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ISLAM AND THE ORIGINS OF CONTEMPORARY WESTERN CIVILISATION

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ISLAM AND THE ORIGINS OF CONTEMPORARY WESTERN CIVILISATION[1]

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The contemporary Western civilisation, which is basically a scientific and technological one, is a great florescence and a wide-spectrum development of the precedent Islamic civilisation. On the other hand, the latter itself was a ring in the eternal chain of human progress. But it was a unique ring; it opened its heart and mind to preceding civilisations whatever might have been their sources and trends. Thus the Islamic civilisation was both tolerant in reception and generous in giving.

However, the point which I would like to stress in this paper is that Islamic science was not the direct outcome of the Islamic State, in its geopolitical sense, but was rather a true expression and reflection of the main principles of Islam itself, which the pioneering generations and centuries of Muslims had apprehended and responded to by an open and clever nature. A state may decline or fall, but if its civilisation survives it will conserve the essence of its principles passing them to its heirs. Given these premises, it would be illogical to expect the issue of any conflict or struggle between Muslims of this age and the present Western civilisation, as it is sometimes claimed. Real causes of conflict should be frankly and truly sought, diagnosed and faced, and the basic ideology common to Islamic science and Western civilisation should be clarified to both partners, opening bridges of mutual understanding that leads to a real human civilisation, which is virtually an ultimate goal of Islam. In the following objective analysis I shall try to relate the rise of "Islamic science" to the basic principles of the religion of Islam.

1 - Islam and Science:

The Qur'an highly esteems "al-ᶜulama" (scholars). "...Say: Are those equal, those who know and those who do not know? ..." (39:9). The Qur'anic and general linguistic usage of the Arabic word "ᶜilm" means knowledge, in its widest sense. Among many sayings *(hadith)* of the Prophet (p.b.u.h.): "The superiority of the learned man over the devout is like that of the full moon over the rest of the planets." [As we "see" them].

2 - Methodology of Science:

2-1 Abolishment of superstitions and false tradition: There was a solar eclipse on the day Ibrahim, the dear son of the Prophet, died. People then said that the eclipse was mourning that sad event, but the Prophet (p.b.u.h.) addressed the people, teaching them the lesson: "The sun and the moon are two of God's signs; they are not eclipsed on account of anyone's death or birth....".

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2-2 Verifying knowledge: In the light of strict Qur'anic rules, the Messenger of Allah warns us, in many sayings, from taking presumptuous conclusions, prejudice, and blind following of predecessors. Thus we find Ibn Abdul-Barr (4th H./10th c.) says that knowledge (science) is really what you have personally verified and made sure of its truth, and, therefore, if anyone says something that he has not verified and only repeats following others he does not really "know" that thing.

2-3 Precision, Honesty and Perfection: These come under the general Islamic term "al-taqwa" (godliness, piety). The Prophet (p.b.u.h.) said: "Be honest in matters of ᶜilm, because being dishonest in these matters is much worse than being dishonest in matters of money and property.

2-4 We find all this and more in the excellent research methodologies presented by al-Nazzâm, Ibn al-Haytham, al-Bîrunî, al-Razî, Ibn Sîna, and other Muslim scholars.

Figure 1. *Al-Khwârazmî, (about 790 - about 840), the Muslim scholar who is credited with establishing the science Algebra and whom the word "algorithm" is derived from his name (The image was introduced by the editor).*

3 - Freedom of Creativity and Thought:

3-1 The Prophet (p.b.u.h.) taught Muslims the sharp demarcation between what belongs to Divine revelation in religious matters and what belongs to worldly knowledge which they should acquire through natural means of experience and study. In his usual way of teaching his companions by giving practical examples and models, he established the golden rule, in the story of the pollination of palm-trees at Medina: "You know better matters of your worldly life". He also instructed them: "If I order you something of your religion follow me, but if I order you something expressing my own view, I am only a human".

