

# **THE IMPERIAL ROOTS OF FASCISM BEHIND THE CRUSADES: PART I CHARLEMAGNE, HAROUN AL-RASHID AND THE JEWISH KHAZARS.**

[6. CLASS WITH BOGOTA AND BUENOS AIRES LYM, NOVEMBER 22, 2006.]

by Pierre Beaudry

11/22/2006

## **INTRODUCTION**

It was not the Germanic invasions of the Mediterranean that destroyed the Roman Empire, as British sophistorian, Edward Gibbon, falsely claimed. The Germanic invasions were welcomed into Rome in order to inject new blood into its dying mercenary imperial armies. The barbarians were allowed to embrace the Roman form of imperia as fast as they could be assimilated, and, as a result, they kept its rotting institutional corpse alive for a few more centuries. On the contrary, as this report will show, it was the Islamic Renaissance of Harun al-Rashid, with the collaboration of the Irish Monastery Movement of Charlemagne, and the Jewish ambassador-merchants of the Khazar kingdom that destroyed the Roman Empire and saved Western Civilization.

However, after Charlemagne and Haroun Al-Rashid had successfully created an ecumenical alliance between the three great religions of Islam, Judaism, and Christianity, for the purpose of establishing sovereign nation-states based on the universal principle of {*agape*}, an unholy alliance had been struck between Byzantium, Venice, the Norman Chivalry, and the Dominican-Benedictine Ultramontane faction of the Papacy in Rome to launch interminable religious warfare and initiate the Crusades in the heart of Europe.

The crusades were not aimed at exclusively destroying the Muslim populations of the East, as the official historical accounts claim falsely. That invasion was part of a grandiose diversion to destroy Europe as such. The aim of the crusades was for the Venetian controlled Papacy to establish an Ultramontane one-world empire and prevent the creation of nation-states across Europe. The immediate goal was to usurp the sovereign powers of kings and establish a global theocratic imperial domination over the civilized world with the instrumentality of Knight-Monk-Warlords. This was exactly the same synarchist type of project that central bankers like Felix Rohatyn are attempting to establish today from their Anglo-Dutch central banking centers in the City of London and Wall Street.

From the 10<sup>th</sup> to the 13<sup>th</sup> centuries, the crusades of this Ultramontane movement were also associated closely with the creation of heresies such as Manicheism and Arianism and the creation of such religious cults as the Bogomils among the Greek Orthodox in the East, and the Cathars among the Catholics in the West, which led to the Bardi and Peruzzi banking dark age of the fourteenth century. The means of achieving

those objectives were excommunication, extortion, inquisition, terrorism, murder, and preemptive wars.

## 1. A STEREOGRAPHIC PROJECTION OF UNIVERSAL HISTORY

At the beginning of the 20<sup>th</sup> century, Belgian historian and scholar, Henri Pirenne, developed an extremely fascinating historical hypothesis stating that it was the advent of Islam that gave the final blow to the moribund cadaver of the Roman Empire, in the 9<sup>th</sup> century, and which became the crucial strategic force that helped create modern Europe by helping Charlemagne shift the central axis of Western Civilization away from Rome towards Aachen. He was right. Thus, Islam became a strategic causal factor for sustaining the *{European Carolingian Renaissance.}* Pirenne stated correctly: “*{Without Islam, the Frank Empire would have probably never existed, and Charlemagne, without Mohammed, would be inconceivable.}*” In making his case on cultural and economic grounds, Pirenne dealt a devastating blow to the *{British Imperial Sophistry}* of Edward Gibbon’s prevalent view of the medievalists in making the claim that the Middle Ages began at the fall of the Roman empire, that is circa 476 AD, and that the Carolingian Empire was merely a continuation of Merovingian Kings. This latter view of history is a complete fallacy of composition, pure sophistry.

