



SCIENCE ISLAM

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

*Bismi Allahi Alrrahmani Alrraheemi
In the name of Allah, the most
Beneficent, the most Merciful*

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THE QUR'ÂN'S MARVELS ARE EVER-LASTING
AND ETERNALLY NEW

ISLÂM AND SCIENCE

– 1 –

*In the Neme of Allâh Ar-Rahmân (The All-Merciful)
Ar-Rahîm (The Ever-Merciful)*

ISLÂM AND SCIENCE

INTRODUCTION.

Amongst us, human beings, none is completely devoid of the innate feeling - even from time to time - that there is a Creating God behind this universe. Such a feeling may be frustrating and people may be prevented from responding to it by the teachings they get as a result of their belonging to a particular environment, their indulgence in earthly life and cheap pleasure naturally, the Almighty Creator should differ from us in all respects :

“And unto Him the like is not”

(Ash-Shûrâ : 11)

الشورى (١١)

لَيْسَ كَمِثْلِهِ شَيْءٌ ﴿١١﴾

Most people could not be easily induced by this sincere feeling of the existence of the Creator to follow the right path leading to Him. Thus, Allâh [God's name in Islâm] sent Prophets and Messengers – Allâh's prayer and peace be upon them – with Divine support in the form of miracles suitable to their environment, until the advent of the last of His Messengers, Prophet Muh_ammad, who emerged after the maturity of the human thinking when the age of science was immanent; Allâh supported him with the Qur'ân to be an Eternal Miracle.

Evidently, nothing can remain forever on earth as an eternal miracle except a unique book. The inimitable elocution and teachings of such a book must be conspicuous and convincing at all stages of civilization. The Qur'ân is the only book which fulfils such conditions.

The very beginning of the revelation was an outstanding signal for the acquisition of knowledge and a forerunner of giving it its due dignity : **“Read in the name of thy Master Who created; created man from a clot; read and thy Lord is Most Generous; Who taught by the pen; taught man what he knew not”**.

(Al-'Alaq : 1-5)

﴿ اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (١) خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (٢) اقْرَأْ وَرَبُّكَ الْأَكْرَمُ (٣) الَّذِي عَلَّمَ بِالْقَلَمِ (٤) عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ ﴾
العلق (١ - ٥)

At the different stages of the revelation, the Qur'ân pointed out that knowledge meant all branches of science.

To become Muslim one should, first of all, believe in the Almighty Allâh and in the teachings of the Qur'ân. **“Verily in the creation of the Heavens and the Earth and in the variation of night and day are signs for people of understanding”**;

(Âl-'Imrân : 190)

﴿ إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِّأُولِي الْأَبْصَارِ ﴾
آل عمران (١٩٠)

“But it is clear signs in the hearts of those whom (the knowledge) has reached”;

(Al-‘Ankabût : 49)

﴿بَلْ هُوَ آيَاتٌ بَيِّنَاتٌ فِي صُدُورِ الَّذِينَ أُوتُوا الْعِلْمَ﴾ العنكبوت (٤٩)

In fact, a great number of the Qur’ânic verses are cosmic verses which reveal the signs of the Almighty Creator in the universe. This is only natural, since He Who created the universe is He Who supported Prophet Muhammad by the Glorious Qur’ân [Allâh’s Own Words] to be the Eternal Miracle. For example we read :

“Assuredly, in the Heavens and the Earth are signs for the believers; and in the creation of yourselves and living beings He disperses on Earth are signs to the firm in faith; and in the variation of night and day and the sustenance which Allâh sends down from the Heaven, whereby He gives life to the Earth after its death, and in sending winds in their ways are signs for a people of discernment”

(Al-Jâthiyah : 3-5)

﴿إِنَّ فِي السَّمَاوَاتِ وَالْأَرْضِ لَآيَاتٍ لِّلْمُؤْمِنِينَ (٣) وَفِي خَلْقِكُمْ وَمَا يَبُثُّ مِن دَابَّةٍ آيَاتٌ لِّقَوْمٍ يُوقِنُونَ (٤) وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَمَا أَنزَلَ اللَّهُ مِنَ السَّمَاءِ مِن رِّزْقٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَتَصْرِيفِ الرِّيَّاحِ آيَاتٌ لِّقَوْمٍ يَعْقِلُونَ﴾ الجاثية (٣ - ٥)

Many verses need comment, or detailed explanation on correct scientific basis, by means of specialists before one can realize how far they prove to be miraculous in the age of science. The following are examples of my comments on a scientific basis on verses of this type.

SOME COMMENTS BASED ON ASTRONOMY

1. “With power and skill did We construct the Heavens and indeed We expand them”.

(Adh-Dhariyât : 47)

الذاريات (٤٧)

﴿وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ﴾

Comments on this verse passed by three scientifically correct phases, each of which suited its own age of civilization.

A — The verse was at first explained by saying that inspite of the almost unlimited amounts of matter and radiation comprized in the universe and form it, Almighty Allâh has more and more of them. Certainly this is true and fair.

B — The verse, also, declares a fact that has been established gradually by actual observation. Thus, the progress in manufacturing telescopes within the last two centuries, and the recent use of radio telescopes, extended our scope of vision from the solar system [5 light hours in diameter], to the Milky Way [100,000 light years in diameter], to the other galaxies such as Andromeda [750,000 light years far], to quasars and pulsars [billions of light years far]. Such galaxies are so remote from us that they appear as mere light spots in the Heavens. This is in spite of the fact that each galaxy is formed of millions and millions of stars. Miraculously enough Almighty Allâh says in the Qur’ân :

2. “Indeed I could swear by the sites of the stars and it is a

great oath if you are aware of them.”

(Al-Wâqi‘ah : 75-76)

﴿فَلَا أُقْسِمُ بِمَوَاقِعِ النُّجُومِ (٧٥) وَإِنَّهُ لَقَسَمٌ لَوْ تَعْلَمُونَ عَظِيمٌ﴾ الواقعة (٧٥ - ٧٦)

C — Finally, a third meaning of the verse : **“With power and skill did We construct the Heavens and indeed we expand them”**, is obviously that the universe expands. However, the expansion of the universe has been established by observation. Galaxies are receding away from us (the Milky Way) at speeds which are proportional to their distances from us.

Also, the expansion of the universe has been shown to be an outstanding result of the Theory of Relativity.

Amongst the outstanding services which the Earth’s atmosphere renders to life in general is that it contains the oxygen on which this life depends. The amounts of this oxygen, together with the total atmosphere pressure decrease rapidly with elevation. If we assume that the total oxygen at the Earth’s surface is 20 units, then at the height of 10 kilometers from the surface it becomes equal to 2 units only, and at a height of 30 kilometers it will be 0.2 units only.

Any one who happens to ascend vertically up in the atmosphere will soon feel that he needs more and more air to inhale. This means that he will feel the need to a wider breast to inhale the proper amount of oxygen. This fact was first stated by the Qur’ân which says :

3. “That whom He willeth to leave straying, He makes his breast close and constricted as if he has to rise up in the sky”.

(Al-An‘âm : 125)

﴿وَمَنْ يُرِدْ أَنْ يُضِلَّهُ يَجْعَلْ صَدْرَهُ ضَيِّقًا حَرَجًا كَأَنَّمَا يَصْعَدُ فِي السَّمَاءِ﴾

(الأنعام (١٢٥)

Again, there is a verse in the Qur‘ân which transfers 300 solar years to 309 whole lunar year, neglecting year fractions. However, such transformation from one system or calendar to another demanded sound knowledge of astronomy, notably at that time. The verse is :

4. “They remained in their cave three hundred years, a number which has to be increased by nine years”.

(Al-Kahf : 25)

﴿وَلَبِثُوا فِي كَهْفِهِمْ ثَلَاثَ مِائَةٍ سِنِينَ وَازْدَادُوا تِسْعًا﴾

(الكهف (٢٥)

It is worth mentioning in passing, however, that the Qur‘ânic verses related to astronomy are numerous, and we have to give brief comments on a limited number of verses chosen to represent various branches of astronomy. One of the verses mentioning the water of the Earth which characterizes it and makes it different from other planets in the solar system says :

5. “And We sent down water from Heavens, according to a precise measure and thereby caused the Earth to hold it”;

(Al-Mu‘minûn : 18)

﴿وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ﴾

(المؤمنون (١٨)

In the earlier stages of the development of the Earth as a planet, it could collect water from Heavens according to a precise measure, so that it could fulfil its mission and sustain living beings on it. This means that, in other words, the quantity of water accumulated on Earth is not haphazardly sent down, in spite the fact that most of the Earth's surface is covered by oceans and seas [about 4/5].

There is a constant gaseous exchange between the hydrosphere and the atmosphere. The most important gas exchanged in this operation is water-vapour which on condensation in the air-layers of cloud formation gives rise to precipitation, the origin of fresh water on Earth.

Amazingly enough, the Polar Circle, which most probably was unknown to the Arabs, and within which the sun rises continuously for about six months in summer, is mentioned in the Qur'ân in a verse concerning Dhul-Qarnain. The verse says :

6. "Until when he reached the land of sun rise, he found it rising on a people for whom We had provided no covering shelter against the sun".

(Al-Kahf : 90)

﴿حَتَّىٰ إِذَا بَلَغَ مَطْلِعَ الشَّمْسِ وَجْدَهَا تَطَلَّعَ عَلَىٰ قَوْمٍ لَّمْ نَجْعَلْ لَهُم مِّن دُونِهَا سِتْرًا﴾
الكهف (٩٠)

About the almost spherical shape of the Earth's surface, we know pretty well that on the hemisphere facing the sun it is day, while on the other it is night. This means that when Allâh's command comes and the Hour (of resurrection) is decreed, it is day on one half of the Earth's surface and night on the other. The Qur'ân says :

7. “Our command comes to Earth by day and by night”.

(Yûnus : 24)

يونس (٢٤)

﴿أَتَاهَا أَمْرُنَا لَيْلًا أَوْ نَهَارًا﴾

Another clear interpretation concerning this verse is that the Hour comes all of a sudden by day or at night.

Finally, speaking about space-travel and the existence of life in other planets, we should not forget that the Theory of probability strongly favours and supports the existence of life in planets having physical features and environments similar to our Earth.

It has, also, been estimated that at least two million planets, similar to our Earth, exist in the Milky Way, and since the Universe is a Universe of galaxies, or made of billions of galaxies, it can be easily deduced that living creatures in the Universe are numberless. Regarding this matter the Qur’ân says :

8. “Seek they then other than Allâh’s religion? and to Him submitted whoever in the heavens and the earth”;

(Âl-‘Imrân : 83)

﴿أَفَغَيْرَ دِينِ اللَّهِ يَبْغُونَ وَلَهُ أَسْلَمَ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ﴾ آل عمران (٨٣)

b. “Whoever in the heavens and the earth ask Him...”;

(Ar-Rah_mân : 29)

الرحمن (٢٩)

﴿يَسْأَلُهُ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ﴾

- c. “And of His signs is the creation of the heavens and the earth and what He has spread forth in both of them of living beings; and He is All-powerful to gather them together when He will,”

(Ash-Shûrâ : 29)

﴿وَمِنْ آيَاتِهِ خَلْقُ السَّمَاوَاتِ وَالْأَرْضِ وَمَا بَثَّ فِيهِمَا مِنْ دَابَّةٍ وَهُوَ عَلَى جَمْعِهِمْ إِذَا يَشَاءُ قَدِيرٌ﴾
الشورى (٢٩)

- d. “And to Allâh makes obeisance every living creature that is in the heavens and that is in the earth and the angels (too) and they are not proud”;

(An-Nahl : 49)

﴿وَلِلَّهِ يَسْجُدُ مَا فِي السَّمَاوَاتِ وَمَا فِي الْأَرْضِ مِنْ دَابَّةٍ وَالْمَلَائِكَةُ وَهُمْ لَا يَسْتَكْبِرُونَ﴾
النحل (٤٩)

SOME COMMENTS BASED ON METEOROLOGY

Meteorology is concerned with the study of [air in its ways]. Allâh says :

1. **“and in the turning about of the winds and the clouds compelled between the sky and the earth surely there are signs for a people who understand”.**

(Al-Baqarah : 164)

﴿وَتَصْرِيفِ الرِّيَّاحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لآيَاتٍ لِّقَوْمٍ يَعْقِلُونَ﴾

البقرة (١٦٤)

2. **“and in the turning about of the winds there are signs for a people who understand”.**

(Al-Jâthiyah : 5)

﴿وَتَصْرِيفِ الرِّيَّاحِ آيَاتٌ لِّقَوْمٍ يَعْقِلُونَ﴾

الجنانية (٥)

However, the Qur’ân is known to be the first book which declared and announced the fact that clouds are formed by winds.

“And Allâh is He Who sends forth the winds so that they raise up the clouds, and He drives them to a land that is dead.”
(Fâtîr : 9)

﴿وَاللَّهُ الَّذِي أَرْسَلَ الرِّيَّاحَ فَتُثِيرُ سَحَابًا فَيَسْقِيهِ إِلَىٰ بَلَدٍ مَيِّتٍ﴾

فاطر (٩)

It is well known now that air contains water-vapour, and that when it rises up in the atmosphere (by various ways), its temperature decreases adiabatically, and consequently it can no longer hold all its water-vapour content. Condensation of the surplus water-vapour thus takes place, either in the form of droplets or in the form of ice crystals, according to the prevailing temperature. In this manner, clouds develop in rising air.

Evidently the ascending air mass either ultimately **spreads** in a single layer or strata-giving rise to a family of clouds called **stratus** clouds, or it may continue to ascend giving rise to the family of cumulus clouds which **grow vertically up**.

Miraculously enough, the Qur'ân differentiates between the two types in the same manner as they are now scientifically identified.

The Qur'ân says :

1. **“Allâh is He Who sends forth the winds as they raise clouds then does He spread them in the sky as He wishes”.**

(Ar-Rûm : 48)

﴿اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتَنِيْرُ سَحَابًا فَيَبْسُطُهُ فِي السَّمَاءِ كَيْفَ يَشَاءُ﴾ الروم (٤٨)

This is the stratus type formed by the spreading of the clouds in strata.

2. **“Seest thou not that Allâh drives along some clouds then He joins them together then makes them into heaps of cumulus...”.**

(An-Nûr : 43)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَزْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا﴾ النور (٤٣)

This is the cumulus type which develops vertically upwards to heights reaching 20 kms.

Now, when clouds give rain they are called nimbus, and we have the two types namely : Nimbo-stratus and cumulonimbus. This stage is the result of the continuation of the

ascending air to provide the growing clouds by water-vapour and tiny or microscopic bodies known as “nuclii of condensation”.

We refer to this process by saying that winds seed clouds to give precipitation.

Apart from their vertical structure and mode of growth, the outstanding physical difference between the nimbo-stratus clouds and the cumulo-nimbus (Cb) clouds is that while the Cb clouds may be accompanied by the formation of hail, lightning, thunder, or thunder-baults, nimbo-stratus clouds may only be associated with rain or snow-fall in cold regions.

There is, however, a big difference between hail and snow. A hail stone may grow in size to become as big as an orange.

The role played by hail in charging the Cb cloud with electricity can be summarised as follows [P.A. Sheppard, Science Progress No. 149, 150] :

1. Positive charge is acquired by an ice crystal **growing from the vapour**. The corresponding negative charge being carried away on ice splinters breaking from the parent crystal (top of the cloud).
2. Negative charge is acquired by an **evaporating ice crystal** or hail stone (near the edge of the cloud).
3. Positive charge much greater than in (1) and (2) is acquired by a hail stone which **rimes under bombardment from super-cooled water-droplets or water drops** (Middle of the cloud), having temperatures below 0°C.

In the light of the physical knowledge, we are going to read the last two verses in complete wording :

The verse concerning the nimbo-stratus type of clouds says:

«Allâh is He Who sends forth the winds so they raise clouds then does He spread them in the sky as He pleases and He makes them partially thick, so that you see the rain coming from inside them, then when He causes it (i.e. the rain) to fall upon whom He pleases of His worshipers they rejoice».

(Ar-Rûm : 48)

﴿اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتَنفِثُ سَحَابًا فَيَبْسُطُهُ فِي السَّمَاءِ كَيْفَ يَشَاءُ وَيَجْعَلُهُ كُسْفًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خِلَالِهِ فَإِذَا أَصَابَ بِهِ مَنْ يَشَاءُ مِنْ عِبَادِهِ إِذَا هُمْ يَسْتَبْشِرُونَ﴾
(الروم (٤٨)

The verse of the Cb clouds says :

“Seest thou not that Allâh drives along some clouds then joins them together then makes them into heaps of cumulus then wilt thou see rain issuing from their inside and He sends down from the sky mountain masses of cumulus wherein is hail afflicting therewith whom He pleases and turning it away from whom He pleases, the vivid flash of its lightning (whose electric charge is due to hail) almost takes away the sight.”

(An-Nûr : 43)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَرْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خِلَالِهِ وَيَنْزِلُ مِنَ السَّمَاءِ مَنَاجِبَ فِيهَا مِنْ بَرَدٍ فَيَصِيبُ بِهِ مَنْ يَشَاءُ وَيَصْرِفُهُ عَنِ مَنْ يَشَاءُ يَكَادُ سَنَا بَرْقِهِ يَذْهَبُ بِالْأَبْصَارِ﴾
(النور (٤٣)

An observer located near the source of the lightning, say being on the top of a high mountain or flying in an aircraft, will have his eyes affected by the lightning, and will lose his sight for a while. Evidently, such conditions of observation

were not available to the Prophet, who delivered the message of God.

About 25 years ago in my Book “Cosmic Verses in the Qur’ân” which appeared in 1961, I quoted several similar verses.

Finally, we have mentioned that for rain to fall from clouds, the winds forming the clouds must continue to seed them with water-vapour and the so-called nuclei of condensation which are mainly sea-salts.

In this respect the Qur’ân says : **“And We send the winds seeding the clouds, thus cause water to descend from the sky therewith providing you with it to drink and you are not the owners of its stores”.**

(Al-Hijr : 22)

﴿وَأَرْسَلْنَا الرِّيَّاحَ لَوَاقِحَ فَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَسْقَيْنَاكُمُوهُ وَمَا أَنْتُمْ لَهُ بِخَازِنِينَ﴾

الحجر (٢٢)

We know, now, that rain is not stored in the sky but a water-cycle.

ON THE ORIGIN OF THE UNIVERSE

Man always tried to solve the mystery of the origin of life. As far back as the history of human thought can be traced, there is evidence of this problem.