3-2 Early Muslims fully comprehended the lesson. In the fight of Badr, the Prophet selected a certain site for the camping of the Muslims' army. One of his Madinese companions asked: "O Messenger of Allah, have you selected this site according to Divine revelation, which we should then stick to it, or is it a matter of warfare planning?" The Messenger of Allah told him it was the latter case. Then the man suggested another more secure and strategic site. The Prophet approved the suggestion and praised the man.

3-3 To encourage competent scholars to try to reach their independent judgement (ijtihad) the Prophet presented to them a significant incentive; that if they reach a correct conclusion they will have two shares of Allah's reward, and if they reach a wrong conclusion they will have one share.

4 - Tolerance and Universality of Islam:

4-1 The tolerance of Islam is undisputable. "Let there be no compulsion in religion; truth stands out clear from error..." (2:256). Muslims respect all precedent heavenly religions and all Prophets and Holy Scriptures; and this is an essential element of their faith. Islam is a universal religion because it is the last word of Allah. "We have not sent thee otherwise than to mankind at large, to be a herald of glad tidings and a warnings, but most people understand not" (34:28). People are invited to adopt Islam voluntarily and after being convinced. "Call [all mankind] unto thy Sustainer's path with wisdom and goodly exhortation, and argue with them in the most kindly manner ...." (16:125).

4-2 The Prophet (p.b.u.h.) also declared that there was no discrimination between Arabs and non-Arabs. Among his great companions were Salman, the Persian, Sohaib, the Byzantine, and Bilal, the Abyssinian, and he used to consult them. On the occasion of the fight of Allies (al-Ahzab), it was Salman who suggested digging a dry trench in front of the exposed part of Medina, a Persian practice unfamiliar to Arabs which perplexed the attackers and forced them to change their tactics. The Prophet also told Muslims that: "Wisdom is the lost property of the faithful, so wherever he finds it he is most entitled to it". Knowledge should be sought (in matters other than religion) from anybody, even from polytheists.

Figure 2. *Ibn Sina or Avicenna (980-1037) was the most influential of all Islamic philosopher-scientists. He wrote on medicine as well as geometry, astronomy, arithmetic and music (The image was introduced by the editor).*

4-3 This spirit, together with the great appreciation of Islam of ᶜilm, made the Islamic mentality an open one seeking knowledge "even in China", and accepting it irrespective of nationality, race or religion. Thus when Arabs mixed with other people, Muslims rushed to accomplish the greatest translation and transfer move in history, to collect and collate the scientific heritage of all humanity and conserving it from extinction. In the climax of this move, in the golden age of the Abbasid dynasty, many non-Muslims and non-Arabs contributed as translators and scientists, such as Ibn Masawayh and Hunayn Ibn Ishaq, the

Christians, Ibn Qurrah, the Sabaean, and the Bukhtishu family, the Syriacs. Many of the bright stars of Islamic science were non-Arabs by birth: al-Rhazi, Ibn Sîna, al-Bîrunî, al-Khwârazmî, to name a few.

4-4 That is how the new spirit of Islam made the streams of knowledge from Babylon, Greece, Alexandria, Persia, Jundishapur, India and China flow into a common new sea. Treasures of ancient civilisations and sciences were transferred to Arabic and availed to students and researchers to be comprehended, analysed, critically verified - with great respect, honesty and appreciation - augmented and developed. That is how earlier "sciences" were fused in the Islamic crucible, re-synthesised and modelled into a new unified form, becoming - for the first time in history - a universal heritage that challenged all previous national, religious and ethnic bigotry. Thus the universality of Islamic science was the reflection of the universality of Islam itself. This was the greatest gift Islam presented to Europe in its Renaissance.

5 - Arabic as a Language of Science:

5-1 The great translation move to Arabic had another important outcome: there became a single universal language of the new universal science. Arabic also became, voluntarily, the common language in many regions of the Islamic world. The great Muslim scientists wrote their monumental works in Arabic, and "Even when a scholar wrote in his mother tongue, notably Persian - like al-Nasawî or Nasîr al-Din al-Tusî - he undertook to translate his own work into Arabic" (Rashed, 1996, p. xi). Arabic soon became the language of science for several centuries, and its mastery was a prerequisite for learning or scientific research outside the Islamic State.