The truth of the matter, however, is that it was the collaboration between the three humanist forces of the Christian, Judaic, and Islamic religions that destroyed the Roman Empire and shifted the center of civilization away from the Venetian centered oligarchical system toward the Carolingian Renaissance, on the one hand, and toward the Abbasid Khalifa of Haroun al-Rashid in Baghdad. Those two cultural forces combined their efforts for a short period of time with the impulse of their mutual Jewish ambassador-merchant networks around the kingdom of the Jewish Khazars, gave the decisive blow to the crumbling Roman Empire by shifting the axis of Western Civilization away from the oligarchical center of Venice and into the development of a Eurasian Landbridge that went from the Nordic countries all the way to China, and thus began the construction of a world that could one day be based on sovereign nation-states.

The crucial point to be made, here, is that, though Pirenne was right in confirming that the world had shifted culturally and economically away from the Mediterranean centered region, he was wrong in emphasizing that such a change had any geographical values. Yes, the world had changed because Charlemagne had shifted the central vector of Western Civilization northward away from the Byzantine and Venetian controlled Mediterranean basin into Europe, and the Islamic Renaissance of Haroun Al-Rashid had done the same thing by moving eastward and south, but that change had no geographical significance whatsoever.

This historical shift was epistemological in the sense of Schiller’s use of the historical perspective that he had initiated from the difference between Solon of Athens and Lycurgus of Sparta. In other words, what is significant in Schiller’s view of history is

not the geographical movements of civilization away from the Mediterranean focus, but its epistemological change away from the oligarchical-centered Roman imperial design of a one world sovereign rule toward a republican-centered design of self-developing peoples and cultures within the boundary condition of sovereign nation-states. That correction is a reflection of what I would call a stereographic projection of history.

As LaRouche has shown how to continuously construct the validatable proof of the Schiller model of universal history, I will be following the same model from the standpoint of a stereographic corrective process because historical changes are always based on corrective adjustments caused by the introduction of new universal physical principles. Thus, I use the term stereographic metaphorically to describe how historical processes tend to change and adjust themselves axiomatically as stereographic images do by the harmonic ordering of conic functions within {*Sphaerics*}. In fact, this resembles the way to discover the seven mistakes included in the two quasi-similar cartoon boxes that used to appear every Saturday in our local newspaper when I was a child. I will show you later how the historical event of the 1282 war of the {*Sicilian Vespers*} reflected such a stereographic anomaly between two empires, as LaRouche noted.

Moreover, as LaRouche has been emphasizing by demonstrating how universal historical developments work in a dynamical way, the history of mankind is based on making discoveries of new universal physical principles that correct previous mistakes and errors of history in order to improve the future of humanity. In this respect, I will show you how the 802 Capitulary of Charlemagne demonstrated precisely such a correction by introducing the principle of justice {*agape*}, into the politics of his empire, but without being able to establish a nation-state. Finally, the idea of the nation-state will emerge, during the Italian Renaissance, only after Nicholas of Cusa was able to solve the ontological paradox of the One and the Many with respect to the Ultramontane Decretals of the middle ages.

The following section on the Baghdad Renaissance is a report sent to me by Hussein Askary of Sweden. This report reveals the crucial significance of the collaboration to civilization by the Islamic Renaissance of the three generations of the Baghdad centered Abbasid Khalifas of Al-Mansour, Al-Rashid, and Al-Ma'moun, especially their translations, their scientific discoveries, and their youth movement of the Banu Musa Brothers at the {*House of Wisdom*} of Baghdad. I give you, here, Hussein's text unedited and for internal use only.

