the example of India also in this context.

Dr. Osama Abdul Aziz,

My comment refers to what Dr. Hijazi has said, because I thought that he was rather pessimistic. He said that during the last fifty years no Arab distinguished figure was known at the International level. But in fact he will find that the surgeon, who will be operating him in England or in the States is an Arab and that the one third of the personnel working in the Western hospitals today, are Arabs or Muslims. Remember Micheal Dibkey is one of the greatest surgeons in the States and he is from Lebanese origin. Majadi Yaquob in England is an Arab and we find that in these countries our fellow Arabs are working. The thing is that due to certain economic circumstances, some of our scientists are obliged to emigrate there and it is an enrichment to the West. We can be inviting them and we can create specialized centers here, instead of creating them in U.S.A. We can invite them here, where they can contribute effectively and where they can be useful. Here and not there. Let us take the example of the Arab scientists in various branches. I will cite the example of Dr. Musharrafa in the field of science, Dr. Ali Ibrahim in the field of Surgery, Dr. Taha Hussain, Ahmed Shawki, and Hafiz Ibrahim in the literary field and they are of International calibre and they can even be compared with Shakespeare and others. Now, when we say that we have not produced a new Ibn Sina, or a new Ibn Nafees. This is true and this will not take place. For one simple reason is that research activities cannot be carried out now on individual basis. But there should be a team work and an integrated approach. We get in touch with various centers, various individuals and the results we obtain are the results made by a team. These are some of the points, I wanted to put.

Dr. Francisco Guerra,

Well, for an arrogant Spaniard, I feel a little bit humbled after attending these meetings, because I had many ideas before I came here and after learning of the work that has been presented here and the work that the Kuwait Government is carrying on, my mouth has closed a little bit. However, I wish to point out a few facts. First, I noticed in these meetings two currents of thoughts: One, which represents a great majority and also the greater reason of Islamic medicine represented by the Hakeems and other people, who want traditional medicine, that is an important asset of the Islamic World. And the other one, the respectful of the so-called scientific approach, which I believe, should be conciliated through this meeting. To that aim, I think it will be wise, if the ideas that have been presented about the meaning of the Islamic Medicine, should be put together and I was looking with love and affection at the work, at the inspiring presentation, I must say, of Dr. Allie Moosa from South Africa, who really was talking with the relation, with the faith and also with the mind put into the meaning in the purpose of Islamic Medicine.

There is one point which I would like to point out to Sheikh Khalid also, that it takes 25 years to

train any scholar and Kuwait cannot afford to wait for 25 years to produce the people who are going to lead the research in Islamic medicine in this nation. So, I have been talking to my colleague, Prof. Putscher from Germny. I represent now a university that was established in a very prosperous Islamic Area, Alakala, near Madrid during the Islamic period, in Spain and I am sure that prof. Putscher and myself will love to have some students working with us. I have one of the largest libraries in the world, as Your Excellency knows and with great deal of Arabic texts and I would like very much to receive people to work with me, because I have also behind me the great resources of the Spanish-Arabic Institute, which is located in Madrid. I think it should be emphasized due to the span of time that will be required for the Kuwaiti Government in order to have Arabic Institutions to put in any movement in the resources that have been accumulated that the coordination and the support of research we are carrying along, for instance I pointed out to Dr. El-Gindy that I have a person working for the past few years in the correlation of the Spanish Materia Medica, during the Islamic period To keep in mind that this is not only the collection of manuscripts what is going to bring the wealth here, but you also need a good number of supporting material to be able to work with the original material you are going to collect here.

Dr. Abdul Rehman Al-Awadi, (Chairman)

Thank you Dr. Guerra, for your excellent and interesting suggestions that you are really willing to help us and Prof. Putscher from Germany also. But as you know, of course we are very much in accordance to what you are saying. It will not take a long time, we think. We are trying to do as much as we can. We are trying to get every Arab and Muslim scholar working in this field, hopefully to get them at least under one umbrella of trying to build up a momentum. I agree with you that it will take a long time, but any thing in the field of scientific research and scientific investigation is going to be a very long process. But we are very grateful for your offer and I am sure we are going to utilize it in our Islamic Medicine Organization, Insha-Allah.

Dr. Fouad Hifnawi

As a matter of fact, the morning sessions were full of good ideas and I want to comment on 2 main points. The first is regarding the Islamic Medical Center, which Dr. Omar Alfi has referred to as well as Dr. Maher Hathout. It is a very good idea, but I think that in order to make this idea integrated, we have to go out and have to see what is going on abroad. I am afraid of two main things,. First, that we send our students and our physicians to the States and then they would not come back and this is called a brain drainage. That is why I am suggesting to establish this center in any other part and there should be some sort of agreement with any Islamic center existing in any of the Arab countries. Those who are working as practitioners, could work in any given region and then they should go to the States for example and then should come back. Because if we ask those physicians to come and live in our Third World, of course, they will accept this and if this idea has been adopted by any given financial system, it would be more beneficial, rather than establishing it in the United States alone.

There is also the missionary physician. When we were in Africa together with Dr. Hamdi Al-Sayyed to deliver some lectures, we felt at the official level that they were in need of a Muslim missionary physician. Of course, this is really something great. If we could take a decision here as to lay down a programme, it is a very good idea. But how shall we train this missionary physician? Even if he is graduated from al-Azhar University, of course he has certain ideas. Is there any given pattern to train him? We should lay down some sort of a course to give him a M.A. or M.S.C. or any Diploma to give him a certain push in order to become a missionary physician. We could select them through an examination and we can send them to any of the poor countries, like Zambia or Tanzania and we could give them some sort of a salary. Of course, he wants to get some money and he wants to be well paid. So, the idea of the missionary physician should be really realized and not be any slogan.