5-2 It should be noted, however, that Arabic did not reach this universal scientific status just because it was the language of the dominant state, but because of certain distinctive characteristics of its own. To give one unbiased testimony I quote the one given by G. Russell (1981), after presenting a good summary of Islamic science in the *Dictionary of the History of Science:*

> *".... It was the nature of Arabic language, however, which played a crucial role. Its remarkable flexibility enabled the translators to coin or to create the exact vocabulary for scientific and technical terms...." (p. 215).*

5-3 Roshdi Rashed notes, in the brief but comprehensive Preface of his *Encyclopedia of the History of Arabic Science,* that:

> *"With Arabic science it became possible to read in one language the translations and the scientific work of the scientists, as well as the advanced research of the modems" (Rashed, 1996, p. xi).*

6 - Accessibility of Islamic Science for Teaching and Popularisation:

6-1 Unifying the language of science, civilisation and everyday life, had another significant impact; it removed barriers between the language of scholars and common people. Thus the concepts, results and creations of science became available to people, for enlightenment and application. Thus science did not only become universal but also popular (within relative historical limits). This is a considerable progressive step, to be contrasted with the later revived science in Europe which remained, for quite a long time, confined to those versed in Latin, a language alien to common people.

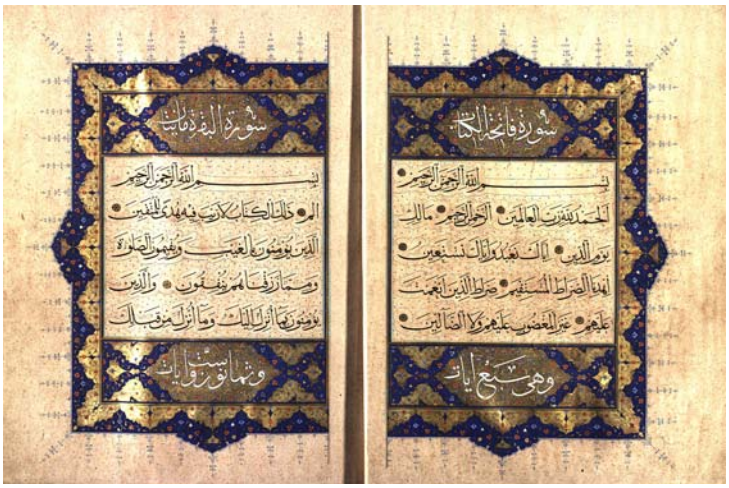

Figure 3. A *page from an early manuscripts of the Quran (The image was introduced by the editor)*.

6-2 The best example to be presented for the popularity of Islamic science was the establishment of the "Ikhwan al-Safa" society in Basra in the second half of the 4th H./10th c. These "brothers" were keen to disseminate their "epistles" - in the various domains of knowledge - from hand to hand, as much as they could.

6-3 Unifying the language of science, civilisation and everyday life also facilitated learning and teaching. The Prophet (p.b.u.h.) preached that: "The search for knowledge is an obligation laid on every Muslim [male or female] ..." He also established a complete code of guidance and ethics for learning and teaching. We may mention only a few examples of his sayings: "Acquire knowledge and teach it to the people....", "The teacher and his pupil share the reward of God....", "He who is asked about something he knows and conceals it will have a bridle of fire put on him on the day of resurrection",.... etc.

7 - The Integral Islamic Concept of Life: Sociology of Science and Science and Value.

7-1 Islam is a complete statute for life in all its aspects. Thus it was quite natural that Islamic science rose tied up to the high values of Islam and in intimate relation with the Islamic society. The messenger of Allah said: "Knowledge from which no benefit is derived is like a treasure from which nothing is expended in God's path". (Benefit is meant here in its broadest sense: material, environmental, and spiritual).