Even the greater problem of the origin of the universe can be traced back, and according to the cosmogonies developed by primitive societies, the birth of the universe was a problem of generation on a gigantic scale, resulting from a monstrous principal egg! Strangely enough, this is also the modern accepted theory!

However, there is a verse in the Qur'ân which says :

“Do not the infidels see that the heavens and the Earth were joined together as one unit before We split them apart and that We made of water every living thing?”

(Al-Anbiyâ' : 30)

﴿أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَاوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا وَجَعَلْنَا مِنَ

الْمَاءِ كُلَّ شَيْءٍ حَيٍّ ﴿٣٠﴾
الأنبياء (٣٠)

The main difficulty in such studies arises from the fact that the connection between theory and observation is so slight that it is always liable to break down. Bold statements and imaginary theories are always ready to fill in the gaps of our present ignorance.

Another main difficulty arises from the fact that science ignores entirely the relations between the Creator and the creation, and has nothing to do with things beyond the scoped matter and radiation, such as spirits or the hereafter.

As regards the first difficulty, the Qur'ân says :

“I made them not to witness the creation of the heavens and the Earth nor their own creation, nor choose I wicked leaders who do not carry out My orders”.

(Al-Kahf : 51)

﴿ مَا أَشْهَدْتُهُمْ خَلْقَ السَّمَاوَاتِ وَالْأَرْضِ وَلَا خَلْقَ أَنْفُسِهِمْ وَمَا كُنْتُ مَتَّخِذَ الْمُضِلِّينَ عَضُدًا ﴾
(الكهف (٥١)

About the second difficulty, the Qur'ân says :

“Say : Their knowledge is restricted only to things which are apparent to them — either directly or indirectly — during their lives on Earth, but surely they care not to think of the Hereafter”.

(Ar-Rûm : 7)

﴿ يَعْلَمُونَ ظَاهِرًا مِّنَ الْحَيَاةِ الدُّنْيَا وَهُمْ عَنِ الْآخِرَةِ هُمْ غَافِلُونَ ﴾
(الروم (٧)

About the same drawback in human senses and knowledge, the Qur'ân also says :

“Verily, We proposed to the Heavens and to the Earth and to the mountains to bear the responsibility of knowledge, but they refused the burden, and they feared to receive it. Man undertook to bear it, but has proved to be unjust and senseless!”

(Al-Ahzâb : 72)

﴿ إِنَّا عَرَضْنَا الْأَمَانَةَ عَلَى السَّمَاوَاتِ وَالْأَرْضِ وَالْجِبَالِ فَأَبَيْنَ أَنْ يَحْمِلْنَهَا وَأَشْفَقْنَ مِنْهَا وَحَمَلَهَا الْإِنْسَانُ إِنَّهُ كَانَ ظَلُومًا جَهُولًا ﴾
(الأحزاب (٧٢)

However, we, Muslims, know that Allâh is the Creator. He is not subjected to our physical laws, as well as He is above

the detection of our senses, but yet He made Himself quite clear to us in two Distinct Eternal Books :

1. The Universe in which we exist. This is the Visual Book.
2. The Qur'ân (the words of Allâh). This book can be read (readable). It was then natural that when Allâh spoke to us by the Qur'ân, a great number of Qur'ânic verses drew our attention to Allâh's signs in the universe in an amazing scientific manner.

In the light of this brief introduction, we no longer forget that our knowledge can be received from two sources :

The first source is the Glorious Qur'ân, and the second source is the established scientific studies or facts. In Islâm, there is no contradiction in any information gained from the two sources.

The proper scientific way leading to a proper understanding of the origin of things on Earth is to collect fossils.

“Say : go and travel through the Earth and see how Allâh did originate creation.”

(Al-'Ankabût : 20)

﴿قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ﴾ العنكبوت (٢٠)

We can explain this verse scientifically by saying : **“go and travel through the Earth”** in order to study its crust, and to collect fossils from here and there, and remains of organisms that lived throughout the ages.

By adopting this scheme, I can say that as far as the present types of the living organisms or species can be traced back throughout the ages, it has been found that no vital

change occurred in them. In other words, man remained as man and was created as man.

There is no evolution from one species to another, but mere development due to acclimatization, such as change in colour, or adaptation due to environment. Study of these things leads to an understanding of the origin of life.

In other words, evidence of things throughout the ages is recorded on the rocks of these ages in the form of fossils, or buried things that can be carefully studied and traced back.

CONCLUSION AND REMARKS

By science is meant all branches of knowledge. It includes studies concerned with the universe and subjects under which fall the modern sciences such as biology, chemistry, physics, astronomy, meteorology and geology. The Qur'ân, which is the Book of Muslims, raises high the prestige and value of these sciences and encourages people to study them for the general good.

The most sublime reference in this respect and most outstanding reality in this connection is that the very first verses of the Qur'ân as revealed by Allâh (God) gave incentive to gain knowledge and to glorify it. The very beginning of the Revelation was actually a signal for the dawn of the age of science and a forerunner of giving knowledge its due dignity. Thus the first verse of the Book says in Sûrat Al 'Alaq :

“Read in the name of Allâh (God) the Creator, Who created man from a clot. Read and your Master is Most Generous, Who taught by the pen, taught man what he knew not”.

(Al-'Alaq : 1-5)

﴿اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (١) خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (٢) اقْرَأْ وَرَبُّكَ الْأَكْرَمُ (٣) الَّذِي عَلَّمَ بِالْقَلَمِ (٤) عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ﴾
العلق (١ - ٥)

The Qur'ân explains in succession at different stages of the Revelation, the meaning of science and education, and points out to the importance of studying the universe, its matter, energy, and living creatures. These are the sciences by which man gains faith and fear of Allâh, in addition to gaining power. For example, we refer to the following verses :

1. **“Those of His servants only who are possessed of knowledge fear Allâh. Surely Allâh is Mighty, Forgiving”.**
2. **“Indeed in the heavens and the earth there are signs for the believers”.**
3. **“And of His signs is the creation of the heavens and the**

earth and the diversity of your tongues and colours. Surely, there are signs in this for the learned”.

- 4. “Have you any knowledge, if so you would bring it forth to us? You only follow a conjecture”.**
- 5. “Say : Are those who know and those who know not, alike?”**

Other verses not only speak highly of science and scientists, but also draw our attention and direct us to pursue knowledge and discover the secrets of the universe. It is a fact that the scientific renaissance, was due to gathering correct observations and performing sound experiments. Physical laws are nothing but interpretations of phenomena in the material world. Although we do not claim absolute authenticity of such laws, yet we agree that they represent the largest possible amount of authenticity and precision. In the light of growing accuracy in observation, scientists introduce, from time to time, amendments or generalisations in some of the physical laws so as to bring them closer to what we may call (fact), or to make them more useful.

This means that continuous observations are to be made concerning earth and heavenly bodies, and this is exactly what the Qur’ân ordains, as there are verses that mean :

- 1. “Say : Go through in the earth and thus see how creation began”,** declaring that the history of our earth is written on the rocks of its crust.
- 2. “See they not the clouds how they are created? and the sky how it is raised high?”**
- 3. “Do they not consider the kingdom of the heavens and the earth and what things Allâh has created?”**
- 4. “Say : Bring forth your proof, provided you are right”.**

Such verses, as well as many others, show that in Islâm it is not wise for the people to have mere fantasy as the basis of their religious ideologies or scientific theories. Any conclusion, which has no support of experience or clear evidence, will not do. In so doing, they will be like those who deduce the properties of matter or explain natural phenomena without making observations or carrying experiments, or those who inherit beliefs without subjecting them to text in order to find out right from wrong.

The Qur'ân, describing such people, says : **“And when it is said to them come to that which Allâh has revealed and to the Messenger, they say : Sufficient for us is that wherein we found our fathers. What! Even though their fathers knew nothing and had no guidance”?**

Another important point concerning the fact that science in the message of Islâm becomes evident and clear when we see how the Book describes, with scientific precision and accuracy, matters pertaining to the universe. This shows, unmistakably, the authenticity and truth of the Revelation. It, also, urged Muslims and encouraged them to take interest in science during the so-called middle-ages or dark ages. In this way, many famous Muslim Scientists arose. In astronomy, for example, the activities and discoveries of the following Muslim Astronomers and Mathematicians can not be forgotten :

Thabet Ben Qorra
El-Bairouny
El-Battany
Ebn Younis
Al-Khalily
Gamshid
Al-Khouarazmy

Examples of the accuracy and precision of the scientific expressions and principles met with in the Book, can be given to various branches of science. In meteorology, for example, the Book states the scientific facts regarding the formation of clouds by rising air winds, and the fall of rain by seeding or continual addition to the clouds of water-vapour carried up by the rising air. The Qur'ân says :

- 1. “Allâh is He Who sends forth the winds so they rise a cloud”.**
- 2. “And He sends the winds seeding the clouds to yield water and We give it to you to drink.”**
- 3. “Seest they not that Allâh drives along bits of clouds, then combines them together, then piles them up to form cumulus from the inside of which they see rain coming down? The cumulus clouds appear in the sky like mountains wherein is hail, afflicting therewith whom He pleases and turning it away from whom He pleases. The flash of its lightning almost takes away the sight”.**

This verse draws our attention to the three outstanding atmospheric phenomena recently observed and well described by using various equipments such as radar.

- i) The cumulus cloud starts with the appearance in the sky of two or more cells which unite together to form the growing cumulus.
- ii) Hail forms only in towering cumulus and not in stratus clouds for example.
- iii) Hail is also now known to be responsible for charging cumulus clouds with electricity and thus the development of

thunder-storms. The outstanding danger that threatens pilots in these storms is that lightning flashes almost take away their sight for a while.

ISLÂM AND SCIENCE

— 2 —

PREFACE

Part -1- of this series (Islâm and Science) is a trial to make it clear that a great number of the Qur'ânic verses are cosmic verses revealing the signs of the All-knowing Almighty Creator in the universe and the close relation between natural science and the message of Islam.

In the present work [Part -2-], an attempt has been made to show that what the reader may gain through divine inspiration and through logical mental judgement are, in Islâm, the proper channels leading to «faith».

MATERIALISM

Materialism in the common sense means non belief in Allâh as Creator of the material universe. Some materialists relate creation to what they refer to as mere «accident» !

Needless to say that our belief in Allâh, the Creator, means mainly to made us go, through the various fields of life and capabilities, in some way as Allâh does in dealing with the universe, such as knowledge, perfection, justice.. :

«And Allâh has the magnificent names so invoke Him by them...» (Al-A'râf :180)

﴿وَلِلَّهِ الْأَسْمَاءُ الْحُسْنَىٰ فَادْعُوهُ بِهَا﴾ الأعراف (١٨٠)

Amongst these names as given by the Qur'ân (99 names) are :

1. **Al-Khabîr** [The All-Cognizant]

The name means that Allâh possesses all knowledge and adeptness. It designates the encompassing of all peculiarities of things as well as their revealed characteristics.

2. **Al-Halîm** [The Patient]

The name means that Allâh is neither provoked to administer justice or inflict immediate revenge or punishment,

nor to restrain the exercise of forbearance and charity against those who sin and disobey His commands, though He is infinitely capable of penalizing the offenders.

3. **Al-Karîm** [The Bounteous]

Allâh grants pardon instead of just retribution. He extends refuge to all who seek Him.

4. **Al-Mujîb** [The Responder]

In need, one can find the response of Allâh in various ways: a. By answering prayers. b. By giving aids and solutions. c. By providing sufficiency to the needy. d. He may offer enlightenments before invocation and grace before appealation.

The censured and spiteful meaning of «materialism» is to believe that nothing exists beyond the material structure of the universe. This means that something, properly governed by fixed physical laws, can be brought into existence by absolutely nothing at the very beginning ! Surely within the material structure of the universe, matter itself occupies the place where our hands and minds can meet the Creator (Allâh).

The censured meaning of «materialism», which we bear in our minds, acquires disgusting significance and repulsive in the moral and intellectual aspects, and has to be acquitted.

Indeed man, according to his inner desire, exerts himself in being fond of material things, appropriating them and

keeping them and their profits for himself only, to the extent that he may forget honour, duty, ... and forgets the fact that beyond this Earthly life there will be another life. If he does not care for any of the pleasures of the Earthly life, he will have much better compensation in the other life. He will not be covetous and humiliated by his cupidity.

Commendable materialism, therefore, is ready to welcome the Creator's makings in the material structure of the universe. It uncovers the secrets of that structure which are signs (or Âyât of the Creator). It also uncovers the laws of nature which are fixed along space and time, and also the so-called mechanical powers. It benefits from exploring the unknown and hidden horizons, and thus sees the Creator everywhere and in every thing.

In this way, one realizes that the material objects are nothing but the very first grasping of mental (facts) which pave the way to the realization of the spiritual facts and the supreme values beyond matter. In such respects the Qur'ân says for example :

1. «Assuredly, in the Heavens and the Earth are signs for the believers; and in the creation of yourselves and the living beings He disperses on Earth are signs to the firm in faith; and in the variation of night and day and the sustenance which Allâh sends down from the sky, whereby He gives life to the Earth after its death, and in sending winds in their ways are signs for a people of discernment. These are the sings of Allâh; We rightfully recite them for

you; but say, with what sort of speech beyond that of Allah and His signs they believe ? » (Al-Jâthiyah : 2-6)

﴿إِنَّ فِي السَّمَاوَاتِ وَالْأَرْضِ لَآيَاتٍ لِّلْمُؤْمِنِينَ (٣) وَفِي خَلْقِكُمْ وَمَا يَبُثُّ مِن دَابَّةٍ آيَاتٌ لِّقَوْمٍ يُوقِنُونَ (٤) وَاختِلَافِ اللَّيْلِ وَالنَّهَارِ وَمَا أَنزَلَ اللَّهُ مِنَ السَّمَاءِ مِن رَّزْقٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَتَصْرِيفِ الرِّيَّاحِ آيَاتٌ لِّقَوْمٍ يَعْقِلُونَ (٥) تِلْكَ آيَاتُ اللَّهِ نَتْلُوهَا عَلَيْكَ بِالْحَقِّ فَبِأَيِّ حَدِيثٍ بَعْدَ اللَّهِ وَآيَاتِهِ يُؤْمِنُونَ﴾
(الْجَاثِيَةِ (٢ - ٦))

2. «Surely, in the creation of the Heavens and the Earth and the variation of night and day and in the boats that sail swiftly over the sea thus benefitting people and in the water which Allâh precipitates down from the sky whereby He gives life to the Earth after its death and disperses various living creatures and in sending winds in their ways and the clouds compelled between the sky and the Earth, there are signs for a people who are wise».

(Al-Baqarah : 164)

﴿إِنَّ فِي خَلْقِ السَّمَوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَالْفُلْكِ الَّتِي تَجْرَى فِي الْبَحْرِ بِمَا يَنْفَعُ النَّاسَ وَمَا أَنزَلَ اللَّهُ مِنَ السَّمَاءِ مِن مَّاءٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَبَثَّ فِيهَا مِن كُلِّ دَابَّةٍ وَتَصْرِيفِ الرِّيَّاحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لَآيَاتٌ لِّقَوْمٍ يَعْقِلُونَ﴾
(البقرة (١٦٤))

3. «Say : go and travel through the Earth and see how Allâh did originate creation.» (Al-'Ankabût : 20).

﴿قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ﴾
(العنكبوت (٢٠))

4. «And We send the winds seeding the clouds and thereby cause water to precipitate down from the sky thus providing you with it to drink. You are not the owners of its stores.» (Al-Hijr : 22)

﴿وَأَرْسَلْنَا الرِّيحَ لَوَافِحَ لِنُزِّلَنَّ مِنَ السَّمَاءِ مَاءً فَأَسْقَيْنَاكُمُوهُ وَمَا أَنْتُمْ لَهُ بِخَازِنِينَ﴾
(الحجر (٢٢)

5. «And We sent down water from the Heavens according to a precise measure, thereby caused the Earth to hold it ...». (Al-Mu'minûn : 18)

﴿وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَاهُ فِي الْأَرْضِ﴾ الْمُؤْمِنُونَ (١٨)

More than three quarters of the Earth's surface is covered with liquid water. Add to this the huge amounts of ice covering the polar-caps and the extensive amounts of water-vapour found in the atmosphere. No other planet in our Solar System could gather comparable amounts of water. However, it is an established fact that water played the biggest role in the evolution, sustenance and development of life on Earth.

6. «And of His signs is the creation of the Heavens and the Earth and all what He spread forth in both of them of living beings. Indeed, He is fully capable of gathering them together when He wills.» (Ash-Shûrâ : 29)

﴿وَمِنْ آيَاتِهِ خَلْقُ السَّمَاوَاتِ وَالْأَرْضِ وَمَا بَثَّ فِيهِمَا مِنْ دَابَّةٍ وَهُوَ عَلَى جَمْعِهِمْ إِذَا يَشَاءُ قَدِيرٌ﴾ الشورى (٢٩)

There is no acceptable reason to suppose that our Earth is the only inhabitable planet in the entire universe. The theory of probability tells us that in our own galaxy (the Milky Way) there are about two million planets which can support life and may be inhabited.

7. «Indeed, I could swear by the sites of the stars and it is a great oath if you are aware of them.»
(Al- Wâq i‘ah : 75-76)

﴿فَلَا أُقْسِمُ بِمَوَاقِعِ النُّجُومِ (٧٥) وَإِنَّهُ لَقَسَمٌ لِّوَعْلَمُونَ عَظِيمٌ﴾ الواقعة (٧٥-٧٦)

The material universe is a universe of galaxies, made of billions and billions of galaxies. The nearest galaxy to our own galaxy is called Andromeda. Its site is about 750 thousand light years afar. Recently the so-called quasars have been discovered at sites greater than 10 billion light years afar !

— One light year equals the distance which light traverses in one year with its velocity which is equal to 3×10^{10} cm/sec. — !!

8. «With power and skill did We construct the Heavens and indeed We are expanding them.»
(Adh-Dhâriyât : 47)

﴿وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ﴾ الذاريات (٤٧)

It is only lately in the Age of Science that it has been discovered that the universe is expanding. Its galaxies are receding with velocities which are increasing

with time. This result has been supported by actual observations as well as theoretically according to the Theory of Relativity !!

9. «And that whom His will is to leave straying He makes his heart close and constricted as if he has to rise up in the sky». (Al-An‘âm : 125)

﴿وَمَنْ يُرِدْ أَنْ يُضِلَّهُ يَجْعَلْ صَدْرَهُ ضَيِّقًا حَرَجًا كَأَنَّمَا يَصْعَدُ فِي السَّمَاءِ﴾

الأنعام (١٢٥)

Atmospheric pressure, and cosequently oxygen amounts in the air, decrease rapidly with increasing height above the Earth’s surface (and M.S.L. generally). The table shows the

Height above M.S.L. in m.	Atmospheric Pressure mb.
0,000	1,000
1,500	850
3,000	750
6,000	500
10,000	300
12,000	200

Evidently at 12,000 m. the atmospheric pressure and hence oxygen amount in the air decrease to one fifth of their values at M.S.L. For this reason, one feels the need to a wider breast in order to inhale greater amounts of air (and hence of oxygen) as he rises up in the sky without outer protection.

