IMPMS Presentation at
Annual Dinner by Muslim Employee Resources
Group of American Airlines
Mr. Edward Thomas

The annual dinner event organized by the Muslim Employee Resource Group (MERG) of American Airlines took place on October 1, 2009. Although scheduled well after the first day of Eid following the holy month of Ramadan, it was billed as an Eid dinner since that celebration continues for some days. The dinner was provided by a Morrocan restaurant. The program included remarks by the director of the American Airlines Human Resources office and the president and a couple of other officers of MERG, a keynote address by Dr. Merve Kavakci on Giving in Islam, and a DVD projection of President Barack Obama’s speech at an Eid dinner in Washington.

The organizers had also asked Dr. Basheer Ahmed, the IMPMS president, to speak on the great scholars of Islamic civilization during the Medieval period. Since he was to be out of town on October 1st, I gave a short presentation on that subject in his stead. Noting that Islamic Civilization was the world leader in mathematics, sciences, astronomy, medicine and other fields from about the 8th to the 16th century, I suggested that, had Nobel prizes existed then, Muslims probably would have won most of them. I then described briefly the contributions of Al-Khwarizmi, who passed on from India to Europe the numbering system we now use, which is better known in the Muslim world as a great mathematician and physician whose Canon of Medicine was still in use in European medical schools in the 17th century – six centuries after his death! I also mentioned Omar Khayyam, whom the West knows as a poet, but who was a great philosopher and physician whose Canon of Medicine was still in use in European medical schools in the 17th century – six centuries after his death! I also mentioned Omar Khayyam, whom the West knows as a poet, but who was a great philosopher and physician whose Canon of Medicine was still in use in European medical schools in the 17th century – six centuries after his death!

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Al-Khwarizmi’s other best known work has the long Arabic title (as transliterated) al-kitab al-mukhtasar fi hisab al-jabr wa l-muqabala (“The compendious book on Calculation by Completion and Balancing”). Once the book was translated into Latin in the 12th century, it quickly acquired the simple title al-jabr, which corresponds to the English word “completion” in the above translation. Thus did algebra reach the West.

If you could look at al-Khwarizmi’s book, you would find that it doesn’t look like the algebra texts you may recall from high school. He does not use letters like x or y nor plus or minus signs, nor exponents or square root symbols. He just uses full words. Here is an example he gives (adapted here from a full English translation in order to shorten it and make it more understandable): What number squared, then added to ten of the same number, equals thirty-nine? Here is the solution: Take half of the ten, multiply that by itself, add the result to thirty-nine, then take the square root of that sum, then subtract from that result half of the ten. That is your answer.

If you like math, try to write this problem in our way, with an equation, and solve the equation. It’s what we call a quadratic equation. We’ll show it in the next IMPMS Newsletter.
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physicians, had a profound influence on Europe for six centuries as

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work on medicine, “Qanoon-Fi-Al-Tibb” (The Canon Of Medicine)

was translated into many European languages and used as text

books for six hundred years until the 16th century. Al-Razi’s work

and the Canon of Avicenna did more to develop European medi-
cine and thought than any other body of work. Ibn Sina concluded
that TB is an infectious disease and the hook worm causes intesti-
nal ailments. He set down scientific rules for testing and rating the

effectiveness of drugs in treating various conditions – rules for

standard clinical drug trials.

Another physician, Ibn Zuhr (Avenzoar), emerged in Seville,
Spain. He acquired fame for his animal experiments, including try-
ing tracheostomy on goats and subsequently on humans. The au-
thor then describes the work of Ibn al-Nafis in Cairo, the head of
Al-Mansoori hospital and the dean of the school of medicine. In
1284, he made the discovery of the true anatomy and functioning of
the heart and how blood flows through it to the lungs, where it
mixes with the air. Some 350 years later, in 1628, William Harvey
began to expand his ideas regarding the circulation of blood.

In the final chapter, Mr. Morgan highlights the qualities of Muslim
leadership using the examples of the first Caliphs, Abu-Bakar to
Ali, who champion the ethos of social fairness and justice and tol-
erance of diversity in faith, nationality and ethnicity. The fourth
Caliph, Ali, set down in writing a detailed template for enlightened
leadership which later surfaced in the Umayyad and Abbasid Cal-

iphates.

Al-Razi, another physician of Baghdad, wrote 200 books on Medicine.
He questioned the teaching and traditions of Galen. He was the first
physician to differentiate between smallpox and measles. He in-
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