

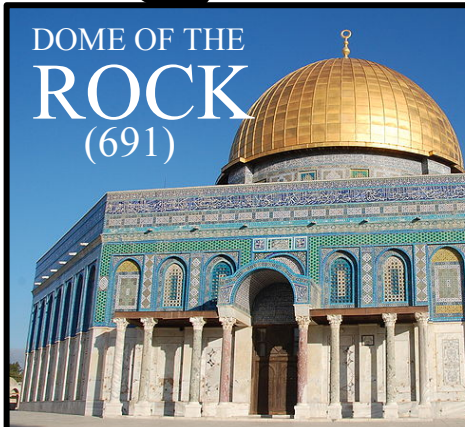
# Islamic Intellectuals

“The ink of the scholar is more sacred than the blood of the martyr.”

-Muhammad, *Hadith*

As the classical world fell, the Islamic Civilization quickly filled the intellectual vacuum. Below are some of history's greatest thinkers, who lived and worked in the Islamic world.

FREEMAN-PEDIA



DOMES OF THE  
ROCK  
(691)

In 621, the Angel Gabriel approached Muhammad. On the orders of Allah, Muhammad was given a white horse. He then travelled from Mecca to Jerusalem where he led the people in prayer. Next, he ascended to the 7 Circles of Heaven where he sees the other prophets (Abraham, John the Baptist, Moses, Jesus, etc.).

It is on the site of Muhammad's ascension that the Dome of the Rock was constructed in 691. The "Rock" that is housed inside is believed to be the spot of Muhammad's ascension. The spot is also one of the holiest sites in Judaism (who believe it is the spot where Abraham attempted to sacrifice his son, Isaac).

Octagonal in design, the Dome of the Rock was designed to compete with Christian and Jewish buildings in Jerusalem. It was meant to be a site for pilgrims, not an actual mosque.



(780-850)

AL-KHWARIZMI

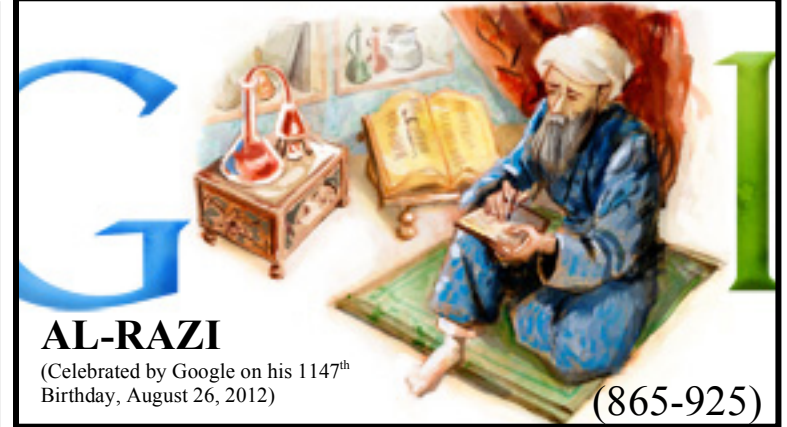
Known in the west as Algoritmi (due to the pronunciation in Arabic), Al-Khwarizmi was a Persian Polymath who studied mathematics, astronomy, and geography.

He is primarily remembered in the west for his work in the field of mathematics. Some of his contributions to this field include:

- The Decimal number system
- Introduction of Arabic numerals to the West
- Linear Equations
- Quadratic Equations
- Algebra\*
  - From his book *al-Kitab al-mukhtasar fi hisab al-jabr wa'l-muqabala*
- Improved Ptolemy's geographical estimates of earth
- Exact instructions on building an Astrolabe

\*From earlier Indian and Greek sources

Al Khwarizimi worked in Baghdad at the House of Wisdom where other intellectuals from as far as India and China gathered to study.



AL-RAZI

(Celebrated by Google on his 1147<sup>th</sup> Birthday, August 26, 2012)

(865-925)

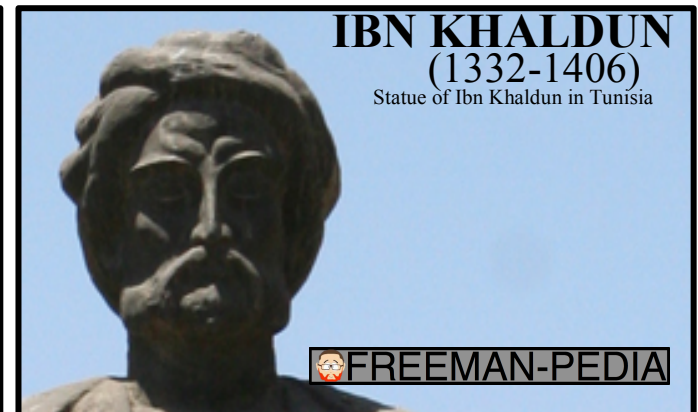
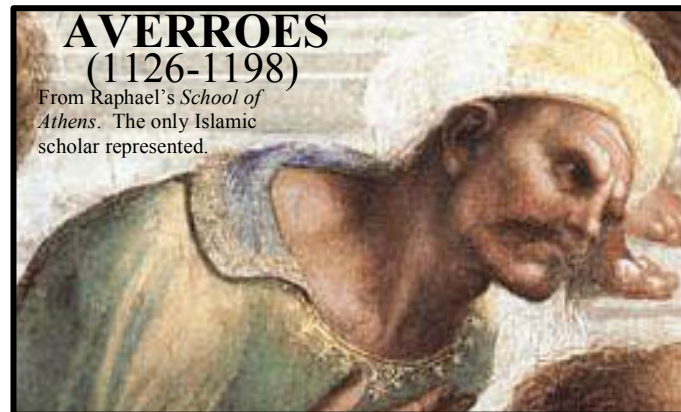
“The greatest and most original of all of the physicians,” Al Razi was a Polymath who wrote more than 50 books on the subject of Medicine. He was the chief doctor at the Baghdad hospital before opening his own medical school/hospital. He eventually went blind and died in 925.