7-2 The exploitation of science in getting practical benefits distinguishes Islamic science from Greek science which is rather basically philosophical. Hence the great technological advances in various fields (as is well exposed in al-Hassan & Hill's book, 1986, on *Islamic Technology: An Illustrated History).* I greatly admire Ibn Abdul-Barr who regarded, in the 5th H./11th c. swimming, chivalry, fashion and decoration as "science" (ᶜulum).

7-3 Unfortunately, when Western science rose in Europe on the shoulders of Islamic science, it had to drop some of the latter's intrinsic values. Europeans became greatly fascinated with the new scientific discoveries; some scientists acquired an arrogant attitude and put their back up to religion. Philosophers stated that good science should be objective, value-free and should not be affected by the scientist person

or his society. To make things worse, the Church attained - for political and historical, but not religious, reasons - an antagonistic and hostile attitude to new science and oppressed scientists. Scientists were apparently defending their scientific research's freedom and independence.

7-4 Gradually, appeals opposing this situation started to be declared, and signs of conciliation between science and values dawned and came to crystallize in the last two decades of the twentieth century, especially in the domain of energy, environment and biotechnology.

7-5 Eventually philosophers of science took to appease the claim of science's superiority and smoothen the arrogance of scientists, and called for the sociology of science, asserting that science was a human activity that intrinsically entails that its theories are falsifiable, and that it is inevitably organically entwined with the society of the scientist and its values. Thus Western science has, at last, retrieved those elements of Islamic science that it had lost in a phase of its development. Now the question of "ethics" is often raised in all scientific practices.

I would like to conclude my article with a Qur'anic verse: "O mankind! We created you all from a male and a female, and made you into nations and tribes, that you may know each other. Verily, the noblest of you in the sight of Allah is the most deeply conscious of Him; and Allah is all-knowing and all-aware" (49:13). This holy verse is the best support of our case, because it asserts the Divine wisdom of the creator in the diversity and variability of mankind. Biologists know that diversity is the secret of the strength of any species of living things, and its equipment for adaptability, survival and evolution. But the diversity within the human species is related to another aim, which is the necessity of "knowing each other", that is the communication and contact between the various cultures, both horizontally, i.e. geographically, and vertically, i.e. between the successive historical ages and stages. The only permissible competition is the endeavour to be more benevolent and righteous -to reach that noblest degree in the sight of Allah. This is then the sprit of the message of Islam, of which the Islamic civilisation presented an ideal link for this contact, in both its geographical and historical dimensions. Had not this been the case with the once-dominant State, only God knows to where it would have led the path of human history. We do not say this to express any pride, but to assert the message of universality of the human heritage, which is the message of Islam, trying to remind people of today, from the East and West, of this fact.

References:

Ali, A. Yusuf, The Holy Qur'an: Text, Translation and Commentary, Doha: Publications of the Presidency of Islamic Courts and Affairs, 1946.

Ali, Maulana Muhammad, A Manual of Hadith, London: Curzon Press, 1977. Asad, M., The Message of the Qur'an, Gibraltar: Dar al-Andalus, 1980.

Robson, J., Mishkat Al-Masabih: English Translations with Explanatory Notes, 2 vols., Lahore: Sh. Muhammad Ashraf, 1931.

al-Hassan, Ahmed Y. and Hill, Donald R., Islamic Technology: An Illustrated History, UNESCO and Cambridge University Press, 1986.

Rashed, Roshdi, Encyclopedia of the History of Arabic Science, in collaboration with Regis Morelon, 3 vols., London: Routledge, 1996.

Russel, G.A., "Islamic Science" in Dictionary of the History of Science, eds. W.F. Bynn, E.J. Brown, Ray Peter, London: The Macmillan Press, 1981.

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Figure 2. An artist impression of Ibn Sina or Avicenna crowned as a king of science in a Latin manuscript (Source: www.wikipedia.org).

Figure 3. A page from an early manuscripts of the Quran. (Source: Qur'an by Dervish Hasan b. Ilyas, 1508, Suleymaniye library, Ayasofya nr. 1.)