Dr. Marwan Al-Sabeh,

As a matter of fact there are three points I want to deal with mainly. All conferences that are being held in our countries are always recommending two main points. The first is to include in the recommendations, to teach the History of Medicine in the curricula of the Faculties of Medicine in the Arab world. We have dealt with this subject matter very thoroughly and that is why we are asking and we want that such recommendations should be accompanied by executive decisions. Of course, we realize the great task undertaken by our Muslim fore-fathers. There is another question which is, the teaching of Arabic in the Faculties of Medicine in the Arab world. Of course, the teaching of Arabic is a very sensitive question, but of course, there are no grounds for such sensitivities. In the Syrian University, we are teaching Arabic without any reactions on the part of the students and the same thing could be applied to the present age. For example, it is a well-known fact that most of the small countries in Europe, are teaching medicine in their own languages, e.g., in Yogoslavia in Yogoslavian, in Romania in Romanian and even in the Soviet languages, despite the fact that the Russian language is the main language. In Tashquend there is Tashqendi language and in the Baltic countries, they are using their own different languages. So, why should we fear the use of Arabic and we can always do what has been already executed in the University of Halab and we should try to apply this as much as possible.The third point I want to deal with is that I want to stress what already had been said as Dr. Abdul Rahim is being very pessimistic and that there are many pressures that might lead to the distortion of the reputation of our fore-fathers in terms of scientists and historian and so on and so forth. The fourth point, I want to deal with is, what has been said by Dr. Hifnawi, that the Medical Center should receive due attention, because we are thus benefiting our Arab societies through the services of such centers in the Medical fields.

Dr. Tharwat Ghuneim,

As a matter of fact, Dr. Hifnawi has said what I wanted to say,but under these circumstances, it is high time now to establish a World Islamic Organization. May be you have said this that there must be such an organisation and we should establish this organization as soon as possible. There are many Muslim scientisits, but they are either in the East or in the West. Those living in the East are suffering from the narrow potentialities or the limited potentialities. So, this organization, through an Islamic Government, could provide potentialities. We can provide all the resources and the programme that could alleviate the problems of Muslims in the poor or in backward countries. This organization, instead of sending delegates to the World Health Organization, could send to this Islamic Organization and thus we would be strengthening the Islamic aspect as well as the medical aspect. I think that this suggestion is worth studying.

Dr. Adnan Jaljoli,

After listening to the different points dealt with by this conference, I find it impending upon me to thank all those who organized this conference and for the great potentialities mobilized for this conference and the great opportunities we have had in order to listen to such valuable lectures. I want to talk about an Islamic Hospital that is going to be established in Amman. This hospital will have 350 beds and it is a public hospital and costs were collected from the donations of some individuals and some Islamic Governments. The construction of this hospital lasted for some time, but it is about to reap its fruits.

The main objective of establishing this hospital is to support the Islamic religion and to show that Muslims are capable of interpreting this into practical actions. The meaning to be expressed by this hospital is, the solidarity in the Islamic community. As it has been established through the services of many

rich people to establish such a hospital for the people coming from outside Jordan as well as coming from Jordan. This institution is a clinical one. It is educational and I mean by this that the chance would be given to train students in the faculty of medicine in Amman and to train physicians after being graduated in all the specializations. As for nursing, we will open an institute for nursing. Although it has not been opened yet, but we have laid down the necessary plans and our main concentration in the few coming years is to collect the money necessary for this objective. As for the third objective of this institution, is the scientific research and I mean by this, to investigate the Islamic Heritage to which the major part of this conference was concentrated. In fact the second point is to encourage the Muslim physician to undertake up-to-date scientific researches and thus we could lay the path with the present and we could cope with what is going on in the whole world. As for the Islamic touches in this hospital, first, it will be keen to link the Islamic medical task with the belief and I mean by this that the physician or the nurse or all the staff would have in mind that the task they are performing, is out of their full belief in Islam and that their main responsibility to undertake these tasks is derived from their belief. We will be keen to implant and instill these ideas in the patients and to put them in psychological status and we will instill their sense of belief that it is God, who is going to cure them but the physician is only a helping assistant. There will be a group of social workers who will be contacting the patients and the visitors of those patients. They will be visiting those patients after finishing the treatment in the hospital and to follow up what they have instilled during the stay in the hospital. As far as application is concerned we have been very keen from the very beginning to have the Sharia dress for the nurses and the women physicians who will be working in this hospital. And the staff in the university are wearing this dress. The same applies to some women, officials and personnel who are working right now. The second aspect is to cut down the mixing between men and women at the hospital and at the university. And this would strengthen the morals of the personnel and they would not be subject to any problems. We would always be keen that the nursing of women patients and children would be undertaken by women nurses and the same for men. There will be a fund for treating the poor people and it would indirectly correlate to the hospital. This fund would be investigating the cases of the poor people who will be applying for treatment and we would be investigating the social status of these poor people and we will decide the levels at which we would be treating those people. We will be collecting the necessary funds and we will be paying these funds to the hospital so that the hospital would be able to undertake its human services. The second point which we have been very keen on is, that these institutions are non- profitable commercial institutions and we will be treating the poor people without any charge and that is why we have been keen to set some workers for this hospital so that they may render some sort of help to such services. The main message of this hospital is similar to the message of the medical institution that is expected to be established, of course with the difference in potentialities and in resources and we are asking God Al-mighty to help us to perform this duty and we hope that there will be the close link between us and all the other Islamic Centers.

Dr. Ahmad Shawky Al-Fanjari

Commenting on interesting lectures given this morning by Drs. Maher Hathout and Omar Alfi in which they proposed the establishment of an Islamic Medical Centre in the U.S., I would like to say that the approach to Islamic missionary activity in our times has long ceased to depend on rhetoric. It depend now on action, basically on the efforts of physicians. They are the ones who bear the brunt of calling for Islam outside the Islamic World. Without them, no missionary activity is possible. I have seen one of the Islamic centres abroad and I am very glad to hear today that these centres should be independent of the Arab League as red tape is notorious for killing any real action. Once I visited an official Islamic centre abroad and was glad to see stacks of incoming mail from all over the world enquiring about Islam and expressing the writers' wish to embrace Islam. Yet, I was appalled to learn that some of those letters had been lying there for years, never opened and never answered. This is the result of relying on

civil servants and not on ideologists who are emotionally involved in their mission.

Contrariwise, I went to a small town in Wallace and found a small group of dedicated Muslim physicians from all parts of the Islamic World; from Pakistan, India, Turky, Iran, Egypt, North West Africa, etc. This small group of true believers have a tremendous and far-reaching influence on the community where they live and carry out their missionary activities. These activities, however, do not cost much. They do not even have a budget or a regular place where they can hold their meetings. Sometimes they have no other place to perform their collective prayers but the town church. Contrast this with the governmental Islamic centres that lean comfortably against a convenient budget. What have they done in the way of calling for Islam? Almost nothing. Now, each one of that small group in Wallace has his own clinic that could yield him windfall profits if he turned his full attention to it. But they devote a large portion of their time to advocating Islam, and we know how precious time is in the US that it is now measured by the dollar.

