House of Wisdom

Jim Al-Khalili (2011). **House of Wisdom**. Oxford University Press, USA. (pp, 210)

Reviewed by: Ms. Nazish Ishtiaq*

Jim Al-Khalili is a British theoretical physicist and a broadcaster on BBC: a frequent commentator on science. In this book, the author discusses the work of various Muslim scientists and scholars of the Islamic Golden age. He also contended reasons for the rise and fall of scientific development in Islamic world, and tries to explore the current situation.

In the start, the author discusses the achievements of Abbasid Caliph; Haroon al-Rashid (763-809) and contended how he expanded his. The author feels that Al-Mamun fostered openness and inclusiveness towards other religions, due to which many scholars gravitated towards Baghdad. Moreover, the author gives a brief overview of the history of the rise of Islam.

The author explains three reasons usually discussed that triggered translation movement in Islamic world. The first reason is that this movement started earlier than Abbasid caliphs during the reign of al-Mansur. The second reason for this movement was the attitude of the Muslims towards knowledge and enlightenment. At the third level, the author mentions that the translation movement was started because of Greeks who were expert in Greek science. However, the author presents other reasons for translation movement. He argues that this transition movement was due to Abbasids' traveling to the heart of their empire: close to the Persian Empire of Sasanians. The second factor was caliph al-Mansur's obsession with astrology: that had a fundamental role in Persian daily life. The third factor is knowledge: that is required for emerging technologies. One of these was paper mill technology.

Similarly, the author illustrates Muslim scientists like al-Chemist and Jabir Bin Hayyan. The author enlists the developments of Jabir bin

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Hayyan and then mentions another chemist of medieval times; al-Razi and gives him credit for providing a classification scheme. He was far more famous for his work in medicine. The author narrates that Bait-ul-Hikma existed during the reign of Umayyad caliph; Muawiya, long before 'House of Wisdom' that contained a large number of books. The first scientist he mentions is al-Khwarzimi and the other one is 'al-Kindi' who is known as a philosopher of Arabs. Another scholar, al-Jahith, had interest in biology. Al-Khalili discusses contributions of Muslim scholars in the field of astronomy, mathematics and geography. Sanad ibn Ali al-Yahudi, al-Mamun, al-Abbas al-Jawhari, Yahya ibn Mansoor and Khawarzimi were among the great scholars. He also mentions the contributions of al-Biruni who measured the size of the earth.

Moreover, the author discusses the contributions of Al-Khawarzimi: who was regarded as the first geographer of Islam. He also raises the point that, according to some historians, Al-Khawarzimi was influenced by Greek and Babylonian Mathematicians. The author also discusses Omar Khayyam as great mathematician of medieval times. So on, about the field of medicine, the author discusses Greek physicians; Hippocrates and Galen. The author says Al-Razi in the Islamic world is a great medic as is Galen and he believed in empirical medical science. Al-Khalili sightsee the brief life history of Ibn-Haytham. He explains Ibn-Haytham's experiments and apparatuses that he used for measurements and results. The author further illustrates that Ibn-Haytham rejected emission theory, and he gave detailed description of the camera. He was the first who explained moon illusion as psychological rather than physical effect.

Al-Biruni was an expert in mathematics and astronomy while Ibn Sina was expert in medicine and philosophy. The author illustrates that al-Biruni solved the Qibla problem for Muslims and explained his geocentric model of the earth. The author discusses that Ibn Sina's 'Canon of Medicine' has been taught as a standard medical textbook in both the Islamic world and Europe for the next six hundred years. The author mentions Al-Ghazali who wrote 'The Incoherence of Philosophers' which was an attack on the Aristotelian approach of Ibn Sina whereas Ibn Rushd wrote book in defence of Ibn Sina.

The author also discusses various caliphs and their reign. He argues that the scholars of Andulusia and Ibn Firnas were world's first aviator. He also mentions the achievements of the most famous surgeon of the Islamic world Al-Zahrawi. He extensively mentions that how Islam played a vital role in medieval Islamic astronomy; as it tells the timing of prayers and Qibla direction etc. He also discusses the contributions of Muslim astronomers like Al-Biruni, Al-Battani, Ibn e Younas. Then the author mentions the brief life history of Al-Tusi, and he discusses his achievement in Trigonometry.

According to the author, Walcher is the very first scholar who translated Arabic treatises into Latin. He declares the Renaissance of Europe as a cultural movement that started from Italy and spread to rest of Europe. Then the author discusses Ibn Nafis and gives him the credit to provide the correct explanation of 'pulmonary transit'.

In the last section of book, the author argues that contemporary Muslim countries spend a very small amount of their GDP on research. He contended that orthodox Muslims do not emphasize much on science. This book is informative and provides a deep insight about the scholars of the Medieval Islamic era. The author discusses many conflicting points as well on which modern historians differ with him. Furthermore, the author does not mentions the literalist scholars of that time like Fakhr-ud-din Al–Razi, Al-Iji, Ibn-Furak, Al-Juwayni and many more. The author also considers literalists as reason for the fall of Muslims which many contemporary scholars differ with. Despite these parities, the book provides a good insight especially for the evolution of scientific method in the Islamic Golden age.