## 2. BAGHDAD 767-1258: A MELTING POT FOR A UNIVERSAL RENAISSANCE

by Hussein Askary

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*{Author's note: During the days of preparation for this report, and while listening to a live webcast from Washington by Lyndon LaRouche on November 16, 2006, I received a phone call from Baghdad informing me that a cousin of mine was kidnapped and killed in one of the neighborhoods of Baghdad. He happened to have the wrong family name driving in his car through the wrong neighborhood. Coming back to the webcast from my shocking phone call, I heard LaRouche answer a question on the situation in Iraq, saying: "The point is, the United States is not respected as long as Bush is President, and as long as Cheney is influential. If the United States wants to do something in Southwest Asia, it's got to get this bum out of the White House, and it's got to have a spokesman for the United States, which people will believe."}*

*To my cousin Sabah and all those innocent Iraqis who have fallen as victims of this evil war, and to those fighting together with LaRouche to impeach Bush and Cheney inside the U.S.A and to change the course of history, I dedicate this humble report. } Hussein Askary, November 18, 2006*

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From its conception in the mind of the Abbasid Khalifa Abu Jaafar Al-Mansour in 767 AD, to the day of its {first} destruction by the Venice-allied Mongol hordes in 1258, Baghdad became the cradle of a historical scientific and cultural renaissance and a melting pot of a rich Islamic-Christian-Jewish-Arab-Persian-Greek-Indian collaboration.

Al-Mansour, standing in his camp one fresh summer morning on the spot that {became} Baghdad, said, after consulting with the monks in a nearby Christian cloister: "This is a good location; here is the Tigris, nothing stands between us and China. Everything comes to us through it from the sea; goods reach us here from Aljazira, Armenia and their surroundings: There is the Euphrates; through it we receive goods from Al-Sham (Syria and Eastern Mediterranean) and its surroundings." (Chronicles of Al-Tabari, volume 7)

According to the chronicler Al-Tabari, Al-Mansour drew the general map of the city and ordered architects and geometers to come from all parts of the Muslim state to plan and build the city. Later on, the cloister and its monks became neighbors of Al-Mansour and his Al-Khuld Palace. It was in such dimensions, (China and the Mediterranean) that the leaders of the Islamic state at the time were thinking. Haroun Al-Rashid, successor of Al-Mansour, established strong diplomatic relations with Charlemagne (see article...). Actually, diplomatic relations with China were established already more than a century before that date, when Prophet Mohammed's companion Saad ibn Abi-Waqqas visited the Chinese Tang Dynasty Emperor in 650 AD. The

Chinese Emperor Yung-Wei, according to writer Yusuf Abdul Rahman, "respected the teachings of Islam and considered it to be compatible with the teachings of Confucius." To show his admiration of Islam, the Emperor approved the establishment of China's first mosque at Ch'ang-an. That mosque still stands there today.

Prophet Mohammed's message to Muslims from the outset of his mission was to encourage Muslims to learn reading and writing and to acquire knowledge no matter how far they should travel and how hard they should work. It is recorded in one of his Prophet's Hadeeths that he said: "Pursue knowledge even if it were in China". For that reason, it became imperative on all Muslim leaders and citizens to look for knowledge everywhere, not simply and only in the religious scriptures, as some fanatics today assert.

With the building of Baghdad, Al-Mansour escaped the bloody intrigues in the former capital Al-Kufa south of Baghdad, and paved the way for a new era of economic, scientific and cultural development. Comparing the living standards and population density of the 9<sup>th</sup> century and 20<sup>th</sup> century Iraq, one is amazed to find out that it was much higher than recently. That development was made possible by the assimilation of scientific knowledge and culture from Persia, India, China and Ancient Greece into one unprecedented melting pot. Most of the translation, rediscovering and assimilation of this knowledge was done by members of different religions and language cultures working together under one mission. Christians and Jews were already integrated into the structures of the Islamic society. The Islamic state by the middle of the 8<sup>th</sup> Century had extended from the Tibet, the Indus and Oxus (Amu Dary) rivers in Asia all the way past the Mediterranean to North Africa and the Iberian Peninsula.

## **THE TRANSLATION FEAT**

The earliest attempt to translate Greek medical records was undertaken by the Umayyad prince Khalid bin Yazid and Omar bin Abdul Azizi in the latter part of the 7<sup>th</sup> century. However, the translation work was not institutionalized before the building of Baghdad.