This personal approach has proved much more effective than the slack modus operandi of the governmental centres. Therefore, if we are serious about carrying out Islamic missionary activity in an effective and successful way we should lean heavily on physicians in the first place. Secondly, such activity should be freed from the tyranny of the red tape. This way we can achieve a lot. I firmly believe that if Islam is to stage a fresh comeback it will be outside the Islamic World; in America or in other non-Islamic countries. Those people can begin from scratch and take Islam from its pure sources.

Prof. M. Putscher,

It is for the thought of the speaker here, who mentioned the problems of the students from foreign countries, joined to the university, who could give, in a pre-Islamic or you would say non-socialistic way, then the idea of the problems of medicine in their own countries, because these Islamic countries have a very high level, in trying to join Western analytical methods with very old experience, for instance, in Pharmacy, in Psycho-therapy, even in Psychosomatic medicine, to join this with modern fields of research. But we have to discuss this not only in Kuwait, in a congress like this, but in the universities, for instance, in Cologn. If there are only 2 or 3 institutions, there to discuss in this way, the problems of the foreign students coming to our European countries, that would be for us ,the European teachers a great help.

Prof. Salimuzzaman Siddiqui,

Thank you very much, Your Excellency, for giving me a few minutes. I shall take very few minutes, in respect to a certain issue which was raised here about the time it takes to build up a full fledged research specialist in any field; something like 25 years. It is true that from the birth onwards it would take 25 years. But here in Kuwait, we have a university in which Graduate studies are completed and after the graduate studies, either in medicine or in any other relative scientific field, about 5 to 6 years' time is enough to produce the required research specialist.

Dr. A.R. Hijazi,

We do not have sufficient medical care to export our resources to the rich countries like U.S.A. or U.K. I do not think we have solved all our medical problems so that we implant our centers abroad. I say this is my point of view and I say it clearly and frankly. I think we are running away from our realities. I think that our real problem is the problem of civilization and problem of our culture and we all know it and here, it seems no body would like to look straight to the realities. We are not here to solve the problems of the world. As for those who think that I am being pessimistic, I say on the contrary. If I was pessimistic, I would not be here. I would not have come here. I would not have done what I have done. I would not say, what I have just said. So, it is not a question of being pessimistic or optimistic,

but I think our problem is that every of us has to expose the problem in an objective manner. We say that there is the problem; this problem has the following factors; the solution of this problem demands this and that and then we find the solution for each component of the problem. I do not think that any one of us here denies that, there are problems in medical research. Yes, we all confess, we all admit this. Of course, I have heard some research papers on the benefits of honey and I hope that this will be published, but in medical research; If you insist to say that I am pessimist, then I am pessimistic, as far as the present is concerned, but I am optimistic as far as the future is concerned and I hope my optimism in the future will be justified.

Dr. Abdul Rehman Al-Awadi, (Chairman)

It seems, there is a misunderstanding about what has been said. I do not think it is a question that they want to set up a specialized agency or organization, but the problem is that the Muslims in the States, in large numbers do not find the right place to go and get medical treatment. So, the problem is to provide services to the Muslims in the U.S.A., Of course, there are many professors who work in America. So, we hope that starting from this point, we should start a nucleus that could provide services to these Muslims. Of course, we know that if we want a hospital to provide services, then it should be of first quality. So, we want this to be a nucleus, so that it could spread in the States. You know as a Muslim, I do not want to die, for example, in America in a hospital with a Christian Bishop on my side. I would like to die or to be treated, to get medical treatment at a Muslim hospital.

I think that a pessimist is not a faithful. I think we, all of us are believers, all of us are faithful muslims, we all are optimistic and we should be optimistic. But these people, these Muslims in the States suffer very very much. Many thousands of them do not find the people who could organize them in their religion and who do not find people who could even, know how to bury them. So, of course, we should start in our countries. We were talking about the missionary physicians and how to train them. Of course, we do not see a problem here. We are in Muslim countries and we are surrounded by Muslims, but when we find the missionary Muslim or Doctor in the foreign coutries, we find that even this Muslim Imam does not know how to preach Islam. So, I think that now the Muslims in America have seen the problem now and they suffer and they need a place in America where they could get medical treatment, and later on they could get the medical training and medical education and so on. But we should not say that we set up a center in the West because it is developed, or so and so. We know that the Khalif Mamoon established Darul Hikma in the Islamic World, not in Greece. We know about the professor Abdul Salaam, who is a Muslim. He got a Nobel Prize and we are proud of him as Muslims, but he is the only Muslim scientist, who has been awarded the Nobel Prize in Physics. I think we are making our first step and we feel that we should progress and we should advance.

Dr. Saeed Ashour

I think what H.E. the Minister of Health has said now, is the synthesis of what we have said concerning the centers, whether the centers be set up in our countries or in other countries. But I begin where H.E. ended. He pointed out something about the missionary doctors, Muslim doctors and again I will comment on this. Perhaps history has something to review in this respect, after this long suffering. I consider there is a responsibility for preaching of Islam. I say this responsibility is no longer the responsibility of Al-Azhar, any Islamic institution all alone and it is not the responsibility of a new center which we alleged to build up, but it is the responsibility of every Muslim, who is living outside this country. In history, we know that Islam had widely spread in many parts which were not visited by the Islamic Armies. We do not hear of any Islamic Army, which had gone as the Phillipines and Indonesia and to China, nor to East Africa. There were no Islamic Armies, which had come so far as to East

Africa. How can we explain the existence of millions of Muslims in those remote parts. We say they were traders. Yes, Muslim traders went to those countries and they traded. They did not go as preachers or missionaries. They went basically for buying and selling and after that the question is: Why did the people of those countries adopt Islam? Is it because they saw him praying and fasting? No, but because they transacted with him and it touched them. They found in Islamic behaviour trust, honesty and other morals of Islam. They loved him and through his behaviour, they were won over to the Islamic faith and thus Islam spread in those countries. No Islamic armies went as far as those remote parts concerned and this is a reply to what the others alleged that Islam was spread by armies. Thus, every Muslim in those parts, in the United States and in England and in Europe and anywhere would rule by his noble behaviour. Try to behave in accordance with Islamic precepts, you will have been the best preacher for Islam, but unfortunately a minority which harms Islam, (I say a minority which harms Islam) which renders Islam unlovable to the people of those areas. So it is not the problem of establishing a cernter or bringing up a preaching doctor; every Muslim in those remote parts is a preacher for Islam.