10. «...He maketh night to spherically succeed day and He maketh day to spherically succeed night...»

(Az-Zumar : 5)

﴿...يَكُونُ اللَّيْلُ عَلَى النَّهَارِ وَيَكُونُ النَّهَارُ عَلَى اللَّيْلِ...﴾ الزمر (٥)

The Glorious Qur'ân has its own way and merit in quoting miraculously scientific (facts). It avoids direct statements which permit and afford opportunity for non-believers, and infidels to deny it in the light of their old non-scientific knowledge (before the age of Science). Long before the age of science, most people regarded the Earth's surface flat as it appeared to them. That the Earth is round and rotates are an example. The Qur'ân mentions these two facts indirectly in several verses. One of such verses is number (10) above. The verse points to the actual shape of the lowest layer of the atmosphere in which day and night succeed one another, and regards them spherical (shells as we know them now!). Evidently, this could be realized only if the Earth is round and rotates in front of the Sun.

Another verse says :

«... Our command (the Last Day) comes to Earth by night* and by day..». (Yûnus: 24)

يونس (٢٤) ﴿... أَتَاهَا أَمْرُنَا لَيْلًا أَوْ نَهَارًا...﴾

A third verse says :

«And a sign to them is the night : When We draw from it the day, they become in darkness». (Yâsîn : 37)

يس (٣٧) ﴿وَايَةٌ لَهُمُ اللَّيْلُ نَسْلَخُ مِنْهُ النَّهَارَ فَإِذَا هُمْ مَظْلُمُونَ﴾

Evidently, daylight is due to the scattering of sunlight on the surface air-layer facing the Sun.

* Only half of the Earth's surface can be in daylight.

WHY ISLÂM

The Qur'ân (and hence Islâm) raises the human mind up to the highest rank, and regards it responsible for almost all human deeds whether good or evil :

«And they (the infidels) uttered : Had we been not heedless of listening (to the Qur'ân) or had we been wise, we could escape being with those driven to the torment of fire.» (Al-Mulk : 10)

﴿وَقَالُوا لَوْ كُنَّا نَسْمَعُ أَوْ نَعْقِلُ مَا كُنَّا فِي أَصْحَابِ السَّعِيرِ﴾ الملك (١٠)

«But it (the Qur'ân) is clear signs in the hearts of those whom the knowledge has reached».

(Al-'Ankabût : 49)

﴿بَلْ هُوَ آيَاتٌ بَيِّنَاتٌ فِي صُدُورِ الَّذِينَ أُوتُوا الْعِلْمَ﴾ العنكبوت (٤٩)

Again, science is the product of the human mind. By adopting scientific methods, we are able to uncover the hidden signs of the Creator and discover His attributes in the material universe, an outstanding step forward towards becoming believers. In fact, science alone is insufficient in order that one might become a proper believer. This is, also, true for conscience alone. For this

reason, Allâh did send prophets each now and then in succession to various nations, until finally when the human mind became almost ripe and the Age of Science was on doors, Muhammad was sent by Allâh to the whole world (the human race).

Islâm regards this world as a productive farm or field for good work for the sake of improving and benefitting Earthly life, as well as ensuring happiness in the hereafter. Man's good or evil deeds in this life can never be lost or go in vain. Islâm assures us that good work in the world is the means of securing happiness in the hereafter, as well as success in this world. In addition, the Muslim's conscience fears Allâh's punishment Who says :

«On that Day, man shall be told his former deeds and his latter. Nay, man shall be a clear proof against himself even though he offers his excuses.» (Al-Qiyâmah : 13-15)

﴿يَبْئُتُ الْإِنْسَانُ يَوْمَئِذٍ بِمَا قَدَّمَ وَأَخَّرَ﴾ (١٣) بَلِ الْإِنْسَانُ عَلَىٰ نَفْسِهِ بَصِيرَةٌ (١٤)
وَلَوْ أَلْقَىٰ مَعَاذِيرَهُ ﴿ القيامة (١٣-١٥)

«The Day every soul shall find what it did of good has been brought forward, and what it did of evil, it will wish if there were between it and that Day a far epoch of time. Allâh warns you, so beware of Him. Surely, Allâh is Merciful to His worshippers.» (Âl-Imrân : 30).

﴿يَوْمَ تَجِدُ كُلُّ نَفْسٍ مَا عَمِلَتْ مِنْ خَيْرٍ مُحْضَرًا وَمَا عَمِلَتْ مِنْ سُوءٍ تَوَدُّ لَوْ أَنَّ بَيْنَهَا وَبَيْنَهُ أَمَدًا بَعِيدًا وَيُحَذِّرُكُمُ اللَّهُ نَفْسَهُ وَاللَّهُ رَءُوفٌ بِالْعِبَادِ﴾ آل عمران (٣٠)

Islam obviously, goes further as it regards life on Earth and life in the hereafter belong to one and the same soul, which means that life in the latter is a continuation to life in the former :

«And those who have earned evil will have a reward of like evil...» (Yûnus : 27)

﴿وَالَّذِينَ كَسَبُوا السَّيِّئَاتِ جَزَاءُ سَيِّئَةٍ بِمِثْلِهَا﴾ يونس (٢٧)

«In the long run, evil in the extreme will be the end of those who do evil...» (Ar-Rûm : 10)

﴿ثُمَّ كَانَ عَاقِبَةُ الَّذِينَ أَصَاؤُوا السُّوْأَى﴾ الروم (١٠)

«...Do you receive a reward other than that which you have earned by your deeds?» (An-Naml : 90)

﴿هَلْ تَجْزُونَ إِلَّا مَا كُنْتُمْ تَعْمَلُونَ﴾ النمل (٩٠)

It is worth mentioning at this stage that with regard to what we have said about Islâm and work, one should not jump into conclusion that Muslims have to regard this world as a prison or abode of torture or suffering. Surely Allâh made life on Earth a mixture of pleasures and pains, but the formers overcome and exceed the latters. In this manner, the world is nothing but an abode fit for being a temporary house of test :

«Say, who has forbidden the ornaments of Allâh which He brought forth for His worshippers and the good things of His providing ?» (Al-A'râf : 32)

﴿قُلْ مَنْ حَرَّمَ زِينَةَ اللَّهِ الَّتِي أَخْرَجَ لِعِبَادِهِ وَالطَّيِّبَاتِ مِنَ الرِّزْقِ﴾ الأعراف (٣٢)

«We try you with evil and good for a test and unto Us you will be returned.» (Al-Anbiyâ' : 35)

﴿وَنَبْلُوكُم بِالشَّرِّ وَالْخَيْرِ فِتْنَةً وَإِلَيْنَا تُرْجَعُونَ﴾ الأنبياء (٣٥)

Allâh also forgives those who, after doing evils, repent and stop doing evil, follow the righteous way and ask Him forgiveness :

«And ask forgiveness of your Master, (Allâh), then repent to Him, and He will give you far enjoyment unto a term stated, and He will give of His bounty to every man of grace...». (Hûd : 3)

﴿وَأَنِ اسْتَغْفِرُوا رَبَّكُمْ ثُمَّ تُوبُوا إِلَيْهِ يُمَتِّعْكُمْ مَتَاعًا حَسَنًا إِلَىٰ أَجَلٍ مُّسَمًّى وَيُؤْتِ كُلَّ ذِي فَضْلٍ فَضْلَهُ﴾ هود (٣)

Islâm, also, gives worship of Allâh special significance and facilitates it to a great extent. Its essence in the comprehension of Allâh's impression is on every thing : nature, life and soul. It means Him in every sort of our acts : working, studying, suffering ... No one, whatever deserves, worshipping save Allâh to whom the like is not :

«And they worship others than Allâh such as have no power of providing them for sustenance with any thing from the Heavens and the Earth and can not acquire such power.» (An-Nahl : 73)

﴿وَيَعْبُدُونَ مِن دُونِ اللَّهِ مَا لَا يَمْلِكُ لَهُمْ رِزْقًا مِّنَ السَّمَاوَاتِ وَالْأَرْضِ شَيْئًا وَلَا يَسْتَطِيعُونَ﴾
النحل (٧٣)

«Allâh forgiveth not that partners should be set up with Him, but He forgiveth anything else, to Whom He pleaseth...» (An-Nisâ' : 48)

﴿إِنَّ اللَّهَ لَا يَغْفِرُ أَنْ يُشْرَكَ بِهِ وَيَغْفِرُ مَا دُونَ ذَلِكَ لِمَنْ يَشَاءُ﴾ النساء (٤٨)

«... And who assigns partners to Allâh, he is as if he had fallen from heaven and been snatched up by birds, or the wind drops him into a far place» (Al-Hajj : 31)

﴿وَمَنْ يُشْرِكْ بِاللَّهِ فَكَأَنَّمَا خَرَّ مِنَ السَّمَاءِ فَتَخْطَفُهُ الطَّيْرُ أَوْ تَهْوِي بِهِ الرِّيحُ فِي مَكَانٍ سَحِيقٍ﴾
الحج (٣١)

«And the unbelievers their deeds are like mirage in a sandy desert, which the (man) parched with thirst mistakes for water, and when he comes unto it he finds it to be nothing, and finds Allâh therein..» (An-Nûr : 39)

﴿وَالَّذِينَ كَفَرُوا أَعْمَالُهُمْ كَسَرَابٍ بِقِيعَةٍ يَحْسِبُهُ الظَّمَانُ مَاءً حَتَّىٰ إِذَا جَاءَهُ لَمْ يَجِدْهُ شَيْئًا وَوَجَدَ اللَّهَ عِنْدَهُ﴾
النور (٣٩)

Finally, amongst the most significant axioms of Islâm is that it refuses entirely any differentiation between the people regarding colour, race, sex ... and the like. Surely, Allâh uses one and the same measure to judge all the people. We read in the Qur'ân Allâh's saying :

1. «Surely, those who believe (the Muslims) and those who follow the Jewish (Scriptures) and the sabians and the Christians, any who believe in Allâh and the Last Day and work righteousness shall have their reward with their Master: on them shall be no fear nor shall they grieve.» (Al-Mâ'idah : 69)

﴿إِنَّ الَّذِينَ آمَنُوا وَالَّذِينَ هَادُوا وَالصَّابِئُونَ وَالنَّصَارَىٰ مَنْ آمَنَ بِاللَّهِ وَالْيَوْمِ الْآخِرِ وَعَمِلَ صَالِحًا فَلَا خَوْفٌ عَلَيْهِمْ وَلَا هُمْ يَحْزَنُونَ﴾
(المائدة (٦٩))

2. «O mankind! We created you from a single (pair) of a male and a female, and made you into nations and tribes that you may know each other. Verily, the most honoured of you in the sight of Allâh is (he who is) the most righteous of you ...». (Al-Hujurât : 13)

﴿يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا﴾
﴿إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاكُمْ﴾
(الحجرات (١٣))

3. «The same religion has He established for you as that which He enjoined on Nooh, the which We have revealed to thee, and that which We enjoined on Abraham, Moses and Jesus : Namely, that you should

remain steadfast in religion and make no divisions therein : To those who worship other (things) than Allâh, hard is the (way) to which thou callest them...».

(Ash-Shûrâ : 13)

﴿شَرَعَ لَكُمْ مِنَ الدِّينِ مَا وَصَّىٰ بِهِ نُوحًا وَالَّذِي أَوْحَيْنَا إِلَيْكَ وَمَا وَصَّيْنَا بِهِ إِبْرَاهِيمَ وَمُوسَىٰ وَعِيسَىٰ أَنْ أَقِيمُوا الدِّينَ وَلَا تَتَفَرَّقُوا فِيهِ كَبُرَ عَلَى الْمُشْرِكِينَ مَا تَدْعُوهُمْ إِلَيْهِ﴾
الشورى (١٣)

ALLÂH

No doubt, the reader has noticed that in this book Allâh's names are written according to their pronunciation in Arabic. For sure, such names are not subject to translation.

It is known that the prophets had been supported by Allâh by means of miracles suitable for their occasions. Naturally, the last prophet — Muh_ammad —, Allâh's peace and blessing be upon him, had to be supported mainly by a unique miracle of eternal character, whose miraculous achievements could remain a guide for all the subsequent generations. This living unique eternal miracle is the Qur'ân.

In the present book [Part 2], we proceed to show how in our age [The Age of Science], the Qur'ân still remains Allâh's portent to mankind. The validity of this statement lies behind the fact that the Qur'ân did state numerous important and outstanding scientific (facts) and achievements which have been discovered and accomplished only recently. In fact, scientific knowledge is also regarded to be amongst the message of the Qur'ân which says :

1. «Verily, in the creation of the Heavens and of the Earth, and in the variation of night and day, are

signs for those of understanding minds.»

(Âl-'Imrân : 190)

﴿إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِّأُولِي الْأَلْبَابِ﴾

آل عمران (١٩٠)

2. «Nay, it is clear signs in the hearts of those whom the knowledge has reached ...».

(Al-'Ankabût : 49)

﴿بَلْ هُوَ آيَاتٌ بَيِّنَاتٌ فِي صُدُورِ الَّذِينَ أُوتُوا الْعِلْمَ﴾ العنكبوت (٤٩)

3. «... Allâh has not created all this but for the truth. He makes His signs clear to those who acquire the knowledge.»
(Yûnus : 5)

﴿مَا خَلَقَ اللَّهُ ذَلِكَ إِلَّا بِالْحَقِّ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ﴾ يونس (٥)

4. «...Those who muse on the creation of the Heavens and of Earth: 'O our Master' ! say they, 'You have not created this in vain; glory be to You' ...»

(Âl-'Imrân : 191)

﴿وَيَتَفَكَّرُونَ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ رَبَّنَا مَا خَلَقْتَ هَذَا بَاطِلًا سُبْحَانَكَ﴾

آل عمران (١٩١)

In the present era of civilization, scientists could not escape admitting the fact that the universe passes through the phase of a perfect system. Natural phenomena, for example, are governed by (fixed) physical laws, which do not change with space or time, thus

making the development and progress of science possible.

Obviously, these features of the universe could not be realized by more chance, but only through the will and supreme wisdom of a creator whose ability and knowledge are unlimited. Allâh says :

«We shall show them our portents in the horizons⁽¹⁾ and within themselves until it will be manifested unto them that it⁽²⁾ is the truth... (Fuṣṣilat : 53)

﴿سَنُرِيهِمْ آيَاتِنَا فِي الْآفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ﴾ فصلت (٥٣)

However, Muslims believe that, while the universe is the «Visible Book of Allâh», the Qur'ân remains the «Readable Book of Allâh».

Muslims, also, witness that faith is a natural phenomenon, while disbelief is an abnormality which does not match with the nature of human life and natural phenomenae.

However, the question : «Why man should believe in Allâh» is one of three hypotheses :

1) A god capable of doing everything and yet created nothing.

2) A god who creates another god who shares with him all the qualities of perfection.

(1) Or on a large scale and wide scope.

(2) The Qur'ân.

3) A god who creates a limited universe, with the imperfection characterizing every limited object.

Obviously, the third hypothesis is the only natural one.

Indeed man has a positive consciousness of his own existence and of his intrinsic reality, and he is not devoid of a positive awareness of the Great Omnipresent and the Cosmic Reality connected with that existence and even guarding it.

To Aristotle and similar philosophers, the existence of God is not a question of divinity on which there is difference between affirmation and negation similar to the difference between guidance and error. It is rather a national truth like geometrical corollaries by means of which — for example — the forms and motion of stars and heavens were depicted.

In fact, studies conducted by faithful philosophers have culminated in different evidences proving the existence of Allâh through argument and logic. One would like to put such evidences in their proper place when one decides in their context the least doubtful and disputable fact that some evidences may not stand without the cosmic consciousness in approximating belief in Allâh to the feeling of religious creed.

It is clear, however, that sense, rational and conscious, becomes of good nature when based on belief in Allâh. This genuine faith is the best interpretation of the secret of creation. It is understood by the believer, adopted by the good thinker and followed by the sane.

Again, we can not accept the presumption about the spontaneous emergence of the universe. Such an argument would be nonsense. Scientifically speaking, the universe emerged at a fixed moment in the past, which means that it had a start-point, and is not infinite in time. Thus, it ought to have been created by a maker.

If we assume that this Maker was of the same type or nature of the universe itself, such a supposition would be a sort of nonsense, leading to the same problem for which we want to find a solution ! Thus, there is no way for solving this problem other than to acknowledge that the Maker (the Great Omnipresent) must differ from the universe in every thing or respect. As stated above, since the universe had a start in time, and will come to an end, the Maker must have neither of the two.

As a matter of fact, one has to reject foolish questions, and asking, say, who created Allâh is only a foolish question. It is, in fact, a false question logically, because it is based on the false assumption that in the very beginning since infinite time ago, there was nothing in existence ! But is it wise to accept that nothing can yield something ? Our material universe, in which we exist, must logically have had a creator whose existence extends to infinity in time and whose power is unlimited. This we call Allâh, and in this sense we read in the Qur'ân :

«... Nought is there like Him ! the Hearer, the Beholder He».

(Ash-Shûrâ :11)

﴿لَيْسَ كَمِثْلِهِ شَيْءٌ وَهُوَ السَّمِيعُ الْبَصِيرُ﴾ الشورى (١١)

«... Is it not enough for you that your Master is witness to all things ?» (Fussilat : 53)

﴿أَوَلَمْ يَكْفِ بِرَبِّكَ أَنَّهُ عَلَى كُلِّ شَيْءٍ شَهِيدٌ﴾ فصلت (٥٣)

«Were they created by nothing ? or were they the creators (of themselves) ? Or did they create the Heavens and the Earth ? Nay, they are not aware of Allâh».

(At-Tûr : 35-36)

﴿أَمْ خَلَقُوا مِنْ غَيْرِ شَيْءٍ أَمْ هُمُ الْخَالِقُونَ﴾ (٣٥) أَمْ خَلَقُوا السَّمَاوَاتِ وَالْأَرْضَ

لَا يُوقِنُونَ ﴿الطور (٣٥ - ٣٦)﴾

«That is Allâh your Master, Creator of everything; no god is there but He ...» (Ghâfir : 62)

﴿ذَلِكُمُ اللَّهُ رَبُّكُمْ خَالِقُ كُلِّ شَيْءٍ لَا إِلَهَ إِلَّا هُوَ﴾ غافر (٦٢)

Unto Allâh only are attributed eternity and perpetuity ;
«He is the First and the Last, the Evident and the Immanent, and He has full knowledge of all things.»