Arabic chronicles and history books tell the story of the sickness of Al-Mansour sometime in the 770s, and how an Assyrian-Christian physician was summoned from Persia to successfully treat him. The Physician's name was Georges bin Bakht-yashua . He lived in the city of Gundi-Shapour in Southwest Iran. That city had become a center for Assyrian-Greek-speaking Christians, since the reign of the pre-Islamic Persian Shah Khosro Anushirwan (531-579 AD), who used to assemble his Roman prisoners of war in that city. A school of medicine had developed there. But when Al-Mansour asked Georges to move with his family to Baghdad and built a hospital and educational center there, Baghdad became the new center for medical science. Many books on medicine were translated from Assyrian and later Greek language. The books of the Greek Galen and Hippocrates became a central object of translation and study.

The Abbasid Khalifas became the patrons of science and philosophy. The most important of them were Haroun Al-Rashid (reigned 786 - 809) and his son Al-Ma'moun

(813 - 833). Under Al-Rashid, the humanist academy, the House of Wisdom, was established with his direct patronage and sponsorship. In the beginning, that academy was focusing on gathering all available manuscripts and books from all different languages and translating them into Arabic, the official language of the Islamic State. Greek had the lion's share of attention of appreciation. Nonetheless, as the work started to develop and the economic and cultural needs of the expanding and growing nation increased, the translators had to move beyond the work of translation. They had to teach the subject matters of the books being translated. They had to replicate all the previous discoveries and comment on them and teach the Khalifa, his children and all the students of these different sciences. Al-Ma'moun ordered the building of an astronomical observatory as an annex to the House of Wisdom. There the translators themselves were scientists and teachers. One of the very early such translator-mathematician-physician was Al-Batrik, who translated and taught the books of Euclid. He also made the first Arabic translation of Plato's Timaeus dialog, which became one of the most important works of philosophy throughout the four hundred years of the Islamic Renaissance and the most read and commented on.

The astronomical observatory in the House of Wisdom became itself another institution where some of the most brilliant Muslim astronomers were educated and worked, such as Kusta bin Luka and the Banu Musa brothers, Ali bin Isa Al-Ustorlabi (The Astrolabe maker), Mohammed bin Musa Al-Khawarizmi (founder of Algebra, who dedicated his first book on the matter to Al-Ma'moun), and Al-Battani.

In order to find manuscripts of works of Plato and other Greek philosophers, which were available in the neighboring and often hostile Byzantine Empire, Haroun Al-Rashid and Al-Ma'moun used both diplomacy and sometimes military victories to acquire manuscripts. In one of his battles with the Byzantines, Al-Rashid suggested exchanging Roman prisoners and officers for Greek books! However, the most effective way was to send "intelligence agents" to fetch "hunt" for books and recruit Greek-speaking translators inside the Byzantine Empire. (See: Torbjörn Jerlerup, Fidelio, Summer 2003)

The renowned Muslim historian Ibn Al-Nadim writes in his chronicles book *Al-Fihrast* : "When Al-Ma'moun defeated the Roman king, he wrote to him demanding that he discloses all the books he had been keeping in secret places in Rome (Constantinople). The Roman king who first refused, agreed later to do that. Al-Ma'moun sent some of his scholars including Al-Hajjaj bin Matar, Ibn Al-Batrik and Salam, the head of the House of Wisdom and others. When the books were brought to him, he ordered the books to be translated immediately. It is said that Yohanna bin Masaweh was among them too."

Another Historian, Ibn Nabateh writes in his book *Sarh-ul Uyoon* about one Sahl ibn Haroun: "He was appointed by Al-Ma'moun as the guardian pf the chest of books at the House of Wisdom. This chest contained the books of the ancient philosophers that were brought back to Al-Ma'moun from Cyprus. The story was that when Al-Ma'moun reached a truce with the ruler of that island, he sent messengers to him asking for the chest of the books of the Greeks that were kept in a special chamber where nobody could

have access to them. When Al-Ma'moun received the books, he became very happy and excited, and he appointed Sahl bin Haroun as a guardian for these books."