Another point, with the permission of the Minister with regard to the lectures which were given in the morning, for which we did not have the opportunity to discuss. One of the speakers talked about a pledge or the charter of the Hippocrates and he called for an Islamic charter or constitution. I would reply by saying that the Muslims have adopted this oath and most of the doctors and books of Hisba and others, they called on the Muslim doctors to take an oath to respect the contents of that book. This is something strange, because Islam is a religion of tolerance. When the Prophet (ﷺ) came and Islam began to spread and when He (ﷺ) was embarked on doing away with the obsecurent society, the Islam looked to the traditions and customs of the old generations, of their forefathers. They accepted parts and rejected others and amended some parts of the traditions because it was of their forefathers and this is the glory of Islam. And the Muslims when they looked into the oaths which was taken by the Paganists they found that it was in accordance with their teachings and so they adopted it. If it was tarnished, if there had been any breach in it, they would have rejected it. And that is why, if we take the oath:

بسم الله الرحمن الرحيم .
الحمد لله رب العالمين .

IN THE NAME OF GOD. MOST GRACIOUS, MOST MERCIFUL PRAISE BE TO GOD, THE CHERISHER OF THE WORLD.

(S 1: V1-2)

This becomes an Islamic oath. That was the look of the Muslims and that was the attitude of their forefathers. There is a sentence by Osler and his renowned book, his famous book, which must be known by the professors and doctors, which is called "The Evolution of Medicine". He said very literally that this oath, which was laid down by Hippocrates in the 5th century before Christ (5 B.C.), was left abondoned for over twelve centuries, until it was applied by the Muslims practically. It was laid down in the 5th century B.C. About 12 centuries that oath remained unapplied. The first people to apply, practically that oath were the Muslims and Osler calls for entitling it, the Islamic Oath. It is not a question of laying it down, but is to apply it. There are medical scriptures about freedom, liberty and brotherhood, but it is not a question of the application of these slogans, that were laid down in the Pagon age and this is the glory of Islam. When Islam came into existence it did not do away with the heritage and the lagacy of the forefathers. On the contrary it gained from it. And with my due respect to Christians here Christianity, when it came, it did away with the legacy and heritage of Paganism. And the Gregorous said this famous phrase; How can we purify the spirit by reference to the heritage of those Paganists? They burnt it down and that is why civilization, humanity was deprived of the heritage and legacy. But Islam had looked at everything in sobriety and rationally. It took one part, amended other parts and

rejected other parts and that is the mystery, the secret of the respect for that oath, and the Muslim Ulama called for its implementation.

Another point is that in the morning one of the speakers had referred to Abdul Latif al-Baghdadi, who was a contemporary to Salahuddin. He used to teach at al-Azhar University and he mentioned the names of those who taught at al-Azhar University during Ottoman period, among preachers and the missionaries. I would like to say that basic point regarding Moafaquddin Abdul Latif al-Baghdadi, that he has taught at al-Azhar University. He was the first man to teach at al-Azhar after al-Azhar had become the stronghold for Sunnah. So, he taught the bases. Indeed the sciences do not know any sect and medicine is medicine. But the image had changed at the time. Al-Azhar was a sectarian institute in addition to an educational institute. That was during the reign of Salahuddin. But after the downfall of the Ottoman dynasty the first importance of Abdul Latif, that comes up after the change of the image of al-Azhar.

During 11 centuries of Islamic empire, the only place for teaching used to be a mosque. There was not a Madrasa. A 'Madrasa' means a thinking school, but a building for education did not exist at that time, only the places for education,.

I would refer to the images and pictures shown and placed here in the seminar from which many pictures that were projected were of Rhazi and Ibn Sina. I am afraid that some of you might believe that these pictures are true. No, these pictures are totally untrue. The picturing of individuals in Islam was hated to the degree of almost being tabooed. The pictures of some individuals that fit the names, the pictures of an individual picking up fruit, that came at the end of the Middle Ages. At the beginning of the Middle Ages there was a picture of Rhazi. The Muslims kept away from any suspicious and not a single picture of Salahuddin is existing in history and I say this at my responsibility.

Thank you for having dealt with this point and before I leave this tribune, I would like to thank H.E. the Minister of Health and the honest people who have assisted him and have submitted so much information, sponsoring and organizing such a big conference like this, which empraces an elite of a number of scientists, providing the good atmosphere and comfort. I thank him very much.

CHAPTER TWO

(Some Selected Papers — Not Presented)

1. PRESENT STATUS AND FUTURE OF ISLAMIC MEDICINE.
   H.E. Hk. Mohammed Said.
2. PRESENT AND FUTURE OF ISLAMIC MEDICINE.
   Dr. S.M. Qureshi.
3. THOUGHTS ON THE FUTURE OF ISLAMIC MEDICINE.
   H.E. Hk. Mohammed Said.

PRESENT STATUS OF ISLAMIC MEDICINE AND ITS FUTURE

Hakim Mohammed Said

PAKISTAN

My personal ideas about the present status of Islamic Medicine and its future are as given in the succeeding paragraphs:

1) Among the large number of philosophers, thinkers and physicians who have either intuitively or logically tried to establish the reality of the soul and the body, the Indo-Pakistan subcontinent has a large number to its credit. The physicians of the subcontinent are largely responsible for preserving this body-sole relation. Hindus and Muslims have equally contributed to the preservation of this heritage.

2) It is to the subcontinent that the credit goes, in the face of extremely trying circumstances, for keeping intact the theory and philosophy of Islamic Medicine in a large measure.

3) It would be unfair to deny to the scientists and workers of the West the important contribution they have made, notably in surgery, microbial biology, preventive medicine, etc.. But at the same time, the West has not accorded the time credit that it should have given to the scientists of the East.

4) We shall, however, realize that we have not addressed ourselves so far seriously to patch up the pieces of our past and to present a coherent picture how the history of medicine is dependent upon links, and how it is un-understandable without the appreciation of these links.

We will not be able to lift the curtain of imitation which covers all our thinking until this is done. For example:

a) We must appreciate that it was Ibn al-Nafis Qarshi who first discovered the principle of the circulation of blood rather than William Harvey.

b) It was Ibn al-Haytham who was the first to discover the real nature of optics and vision.

c) Where would Galileo be if Ibn al-Haitham had not invented the principle of magnification of the lens or Van Leevenhoek be with his microscope? The science of astronomy owes its existence to this Arab physicist.

d) It is not correct, in fact, to designate Jabir Ibn al-Hayyan as the father of Arab Chemistry, he is the real father of chemistry. He has discovered the mineral acids and unit processess, like crystallization, sublimation, distillation, etc. on which rests the backbone of modern industry.