(Al-Hadîd : 3)

﴿هُوَ الْأَوَّلُ وَالْآخِرُ وَالظَّاهِرُ وَالْبَاطِنُ وَهُوَ بِكُلِّ شَيْءٍ عَلِيمٌ﴾ الحديد (٣)

«There is no god but He : That is the witness of Allâh, the Angels and those endued with knowledge, standing firm on justice.»

(Âl-Imrân : 18)

﴿شَهِدَ اللَّهُ أَنَّهُ لَا إِلَهَ إِلَّا هُوَ وَالْمَلَائِكَةُ وَأُولُوا الْعِلْمِ قَائِمًا بِالْقِسْطِ﴾

آل عمران (١٨)

MODERN SCIENCE

The Qur'ân welcomes knowledge on sound basis:

«Say : Bring forth your proof, provided you are right»

(Al-Baqarah : 111)

البقرة (١١١)

﴿قُلْ هَاتُوا بُرْهَانَكُمْ إِن كُنتُمْ صَادِقِينَ﴾

It sets before science the clues and encourages attaining wider and wider scopes :

«And say (asking Allâh) : O my Master, I beg for increasing my knowledge.»

(Tâhâ : 114)

طه (١١٤)

﴿وَقُلْ رَبِّ زِدْنِي عِلْمًا﴾

Modern science concentrates on the study and utilisation of the inherent energy and potentialities of material things, ignoring entirely the study of their essence of the spiritual values. For example, modern science cannot yet explain the essence of electricity in as much as it has succeeded in making use of it. The function of science now is mainly to utilise the inherent power of things without searching for the manner of their creation, their essence or their creator. This obviously, does not lead to metaphysics. The Qur'ân, however, urges us towards studying these things in order

to see the preciseness and perfection which make us realize that there exist a Designing Creator behind everything.

Whatever progress science may achieve, it will never be able to overcome death; and however, society may advance, it will never remove from the hearts of man all the seeds of evil. It is none but Allâh Who can make man's life — despite death and evil — a bliss which man accepts from Allâh, the Almighty, with thanks and obedience. «O man ! what has turned you away from your Master, the Most Beneficent ? He Who created you in due proportion and gave you proper stature. In whatever form He wills does He put you together?» (Al-Infîţâr : 6-8)

﴿يَا أَيُّهَا الْإِنْسَانُ مَا غَرَّبَكَ رَبِّكَ الْكَرِيمِ (٦) الَّذِي خَلَقَكَ فَسَوَّاكَ فَعَدَلَكَ (٧) فِي أَيِّ صُورَةٍ مَا شَاءَ رَكَّبَكَ﴾
الانفطار (٦ - ٨)

«Indeed, We have put forth for people in this Qur'ân every sort of Parable in order that they may receive admonition.» (Az-Zumar : 27)

﴿وَلَقَدْ ضَرَبْنَا لِلنَّاسِ فِي هَذَا الْقُرْآنِ مِنْ كُلِّ مَثَلٍ لَعَلَّهُمْ يَتَذَكَّرُونَ﴾

الزمر (٢٧)

«See you not that Allâh sends down water from the sky and then by it We cause the upgrowth of fruits of various types and colours and that of the mountains are tracts white and red of various grades and shades of colour and black intense masses; and of people and beasts and cattle various likewise are the kinds, but of His

servants who fear Allâh are only those possessed of knowledge, verily Allâh is All-Mighty, All-Forgiving.»

(Fâṭir : 27-28)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ ثَمَرَاتٍ مُخْتَلِفًا أَلْوَانُهَا وَمِنَ الْجِبَالِ جُدَدٌ بَيَضٌ وَحُمْرٌ مُخْتَلِفٌ أَلْوَانُهَا وَغَرَابِيبُ سُودٍ (٢٧) وَمِنَ النَّاسِ وَالدَّوَابِّ الْأَنْعَامُ مُخْتَلِفٌ أَلْوَانُهُ كَذَلِكَ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ إِنَّ اللَّهَ عَزِيزٌ غَفُورٌ﴾
(فاطر (٢٧-٢٨))

«Assuredly, in the creation of the Heavens and of the Earth and in the alternation of night and day and in the ships which sail on the sea for the benefit of mankind and in the rain which Allâh sends down from the sky thus giving life to the land after its death and disperses in it all types of beasts and in sending winds in their ways and in the clouds that are made to render service between the Sky and the Earth are signs for people who understand»
(Al-Baqarah : 164)

﴿إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَالْفُلْكِ الَّتِي تَجْرِي فِي الْبَحْرِ بِمَا يَنْفَعُ النَّاسَ وَمَا أَنْزَلَ اللَّهُ مِنَ السَّمَاءِ مِنْ مَاءٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَبَثَّ فِيهَا مِنْ كُلِّ دَابَّةٍ وَتَصْرِيفِ الرِّيَّاحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ﴾
(البقرة (١٦٤))

«We have put forth for people in this Qur'ân every kind of parable in order that they may receive admonition».
(Az-Zumar : 27)

﴿وَلَقَدْ ضَرَبْنَا لِلنَّاسِ فِي هَذَا الْقُرْآنِ مِنْ كُلِّ مَثَلٍ لَعَلَّهُمْ يَتَذَكَّرُونَ﴾

(الزمر (٢٧))

The Qur'ân comprizes the arguments and evidences on which we rely in this age of science also, in order to prove that it is a divine revelation from the All-Knowing Creator. Its inimitable elocution and teachings are conspicuous and convincing at all stages of civilization.

The Qur'ân deals with scientific issues in about 900 verses. Most of these verses constitute as a whole the aspects of the Qur'ân's miraculousness that are manifested in our age in which peoples and communities believe mainly in science, as well as the strength of nations is gauged by the culture they achieve, the knowledge they acquire and the inventions they accomplish. Indeed, that is one of the magnificent qualities of the Qur'ân, the Book whose miraculousness is neither confined to a particular age nor ends at a fixed time. Now the way of ascension to Almighty Allâh is itself the way of sound knowledge and true science as revealed by the study of mathematics, astronomy, physics, meteorology ... as stated before in Islâm and Science(1), the very first verses in the Qur'an heralded the emergence of our Age of Science and urged the search for knowledge. The reader may again ponder in Allâh's saying :

«Read in the name of thy Master Who created, created man from a clot, read and thy Master is the Most Generous, Who taught by the pen, taught man what he knew not». (Al-'Alaq : 1-5)

﴿اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (١) خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (٢) اقْرَأْ وَرَبُّكَ الْأَكْرَمُ (٣) الَّذِي عَلَّمَ بِالْقَلَمِ (٤) عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ﴾
 العلق (١ - ٥)

In a later stage of the revelation the Qur'ân, for example, asks us for travelling here and there to see how creation began. Scientifically, notably in natural history, this is, as we are aware now, in order to gather and collect various fossils, and it is accepted that the Earth's history is written within the layers of its crust.

The Qur'ân says :

«Say : Go and travel through the Earth to see how creation began.» (Al-'Ankabût : 20)

﴿قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ﴾

(العنكبوت (٢٠)

Evidently, the modern scientific method, or scheme, is based originally on careful observation, description and measurement, using our senses, notably vision. When senses fail to detect a phenomenon, we use our apparatus, or our tools, as we do when studying the magnetic field for example. This means that modern science concerns apparent things only, and our minds have been prepossessed by various problems on Earth and by the laws of life, and, therefore, stopped at the limits of material life. Allâh says in this respect :

«...But most people understand not. They know but the apparent (things) in the life of this world, but of the hereafter they are heedless» (Ar-Rûm : 6-7)

﴿وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ﴾ (٦) يَعْلَمُونَ ظَاهِرًا مِّنَ الْحَيَاةِ الدُّنْيَا وَهُمْ عَنِ

الْآخِرَةِ هُمْ غَافِلُونَ ﴿الروم (٦ ، ٧)

Below are two modern science examples, one meteorological about clouds and the other astronomical concerning comets. Nimbo-stratus clouds spread in layers (or strata). Hence the name nimbo-stratus. Clouds have the advantage that, apart from deserts, they may be observed almost daily in rainy seasons. About the nimbo-stratus clouds, Allâh says :

«Allâh is He Who drives forth the winds so they raise clouds then does He spread them (in layers or strata) in the sky as He wishes and He makes them thick so that you see the rain issuing from inside them; then when He causes it to fall upon whom He pleases of His worshippers they rejoice».

(Ar-Rûm : 48)

﴿اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتُثِيرُ سَحَابًا فَيَبْسُطُهُ فِي السَّمَاءِ كَيْفَ يَشَاءُ وَيَجْعَلُهُ كَسَفًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خِلَالِهِ فَإِذَا أَصَابَ بِهِ مَنْ يَشَاءُ مِنْ عِبَادِهِ إِذَا هُمْ يَسْتَبْشِرُونَ﴾

الروم (٤٨)

Cumulus clouds develop and grow vertically upwards and thus acquire the shape of mountains.

Rainy clouds are called nimbus clouds, and thus two types of rainy clouds arise. These are :

(1) Nimbo-stratus clouds, and (2) Cumulo-nimbus clouds. This latter type is the only type of clouds in which hail may form and fall down. Lightning, thunderstorms and thunderbolts are also natural phenomena which arise active cumulo-nimbus clouds [Cb] only.

Hail stones differ completely from snow-flakes which fall in cold regions from nimbo-stratus clouds. Snow-flashes are formed of tiny ice crystals while hail stones fall from Cb clouds and may grow in size to attain large volumes [and may become as big as oranges].

The verse concerning the (Cb)-cloud says :

«Seest thou not that Allâh drives along bits of clouds then He joins them together then makes them into heaps of cumulus (Cb) then wilt thou see rain issuing from their inside and He sends down from the sky mountain masses of cumulus wherein is hail afflicting therewith whom He pleases and turning it away from whom He pleases, the vivid flash of its lightning (whose electric charge is due to hail) almost takes away the sight». (An-Nûr : 43)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَرْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خَلَالِهِ وَيَنْزِلُ مِنَ السَّمَاءِ مِنْ جِبَالٍ فِيهَا مِنْ بَرَدٍ فَيُصِيبُ بِهِ مَنْ يَشَاءُ وَيَصْرِفُهُ عَنِ مَنْ يَشَاءُ يَكَادُ سَنَا بَرْقُهُ يَذْهَبُ بِالْأَبْصَارِ﴾

النور (٤٣)

Evidently, according to this verse, and in nature, the (Cb) cloud starts by the formation of bits of clouds (2 to 4 say) which join or combine together to form the growing cloud.

After being so developed, the (Cb) cloud goes through an almost well defined life cycle in about 2 hours. The earlier stages of the cycle are the growing stages, and are followed by the (hail stages) which are

characterized by down droughts in agreement, in a miraculous way, with Allah's saying : **“and He sends down from the sky mountains wherein is hail”**.

Lightning results from electric discharges between oppositely charged (Cb) elements, while thunder results from the sudden and extensive heating of the air in which lighting occurs. Thunderbolts are due to electric discharges between the electrically charged (Cb) elements and the Earth's surface.

The charging of the Cb elements results from charge separation associated with changes of phase involving hail as follows :

1. Positive charge is acquired by an ice crystal growing from the vapour, the corresponding negative charge being carried away on ice splinters breaking from the parent crystal.

2. Negative charge, greater in rate of production and maximum amount than in (1), is acquired by an evaporating hail element or stone, the separation being again associated with splinter formation.

3. Positive charge, much greater in rate of production and maximum amount than in (1) or (2), is acquired by a hailstone which rimes under the bombardment from supercooled droplets. Splinter formation is again involved. The electrification ceases of glazed ice instead of rime occurs on the element.

In this manner, the (Cb) elements acquire negative charge mainly where hail evaporates (near and at the

edges), and positive-charge where it rimes (central bottom). However, the Qur'ân says in this respect :

“The vivid flash of its lightning almost takes away the sight”, meaning the flash of lightning resulting from hail formation ! Is that not amazing ? Add to this the fact that those who happen to be near enough to the (Cb) cloud may lose their sight for a while!!

As regards comets, they are members of the solar system. They travel under the sun's gravitational field in orbits that are conic sections subject to planetary perturbations. The observed orbits may be elliptical, parabolic or hyperbolic.

A comet whose orbit is an ellipse will be periodic and return to perihelion at almost regular intervals. Parabolic or hyperbolic orbits are not periodic. A comet that leaves our neighbourhood with such an orbit will leave the solar system forever. In practise, it is not difficult to distinguish between the three orbits. About three fourths of all known comets have apparently parabolic orbits, and less than twenty are known to have apparently hyperbolic orbits. About one hundred comets are known to have elliptical orbits, and many of them have been observed to return around the sun several times. Halley's comet is one of them.

This comet was noted by Halley to be periodic. He observed that the orbits of the comets of the years 1531, 1607 were identical with that of the comet of 1682. He then correctly predicted a return in 1758, but did not live to see it.

Records of the comet are available since 240 B.C. For a long period, notably in the less enlightened ages, it was credited with being the precursor of grave events. Its appearance in 837 was accompanied by the fall of* Amorio, and in 1453 by the fall of Constantinople.

★ سقطت عمورية في يد الخليفة المعتصم عام ٢٢٣ هـ - ٨٣٧ م . وفي ذلك يقول

أبو تمام قصيدة مطلعها :

السيف أصدق أنباء من الكتب

في حده الحد بين الجد واللعب

The most recent return in 1910 was an event of scientific activity. Halley's comet was seen again in the summer of 1986. It is one of about forty comets known to have periods between 10 and 1,000 years, due to their large orbits.

Like other bright comets when near to the sun, Halley's comet is observed to have a complicated structure : The head consists of a large (coma) — gases and fine particles round a nucleus and a bright (nucleus). The (tail) points away from the sun across millions of kilometers as if it sweeps the sky ! Generally, when a comet is far from the sun no tail becomes visible as it approaches Perihelion. The material of the head is volatilized by the sun's radiation, and driven away from the sun by radiation pressure. At every approach to the sun a periodic comet, such as Halley's, loses some of the material of its head.

The above almost detailed description about comets has been given in order to throw light on Allâh's saying:

«Nay, indeed I could swear by the (heavenly bodies) which remain far from the sight for long periods of time and reappear running sweeping (the sky)».

(At-Takwîr : 15-16)

﴿فَلَا أَقْسَمُ بِالْخُنُوسِ (١٥) الْجَوَارِ الْكُنُوسِ﴾

التكوير (١٥ - ١٦)

Finally, it remains to prove the amazing validity of the verse given on page (11), Book (1), which says :

«And they remained in their cave three hundred years, a number which has to be increased by nine years».

(Al-Kahf : 25)

﴿وَلَبِثُوا فِي كَهْفِهِمْ ثَلَاثَ مِائَةٍ سِنِينَ وَازْدَادُوا تِسْعًا﴾

الكهف (٢٥)

This verse miraculously transfers 300 solar years exactly to 309 lunar years ! !

In the light of the recent careful astronomical measurements and exact estimates, it became evident that :

1. The average duration of the lunar month = 29.550329 days.

2. one solar year equals 365.2422 days, so that the total number of days in 300 solar years is :

$300 \times 365.2422 = 109572.66$ days, and the total number of days in 309 lunar years is :

$12 \times 309 \times 29.550329 = 109572.66$ days.

Evidently, there are twelve lunar months in one lunar year, and the Qur'ân says :

«For sure, the number of months (per year) as regarded by Allâh, is twelve months in the Book of Allâh on the day He created the Heavens and the Earth ...»

(At-Taubah : 36)

﴿إِنَّ عِدَّةَ الشُّهُورِ عِنْدَ اللَّهِ اثْنَا عَشَرَ شَهْرًا فِي كِتَابِ اللَّهِ يَوْمَ خَلَقَ السَّمَاوَاتِ
وَالْأَرْضَ﴾

التوبة (٣٦)

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ISLÂM AND SCIENCE

— 3 —

THE TRUE PILLAR OF LIGHT

The mission of Prophet Muh _ammad (prayers and peace be upon him) and the revelation of the Qur'ân were the most outstanding events in history to offer man justice, liberty and equality, to enrich human culture and to bring forth new dimensions to the study of the universe.

Needless to say that, in order to bring mankind closer and closer to the Great Intellectual Reality concerning the existence of Merciful, dominating and Ominpotent Creator, the Qur'ân urged us to investigate the hidden wonders of nature, and thus to endeavour interpreting the fixed rules and unaltered mechanisms which govern the expanding universe with outstanding precision and extreme exactness!

As mentioned in part (2), materialism essentially means the denial of the “Great Intellectual Reality” which is the basic doctrine in Isâm known as “Tawh _îd”, or the belief in the Oneness of Allâh. Such denial soon leads to spiritual emptiness which creates confusion, anarchism and instability, due to the hollow void in the initial build up of human psyche.

Needless to say that there is no reason whatever to assume the existence of more than One Creator. This has become quite evident in the Age of Science, due to the scientifically established uniformity, stability and uniqueness in the build up of the universe.

“Tawhîd” and the concepts involving the essentials of human life as particularized in the Qur’ân, urge people to accept and adopt Islamic values and doctrines which ensure human rights in full fairness.

Similar to the physical laws which are established by science and which act to maintain the existence of natural phenomena, the moral balance of mankind is established by religious standards and values and maintains human nature behaving and acquiring fine character.

Again, the human mind, which designates the human race as occupying the highest rank among beings living on Earth, is part of the Supreme Measure. One can say that it is reflection of Allah’s Light, Wisdom, Perfection, Knowledge, Justice and Ominpotence; the Qur’ân Says what means:

“The Merciful; taught the Qur’ân; He created man; He taught him the Bayân*; the sun and the moon follow perfectly computed courses; and the seedlings and trees booth bow in adoration; and the sky He raised high, and set up the balance (of Justice); so do not transgress (due) balance; and establish weight with justice and fall not short in the balance”.

(Ar-Rah_mân : 1-9)

﴿الرَّحْمَنُ (١) عَلَّمَ الْقُرْآنَ (٢) خَلَقَ الْإِنْسَانَ (٣) عَلَّمَهُ الْبَيَانَ (٤) الشَّمْسُ وَالْقَمَرُ بِحُسْبَانٍ (٥) وَالنَّجْمُ وَالشَّجَرُ يَسْجُدَانِ (٦) وَالسَّمَاءَ رَفَعَهَا وَوَضَعَ الْمِيزَانَ (٧) أَلَّا تَطْغَوْا فِي الْمِيزَانِ (٨) وَأَقِيمُوا الْوَزْنَ بِالْقِسْطِ وَلَا تُخْسِرُوا الْمِيزَانَ (٩)﴾
 الرحمن (١-٩)

* Ability of expression, intelligent speech, capability to understand and interpret well, capacity to grasp knowledge.