It is obvious from those stories that the books on Greek philosophy and science were intentionally kept away from the public in the Eastern Roman Empire, for clear political and ideological reasons.

Another prominent translator was Yohanna bin Masaweh (died 857), who also came from Gundi-Shapour. He established a hospital in Baghdad. Yohanna was a Nestorian Christian. Haroun Al-Rashid assigned him to translate Greek books that were taken as booty from Byzantine cities conquered by the Muslim army. He was also made the "chief" translator, verifying other translations and training translators. Al-Ma'moun later made him the director of the House of Wisdom. In addition to translation, Yohanna wrote books on geometry, medicine and optics. He also made medical experiments on animals, such as monkeys to test new medicines. One of his most known students was Hunayn ibn Ishaq, who mastered Assyrian, Arabic, Greek and Persian.

Hunayn ibn Ishaq (808-873) is most famous as a translator. He translated 100 Greek books to Assyrian and 37 to Arabic. He was trained in medicine and made original contributions to that subject. However as the leading translator in the House of Wisdom, he came to have an enormous influence on the mathematicians of the time. Hunayn, who was a Nestorian Christian, learned Greek in Alexandria as a young student, and became an expert on the Greek language. He took part in the travels in the Byzantine Empire and parts of the Muslim world to find books and recruit translators and scholars. Hunayn personally translated books of both Plato and Aristotle.

Other prominent translators in the House of Wisdom were the Astronomer Thabit bin Qurra, Yusuf Al-Khouri Al-Qas, who translated Archimedes' now lost work on triangles, and Qusta ibn Luqa, a Syrian Christian who translated Hypsicles, Theodosius' *Sphaerica*, Heron's *Mechanics*, Autolycus Theophrastus' *Meteora*, Euclid, and other works. The son of Hunayn, Ishaq ibn Hunayn, strongly influenced by his father, is famed for his revised Arabic translation of Euclid's *Elements*.

## **THE BANU MUSA BROTHERS: A TEN'TH CENTURY MUSLIM YOUTH MOVEMENT!**

The Three Banu Musa (means sons of Musa) brothers became orphans following the death of their father Musa bin Shakir, a brilliant mathematician and astronomer in the court of Al-Ma'moun in the early 9<sup>th</sup> century. The three boys, Mohammed, Ahmad and Hasan, were taken by Al-Ma'moun under his custody. He ordered the governor of Baghdad Ishaq bin Ibrahim, who in his turn delivered them to Yahya ibn Mansour, a prominent scholar-astronomer and dean of the House of Wisdom. The three brothers grew up inside that great academy.

They lived and worked with such great philosophers as Al-Jahidh, Al-Kindi and Al-Khwarizmi, and translators and scholars like Hunayn bin Ishaq, Ishaq bin Hunayn, Kosta bin Luka and Thabit bin Qurra. The three brothers learned Greek and studied many of the books that were translated. However, as they became young adults, they participated in all kinds of political, economic and scientific missions that were assigned to them by Al-Ma'moun.

One of the close collaborators of Banu Musa was Astronomer and mathematician Sanad bin Ali. Sanad was from a Jewish family from Iraq. He worked with the brothers in a large number of crucial scientific and economic projects, such as building water canals around Baghdad, connecting the two rivers, Tigris and Euphrates.

One such fascinating mission was the measuring of the circumference of Earth. In the 820s, Al-Ma'moun got hold of Greek documents, referencing Eratosthenes' magnificent and creative method of measuring the circumference of Earth. Al-Ma'moun wanted that verified, or rediscovered, to find out the truth. He assigned to Banu Musa and Sanad the mission of replicating and rediscovering the principle that guided Eratosthenes. A number of the prominent astronomers and mathematicians joined the brothers out to the desert south of Mosul. Sanad wrote down the report on the mission. The brothers came with a new method of measurement. Rather than measuring the difference of the angle of the shadow cast by the sunrays on two poles located in two different locations along the meridian, Banu Musa used the heavenly sphere as a reference point.