There are several such examples which will appear before us the more we try to probe into our past.

We know at best only twenty or so prominent physicians from the past, a vast number through the accident of history is yet hidden from our purview. We have to revert to medieval manuscripts in the libraries of Escorial, Istanbul, Cairo, and Rabat to scour out these personalities and study them.

5) The only way to rediscover ourselves and our past is through the compilation of a union catalogue without which we shall remain plunged into darkness. If we fail to succeed in doing so this time we might as well lose the opportunity for ever.

6) It is not perhaps possible, let it be confessed, for any positive advance to be recorded in the field of Islamic Medicine unless we put down theories and philosophies of medicine in modern language. Thus the four humours can be explained by means of chemical groups like the Amino, terperic, hydroxyl, carboxyl and so on and the four elements either symbolically or in terms of carbon, oxygen, hydrogen and nitrogen. The theory of humours reigned supreme for two millenia and it is our belief that it is as valid today as before.

7) On the occasion of the first International Conference on Islamic Medicine Hakim Abdul Hameed read a paper, *Earth, Elements* and *Man.* Unfortunately, it did not receive the importance due to it. I should like to announce on this occasion that an international conference/ symposium is being held in India next year in which scholars from the world over will participate.

8) We should make the sum-total of the Muslim scientists from 1st century A.H. down to the 14th century A.H. as the topic of our writings and discussions, e.g. Asharrite philosophy, the concept of atomism, the development of the concept of synegism in medicine, and so on so that a comparative structure may be worked out. Those who have studied Joseph Needham's *Science and Civilization in China* should know how useful such comparative chronologically arranged tables can be.

9) In the field of materia medica, the Muslim contribution stands unrivalled. Dioscorides, for instance, mentions some 600 drugs, barely 400 of them, identifiable today, but Ibn al-Baytar mentions some 3,000 drugs and by the later medieval period the number of drugs in use in Islamic materia medica was nearly 10,000.

But the point at issue is the correct identification and classification of plants. Many different drugs carry the same name. One example is that of *Shayba* which may denote the wormwood or a lichen. It has therefore become essential to compile an encyclopaedia of medicinal plants which give their natural odours, taxonomic/ inflorescence characteristics, habitat and occurence, distribution, etc., accompanied by illustrations.

10) We should undertake to locate rare manuscripts on medicine and undertake their translation into English. This should make for a major attempt at linking science and medicine. I should like to mention at this stage that as far back as 1969, I undertook the search for the manuscript of the *Kitab al-Marazin* of Ibn al-Haytham; a photocopy of the MS was on display in the cities where papers on Ibn al-Haytham were read. An international congress was arranged on that great physicist under the sponsorship of Hamdard Foundation and two publications, viz., the Proceedings of the Congress and the translations of some of the treatises by Ibn al-Haytham into Urdu. Ibn al-Haytham is not only the first inductive physicist but also the father of optics. It is not generally known that it was he who originally conceived the Aswan dam.

Dr. Abdul Hamed Sabra of Harvard University completed the translation of this monumental treatise but it has been lying in wait for publication for the last two years. This is rather regrettable as no book on the history of optics would be complete without the mention of his work on the phenomenon of vision, camera, obscura, anticipation of the Fermat principle, the second law of optics, and so on.

11) I shall not take any more valuable time of the honoured and distinguished delegates at this Conerence except to say that the Islamic World should derive the fullest possible benefit from God-given wealth it has at its disposal. One of the ways in which we could offer our gratitude to Allah, the Almighty, the Compassionate is by discovering ourselves.

PRESENT STATUS AND FUTURE PROSPECTS OF ISLAMIC MEDICINE

Dr. S.M. Qureshi
U.K.

Quran says:

> *INVITE ALL TO THE WAY OF THY LORD WITH WISDOM AND BEAUTIFUL PREACHING; AND ARGUE WITH THEM IN WAYS THAT ARE BEST AND MOST GRACIOUS: FOR THY LORD KNOWETH BEST WHO HAVE STRAYED FROM HIS PATH AND WHO ARE RECEPTIVE TO GUIDANCE.*
>
> (S 16: V125)

The *Reorganisation* of Islamic medicine in our times is a highly formidable task requiring a continuous effort over several decades. This Summit will undoubtedly increase our understanding of Islamic medicine, it has to be appreciated that Islamic medicine can not be rediscovered outside a living, dynamic, thriving civilisation of Islam ; essentially, the rediscovery of moral and ethnical, social and health care needs of Islamic society. The current interest in Islamic medical science is undoubtedly due to the re-emergence of the Muslim People in this century and of the growing consciousness in Islamic societies of their traditional heritage and distinct cultural identity.

The problems in the conception of the contemporary aspects of Islamic medicine arises from a "missing link" in the practice of the traditions of Islamic medicine. When *Taqlid* became the dominant paradigm of Muslim civilisation the practice of Islamic medicine disappeared. Had there been a continuous link in the traditions of Islamic medicine there would have been no need to rediscover Islamic medicine, it would have just existed. But because there is a missing link in the tradition it is difficult for contemporary Muslim medical scolar to conceive how Islamic medicine can be practiced today. And this is where the historians of medical science come in.

A new era (IJTIHAD) has begun, as example, new medical science biased Universities have mushroomed over the last decade in the Islamic World. There is a great need of integrated health policy in the Muslim world, with the values and culture of Islam. Muslim countries must ensure that their medical and health policies, including research priorities, medical educational structure, developmental progress, medical manpower planning, reflect the rich cultural heritage of Islam and the aspirations of the indigenous people.

Health Priorities

1. Preference shouid be given to certain endemic illnesses, as exampletrans cultural psychiatric illness, on which the religious and cultural influence is dominant. These illnesses must be given a recognised entity rather than simply saying "it isGod's will" or an influence of certain evils or magic etc.

2. Detection and eradication of disability illness in children and their developmental assessment projects.

3. Control of communicable diseases and immunisation programmes.

4. Nursing care in Islam.

5. Maternity and Health Care needs and Family Planning in an Islamic Society.

6. Research projects that include drug surveillance research project including traditional drugs applied as traditional remedies, its code of practice and therapeutics.