We, believers, have thus to operate with standards and values consistent with the law of balance and justice. However, this also means consistency with the reality of our own nature and we are apt to receive Allâh's blessing in the Hereafter. In other words, we have to endeavour following the righteous path of reality and justice. In such respects the Qur'ân says, for example what means:

“Praise be to Ar-Rahmân to Whom belongs all that in the heavens and in the earth, and to Him be praise in the Hereafter; He is All Wise All- Cognizant. He knows all that goes into the earth and all that comes out thereof, all that comes down from the sky and all that ascends thereto, and He is Ar-Rahîm (All-Merciful) and the Ghafûr (All-Forgiving)”.

(Saba' : 1-2)

﴿ الْحَمْدُ لِلَّهِ الَّذِي لَهُ مَا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ وَلَهُ الْحَمْدُ فِي الْآخِرَةِ وَهُوَ الْحَكِيمُ الْخَبِيرُ (١) يَعْلَمُ مَا يَلِجُ فِي الْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنْزِلُ مِنَ السَّمَاءِ وَمَا يَعْرُجُ فِيهَا وَهُوَ الرَّحِيمُ الْغَفُورُ (٢) ﴾ سبأ (١-٢)

“... Who is aware of the unseen, and from Who is not hidden the least mass of an atom neither in the heavens nor in the earth, nor is there anything less than that or greater, but in a conspicuous record. That He shall reward those who believe and have deeds of righteousness: For such is forgiveness and generous sustenance”.

(Saba' : 3-4)

﴿ عَالِمِ الْغَيْبِ لَا يَعْزُبُ عَنْهُ مِثْقَالُ ذَرَّةٍ فِي السَّمَوَاتِ وَلَا فِي الْأَرْضِ وَلَا أَصْغَرُ مِنْ ذَلِكَ وَلَا أَكْبَرُ إِلَّا فِي كِتَابٍ مُبِينٍ (٣) لِيَجْزِيَ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ أُولَئِكَ لَهُمْ مَغْفِرَةٌ وَرِزْقٌ كَرِيمٌ (٤) ﴾ سبأ (٣-٤)

It is worth mentioning here that during the time of the revelation (of the Qur'ân) it was common (according to Greek philosophers) to call ultimate small size of material bodies by their name "atom". It was also believed that the atom could not be divided into smaller constituents. Its divisibility was realized only in the Age of Science, but the Qur'ân still says what means:

".... and from your Lord is not hidden the least mass of an atom, neither in the earth nor in heavens, nor is there anything less than that or greater, but in a conspicuous record".

(Yûnus : 61)

﴿وَمَا يَعْزُبُ عَنْ رَبِّكَ مِنْ مِثْقَالِ ذَرَّةٍ فِي الْأَرْضِ وَلَا فِي السَّمَاءِ وَلَا أَصْغَرَ مِنْ ذَلِكَ وَلَا أَكْبَرَ إِلَّا فِي كِتَابٍ مُبِينٍ﴾
يونس (٦١)

The main basic themes of the so-called useful scientific knowledge are miraculously inherent in the text of the Qur'ân for the purpose of human enlightenment. Essentials of natural phenomena such as: clouds, rain, wind, daylight... have been generally indicated in the Qur'ân before being established by scientists. Enlightened minds, however, will think rationally and honestly and consequently never miss the reality of Creation.

Examples of the universality and unification in the base of the origin of creation are, in the Age of Science, evident in the conclusions attained in all the branches of science such as: the laws of physics, the "phenomenon of pairs" observable in both animate and inanimate creation, the structure of the atom and of the solar system, the precise quantification and precision involved in the creation and the secrets of the soul... Moreover, the unlimited vastness and the sequential hierarchic constitution of the entire universe are vivid indications of the Creator and the Oneness of Allâh.

The Qur'ân does not provide text books or lecture notes in dealing with scientific subjects, but quotes the (facts) that reflect on the glory of organization, grandeur of creation, precision, supreme cohesion of purpose, proof of Divine power, unique intelligence, and elimination of the so-called “accidental creation”. The Qur'ân states what means:

“And We made the sky (the atmosphere) preserved roof yet they care not to recognize its (multiple) services”.

(Al-Anbiyâ' : 32)

﴿وَجَعَلْنَا السَّمَاءَ سَقْفًا مَّحْفُوظًا وَهُمْ عَنْ آيَاتِهَا مُعْرِضُونَ﴾ (٣٢) الأنبياء (٣٢)

The earth's roof is its atmosphere. It is composed of a mixture of gases which are preserved and not allowed to escape into space due to the relatively large gravity of the earth. This condition could not be realized on the moon, which lost its roof and thus became roofless, due to its relatively small gravitational force. In this way the moon soon lost the water of its oceans and seas. It evaporated into the vast space.

The earth's atmosphere (or roof) renders vital services to living creatures on earth, notably human beings, such as:

- 1- It contains oxygen necessary for the life of both the animal and the plant kingdoms.
- 2- It carries water vapour from the earth's surface up to the upper layers of the atmosphere where clouds form and give rain. This process involves the source of fresh water on earth.

3- It contains the carbon dioxide gas, which is absorbed by plants receiving sunlight by day to form sugar, starch, oil...

4- Sound waves propagate through the air, thus we can hear the voice of each other. This is not the case on the moon.

5- Daylight is due to the scattering and diffuse reflection of sun rays in the thin air layer extending from the earth's surface up to about 200 kilometers and facing the sun. This layer may be referred to as the (skin-layer). The rest of the atmosphere and space are dark and dim. As the earth rotates the skin- layer keeps facing the sun and appears as though it is flayed from the body of the atmosphere. Miraculously enough the Qur'ân says in this respect what means:

“And a sign to them is the night when We strip from it the day they become in darkness”.

(Yâsîn : 37)

﴿وَايَةٌ لَهُمُ اللَّيْلُ نَسْلَخُ مِنْهُ النَّهَارَ فَإِذَا هُمْ مُظْلَمُونَ﴾ (٣٧) يس

Again, one reads in the Qur'ân what means:

1- **“And that is He Who made the sun shining and the moon illuminating and measured out phases for it that you might be aware of the number of years and the count of time; nowise did Allâh create this but in Truth and Righteousness, thus He explains His signs in detail for a people who are granted knowledge”.**

(Yûnus : 5)

﴿هُوَ الَّذِي جَعَلَ الشَّمْسُ ضِيَاءً وَالْقَمَرَ نُورًا وَقَدَرَهُ مَنَازِلَ لِتَعْلَمُوا عَدَدَ السِّنِّينَ وَالْحِسَابَ مَا خَلَقَ اللَّهُ ذَلِكَ إِلَّا بِالْحَقِّ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ﴾ (٥) يونس

يونس (٥)

Evidently, this verse refers to the fact that the sun is the source of light, while the moon reflects back sunlight falling on its surface back to the Earth. Lunar months and years can be readily counted by observing the phases of the moon. The Qur'ân states what means:

2- **“And We have made the night and the day two signs: the sign of the night have We cancelled, while We have made the sign of the day lightened that you may seek bounty from your Master and that you may know the number and count of the years; likewise everything have We fully explained”.**

(Al-Isrâ' : 12)

﴿وَجَعَلْنَا اللَّيْلَ وَالنَّهَارَ آيَتَيْنِ فَمَحَوْنَا آيَةَ اللَّيْلِ وَجَعَلْنَا آيَةَ النَّهَارِ مُبْصِرَةً لِّتَبْتَغُوا فَضْلًا مِّن رَّبِّكُمْ وَلِتَعْلَمُوا عَدَدَ السِّنِّ وَالْحِسَابِ وَكُلَّ شَيْءٍ فَصَّلْنَاهُ تَفْصِيلًا﴾ (١٢)

الإسراء (١٢)

The earth receives maximum amount of solar energy in the blue part of the solar spectrum. Also the blue rays suffer maximum scattering by the air molecules present in the lowest 200 kms of the atmosphere, thus producing the blue of the sky. This means that the blue of the sky is nothing but an optical phenomenon.

Scattering of the rays makes them come from all directions, so that it is not necessary, in order to lighten a room with daylight, that one should open a window facing the sun. Opening any window not facing the sun allows scattered rays to enter the room and lighten it! Is that not a sign of the Creator being All-Wise and All-Cognizant?

The Qur'ân states what means:

- 3- **“Allâh is He Who raised the heavens without pillars that you may see; then mastered Himself on the throne of Authority and subjected the sun and the moon, each one runs its course for a term appointed...”**

(Ar-Rad : 2)

﴿اللَّهُ الَّذِي رَفَعَ السَّمَوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ وَسَخَّرَ الشَّمْسَ وَالْقَمَرَ كُلٌّ يَجْرِي لِأَجَلٍ مُّسَمًّى﴾
(الرعد (٢)

In fact, here and there in its text, the Qur'ân draws our attention to the various signs (of the Creator) embedded in the universe such as: The vast dimensions of space; the relativity of time and the alteration of day and night on earth. The Qur'ân states what means:

“Indeed I could swear by the sites of the stars and indeed it is a great oath if your are aware of it.”

(Al-Wâqi‘ah : 75-76)

﴿فَلَا أَقْسِمُ بِمَوَاقِعِ النُّجُومِ (٧٥) وَإِنَّهُ لَقَسَمٌ لِّوَعْلَمُونَ عَظِيمٌ (٧٦)﴾
(الواقعة (٧٥-٧٦)

As stated in Book (2), the so-called quasars have been discovered at sites greater than 10 billion light years afar! The Qur'ân states what means:

“And indeed in accord with your Lord, one day is like thousand years as counted by you.”

(Al-Hajj : 47)

﴿وَإِنْ يَوْمًا عِنْدَ رَبِّكَ كَأَلْفِ سَنَةٍ مِّمَّا تَعُدُّونَ (٤٧)﴾
(الحج (٤٧)

Scientifically speaking, there is no absolute time. One day on earth differs from that on any other planet in our solar system.

“And in the alteration of night and day and the sustenance which Allâh sends down from the sky, whereby He gives life to the earth after its death, and in sending winds in their ways are signs for a people of discernment.”

(Al-Jâthiyah : 5)

﴿وَإِخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَمَا أَنْزَلَ اللَّهُ مِنَ السَّمَاءِ مِنْ رِزْقٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَتَصْرِيفِ الرِّيَّاحِ آيَاتٌ لِقَوْمٍ يَعْقِلُونَ﴾ (٥) الجاثية

Mathematics is accounted for in the Qur’ân by using the Decimal system of notation. It is science of number. The present system of notation is known as the Arabic system. In this system, the number which is written 888, was, in the Roman system, written in the form: DCCCL XXX VIII.

Evidently, in the Arabic decimal system, one letter stands for eight hundred, another for eighty and another for eight. Thus the symbol 8 can signify eight hundred, or eighty or eight according to position. The symbol 0, as was introduced by the Arabs, was placed in the position where no number was present.

During the time of the Revelation (of the Qur’ân), there was in use more than one system of notation and counting, but the Qur’ân insisted to use in its text the so-called Decimal system only. This system, as described above includes the method of counting by tens. This choice of the Qur’ân urged the Muslims to stick to it and to recommend it to all other nations.

The frequency of occurrence of numbers in the text is not equal. The number 1 has the highest frequency, about 95. This is natural, because Islām is the religion of Monothesis. The Qur'ân says, for example what means:

“Say He is Allâh, The One and Only.”

(Al -Ikhlas : 1)

(الإخلاص (١)

﴿قُلْ هُوَ اللَّهُ أَحَدٌ﴾

The greater part of the numbers used are evidently 10 and powers of 10, such as:

100 - 1,000 - 100,000.

The decimal point $1/10$ was introduced later by the Muslims. The Qur'ân says what means:

“And those who were their predecessors rejected the Truth even though they did not receive one tenth of what We had granted...”

(Saba': 75)

(سبأ (٤٥)

﴿وَكَذَّبَ الَّذِينَ مِنْ قَبْلِهِمْ وَمَا بَلَّغُوا مِْعْشَارَ مَا آتَيْنَاهُمْ﴾

The world had to wait about 200 years after the time of the Revelation of the Qur'ân until the Muslim mathematician, Gamshid, introduced the decimal point and the symbol 0 in the positions where no number was present.

The following are examples regarding the verses mentioning the number 10 and its powers:

- 1- “He who brings a good deed shall have ten the like of it....”

(Al-An‘âm : 160)

﴿مَنْ جَاءَ بِالْحَسَنَةِ فَلَهُ عَشْرُ أَمْثَالِهَا﴾ (الأنعام) (١٦٠)

- 2- “.... and if there are of you one hundred they will vanquish a thousand of the unbelievers...”

(Al-Anfâl : 65)

﴿وَإِنْ يَكُنْ مِنْكُمْ مِائَةٌ يَغْلِبُوا آلَافًا مِّنَ الَّذِينَ كَفَرُوا﴾ (الأنفال) (٦٥)

- 3- “... and a day in the sight of the Master is like a thousand years of your reckoning.”

(Al-Hajj : 47)

﴿وَإِنْ يَوْمًا عِنْدَ رَبِّكَ كَأَلْفِ سَنَةٍ مِّمَّا تَعُدُّونَ﴾ (الحج) (٤٧)

- 4- “... In a day the measure whereof is as fifty thousand years.”

(Al-Ma‘ârij : 4)

﴿فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ﴾ (المعارج) (٤)

- 5- “And We sent him to a hundred thousand (persons) or more.”

(Aş-Şâffât : 147)

﴿وَأَرْسَلْنَاهُ إِلَى مِائَةِ أَلْفٍ أَوْ يَزِيدُونَ﴾ (الصافات) (١٤٧)

- 6- “Didst thou not turn your vision to those who abandoned their houses though they were thousands...”

(Al-Baqarah : 243)

﴿أَلَمْ تَرَ إِلَى الَّذِينَ خَرَجُوا مِن دِيَارِهِمْ وَهُمْ أُلُوفٌ﴾ (البقرة) (٢٤٣)

Obviously, one can say that the text comes in a manner declaring the approach of the “Age of Science”, being comprehensive, stimulant to the thought, rational and enlightening to the mind.

Knowledge becomes rather complete and well understood when it is quantized. Mathematics in this respect is the element of wisdom and exact meaning. Its study introduces balance and order to the various branches of knowledge.

Muslim mathematicians added various fundamental contributions to mathematical sciences, such as the introduction of Algebra and Logarithms.

In the field of natural sciences the Qu’ân says, for example what means:

1- “Have We not made the earth as an expanse; and the mountains as pegs.”

(An - Naba’ : 6-7)

﴿ أَلَمْ نَجْعَلِ الْأَرْضَ مِهَادًا ﴿٦﴾ وَالْجِبَالَ أَوْتَادًا ﴿٧﴾ ﴾ النبأ (٦-٧)

A modern model of the earth’s crust shows rather uniform thick layer of basalt over the so- called mantle. Upon these are super imposed continental blocks with average thickness varing between about 30-40 kilometers. These blocks are so heavy that they press the layer of basalt underneath them down by about 20 kilometers into the mantles thus resembling roots or pegs.

Nowadays, the fact that a continent floats on the mantle is known as the (Theory of Isostacy), and just as the roots of continental blocks thrust deep into the underlying mantle, so the roots of mountain systems push down, even deeper in order to support their weights, and to justify their great heights. In this respect the Qur’ân says, what means:

1- “Have We not made the earth as a wide expanse; and the mountains as pegs.”

(An-Naba' : 6-7)

﴿ أَلَمْ نَجْعَلِ الْأَرْضَ مِهَادًا ﴿٦﴾ وَالْجِبَالَ أَوْتَادًا ﴿٧﴾ ﴾ النبأ (٦-٧)

Usually, from high mountains and stable- lands, rivers flow down to valleys and flat areas of the earth's surface. The Qur'ân says what means:

2- “And it is He Who spread out the earth and set thereon high mountains and (flowing) rivers....”

(Ar-Ra'd : 3)

﴿ وَهُوَ الَّذِي مَدَّ الْأَرْضَ وَجَعَلَ فِيهَا رَوَاسِيَ وَأَنْهَارًا ﴾ الرعد (٣)

Again, the most striking feature about the earth's surface is that most of it (about 4/5) is covered with water. Still more land could be drowned in oceans if the earth's heat reservoirs, represented by the millions of cubic kilometers of the ice caps in polar and high mountain regions, were to melt. Average sea-level will thus rise by about 500 meters.

All this amount of water on earth is not in vain. It supports life on it and acts to minimise temperature differences and contrasts on the planet between day and night, and summer and winter in an outstanding manner. However, the Qur'ân says what means:

1- “And We sent down water from the sky according to (due) measure and thus We caused it to be presered in the earth....”

(Al-Mu'minûn : 18)

﴿ وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ ﴾ المؤمنون (١٨)

Evidently, within the material universe, including our home (the earth), these are signs for people to witness Allâh's supreme wisdom and unlimited knowledge:

4- “And in the earth are signs for believers.”

(Adh - Dhâriyât : 20)

الذاريات (٢٠)

﴿ وَفِي الْأَرْضِ آيَاتٌ لِّلْمُوقِنِينَ (٢٠) ﴾

Water that covers about four fifths of the globe is vital for life to flourish on it. The creation of the atmosphere, which acts as roof of the entire earth, dominates and protects lives of living beings on it as mentioned before.

Without rain erosion and weathering of rocks become almost checked and there would be no fertile soil in which plants could grow. Needless to say- that water forms more than 70 per cent of the weight of our bodies and takes part in almost all the chemical reactions taking place in living bodies in general. Allâh says what means:

5- “... And We made from water every living thing...”

(Al-Anbiyâ' : 30)

الأنبياء (٣٠)

﴿ وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ ﴾

6- “He sent down water from the sky thereby channels did flow, each according to its measure...”

(Ar- Ra'd : 17)

الرعد (١٧)

﴿ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَسَالَتْ أَوْدِيَةٌ بِقَدَرِهَا ﴾

7- “Verily, in the heavens and the earth are signs for the believers...”