They measured the angle of declination from the first location in relation to the north pole in the heavenly sphere, and moving north until the angle in relation to the north pole changed by one degree, all the time measuring the distance between the first location and the second. Knowing that each degree on the heavenly sphere corresponds to one degree on the circle of the surface of earth, they came to the conclusion that the distance between location one and two multiplied by 360 degrees would give them the measure of the circumference of earth. The result they reached was 40,253 km (in today's units), missing by about 133 km.

They did the measurement once again going south from the first location, and reached a very close conclusion. With that accomplished, Al-Ma'moun was satisfied, and Muslim astronomy gained a new discovery of principle.

Most of the persons working in the House of Wisdom were youth. Not only the Banu Musa brothers, but also Ishaq ibn Hynayn, and Qusta bin Loka, Al-Khawarizmi and Thabit bin Qurra were all in their teens and 20s when they studied and worked in there. Like the LaRouche Youth Movement today, they were involved in political and economic affairs of the state, as economic and scientific advisers to the Khalifas. They also traveled to recruit other youth from different parts of the Islamic state and even Byzantium.

One important example was the recruitment of Thabit bin Qurra by Mohammed bin Musa. Mohammed was on his way back from one of his exploration journeys in



Greece and met Thabit in the town of Harran (southern Turkey today). He organized Thabit, who was a Mandaean (Nazarene) and not a Muslim, to accompany him back to Baghdad to work together.

Thabit was much younger, but showed signs of genius. The three brothers adopted him as fourth brother and made sure that he got the best education. Thabit grew up to become one of the most important translators and astronomers in Islamic history. He translated dozens of Greek books of Plato, Archimedes, Hippocrates, Euclid, etc. He authored 150 different books in Arabic in mechanics, mathematics, geometry, astronomy and medicine. The books on mechanics by Archimedes and Heron of Alexandria that he translated opened the eyes of Banu Musa on this important science, which played a great role in their participation in the economic development of Iraq in particular and the Islamic state in general. Water works, canals, fountains, tools, and urban water systems were designed by Banu Musa. They even designed and built mechanical toys for children and amusing tricks for the entertainment of the public.

Banu Musa always worked as a team. One of the joint projects they undertook together, was on mechanics. That book is still available in the University of Alippo, Syria. It also includes geometrical studies and commentaries on Archimedes' two works *On the Sphere and The Cylinde* and *On the Equilibrium of Planes*. The book is completed with illustration of the tools and constructions they designed, in a way that reminds us of Leonardo Da Vinci's work.

Banu Musa selflessly served the spreading of knowledge and always gave credit to the Greek scientists whose works they reworked and improved.

## **TRANSMISSION TO EUROPE**

Some of the works translated by the House of Wisdom were later translated to into Latin by scholars in Toledo, Spain, which from the 10<sup>th</sup> century onward was a center of Muslim-Jewish-Christian collaboration in philosophy and science. From Toledo, these translations, as well as original writings by Islamic scholars like Ibn Sina and Al-Farabi, including the rich treasure of Arab medicine, were disseminated throughout Europe. Commentaries on Plato by Al-Farabi, were among the first known works on Plato to be known in Europe. Only the Timaeus dialog was known in Europe at the time and that to a very limited extent. Many ancient Greek works were translated into Latin from Arabic. The example of the famous Apollonius of Perga was is typical. His *Conics*, which played a crucial role in the development of modern astronomy, was translated from both Greek and Arabic: Its first four Books were translated from Greek, and Books Five, six and Seven from Arabic. Johannes Kepler would later revolutionized astronomy when he hypothesized that the planets moved along the pathways of elliptical curves described by Apollonius in the Conics.