In summary, it is suggested to form a Pan- Islamic *Medical Foundation* intended to develop a deeper understanding between Islam and the West regarding the role of medical science in their social,

economic and cultural development, exchange of medical manpower and to offer Islamic Medical Fellowship grants to various Universities. Due to the large number of overseas doctors from the Middle Eastern countries in Britain, this gesture would strengthen the gap between the two cultures.

This Foundation could be funded by various rich Islamic countries who have embassies, in Britain and its supervision could be done under their cover. There is a possibility that a huge revenue will be available that could be used for the health care needs of these countries, and this Foundation will have a pragmatic role offering the medical care.

7. The Institute of Islamic Medical Science The Academy of Islamic Medical Sciences. It is suggested to establish an international academy of Islamic Medical Sciences in Britain *with* liaison and affiliation to one of the British Universities under full control of prominent medical scholars and the Institute could be funded by the *Pan-* Islamic Medical Foundation. Some post graduate doctrate diplomas in the history of Islamic Medicine or other allied subjects could be made available.

Such developments in the research projects will foster the Islamic Medical Sciences in liaison with the Western medical faculties e.g. Britain.

8. Arrange an Islamic Medical Exhibition in the U.K. to create a public awareness and popular interest among the western society.

I urge upon the Secretariat of this Conference to give high priority to forming this Foundation which could benefit from UNESCO's programme on Islamic sciences, with its Head Office in Kuwait and Co-ordinating Offices in Britain or any other European Capital.

THOUGHTS ON THE FUTURE OF ISLAMIC MEDICINE

Hakim Hohammed Said

PAKISTAN

This Second International Conference on Islamic Medicine is the second in the series of an endeavour to link together the broken pieces of history of medicine into a single framework. My association with the International Organisation of Islamic Medicine, Kuwait, which has organised the Conference is a source of great pride and pleasure for me, as my lifelong dream of placing Islamic Medicine in a world perspective is being fulfilled.

It is a matter of great happiness for the whole Islamic world, but especially for those of us in the Sub-continent (Pakistan, India, and Bangladesh) who through the efforts of dedicated physicians and scholars have kept the torch of Islamic medicine aloft and glowing. The wealth of Islamic medicine, to which Ibn Sina, Razi, Ibn Rushd, and al-Baytar have contributed and the surgical heritage left by al--Zahrawi have not only been preserved but enlarged by them. It is therefore befitting that their efforts should have borne fruit and are at last gaining a concrete shape. We are witnesses to a new, silent intellectual revolution. The privilege for promoting and furthering the cause of Islamic medicine goes to his Highness the Amir of Kuwait, Shaikh Jabir al-Ahmad al-Sabah, who made the bold and right decision that Islamic medicine should gain a firm footing in the world of today.

I still recall the date and the day when I had the privilege of having an audience with His Highness along with H.E. Dr. Abdur Rahman Abdullah al-Awadi, Minister of Health, Kuwait, and had the opportunity of discussing with His Highness in great detail about the *modus operandi* to be adopted with respect to the renaissance of Islamic medicine. The enthusiasm and interest which His Highness manifested on the occasion is an indication of the success which our endeavour will receive. His Highness cherishes Islamic medicine as he has the gift of gaining insight into facts and their implications and more than anyone else, seems to realize that the chains and links which connect us to our glorious heritage lie broken and have to be forged again.

The object of my study thought is the medicine of the Prophet (ﷺ) and therefore of necessity, Islamic medicine. I can therefore assert on the basis of my knowledge and the study I have made that the teachings of the Holy Prophet (ﷺ) and especially the medicine of the Prophet (ﷺ) , has cast the shadow of their influence since the first day of the Hijrah upon the scholars of science and medicine and philosophy and allied disciplines. Islamic medicine therefore has never once transgressed the ethical limits prescribed by Islam. The body of man is composed of matter and spirit. As long as medicine remained within the ambit of Islam and ethics, the spiritual content remained intact within it, as no cure was or is possible without it. Many diseases have at their core the spiritual aspect, and, so long as man lives on the planet, the relation between the body and the soul cannot come to an end. And, when it is not possible for the body and the soul to terminate their relationship, the material and spiritual contents will have equal importance, and no cure is possible if one is dissociated from the other.

When I cursorily saw the rare manuscripts on Islamic medicine housed - or rather, if you permit me to say so with a heavy heart - buried in the different libraries of the world, I saw them proclaim the Word of God and the *Sunnah* of the Holy Prophet (ﷺ) Not one manuscript of the Islamic world is devoid of this beauty and exalted thinking. The precise number or manuscripts is unknown, but is estimated at not less than three millions. It is hardly a matter of elation for us as Muslims that we should be so oblivious to our scholarly, technical, cultural, scientific, and medicinal heritage. I know for certain that in Turkey alone there are 400,000 manuscripts, that Escorial has some 15,000 manuscripts, and the University of Princeton more than 10,000 manuscripts. It is within my knowledge that the British Museum

not only houses the rarest manuscripts but also other priceless relics of the Muslim heritage and that there is a remarkable library in Rabat containing priceless manuscripts.

We must be impartial, truthful and confess that among those who have worked in the field of the history of science and medicine, the majority is non-Muslim. Muslims are conspicuous by their absence in this field. The torch which they themselves lighted and passed on to all the four corners of the West, is extinguished for them. Islam has never permitted renunciation of the world, or to rest content, while the laurels are being won by the West.

This is not a survey of the past; it encompasses the present as well. The world of Islam is still enveloped in darkness and confusion. The West with its technological and scientific superiority holds the Muslim world as a pawn. Despite the enormous wealth, material as well as spiritual, which the Muslim world has at its disposal, it has not been able to buy technology yet, and the Western manufacturing techniques and the entrepreneurs have robbed the Orient and ransomed it to comfort and a life of ease.

All these high edifices, these palatial buildings, this display of gadgetry and provisions of comfort are naught if we are deprived of the wealth of knowledge. If we find ourselves unable to reforge the links with the past, and are not in a position to appreciate our history, we are in a state where our sensitivity to our predicament is at a vanishing point.

A closer look at the rate at which we are frittering away our wealth, energy, and heritage, should convince us that the day is not far off when we are face to face with stark poverty if we do not reorient our thinking. Opportunities do not repeat themselves. If we fail to grasp the present opportunity when we have the advantage, and do not preserve our scientific, spiritual, literary, and cultural traditions, an opportunity like this is not likely to occur again and our efforts towards achieving advancement will be checkmated by the skilled chess-players of the West.