He was the first to notice that Measles and Smallpox were two separate diseases.

*“The eruption of smallpox is preceded by a continued fever, pain in the back, itching in the nose and nightmares during sleep. A swelling of the face appears, which comes and goes, and one notices an overall inflammatory color noticeable as a strong redness on both cheeks and around both eyes. Additional symptoms are: dryness of breath, thick spittle, hoarseness of the voice, pain and heaviness of the head, restlessness, nausea and anxiety. (Note the difference: restlessness, nausea and anxiety occur more frequently with 'measles' than with smallpox. At the other hand, pain in the back is more apparent with smallpox than with measles).”*

He was the first to correctly write on Allergies, Fevers, Pediatrics, Infectious diseases, etc. Below is his statement on Ethics in Medicine:

*“The doctor's aim is to do good, even to our enemies, so much more to our friends, and my profession forbids us to do harm to our kindred, as it is instituted for the benefit and welfare of the human race, and God imposed on physicians the oath not to compose mortiferous remedies.”*



Islamic philosophy is divided into two eras. Before Avicenna and After Avicenna. Ibn Sina (or Avicenna) was the most important thinker of the medieval period. Memorizing the Qur'an at age 10, he was a polymath whose medical textbook was used in Europe into the 17<sup>th</sup> century. Below is one of his most famous thought experiments:

### The Floating Man

*"Imagine, a man floating in a room with zero sensory input, no sound, no gravity, no sensation of any kind, floating in complete darkness, no sensation even of his own body because no part of his body touches any other part — say the man was created this way, would he be capable of thought? Can the human mind have thoughts without any external sensory input? If so, what would this man be thinking? Would the floating man have awareness of anything?"*

Avicenna answers: *"Yes, even though the man has no awareness of his environment, or anything external to himself, he would at least be aware of his own existence."* It's interesting to note how this idea is a precursor to Rene Descartes's famous philosophical statement: *"I think, therefore I am."*

Dante's *Inferno* depicts a journey through hell. The first level of hell is reserved for great people who were not Christian. Dante depicts Avicenna and Averroes alongside Plato and Aristotle. He is one of history's greatest intellects and known in Persia as the "Doctor of Doctors".

Another great Islamic Polymath, Ibn Rushd, or Averroes, was born in Spain and was a prominent Qadi (Judge).

Averroes wrote on a myriad of topics, but his work on Aristotle stands out as his greatest work. He attempted to reconcile Aristotle with Islam. In his time, philosophy was considered to be dangerous. He wanted to tie the principles of Aristotle with that of Islam. This is similar to medieval Scholasticism in Europe. It was the commentaries of Averroes that reintroduced Aristotle to the West. A few translations of Aristotle were available to the Europeans, but it wasn't until Averroes commentaries were available in Europe that the Europeans began to fully study Aristotle. Thomas Aquinas, the great European philosopher of the medieval era and leader in the field of Scholasticism, simply referred to Aristotle as, "The Philosopher" and Averroes as, "The Commentator."

Like many other great people in history, he had little influence on the Islamic world he lived. His influence was not seen until centuries later when the Europeans discovered his commentaries.

Ibn Khaldun was a Muslim historian who is considered one of the founders of modern historiography. He saw little fame during his life and his most famous work did not become well known until the 19<sup>th</sup> Century. The *Muqaddimah* was meant to serve as a preface to his *History of the World*. But, most people even in his time saw it as a stand alone, independent work on the Social Sciences.

Ibn Khaldun believed that man is political by nature, and that man's interdependence creates the need for the political community. Ibn Khaldun argues that men and tribes need to defend themselves from potential attack by beast or even unjust men, and thus political communities are formed. The glue which holds such tribes together and eventually forms "royal authority" or the state, according to Ibn Khaldun, is *'asabiyah* or *group feeling*.

Ibn Khaldun also anticipates Machiavelli by attempting to answer the question of whether it is better for the ruler to be feared or loved. Ibn Khaldun, like Machiavelli, answers that it is best to be both. However, unlike Machiavelli, Khaldun believes that if that is not possible then it is better to be loved than feared because fear creates many negative effects in the state's population.

Below is his analysis of the **Dynastic Cycle**:

*"The first generation retains the desert qualities, desert toughness, and desert savagery...they are brave and rapacious...the strength of group feeling continues to be preserved among them. They are sharp and greatly feared. People submit to them.*

*Under the influence of royal authority and a life of ease, the second generation changes from the desert attitude to a sedentary culture, from privation to luxury and plenty, from a state in which everybody shared in the glory to one in which one man claims all the glory...others are [in]...humble subservience...the vigor of the group feeling is broken...But many of the old virtues remain...because they [the people] had had direct personal contact with the first generation...The third generation, then, has (completely) forgotten the period of desert life and toughness...Luxury reaches its peak among them...Group feeling disappears completely...People forget to protect and defend themselves...In the course of these three generations, the dynasty grows senile and is worn out."*