The influence of Islamic science on developments on the west is a greater subject than could be dealt with in this short report. Therefore, it will remain as a separate subject for future attempts.

## **RELIGIOUS TOLERANCE IN ABBASID BAGHDAD**

It became clear from the above mentioned prominent and crucial involvement by Assyrian and Nestorian Christians in both medical care and studies and the work in the House of Wisdom, that they were regarded as an integral part of the Islamic society. The Christians had special privileges in Baghdad, allowing them to have many churches in Baghdad, and a residential quarter in Baghdad, which was called Hay Ar-rom. The patriarchs of the eastern Churches chose to have their holy seat in Baghdad. Unlike the Roman Empire, Christian archbishops were elected by the church, and approved later by the Khalifa. In addition to their professional positions, Christians were appointed in political positions too. Some of them such as Abdoon bin Sa'id and Nasr bin Haroun were appointed as ministers in the time of Khalifa Al-Muttaqi in the 10<sup>th</sup> century and under the Buwaihid dynasty in the 10<sup>th</sup> century.

Less known, is the situation of the Jews in that period. In Baghdad, Jews had a major thriving quarter, which remained so until the fall of Baghdad under the Mongol invasion in 1258. Benjamin of Toledo, a Jewish traveler and historian who traveled from Spain through the Islamic world to Baghdad, visited this quarter in 1169. He left a book called "*The Journey of Benjamin of Toledo*" (available in Arabic still today). In that book, Benjamin of Toledo states that there were about 40,000 Jews living in Baghdad at the time. He also reports that there were 10 Torah schools and 28 Synagogues. Benjamin described in his book the great hospitality and respect the grand Rabbi enjoyed there from the Muslims who considered him the heir of King David and chief of the Mosaic nation. The Grand Rabbi had both religious and legislative authority among the Jewish community in Baghdad. The Khalifa protected his authority. Arab chronicles describe the Grand Rabbi when he was summoned to meet the Khalifa as: "dressed in silk with a white turban ornamented with diamonds. He was accompanied armed guards, with a page running ahead of his entourage shouting 'make way to our master, son of King David'."

The Khalifas, since Haroun Al-Rashid enjoyed having open debates in their court, where they had a weekly gathering of representatives of all religions and schools of thought. Christian and Jewish leaders had the full freedom to defend their faith in front of the Khalifa against any challenger. A famous such debate was witnessed in the court of Al-Ma'moun between the Muslim Imam Al-Ridha and the Christian Patriarch and Grand Rabbi. The debate was about Imam Al-Ridha's argument to prove that in both the Bible and the Torah there is evidence of the coming of the Prophet Mohammed, quoting extensively from the two Holy Books.

The Mandaean were also integrated and tolerated in the Islamic state and received the same good treatment as Christians and Jews. Some of the most brilliant astronomers and scientist in the Abbasid era were Mandaean, such as Thabit bin Qurra, Al-Battani and the famous chemist Jabir bin Haiyan.

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A problematic aspect of this process was that from the outset no real distinction was made regarding the difference methods of scientific reasoning within the Greek culture. That was probably due to two factors: One is the corruption of scientific thinking during the Roman Empire's centuries-long Dark Age, the other is the eagerness to collect and digest as much as possible of whatever was available from the ancients, in accordance with the recommendation of the Prophet Mohammed and the Holy Qur'an. In the beginning, almost all Greek books on Science and Philosophy were given equal weight. For example, both Aristotle and Plato were held up as great thinkers, with the distinction that Plato is the "Divine" philosopher due to his monotheistic view of the Universe and its Creator, a view compatible with the beliefs of Islam. Aristotle, on the other hand was regarded as the "First Scholar" due to his "down to earth" empirical approach to knowledge. Another example was the treatment of astronomy and geometry from both the fraudulent Ptolemaic method and the saner Pythagorean method of "Sphaerics". The verification and sorting process took some time, when Muslim scientists started to replicate and examine both the axiomatic and experimental aspects of what was delivered to them. Through the interventions of such great Muslim scientists and philosophers as Al-Kindi, Al-Razi, Ibn Sina, Al-Farabi, in the 9<sup>th</sup> and 10<sup>th</sup> centuries and even later, the dividing line started to become clearer. Critique and outright refutations of Ptolemy's astronomy, Euclid's geometry and Aristotle's methodology started to become a key aspect of the "dissertations" of upcoming scholars.