Are then those of us in the Islamic world who cherish knowledge and have the capacity to think and plan ahead, prepared to consider the possibility of collecting the manuscripts housed in different libraries of the West, to parcel out a portion of the vast wealth which the Arab Muslim countries have at their disposal, and to assign research projects to scholars thus opening the gateway to cosmic conquest to which God through His infinite Compassion has Himself earmarked for us?

The personal interest which His Highness the Amir of Kuwait has displayed in the renaissance of Islamic medicine is a landmark in the history of the Muslim world. It is bound to bear results which will be far-reaching. If medicinal history since the days of th Holy Prophet (ﷺ) is so collected so as to form a continuous link and a realistic approach is adopted, the change is bound to be profound. The scientist of the present will then be forced *per se* to visualize the past, and he will have to ponder over the rationality of the assumptions of Islamic medicine in terms of temperament, elements, and humours which reconcile the body and the spirit.

We can count the number of those who have tried to resuscitate Islamic medicine outside the Sub--continent on finger-tips. It would therefore not be in the fitness of things and not in keeping with the broadmindedness so characteristic of Muslims, if we deny priority in this regard to the Muslim physicians and scholars of the Sub-continent who despite the machinations and pressure of the British rulers, kept the tradition of Islamic medicine intact during this extremely trying period.

I bear witness to the hope that Kuwait will bring about the renaissance of Islamic learning which played such a key role in the evolution of scientific ideas of the West. Let us, on the auspicious occasion of the Second Conference on Islamic medicine, unite with one mind and decide to launch a programme for collecting manuscripts form all over the world, and establish a link with the past so as to assure continuity, and be witnesses to a revolution in the world of science and medicine. It is absolutely essential to bring about such a revolution which is the crying need of the hour.

The aspects upon which we are deliberating during the Second Congress is of capital importance in that the subjects which we are covering here are of considerable significance and the results of these deliberations will have a far-reaching influence. The message and the importance of Islamic medicine will register a universal impact. We should, however, avoid according a secondary status to the philosophy and basic concepts of medicine. We should chalk out an outline for the third International Conference on Islamic medicine and keep note of the problems facing it.

While, on the one hand, we should keep in view the medicine practised by the Holy Prophet (ﷺ) on the other we should conduct studies to prove the basic principles of Islamic medicine with the aid of modern science. We should have personnel at the Centre for Islamic studies, Kuwait, to undertake these studies which will involve the use of computers and complex analytical equipment.

The clinical experiments on natural drugs which are being conducted do certainly represent a forward step, but are not satisfactory. We should invite the practitioners of Islamic medicine to participate in these studies, since they keep on looking for plants and herbs at all kinds of forlorn places, identifying them and using them for cure, thereby ensuring the survival of this medicinal system.

The duality of the spirit and matter is now being considered as a unity. Thus light comprises several kinds of manifestation, wave-front, rectilinear waves, Hertzian waves, quanta, etc., and yet light is unity. The concepts of Islamic medicine are quite firm, with new ideas and observations coming to the fore. All that is required is that they should be explained in modern scientific language.

New vistas for research have opened up as regards the definitions and interpretations of health, disease, and treatment, and fresh orientations can be given to old concepts. We know now, for instance, that no human organ or liquid is free from the presence of the four elements, oxygen, nitrogen, hydrogen, and carbon and we can explain the concept of four elements in the light of this fact. Now facts which have come to light need to be studied in depth and these facts, once collected and collocated, may help us to understand the basic concepts of Islamic medicine.

The Four-Element Theory

Elements in one form or the other have constituted an important part of the theory and practice of all Islamic systems of medicine, and among its fundamentals are included the definition and interpretations of elements. The number of elements found in the human body (17 or 18) 60 years ago, has now reached 81 out of 92 naturally occurring ones. This fact is perhaps destined to take us back to the old philosophical concept that man as microcosm reflects nature as macrocosm. The ancient systems do not view man in isolation from nature. Everything —— animate and inanimate —— has a *mizaj* (temperament). The microcosm theory has found its echo even in modern thought when a philosopher like Leibnitz (1646-1716) thought that every monad reflects the world from its own standpoint. If we could reach such conclusions through critical analysis and application of modern scientific methodology, we will find out the true position of elements and man on earth. This may entirely change the present concepts of the philosophy, theory and practice of medicine.

Collective research and exchange of views by scientists of different disciplines all over the world are needed to tackle a problem of this magnitude with the following Objectives:

1. To collect scientists of various disciplines, e.g. physiologists, biochemists, geochemists, nutritionists, environmentalists, physicists, physicians of modern and ancient systems of medicine, philosophers etc. for an exchange of views on the role of the elements on human health and disease.

2. To evaluate the elemental composition of human body in relation to that of earth's crust, sea-water and air.

3. To study the clinical significance of elemental shifts in pathological states.

4. To find the true position of man on earth and gain knowledge leading to the development of a new discipline of 'Medical Elementology'.

Earth, Elements, and Man

Hakim Abdul Hameed, who is an exponent *non pareil* of Islamic medicine in India and who has had so much work done on the application of modern scientific methods to drugs, e.g. their standardization, evaluation, and pharmacology, read a paper on *Earth, Elements, and Man* on the occasion of the first International Conference on Islamic Medicine in Kuwait (January 1981). The scope of the Second Conference could not have been determined without giving consideration to the points etched in the paper regarding the future of Islamic medicine and the implications involved. I have stressed time and again that we cannot generate re-thinking on Islamic medicine without stressing its theoretical and conceptual aspect. All traditional systems use the same drugs, but the concept of usage is different. Ayurveda has its own concept and Islamic medicine another. Islamic medicine has borrowed drugs from different systems but has devised different uses for them. Homeopathy has a concept of its own. It is the Islamic concept which is composed of the hypotheses of elements, humours, and temperament that have to be elaborated and put forward before the international forum.

The definition of Islamic medicine is not merely eponymic in the sense that it flourished after the advent of Islam and had its evolution during the ascendancy of Islam in the early Medieval era. Many non-Muslims like Moses Maimonides and Ibn Biklarish al-Israili have made reckonable contributions to it. We know of a dozen men of medicine like al-Majusi, Ibn Baytar, al-Kindi, Ibn Rushd, Ibn Sina, al-Razi, Tabari, Ibn Zuhr, al-Zahrawi and others, but not of many more who have made their contributions to Islamic medicine. It would be a veritable tragedy if we are not able to collate and collect information on the practitioners of Islamic medicine. Information on the history of Islamic medicine can never hope to be comprehensive if we fail to do so. Each of the major works bears references to the past masters and there is ample material to go upon. This is only possible if we collect the manuscripts from different libraries of the world.