(Al- Jâthiyah : 3)

الحاثية (٣)

﴿ إِنَّ فِي السَّمَوَاتِ وَالْأَرْضِ لَآيَاتٍ لِّلْمُؤْمِنِينَ (٣) ﴾

Without the carbondioxide plants could not produce carbohydrates which are the primary stage in the food chain that supports animal life on earth. In this process solar energy (light) is also stored by the green matter of the leaves (chlorophyl) in the form of wood or carbon, oil, sugar and starch for the benefit of mankind. In such respects the Qur'ân says what means:

8- **“And He has subjected to you, freely from Him, all that is in the heavens and that is in the earth...”**

(Al- Jâthiyah: 13)

﴿ وَسَخَّرَ لَكُم مَّا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ جَمِيعًا مِنْهُ ﴾ الجاثية (١٣)

9- **“And He is Who has sent down water from the sky thereby We produce plants of all types from which We get out green matter (chlorophyl) by which we produce cumulative grains...”**

(Al-An‘âm : 99)

﴿ وَهُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا نُخْرِجُ مِنْهُ حَبًّا مُتَرَاكِبًا ﴾ الأنعام (٩٩)

Without the high altitudes cover of atomic oxygen (ionsphere) and ozone (ozonsphere), which absorb most of the ultra-violet radiation coming from the sun, life on earth would be rather impossible. Again the Qur'ân says what means:

10- **“Have you not seen that 'Allâh has subjected to you all that is in the earth...”**

(Al- Hajj : 65)

﴿ أَلَمْ تَرَ أَنَّ اللَّهَ سَخَّرَ لَكُم مَّا فِي الْأَرْضِ ﴾ الحج (٦٥)

No Limits

In fact, the examples given above are mere samples not to be compared with the vast fields of knowledge which have been gained by the human race through scientific discoveries and researches.

Almost no limit could be made to scientific progress. According to the astronomical observations, no other beings live on the other planets of our own solar system. Man is, therefore, the master of the whole solar system. Allâh says what means:

- 1- **“And He taught (the race of) Âdam the nature of all things...”**

(Al - Baqarah : 31)

البقرة (٣١)

﴿وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا﴾

- 2- **“... And say (asking Allâh) : O my Lord, I beg for increasing my knowledge.”**

(Tâhâ : 114)

طه (١١٤)

﴿وَقُلْ رَبِّ زِدْنِي عِلْمًا (١١٤)﴾

Scientists predict that life on earth will finally come to an end when the sun suddenly expands (or explodes) in such a dreadful manner that it reaches the moon and consequently burns the earth. At present, the temperature of its outer radiating surface has been estimated to be 6000 degrees absolute! Allâh says what means:

“And the sun and moon are joined together. That day will man say: Where is the refuge?”

(Al- Qiyâmah : 9-10)

﴿وَجَمَعَ الشَّمْسُ وَالْقَمَرُ (٩) يَقُولُ الْإِنْسَانُ يَوْمَئِذٍ أَيْنَ الْمَفْرُ (١٠)﴾

القيامة (٩-١٠)

The Qur’ân tells us that this will take place when the earth becomes an ornamental spot in the solar system, and man becomes the master in the system:

“Until the earth becomes clad with its garden ornaments and is decked out in beauty, and the people to whom it belongs think that they possess the ability of disposal over it, there comes Our command by night or by day...”

(Yûnus : 24)

﴿حَتَّىٰ إِذَا أَخَذَتِ الْأَرْضُ زُخْرُفَهَا وَازَيَّنَّتْ وَظَنَّ أَهْلِهَا أَنَّهُمْ قَادِرُونَ عَلَيْهَا أَتَاهَا أَمْرُنَا لَيْلًا أَوْ نَهَارًا﴾
يونس (٢٤)

Surely, Allâh’s command will come by night or by day, exactly as the verse states, because at any moment only one half of the earth’s surface faces the sun receives sun light, while the other half becomes at night.

THE ROLE OF THE QUR'ÂN IN ESTABLISHING THE PRINCIPLES OF BASIC SCIENCE

I. Arithmetic

The advancement in arithmetic was the first real step that lead to the progress in science. During the time of the revelation there existed in common use two principal systems of number and counting, namely the decimal and sexagesimal systems. As a simple example illustrating the difference between these systems, the value of 231.157 in the decimal system is:

$$2 \times 100 + 3 \times 10 + 1 + \frac{1}{10} + \frac{5}{100} + \frac{7}{1000}$$

which in the sexagesimal system is:

$$2 \times 3600 + 3 \times 60 + 1 + \frac{1}{60} + \frac{5}{3600} + \frac{7}{216000}$$

The Qur'ân, as said above, urged the Muslims to reject adopting, and stop using, the sexagesimal system. On the basis of the decimal system of numbers and fractions, it uses the following digits and numbers in various aspects:

1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 30
- 40 - 60 - 70 - 80 - 90 - 100 - 200 - 300 - 1000 - 2,000 - 3,000 -
5,000 - 50,000 - and 100,000.

Amongst the fractions used one can find:

$$\frac{1}{2} - \frac{1}{3} - \frac{1}{4} - \frac{1}{5} - \frac{1}{6} - \frac{1}{8} - \frac{1}{10}$$

Naturally, the number 1 has maximum frequency of occurrence amongst all the verses, since Islâm is the religion of Monotheists. One of the verses reads as follows:

“Say: He is Allâh the One and Only.”

(Al-Ikhlâs : 1).

الإخلاص (١)

﴿قُلْ هُوَ اللَّهُ أَحَدٌ (١)﴾

Evidently, the Qur’ân also repeats using the number 10 and its powers to 10 to the five. At that early time of the revelation, however, mathematical operations were limited to certain purposes in trade, heritage and the like... The dozen was also sometimes used.

The world had to wait at least 200 years after revelation until the Muslim scientists introduced the decimal point and the use of the Zero (0) as we know it now.

The following are some selected verses which mean:

1- “Allâh directs you as regards your children’s (inheritance): for the male a portion equal to that of two females; but if only women more than two their share is two thirds of the inheritance, and if only one, her share is one half; for parents, a sixth share of the inheritance is for each if the deceased left children; if he has no children and the parents are the (only) heirs the mother takes the third, but if the deceased has brothers (or sisters) the mother takes sixth. The distribution in all cases is (always) after the payment of legacies or debts.”

(An-Nisâ’ : 11).

﴿يُوصِيكُمُ اللَّهُ فِي أَوْلَادِكُمْ لِلذَّكَرِ مِثْلُ حَظِّ الْأُنثِيَيْنِ فَإِنْ كُنَّ نِسَاءً فَوْقَ اثْنَتَيْنِ فَلَهُنَّ ثُلُثَا مَا تَرَكَ وَإِنْ كَانَتْ وَاحِدَةً فَلَهَا النِّصْفُ وَلِأَبَوَيْهِ لِكُلِّ وَاحِدٍ مِّنْهُمَا السُّدُسُ مِمَّا تَرَكَ إِنْ كَانَ لَهُ وَلَدٌ فَإِنْ لَمْ يَكُنْ لَهُ وَلَدٌ وَوَرِثَهُ أَبَوَاهُ فَلِأُمِّهِ الثُّلُثُ فَإِنْ كَانَ لَهُ إِخْوَةٌ فَلِأُمِّهِ السُّدُسُ مِنْ بَعْدِ وَصِيَّةٍ يُوصِي بِهَا أَوْ دِينَ﴾

النساء (١١)

- 2- “And their predecessors rejected the Truth and yet they have not attained one tenth of what we had granted to those...”
(Saba’ : 45)

﴿وَكَذَّبَ الَّذِينَ مِنْ قَبْلِهِمْ وَمَا بَلَغُوا مِئْشَارَ مَا آتَيْنَاهُمْ﴾ سبأ (٤٥)

- 3- “He who does good will have ten times as much to credit...”

(Al-An‘âm : 160)

﴿مَنْ جَاءَ بِالْحَسَنَةِ فَلَهُ عَشْرُ أَمْثَالِهَا﴾ الأنعام (١٦٠)

- 4- “Or they may say: he forged it; say to them: bring you then ten Sûras forged like to it...”

(Hûd : 13)

﴿أَمْ يَقُولُونَ افْتَرَاهُ قُلْ فَأْتُوا بِعَشْرِ سُوْرٍ مِثْلِهِ مُفْتَرِيَاتٍ﴾ هود (١٣)

- 5- “And We appointed for Moses thirty nights, and added to them ten, and he completed the whole time appointed by his Master of forty nights.”

(Al-A‘râf : 142)

﴿وَوَاعَدْنَا مُوسَى ثَلَاثِينَ لَيْلَةً وَأَتَمَمْنَاهَا بِعَشْرِ فِتْمٍ مِيقَاتٍ رَبِّهِ أَرْبَعِينَ لَيْلَةً﴾

الأعراف (١٤٢)

- 6- “Allâh aforetime did take a covenant from the Children of Israel and We appointed among them twelve Chieftains...”

(Al-Mâ'idah : 12)

﴿وَلَقَدْ أَخَذَ اللَّهُ مِيثَاقَ بَنِي إِسْرَآئِيلَ وَبَعَثْنَا مِنْهُمُ اثْنَيْ عَشَرَ نَقِيبًا﴾ المائدة (١٢)

- 7- “The parable of those who spend their substance in the way of Allâh is like that of a grain (of corn) which grows seven ears, each ear has one hundred grains; and Allâh gives manifold increase to whom He pleases....”

(Al-Baqarah: 261)

﴿مَثَلُ الَّذِينَ يُنْفِقُونَ أَمْوَالَهُمْ فِي سَبِيلِ اللَّهِ كَمَثَلِ حَبَّةٍ أَنْبَتَتْ سَبْعَ سَنَابِلَ فِي كُلِّ سَنَبَلَةٍ مِائَةُ حَبَّةٍ وَاللَّهُ يُضَاعِفُ لِمَنْ يَشَاءُ﴾ البقرة (٢٦١)

- 8- “Remember you implored the assistance of your Lord and He answered you: I shall assist you with one thousand of the angels, ranks on ranks.”

(Al-Anfâl : 9)

﴿إِذْ تَسْتَغِيثُونَ رَبَّكُمْ فَاسْتَجَبَ لَكُمْ أَنِّي مُمِدِّكُمْ بِالْفِ مِنَ الْمَلَائِكَةِ مُرْدِّينَ (٩)﴾

الأففال (٩)

- 9- “And We did send Nooh to his people and he tarried among them one thousand years less fifty years...”

(Al-'Ankabût : 14)

﴿وَلَقَدْ أَرْسَلْنَا نُوحًا إِلَىٰ قَوْمِهِ فَلَبِثَ فِيهِمْ أَلْفَ سَنَةٍ إِلَّا خَمْسِينَ عَامًا﴾

العنكبوت (١٤)

- 10- “He (controls and rules) all affairs from the Heaven to the Earth, then will (all affairs) be raised up to Him (ta’ruj) during a day the measure whereof is one thousand years of your reckoning.”

(As- Sajdah : 5)

﴿يُدِيرُ الْأَمْرَ مِنَ السَّمَاءِ إِلَى الْأَرْضِ ثُمَّ يَعْرُجُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ أَلْفَ سَنَةٍ مِمَّا تَعُدُّونَ﴾ (٥) السجدة

- 11- “The Night of Qadr (Power and Mercy) is better than thousand months.”

﴿لَيْلَةُ الْقَدْرِ خَيْرٌ مِنْ أَلْفِ شَهْرٍ﴾ (٣) القدر

- 12- “... If there are twenty amongst you, patient (and persevering), they will vanquish two hundred and if there are one hundred they will vanquish one thousand of the unbelievers...”

(Al- Anfâl : 65)

﴿إِنْ يَكُنْ مِنْكُمْ عِشْرُونَ صَابِرُونَ يَغْلِبُوا مِائَتِينَ وَإِنْ يَكُنْ مِنْكُمْ مِائَةٌ يَغْلِبُوا أَلْفًا مِنَ الَّذِينَ كَفَرُوا﴾ (٦٥) الأنفال

- 13- “... and He knew that there is weakness in you; even though if there are a hundred of you, patient and preserving, they will vanquish two hundred with the leave of Allâh, for Allâh is with those who patiently persevere.”

(Al-Anfâl : 66)

﴿وَعَلِمَ أَنَّ فِيكُمْ ضَعْفًا فَإِنْ يَكُنْ مِنْكُمْ مِائَةٌ صَابِرَةٌ يَغْلِبُوا مِائَتِينَ وَإِنْ يَكُنْ مِنْكُمْ أَلْفٌ يَغْلِبُوا أَلْفَيْنِ بِإِذْنِ اللَّهِ وَاللَّهُ مَعَ الصَّابِرِينَ﴾ (٦٦) الأنفال

- 14- "... Is it not enough for you that your Lord would provide you with three thousand angels (specially) sent down?"

(Âl- 'Imrân: 124)

﴿أَلَنْ يَكْفِيَكُمْ أَنْ يُمِدَّكُمْ رَبُّكُمْ بِثَلَاثَةِ آلَافٍ مِنَ الْمَلَائِكَةِ مُنَزَّلِينَ (١٢٤)﴾

آل عمران (١٢٤)

- 15- "Yea, if you remain firm and act aright, even if (your enemy) should rush in hereon you in hot haste, your Lord would provide you with five thousand angels making terrific onslaught."

(Âl- 'Imrân: 125)

﴿بَلَىٰ إِنْ تَصْبِرُوا وَتَتَّقُوا وَيَأْتُوكُمْ مِنْ فُورِهِمْ هَذَا يُمْدِدْكُمْ رَبُّكُمْ بِخَمْسَةِ آلَافٍ مِنَ

الْمَلَائِكَةِ مُسَوِّمِينَ (١٢٥)﴾

آل عمران (١٢٥)

- 16- "Did you not turn by vision to those who abandoned their homes, though they were thousands (in number) for fear of death...?"

(Al- Baqarah: 243)

﴿أَلَمْ تَرَ إِلَى الَّذِينَ خَرَجُوا مِنْ دِيَارِهِمْ وَهُمْ أُلُوفٌ حَذَرَ الْمَوْتِ﴾ البقرة (٢٤٣)

- 17- "The angels and the Spirit ta'ruj (ascend curvilinearly) to Him in a day the measure whereof is (as) fifty thousand years."

(Al- Ma'ârij: 4)

﴿تَعْرَجُ الْمَلَائِكَةُ وَالرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ (٤)﴾

المعارج (٤)

18- “And We sent him (Jonah) to one hundred thousand (men) or more.”

(Aṣ- Ṣâffât : 147)

الصفات (١٤٧)

﴿وَأَرْسَلْنَاهُ إِلَىٰ مِائَةِ أَلْفٍ أَوْ يَزِيدُونَ﴾ (١٤٧)

II. Winds

Winds are air in motion. Generally, air moves under the effect of atmospheric pressure differences. When air rises up it is cooled down by the expansion resulting from the decrease of atmospheric pressure with increasing height as mentioned in page 49 of book II of this series. The rate of cooling amounts to 10°C per kilometer for dry air and 6.5°C per kilometer for saturated air.

Cooling of moist air decreases its ability to hold water-vapour, and when saturation is attained further cooling produces condensation, or the formation of water-drops or ice crystals according to temperature. This is how clouds are formed at levels depending on the amounts of water-vapour present in the ascending air.

This means that clouds are formed by the ascent of moist air in the atmosphere (by winds moving in the vertical). The first book which postulates this fact is the Qur'ân:

- 1- "He is Allâh Who sends the winds and they raise clouds..."

(Ar-Rûm: 48)

﴿اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتُثِيرُ سَحَابًا﴾ الروم (٤٨)

- 2- "And Allâh is He who sends forth the winds and they raise cloud..."

(Fâtîr : 9)

﴿وَاللَّهُ الَّذِي أَرْسَلَ الرِّيَّاحَ فَتُثِيرُ سَحَابًا﴾ فاطر (٩)

Naturally, therefore, the general distribution of clouds and rainfall over the earth's surface should follow the so-called

General Wind Circulation. Muslims have been requested and urged to study this circulation by the Qur'ân:

- 3- "... And in the turning about of the winds there are signs for a people who are wise."

(Al- Jâthiyah: 5)

﴿وَتَصْرِيفِ الرِّيَّاحِ آيَاتٌ لِّقَوْمٍ يَعْقِلُونَ﴾ (٥) الجاثية (٥)

- 4- "... And in the turning about of the winds and the clouds which are trailed like slaves between the sky and the earth indeed there are signs for a people who are wise.."

(Al- Baqarah: 164)

﴿وَتَصْرِيفِ الرِّيَّاحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لآيَاتٌ لِّقَوْمٍ يَعْقِلُونَ﴾ (١٦٤)

البقرة (١٦٤)

Meteorologically speaking, winds are also known to be either continental (dry) or maritime (humid) in origin. The inflow of a maritime air-mass is usually a sign of wet weather, while dry weather generally accompanies the inflow of continental air-masses. The Qur'ân, however, distinguishes between such air-masses.

- 5- "And He is Who sends the winds as heralds of glad tidings going before His mercy..."

(Al- Furqân: 48)

﴿وَهُوَ الَّذِي أَرْسَلَ الرِّيَّاحَ بُشْرًا بَيْنَ يَدَيْ رَحْمَتِهِ﴾ (٤٨) الفرقان (٤٨)

The same meaning is also given in the verses Ar-Rûm (16), An-Naml (163) and Al-A'râf (57), which refer to maritime air-masses of wet periods. Dry air-masses are, on the other hand, rainless:

6- “And in the ‘Âd (people) behold, We sent against them the devastating dry wind.”

(Adh- Dhariyât : 41)

﴿وَفِي عَادٍ إِذْ أَرْسَلْنَا عَلَيْهِمُ الرِّيحَ الْعَقِيمَ﴾ (٤١) الذاريات (٤١)

Winds also have different speeds or forces. Meterologists use a special scale of wind force known as the Beaufort Scale, which is given in Table (1). In general, the meaning of each individual name of wind as quoted by Qur’ân has been given in Table (1)...

Average		Description	Name in the Qur’ân (Translated)
Force	Speed		
0	0 M.P.H	Calm	Calm
1	2	Light air	
2	5	<div style="display: inline-block; vertical-align: middle; font-size: 3em;">{</div> Light Breeze Gentle Breeze Moderate Breeze Fresh Breeze	Favourable wind
3	10		
4	15		
5	21		
6	28	Strong Breeze	Strong wind
7	35	Moderate Gale	Furious noisy
8	42	Fresh Gale	Violent
9	50	Strong Gale	Violent with showers of stones
10	59	Whole Gale	Violent breaking masts
11	68	Storm	Storm
12	above 75	Hurricane	Hurricane

Table (1) The Beaufort Scale

Some chosen verses concerning winds which mean:

Force (0): “If it be His will He can make the wind calm...”