Sorting out this crucial aspect of the history of the epistemological fight within the Islamic Renaissance has not been undertaken yet in any serious manner. Its time has come now. And with the type of historical work being carried out by the LaRouche Youth Movement, it seems appropriate now to accomplish this unfinished mission.

## **CONCLUSION:**

Every great renaissance movement starts with the gathering, translation, and assimilation of the best that have been produced by other great cultures and individuals. However, each time in history, one culture had to bear the burden of lifting civilization from the mud of corruption and building something, which would last into the future for the sake of all cultures and all humankind. However, this time, with Lyndon LaRouche's initiative for a Eurasian and planetary renaissance, can all cultures work together on the principled view of Man's original sublime character as being created in the image of the Creator of the Universe.

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[Comment on questions raised in the class of November 22, 2006 on the Banu Musa rediscovery of the Eratosthenes discovery of the circumference of the earth.]

**ON THE REDISCOVERY OF THE PRINCIPLE OF PROPORTIONALITY  
BY LYM MEMBERS ALFONSO, OSCAR, AND MIRIAM.**

Now, there is an important question that Alfonso and Oscar, in Bogotá, and Miriam, in Buenos Aires, raised in different ways during the class, when they looked for the solution to the discovery of the circumference of the earth by Eratosthenes and the different solution found by Banu Musa and Sanad as reported by Hussein.

The underlying issue that all three LYM have raised was essentially implying the difference between the empiricism of Aristotle and the principle of discovery of Plato. Miriam raised explicitly the question of the epistemological difference between the sphere and the plane, and Alfonso and Oscar were looking for a different way to solve the same problem, starting with the latitude position to the pole star rather than a shadow. All three were looking for the principle, not for the metric of the thing in itself. That was the important point to consider.

Now, by looking for the principle underlying this problem, you are thinking of the universal physical principle of proportionality that was put into application by Thales, Eratosthenes, and Banu Musa, and which pertains to the relationship between two incommensurable domains, which is expressed by the fact that “*{each degree on the heavenly sphere corresponds to one degree of the circle on the surface of the earth}*,” as Hussein indicated. Thus, the principle of the incommensurable measure is expressed in the dynamic form of *{this is to this, as that is to that}*, between the continuous manifold of the spherical domain and the discrete manifold of the circular plane. That was the leap of faith that had to be made to solve the Eratosthenes problem.

The interesting thing about this physical experiment, however, is that the discovery of principle here embodies a paradox and a corresponding failure to solve it, which is confirmed by the ambiguous nature of the instrumentality of the compass. The failure comes when the compass is used as a linear metrical instrument rather than an angular instrument. In other words the compass is not simply used as an instrument to produce points, lines, and circles in the plane, as Euclid would have it, but as an instrument that supercedes the paradox of the sphere and the plane; that is, when the compass is used as a conic angular function as developed from *{Sphaerics}*. It was from that standpoint that the Greeks understood the compass, as an instrument capable of solving the paradox of transforming what is perceived on the surface of a celestial sphere and projecting it onto a circular plane.

While the empiricist Aristotle was fixated in attempting to determine curved or straight distances between the two points of the compass, the Platonic astrophysicist was measuring the angle between the two, regardless of surface curvature. That is how, as we will discuss later, Hipparchus was able to discover the principle of the Astrolabe, that is, the principle of mapping proportionately the sphere of the heaven onto a flat circle, which is a reputed impossibility.

FIN