If we do not succeed in collecting the records of the history of medicine from the of the Holy Prophet (ﷺ) down to the fourteenth century A.H., the future cannot hold out much for us. The Islamic world, despite its intellectual fertility and Arab wealth, has yet to forge unity within its ranks and to march forward with the torch of faith in its hands. This is indeed a critical state of affairs calling for immediate remedial measures. One of them is the initiation of a comprehensive programme for translation, collection of material for bibliography, and writing of historical works. It is therefore my humble submission that we should *know* about our physicians better and assess their contributions properly. How long do we have to depend upon the West for highlighting our work which it assesses from its own standpoint which, under the guise of objectivity more often than not is sarcastic and derogatory. Every effort has been made to mask the fact that Ibn al-Nafis al-Qarshi is the discoverer of the theory of the circulation of blood or that Roger Bacon was not indebted to Ibn al-Haitham. Another corollary to all this is often the sarcastic question which many Many Muslims themselves put: How can the religion of medicine be Islamic? Our minds, overlaid with Western influence, often compels us to accept this objection and some of us even feel ashamed that we should think and act in such an "obscurantist" and "cussed" manner. We have sinned against our own heritage because we have neglected our own past and this dissociation has gone so far that, if our approach is not corrected in time, the damage may be irreparable. Since the 16th century we have foresworn research and speculation and this is equally true today. We have not even managed to compile a list of scholars in the field of science nor prepared a union catalogue of holdings of different manuscripts and listed their subjects and contents. We have therefore not

made any effort to forge links with our past. It is my view that the time has come for al-Dawlat al-Kuwait to make an advance in this direction, pressing into service its wealth. resources, and personnel. I have prepared a plan for this purpose which is being attached to this paper as an annexure. The scope of the plan is naturally such that no single Muslim country can act upon it alone and a cooperative effort is necessary. I have been allowed by the President of the Islamic Republic of Pakistan to take the initiative in this matter and we are hoping for cooperation from other Muslim countries.

Why Islamic Medicine?

When China began to study the Chinese system of medicine and conducted investigations upon the system, not one voice from the four corners of the world was raised to ask why medicine in China was designated as Chinese. When India embarked on a comprehensive programme upon Ayurveda and earmarked millions of dollars upon the theory and practice of Ayurveda no one asked why the medicine of a particular region and people should be given the appellation of a specific nature. But when we speak of the Islamic system of medicine, our own people and others begin to ask why any medicine, whose purpose, after all, is to heal, should be hitched to a particular religion.

While others can be forgiven for putting such questions, objections and censures raised by our own people are painful; they are painful because through our negligence, lack of research, poor objectivity, lack of the sense of purpose, we are seized by a feeling of wonder upon the achievements made by Western science, and react to them by belittling our own heritage. Since a vast majority of Western writers and scholars who are dedicated to the propagation of the superiority of the West and regard all other cultures as the accidents of history, we respect by rote what they say. Even if it appears pejorative to our own ego, I should rather say that this is so, because we have no regard, no respect for our faith, even though on surface we pledge our allegiance to it. I can say with certainty that, with few notable exceptions, the modern doctor of today knows nothing about the philosophy and concepts of the Islamic system of medicine. He knows neither about the humoural theory nor does he know what the elements symbolize. He does not really believe in the relationship between the material and the soul. Only a Muslim, schooled in an environment of thinking which is non-Islamic can ask: Why Islamic medicine? Scholars of medicine the world over are studying acupuncture and Ayurveda, but the questions, why Chinese medicine and why Indian medicine do not occur to them. The basic reason for this double standard is that the scholars of the West and non-Muslim Orient bear dislike for Islam. And they have succeeded so far because the Islamic world itself has followed them, which is an added advantage to them.

The only way to counteract this ignorance on our part and the subtle propaganda of the West is to acquaint ourselves with the works of our scholars, scientists, and writers and to take more positive and concerted steps in this direction.

The Effective Use of Plant Drugs

The observations and experiments made upon natural drugs during Antiquity and the Medieval Age have come down to us in the form of papyri, inscriptions, and some written works. The history of medicine is not a subject we would discuss here. Suffice it to say, the observations made by the classical and Muslim writers upon plant drugs have not been controverted to this day. It is the ancient and medieval work on plant drugs that has given rise to modern synthetics and antibiotics. Modern drugs have given rise to side-effects, setting in train the appearance of new diseases known today as the diseases of modern drugs. This, in turn, has given rise to re-thinking and forced man to take recourse to plant drugs: and the study of plant drugs has become a favourite topic for study.

Dr. Salimuzzaman Siddiqui has himself confessed that he embarked upon the chemical inves-

tigations of plant drugs through a grant specially made for this purpose by Masih al-Mulk Hakim Hafiz Mohammad Ajmal Khan and, in the result, his investigations upon *Rauwolfia serpentina* Benth. provide food for thought to scientists the world over. Dr. Siddiqui has also explained in modern terminology the temperament of drugs.

I personally know of no single work wherein old wisdom and recent additions to knowledge have been collected together and no materia medica has been edited to bring out a synthesis of age-old drugs and new knowledge about them. It is my own submission that such a work requires to be brought out and the works of the Muslim masters should be re-examined in the full light of modern discoveries.

Polypharmaceuticals in Islamic Medicine

Ancient and medieval physicians discovered for us drugs that are still as effective today. They formulated compound drugs which have been in use for centuries. They are so designed that each constituent of the drug acts as a synergist for the other. We have medical formularies in which the polypharmaceuticals with the weight in which each ingredient is to be added have been described. Their veracity is beyond doubt. They include not only whole plants or parts of plants but also minerals, precious stones, and animal drugs. The use of silver and gold is from times immemorial. To call them a traditional incorporation would be wrong. The use of minerals is resorted to in modern medicine, and the incorporation of gold and silver foils is from the standpoint of therapy. The use of minerals, gold, and silver demands not only chemical and biochemical investigations but also pharmacological study. We would then be able to present to the world drugs that would serve as potent curatives and bring about a revolution in thinking.

Conclusive Remarks

I have indicated briefly the steps that need to be adopted for bringing about the Renaissance of Islamic medicine and the problems that need to be tackled immediately.

I hope at the present Conference we might be able to tackle some of them and arrive at a decision at the third Conference on Islamic Medicine to finally get down to tackling them.