(Ash - Shûrâ : 33)

﴿إِنْ يَشَأْ يُسْكِنِ الرِّيحَ﴾ الشورى (٣٣)

Forces (1-5): “He is Who enableth you to traverse through land and sea, so that you even board ships, they sail with them with a favourable wind and they rejoice thereat...”

(Yûnus : 22)

﴿هُوَ الَّذِي يُسِيرُكُمُ فِي الْبَرِّ وَالْبَحْرِ حَتَّىٰ إِذَا كُنْتُمْ فِي الْفُلِكِ وَجَرِينَ بَيْنَ يَدَيْهِ طَيْفَةً وَفَرِحُوا بِهَا﴾ يونس (٢٢)

Forces (6): “...On which strong wind blew on a tempestuous day.”

(Ibrâhîm: 18)

﴿اشْتَدَّتْ بِهِ الرِّيحُ فِي يَوْمٍ عَاصِفٍ﴾ إبراهيم (١٨)

Forces (7): “So We sent against them a furious moisy wind through days of disaster....”

(Fussilat : 16)

﴿فَأَرْسَلْنَا عَلَيْهِمْ رِيحًا صَرْصَرًا فِي أَيَّامٍ نَّحْسَاتٍ﴾ فصلت (١٦)

Forces (8): “But the ‘Âd, they were destroyed by a furious noisy violent wind.”

(Al- Hâqqah : 6)

﴿وَأَمَّا عَادٌ فَأُهْلِكُوا بِرِيحٍ صَرْصَرٍ عَاتِيَةٍ﴾ الحاقة (٦)

Forces (9): "...Or that He will send against you a violent wind with showers of stones..."

(Al- Isrâ': 68)

﴿أَوْ يُرْسِلَ عَلَيْكُمْ حَاصِبًا﴾ (الإسراء (٦٨))

Forces (10): "... And sends against you a violent wind that breaks your masts.."

(Al- Isrâ': 69)

﴿فَيُرْسِلَ عَلَيْكُمْ قَاصِفًا مِّنَ الرِّيحِ﴾ (الإسراء (٦٩))

Forces (11): "... Comes a stormy wind and the waves come to them from all sides.."

(Yûnus : 22)

﴿جَاءَتْهَا رِيحٌ عَاصِفٌ وَجَاءَهُمُ الْمَوْجُ مِنْ كُلِّ مَكَانٍ﴾ (يونس (٢٢))

Forces (12): "... And it was caught in a hurricane with fire therein.."

(Al- Baqarah : 266)

﴿فَأَصَابَهَا إِعْصَارٌ فِيهِ نَارٌ﴾ (البقرة (٢٦٦))

III. Cosmology

It is accepted amongst cosmologists that the creation of the earth and the heavens (the universe) and their content of matter and radiation is neither haphazard nor accidental as non-believers utter, but according to perfect design and precise measure. In this respect the Qur'ân says for example what means:

- 1- “Verily, there is not a single thing but its (unexhaustible sources and) treasures are with Us; and We only send down thereof in due and ascertainable measures.”

(Al-Hijr : 21)

﴿ وَإِنْ مِنْ شَيْءٍ إِلَّا عِنْدَنَا خَزَائِنُهُ وَمَا نُنَزِّلُهُ إِلَّا بِقَدَرٍ مَعْلُومٍ ﴾ (الحجر (٢١))

- 2- “... And every single thing is to Him according to (precise) measure in due proportion.”

(Ar- Ra'd : 8)

﴿ وَكُلُّ شَيْءٍ عِنْدَهُ بِمِقْدَارٍ ﴾ (الرعد (٨))

- 3- “Verily, everything have We created in due proportion and measure.”

(Al- Qamar : 49)

﴿ إِنَّا كُلَّ شَيْءٍ خَلَقْنَاهُ بِقَدَرٍ ﴾ (القمر (٤٩))

- 4- “And We sent down water from the Sky according to a precise measure and thereby We caused the earth to hold it...”

(Al - Mu'minûn : 18)

المؤمنون (١٨)

﴿وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ﴾

Astronomically, the earth is known to be the only planet in the Solar System which contains a great amount of water in its three phases namely:

- 1- The solid phase comprising the ice of the two poles and tops of mountains. These are vast areas where extensive amounts of surplus heat energy can be extinguished.
- 2- The gaseous phase, which is the water-vapour suspended in the atmosphere. The density of water-vapour is only 3/8 that of the dry air. For this reason air can carry water- vapour and lift it to great heights sufficient for clouds to form and precipitation to occur by condensation, or transformation of the water-vapour into water drops or ice crystals according to temperature.
- 3- Liquid water, which is the liquid phase. This covers about three-quarters of the earth's surface. It is the source of water-vapour in the atmosphere. The so-called ocean-currents evenly distribute solar energy falling on the earth's surface, and thus enable life to flourish on earth.

Rain is the actual source of fresh-water on earth, whether we take this water from rivers, tributaries, wells, or springs... this is exactly what the Qur'ân postulates. The verse means:

- 4- “See you the water which you drink. Do you bring it down (in rain) from the nimbus clouds or are We Who let it fall?”

(Al- Wâqi'ah : 68-69)

﴿أَفَرَأَيْتُمُ الْمَاءَ الَّذِي تَشْرَبُونَ (٦٨) أَنْتُمْ أَنْزَلْتُمُوهُ مِنَ الْمُزْنِ أَمْ نَحْنُ الْمُنْزِلُونَ (٦٩)﴾

الواقعة (٦٨-٦٩)

Again, for travelling through space, or ascent upwards to heavens, the Qur'ân miraculously introduces the expression (Ya'ruj) as verb, and (Mi'râj) as name. The expression means motion in curved lines and not in straight lines. We are now aware of the fact of the geometry of space that it does not know the so-called straight lines. In space all things move in curved lines. However, the Qur'ân says what means:

1- "From Allâh Master of (al-ma'ârij) the ways of ascent."

(Al- Ma'ârij : 3)

﴿مِنَ اللَّهِ ذِي الْمَعَارِجِ (٣)﴾

المعارج (٣)

2- "He Knows all that goes into the earth and all that comes out thereof, all the comes down from the heaven and all that ya'ruj (mounts up) thereto, and He is Ar-Ra hîm (Most Merciful) Al-Ghafour (Most-Forgiving)."

(Saba' : 2)

﴿يَعْلَمُ مَا يَلْجُ فِي الْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنْزِلُ مِنَ السَّمَاءِ وَمَا يَعْرُجُ فِيهَا وَهُوَ

الرَّحِيمُ الْغَفُورُ (٢)﴾

سبأ (٢)

3- "... He known whatever enters within the earth and whatever comes forth out of it, whatever comes down from the heaven and whatever ya'ruj (mounts up) to it, and He is with you wheresoever you may be..."

(Al- Hadîd : 4)

﴿يَعْلَمُ مَا يَلِجُ فِي الْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنْزِلُ مِنَ السَّمَاءِ وَمَا يَعْرُجُ فِيهَا وَهُوَ
مَعَكُمْ أَيْنَ مَا كُنْتُمْ﴾ الحديد (٤)

4- “The angels and the spirit ta‘ruj (ascent) to Him in a day the measure whereof is fifty thousand years.”

(Al - Ma‘ârij : 4)

﴿تَعْرُجُ الْمَلَائِكَةُ وَالرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ﴾ (٤)
المعارج (٤)

IV. Biochemistry

Under this title, we are mainly concerned with photosynthesis, which is the process by which oxygen and complex organic substances, like oil or starch or sugar... are produced in plants from the carbondioxide present in the atmosphere and the water of the soil under the influence of sunlight in the presence of the chlorophyl which exists in the green leaves.

The chlorophyl is green colouring matter in almost all plants apart from few types. It is a mixture of two pigments in about three to one proportions. Both are exters and anaptonically related to hemin.

The chlorophyl is soluble in either, alcohol, and olive oil, and when dissolved it exhibits a red florescence.

Relatively high energy content results from the fixation, as chemical energy, of part of the radiant energy of the sunlight falling on the plant's leaves.

In fact, photosynthesis is the most fundamentally important of biochemical processes. This is because, chemically speaking, green plants are the only productive segment of the earth's population. The Animal Kingdom is not so equipped to make use of solar radiant energy. Members of this kingdom make use only of the chemical energy stored in materials such as starches, sugars..., either directly or indirectly through other animals that feed on plants. In fact, the continuance of animal life is entirely dependent on the photosynthetic activity of plants.

Miraculously enough, the Qur'ân says what means:

“And it is He who sends down water (rain) from the sky, with it We produce vegetation of all kinds (plants), from which We produce green (material chlorophyl) out of which We produce heaped grain...”

(Al - An‘âm : 99)

﴿وَهُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا
نُخْرِجُ مِنْهُ حَبًّا مُتَرَاكِبًا﴾
الأنعام (٩٩)

V. Outstanding Obstacles Faced

The Ancient Agricultural Communities

The Qur'ân mentions that the ancient agricultural community in Egypt used to face deadly troubles, whenever the people missed Allâh's righteous way, as signs from Allâh.

“So We sent on them (high destructive) floods, locusts, lice, frogs and blood (bilharzia), signs openly self-explained..”

(Al - A'râf : 133)

﴿فَأَرْسَلْنَا عَلَيْهِمُ الطُّوفَانَ وَالْجَرَادَ وَالْقُمَّلَ وَالضَّفَادِعَ وَالدَّمَ آيَاتٍ مُّفَصَّلَاتٍ﴾

الأعراف (١٣٣)

The floods refer most likely to high Nile floods which used to destroy many villages and damage most fields in ancient Egypt. In our Age of Science, however, the Nile reservoirs and High Dam put an end to this effect.

Locusts destroy the crops. As the immature locusts can not fly, they march steadily across the country eating every green plant as they pass; and they even cross rivers by the bridges formed of the bodies of the drowned, vanguards!

Locusts multiply at an alarming rate. Vast swarms measuring 50 by 80 kms- and occupying several days in passing may fill the air such that the sunlight becomes almost totally absorbed. It is said that once train traffic was stooped by locusts' crushed bodies! However, nowadays locusts have been successfully vanquished and killed.

It can be readily seen that, before the Age of Science, the five signs quoted in the Qur'ân characterized the agricultural community of Ancient Egypt.

Lice form a group of small parasitic wingless insects. The mouth parts are developed into a hooked tube with which they bore into the skin and suck the blood of their hosts! The eggs are deposited on the hairs, hatch out in few days and produce their species in almost a fortnight.

Lice, in general, furnish an unbearable source of discomfort and disease. Other types are: (a) The plant louse and (b) the chicken lice.

Frogs are smooth-skinned members of the order Ecaudate (tailless) of the class Batrachia. They are distinguished from newts and salamanders by the absence of a tail in the adult stage.

Frogs can live only in damp places. They are absent from deserts and high ranges of mountains. They furnish sources of unbearable noise. They feed on insects and slugs seized by thrusting out the long sticky tongues. Blood (Bilharzia): The word blood has been mentioned by the Qur'ân to denote urine containing blood as a result of infection with bilharzia. This disease has only been discovered by Dr. Bilharz in the last century.

VI. The Spherical Shape And Rotation Of The Earth

The fact that the earth is round and that it rotates round its axis and round the sun is also postulated in the Qur'ân, but in an indirect manner.

People generally see that the earth's surface appears flat, in spite of the fact that it is almost spherical. When referring to such apparently described phenomena, the Qur'ân adopts a unique indirect way of expressing things such that it does not urge people to deny the revelation.

The spherical shape of the earth necessitates that when one half of the earth's surface faces the sun it becomes illuminated. This represents day time. The other half does not face the sun and faces the darkness of space (night). The Qur'ân expresses this fact by saying what means:

1- "... There reaches it Our command by night or by day..."

(Yûnus : 24)

يونس (٢٤)

﴿أَتَاهَا أَمْرُنَا لَيْلًا أَوْ نَهَارًا﴾

Again, the Qur'ân says what means:

2- "... He makes the night spherically overlap the day, and makes the Day spherically overlap the night..."

(Az-Zumar : 5)

الزمر (٥)

﴿يَكْوِّرُ اللَّيْلَ عَلَى النَّهَارِ وَيُكَوِّرُ النَّهَارَ عَلَى اللَّيْلِ﴾

3- “And the earth after that He spread it out.”

(An- Nâzi‘ât : 30)

﴿وَالْأَرْضَ بَعْدَ ذَلِكَ دَحَاهَا﴾ (٣٠) النازعات (٣٠)

In this verse, the Qur’ân uses parts of the word (dahaha), which in some parts of the Arab world means (shaped like an egg). This has been discovered to be the true shape of the earth.

The rotation of the earth has been made clear by several verses such as:

4- “You cause the night to gain on the day and You cause day to gain on the night...”

(Âl- ‘Imrân : 27)

﴿تَوَلَّجَ اللَّيْلَ فِي النَّهَارِ وَتَوَلَّجَ النَّهَارَ فِي اللَّيْلِ﴾ آل عمران (٢٧)

5- “... And nor can the night outstrip the day and each revolves on in an orbit.”

(Yâsîn : 40)

﴿وَلَا اللَّيْلُ سَابِقُ النَّهَارِ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ﴾ (٤٠) يس (٤٠)

6- “And you see the mountains and think them firmly fixed (stationary), but they pass away as clouds pass away...”

(An- Naml : 88)

﴿وَتَرَى الْجِبَالَ تَحْسَبُهَا جَامِدَةً وَهِيَ تَمُرُّ مَرَّ السَّحَابِ﴾ النمل (٨٨)

VII. The Last Day

This is also the Day of Resurrection. Astronomically speaking, the earth and the solar system are not eternal. The whole matter will come to an end when the sun suddenly expands or explodes such that its outer atmosphere (6,000 degrees absolute) fills the whole space extending up to the orbit of the earth and its moon. Such a phenomenon is observed taking place in heavens.

The condition that our solar system retains its common features is that the sun remains in equilibrium and does not explode. Miraculously enough, this condition has been stated by the Qur'ân which means:

“It is not permitted to the sun to reach the moon, nor can the night outstrip the day, each should swim along in an orbit.”

(Yâsîn : 40)

﴿لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ (٤٠)﴾

يس (٤٠)

The Qur'ân adds what means:

1- “He questions: When is the Day of Resurrection?”

(Al- Qiyâmah : 6)

القيامة (٦)

﴿يَسْأَلُ أَيَّانَ يَوْمَ الْقِيَامَةِ (٦)﴾

2- “But when the sight is dazed.”

(Al- Qiyâmah : 7)

القيامة (٧)

﴿فَإِذَا بَرِقَ الْبَصَرُ (٧)﴾

3- “And the moon is eclipsed.”

(Al- Qiyâmah : 8)

القيامة (٨)

﴿ وَخَسَفَ الْقَمَرُ ۝٨ ﴾

4- “And the sun and the moon are joined together.”

(Al- Qiyâmah : 9)

القيامة (٩)

﴿ وَجُمِعَ الشَّمْسُ وَالْقَمَرُ ۝٩ ﴾

5- “Human beings on that Day utter: (where could escape be)?”

(Al- Qiyâmah : 10)

القيامة (١٠)

﴿ يَقُولُ الْإِنْسَانُ يَوْمَئِذٍ أَيْنَ الْمَفْرُ ۝١٠ ﴾

VIII. Preventive Medicine

The Qur'ân also comprises many verses which establish the principles underlying the best ways for keeping fit and healthy, or the principles for the basis of the so-called Preventive Medicine. These principles introduce the outstanding restrictions regarding food. The Qur'ân says, for example what means:

- 1- "... Eat and drink but waste not by excess for He (Allâh) loves not the wasters."

(Al-A'râf : 31)

﴿وَكُلُوا وَاشْرَبُوا وَلَا تُسْرِفُوا إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ﴾ (٣١) الأعراف (٣١)

- 2- "Forbidden to you (for food) are: dead meat, blood, the flesh of the swine and that on which has been involved the name of other than 'Allâh, that which has been killed by strangulation, or by a violent blow, or by a headlong fall, or by being gored to death: that which has been (partly) eaten by a wild animal, unless you are able to slaughter it (in due form), that which is sacrificed on stone (altars).."

(Al-Mâ'idah : 3)

﴿حُرِّمَتْ عَلَيْكُمُ الْمَيْتَةُ وَالدَّمُ وَلَحْمُ الْخِنْزِيرِ وَمَا أُهْلَ لِغَيْرِ اللَّهِ بِهِ وَالْمُنْخَنِقَةُ وَالْمَوْقُوذَةُ وَالْمُتَرَدِّيَةُ وَالنَّطِيحَةُ وَمَا أَكَلَ السَّبُعُ إِلَّا مَا ذَكَّيْتُمْ وَمَا ذُبِحَ عَلَى النُّصُبِ﴾ المائدة (٣)

As a rule, all dead meat is forbidden except marine species and locusts. Similarly, all blood is forbidden apart from liver and spleen.

Muslims have to drain off the blood from the vessels of an animal by slaughtering and to mention the name of Allâh before the slaughter.

Medically, pork meat is synthetized in the body. Many parasites exist in its meat. It is, therefore, harmful. The prohibition of the other types of meat quoted in the above verse follow similar arguments having their roots in biochemistry.

- 3- “O ye who believe: Intoxicants and gambling, stones and arrows are abominations of the Satan’s handiwork; (so) avoid such, that you may prosper.”

(Al- Mâ'idah: 90)

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا إِنَّمَا الْخَمْرُ وَالْمَيْسِرُ وَالْأَنْصَابُ وَالْأَزْلَامُ رِجْسٌ مِّنْ عَمَلِ الشَّيْطَانِ فَاجْتَنِبُوهُ لَعَلَّكُمْ تَفْلِحُونَ﴾ (٩٠)

المائدة (٩٠)

Alcohol is now known to have bad and serious effects on the liver, brain, heart and vascular system. Moreover, alcohol leads to loss of dignity, self respect and poor personality.

Marriage and sexual affairs have their issue related to health. One reads in the Qur'ân what means:

- 4- “And they ask you concerning women’s courses. Say: They are a hurt and a pollution; so keep away from women in their courses and do not approach them until they are clean. But when they have purified themselves, you may approach them in any manner (time or place) ordained for you by Allâh; for Allâh loves those who turn to Him always and He loves those who keep themselves pure and clean.”

(Al- Baqarah : 222)

﴿وَيَسْأَلُونَكَ عَنِ الْمَحِيضِ قُلْ هُوَ أَذَىٰ فَاعْتَزِلُوا النِّسَاءَ فِي الْمَحِيضِ وَلَا تَقْرَبُوهُنَّ حَتَّىٰ يَطْهَرْنَ فَإِذَا تَطَهَّرْنَ فَأْتُوهُنَّ مِنْ حَيْثُ أَمَرَكُمُ اللَّهُ إِنَّ اللَّهَ يُحِبُّ التَّوَّابِينَ وَيُحِبُّ الْمُتَطَهِّرِينَ﴾ (البقرة: ٢٢٢)

IX. Homosexuality

Homosexuality received outstanding importance in the Qur'ân. It is entirely condemned and declared as a sinful act:

- 5- “And remember Lût, behold, he said to his people: You do commit lewdness such as no people in creation ever committed before you. Indeed, you do approach men and cut off the highway..”

(Al- ‘Anqabût : 28-29)

﴿وَلَوْ طَآ إِذْ قَالَ لِقَوْمِهِ إِنَّكُمْ لَأْتُونَ الْفَاحِشَةَ مَا سَبَقَكُمْ بِهَا مِنْ أَحَدٍ مِنَ الْعَالَمِينَ﴾ (٢٨)
 أَنْتُمْ لَأْتُونَ الرِّجَالَ وَتَقْطَعُونَ السَّبِيلَ ﴿٢٩﴾ العنكبوت (٢٨-٢٩)

- 6- “And Lût (an apostle); he said to his people: Do you commit lewdness inspite that you see (you are aware of it)? You do approach men in your lusts rather than women; nay you are but a people grossly ignorant.”

(An- Naml : 54-55)

﴿وَلَوْ طَآ إِذْ قَالَ لِقَوْمِهِ أَتَأْتُونَ الْفَاحِشَةَ وَأَنْتُمْ تُبْصِرُونَ (٥٤) أَأَنْتُمْ لَتَأْتُونَ الرِّجَالَ شَهْوَةً مِّنْ دُونِ النِّسَاءِ بَلْ أَنْتُمْ قَوْمٌ تَجْهَلُونَ (٥٥)﴾
النمل (٥٤-٥٥)

7- “And Lût, who said to his people: Do you commit lewdness such as no people in creation ever committed before you? You do practise your lusts with men in preference to women; indeed you are a people transgressing beyond bounds.”

(Al- A‘râf : 80-81)

﴿وَلَوْ طَآ إِذْ قَالَ لِقَوْمِهِ أَتَأْتُونَ الْفَاحِشَةَ مَا سَبَقَكُمْ بِهَا مِنْ أَحَدٍ مِّنَ الْعَالَمِينَ (٨٠) إِنَّكُمْ لَتَأْتُونَ الرِّجَالَ شَهْوَةً مِّنْ دُونِ النِّسَاءِ بَلْ أَنْتُمْ قَوْمٌ مُّسْرِفُونَ (٨١)﴾

الأعراف (٨٠-٨١)

In a word, the above verses quoted in this chapter, are merely examples of some principles concerning basic science amongst the vast teachings and knowledge included in the Qur’ân. The question arises, however, is that not evidence of the truthfulness of the verse which means:

“..... Nothing have We ignored (Or neglected) from the Book...”

(Al-An‘âm : 38)

﴿مَا فَرَّطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ﴾ الأنعام (٣٨)

THE TWO BOOKS OF ALLÂH

I. On The Integrity Of The Qur'ân

By these two books is meant:

- 1- The Book which we read and recite its verse. This is the Qur'ân.
- 2- The book in which we live and observe its wonders. This is the Universe.

Since the Universe is entriely a material structure, Allâh used to send prophets. The last prophet, Muh _ammad, was supported by the Qur'ân, as an Eternal Miracle, to be the guiding light of reason and understanding. It renders clear the various phases of intellectual and spiritual life.

Evidently, Allâh created man to be in the best structure and provided him with the distinguishing reason that established man's superiority above other creatures. Allâh also gave man the abilities to express himself and bestowed upon him the faculty of speech:

“Ar-Ra hmân. Taught the Qur'ân. Created man. Offered him the ability to express himself.”

(Ar-Rahmân : 1-4)

﴿الرَّحْمَنُ (١) عَلَّمَ الْقُرْآنَ (٢) خَلَقَ الْإِنْسَانَ (٣) عَلَّمَهُ الْبَيَانَ (٤)﴾

الرحمن (١-٤)

When Allâh spoke by the Qur'ân, the Book we read, it was only natural that He referred to and mentioned several of His signs in the universe, His vivid Book. In this manner He talked about the heavens, the sky and atmosphere, the sun and the moon, water, winds, clouds, day and night..., in the manner partially described in the present series of books.

Allâh offered us life, made us dwell the earth, and provided us with a gaseous roof to protect us from the deadly hazards of space.

In the Age of Science, man began to travel through the space and did reach the moon.

Naturally, this step will be followed by others towards the planets. Amazingly enough, the Qur'ân also mentions the possibility of travelling through space when Allâh offers man the ability and power acquired by scientific progress. Allâh says what means:

“O company of jinn and men, if you have the power to penetrate through the diameters of the heavens and the earth, then do penetrate; you will never penetrate save with authority and might.”

(Ar- Rah_mân : 33)

﴿يَا مَعْشَرَ الْجِنِّ وَالْإِنسِ إِنِ اسْتَطَعْتُمْ أَنْ تَنْفُذُوا مِنْ أَقْطَارِ السَّمَوَاتِ وَالْأَرْضِ فَانْفُذُوا لَا تَنْفُذُونَ إِلَّا بِسُلْطَانٍ (٣٣)﴾
الرحمن (٣٣)

With respect to us, the lowest sky is the earth's atmosphere where meteors burn by the excessive heat produced by friction with the air molecules. In this manner, meteors appear like lamps decorating the lowest sky:

“We did decorate the lowest sky with lamps...”

(Al- Mulk : 5)

﴿وَلَقَدْ زَيَّنَّا السَّمَاءَ الدُّنْيَا بِمَصَابِيحَ (٥)﴾
الملك (٥)

Evidently, however, the Qur'ân mentions the various phenomena of nature and urges mankind to contemplate and study them. The Qur'ân, being the eternal message of Allâh to mankind for guidance, it makes it clear that our studies in science should not be merely for the sake of understanding the material universe, but also a means of recognizing Allâh, the Creator of the universe, and thus deepening our faith as believers.

The Qur'ân aims at supplication to Allâh in order that He may teach us and increase our knowledge*:

“... And say (asking Allâh): O my Master, I beg for increasing my knowledge.”

(Tâhâ : 114)

﴿ وَقُلْ رَبِّ زِدْنِي عِلْمًا ﴾ (١١٤) طه (١١٤)

Amongst the outstanding requests frequently demanded by the Qur'ân from mankind are: to observe, ponder, and use our minds. In doing so with earnest honesty, man can be brought to realization of the Creator.

Muslims believe that the Revelation of the Qur'ân is the words of Allâh. The extraordinary supreme and supernatural literary elegance and fluency, together with the artistic rhetoric dimensions of the Qur'ân were extra-reasons that promoted

* (1) By observing and studying Allâh's signs in the Universe.

(2) However, some cosmic phenomena whose apparent features differ from their actual status, such as the shape of the earth, are not directly, but indirectly mentioned by the Qur'ân, mainly to avoid being denied and attacked by ignorant peoples notably during the time of revelation.

early Muslims to memorize, scribe and intemately preserve the text of the Qur'ân. Even the unbelievers are invited in the Qur'ân to contemplate over its various verse that mean:

- 1- “Do they not then earnestly seek to understand the Qu'rân, or are their hearts locked up by them?”

(Muḥammad : 24)

﴿ أَفَلَا يَتَذَكَّرُونَ الْقُرْآنَ أَمْ عَلَى قُلُوبٍ أَقْفَالُهَا ﴾ (٢٤) محمد (٢٤)

- 2- “Here is a Book which We have sent down to you full of blessings that they may motivate on its signs and that people of understanding may receive admonition.”

(Şâd : 29)

﴿ كِتَابٌ أَنْزَلْنَاهُ إِلَيْكَ مُبَارَكٌ لِيَدَّبَّرُوا آيَاتِهِ وَلِيَتَذَكَّرَ أُولُوا الْأَلْبَابِ ﴾ (٢٩)

ص (٢٩)

Since the Qur'ân's teachings are not restricted to a specific age of time or people, the treasures of its unlimited unexhaustible dimensions are continuously realized as time marches on, in eternal reality, vitality and freshness.

II. No Flaws In The Universe

There is no reason, whatever, to assume that the universe has several creators. This is evident notably from the fact that the laws of nature and processes of creation are obeyed and observed valid everywhere:

- 1- “No want of proportion will there be in the creation of Ar-Ra ḥmân...”

(Al- Mulk : 3)

﴿ مَا تَرَىٰ فِي خَلْقِ الرَّحْمَنِ مِن تَفَوتٍ ﴾ الملك (٣)

- 2- “... Seest thou any flaw?”

(Al- Mulk : 3)

﴿ هَلْ تَرَىٰ مِن فُطُورٍ ﴾ (٣) الملك (٣)

- 3- “I call them not to witness the creation of the heavens and the earth nor even their own creation...”

(Al-Kahf : 51)

﴿ مَا أَشْهَدُهُمْ خَلْقَ السَّمَوَاتِ وَالْأَرْضِ وَلَا خَلْقَ أَنْفُسِهِمْ ﴾ الكهف (٥١)

Also, there is no reason, whatever, to assume that the creator does not differ from creation in all respects. We read in the Qur’ân what means:

1- “Say: He is Allâh the One and the Only.”

(Al - Ikhâlâs : 1)

(الإخلاص (١)

﴿ قُلْ هُوَ اللَّهُ أَحَدٌ ۝١ ﴾

2- “Allâh the Eternal Absolute.

(Al - Ikhâlâs : 2)

(الإخلاص (٢)

﴿ اللَّهُ الصَّمَدُ ۝٢ ﴾

3- “He begetteth not nor is He begotten.”

(Al - Ikhâlâs : 3)

(الإخلاص (٣)

﴿ لَمْ يَلِدْ وَلَمْ يُولَدْ ۝٣ ﴾

4- “And He had entirely none to Him.”

(Al - Ikhâlâs : 4)

(الإخلاص (٤)

﴿ وَلَمْ يَكُنْ لَهُ كُفُوًا أَحَدٌ ۝٤ ﴾

We also read the following names of Allâh in the Qur’ân:

1- THE OWNER OF SOVEREIGNTY

Everything belongs to Him: Kingdom of Heavens and the Earth and all that exists inbetween. He offers life to every living being, or takes it away as He disposes. His Sovereignty inspires His Supremacy and His Ominpotence over all.

2- THE ABSOLUTE

No relation, whatever, exists between His Entity and other creatures and beings. He is consecrated, not for the sake of wantage regarding needs and necessities.

WHAT MODERN CIVILIZATION MISSED AS A RESULT OF THE DEGENERATION OF THE MUSLIM WORLD

At this stage one can realize that science is the message of Islam. The Qur'ân describes with scientific precision matters pertaining to the universe. It also urges Muslims to take interest in sciences. In this manner, many famous Muslim Scientists arose during the so-called middle ages or even dark ages. The Qur'an says what means:

“And say (asking Allâh) :O my Master, I beg for increasing my knowledge.”

(Tâhâ : 114)

طه (١١٤)

﴿ وَقُلْ رَبِّ زِدْنِي عِلْمًا ﴾ (١١٤)

Contrary to Islamic teachings, modern civilization began in Europe by entire separation of science from religion. In this manner modern civilization and nothing to do with faith, and morals and thus became entirely materialistic. This fact, however, leads to wide-spread infidelity.

Another outstanding characteristic of Islâm is that it is also the true message of equality between nations and tribes, liberty and justice. In the Muslim world, Muslims had no colonies. The Qur'ân says clearly what means:

“O mankind: We created you from a single (pair) of male and a female and made you into nations and tribes that you may know each other. Verily, the most honoured of

you in the sight of Allâh is he who is the most righteous of you...”

(Al - Hujurât : 13)

﴿يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاكُمْ إِنَّ اللَّهَ عَلِيمٌ خَبِيرٌ﴾ (١٣) الحجرات

Islâm also injects the character of dignity without being proud, of contentment without being lazy, of confidence without conceit, of order without tyranny, and of freedom without corruptions, notably family corruption. With such dignified behaviour, the Egyptians readily became Muslims shortly after the invasion by the Muslim Arabs. Such behaviour never happened with the invasion of the Europeans!

ISLÂM AND SCIENCE

- 4 -

PREFACE

The original text of the Qur'ân is still preserved entirely in every respect of its original language word by word. Records and order of the revelation of the Qur'ân were so faithfully made such that as time marches on one can say and report with precision, the actual place and time of revelation of each verse.

For such reasons, it is known everywhere that the Qur'ân has retained its purity without the least change up to now.

The language of the Book is the living Arabic. This is generally not the case with regard to old and extinct languages. Moreover, there is no fear of mixing the Qur'ân with human interpretations or even with the Traditions of the Prophet. In this sense Allâh says:

“Lo! We, even We, revealed Adh-Dhikr (Qur'ân) and verily, We are its Guardian”.

(Al- Hîjr : 9)

الحجر (٩)

﴿ إِنَّا نَحْنُ نَزَّلْنَا الذِّكْرَ وَإِنَّا لَهُ لَحَافِظُونَ ﴾

Amongst the facts concerning the Qur'ân is that it is regarded as the principal source of Islâm. It lays down the law of the relation of man to Allâh, and includes the fundamentals of the principles governing all humanity, Allâh The Almighty says:

“So set your purpose for religion as a man by nature upright - the nature originated by Allâh, in which He has originated people; there is no altering to Allâh’s creation; that is the right religion but most people know not.”

(Ar-Rûm : 30)

﴿فَأَقِمْ وَجْهَكَ لِلدِّينِ حَنِيفًا فِطْرَتَ اللَّهِ الَّتِي فَطَرَ النَّاسَ عَلَيْهَا لَا تَبْدِيلَ لِخَلْقِ اللَّهِ ذَلِكَ الدِّينُ الْقِيمُ وَلَكِنَّا أَكْثَرُ النَّاسِ لَا يَعْلَمُونَ﴾

الروم (٣٠)

No translation whatever, into English or any other language, can do justice to the magnificent Arabic style of the Qur'ân, Allâh The Almighty says:

“And so We have revealed to you an Arabic Qur'ân.”

(Ash-Shûrâ : 7)

الشورى (٧)

﴿وَكَذَلِكَ أَوْحَيْنَا إِلَيْكَ قُرْآنًا عَرَبِيًّا﴾

In fact, any verses selected in any book of this series are mainly of simplified nature and cannot give an exact idea of the passages which fill the Qur'ân with glorious power.

UNIVERSALITY OF ISLÂM

I. The Vocation Of Man Between The Law Of The People And The Law Of Allâh

History tells us that the outstanding success which Prophet Muhammad (prayers and peace be upon him) achieved, within the limited time of twenty - three years, is ranked as the completion of the most supreme effort with no parallel. An entire change in the thought and behaviour of a whole generation towards goodness and godliness had been realized by a single man!

In addition to that, the almost unlimited teachings of ethical, moral and spiritual values which his message set up into motion, still march on in the Muslim world.

The Qur'ân is basically addressed to intelligent and understanding individuals. It invites man to observe carefully everything round him in existence and thus to reflect upon it carefully. Knowledge acquired by the Qur'ân is of the highest rank. To acquire it, purity in faith and concentration of mind are both essential prerequisites. In this respect the Book says for example what means:

1- “And when the Qur'ân is recited give ear to it and pay heed that you may be offered mercy.”

(Al-A'râf : 204)

﴿وَإِذَا قُرِئَ الْقُرْآنُ فَاسْتَمِعُوا لَهُ وَأَنْصِتُوا لَعَلَّكُمْ تُرْحَمُونَ﴾ الأعراف (٢٠٤)

2- “ They only are the (true) believers whose hearts feel fear when Allâh is mentioned, and when His signs are recited to them they increase in belief and they trust in their Lord.”

(Al -Anfâl : 2)

﴿إِنَّمَا الْمُؤْمِنُونَ الَّذِينَ إِذَا ذُكِرَ اللَّهُ وَجِلَتْ قُلُوبُهُمْ وَإِذَا تَلِيَتْ عَلَيْهِمْ آيَاتُهُ زَادَتْهُمْ إِيمَانًا وَعَلَىٰ رَبِّهِمْ يَتَوَكَّلُونَ﴾

(الأنفال (٢)

Fairly enough, it is expected that the Book, provided it is properly understood, would lead to discoveries concerning the secrets of nature. At the same time, careful study of nature will help in the proper interpretation and understanding of the Book. Naturally, as human knowledge advances the Qur'ân unfolds itself gradually, Allâh, The Almighty says:

3- “ We shall show them Our signs in the horizons (vast extensions) and in themselves until it becomes evident to them that it (the Qur'ân) is the truth.”

(Fussilat : 53)

﴿سَنُرِيهِمْ آيَاتِنَا فِي الْآفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ﴾

فصلت (٥٣)

II. Islâm : A Universal Attitude

From the first moment anyone embraces Islam (the noble message of universal fraternization) his race, colour and nationality sink into insignificance before the vast conception of humanity and equality for which Islâm opens his mind. For example the Qur'ân says:

1- “ O mankind; We created you from a single (pair) of male and female and made you into nations and tribes that you may know each other; the most honoured of you in the sight of Allâh All-Knowing and All-Reckoning.”

(Al-Hujurât : 13)

﴿يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاكُمْ إِنَّ اللَّهَ عَلِيمٌ خَبِيرٌ﴾

الحجرات (١٣)

2- “Say: O Followers of The Book come to a proposition equitable between you and us, that we shall not worship any but Allâh and that we shall not take others for associates besides Him.”

(Âl-‘Imrân : 64)

﴿قُلْ يَا أَهْلَ الْكِتَابِ تَعَالَوْا إِلَىٰ كَلِمَةٍ سَوَاءٍ بَيْنَنَا وَبَيْنَكُمْ أَلَّا نَعْبُدَ إِلَّا اللَّهَ وَلَا نُشْرِكَ بِهِ شَيْئًا...﴾

آل عمران (٦٤)

3- “ In the name of Allâh. Ar-Rahmân (The All-Merciful)
 Ar-Rahîm (The Ever Merciful). All praise is due to Allâh
 Lord of all the worlds. Ar-Rahmân Ar-Rahîm. Owner of the
 Day of Judgment. You, do we worship and Your aid do we
 seek, Guide us on the straight way. The way on whom You
 have bestowed Your favor neither of those upon whom anger
 is brought down, nor of those who go erring.”

(Al-Fâtihah : 1-7)

﴿ بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ ﴾ (١)

الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ (٢) الرَّحْمَنِ الرَّحِيمِ (٣)

مَالِكِ يَوْمِ الدِّينِ (٤) إِيَّاكَ نَعْبُدُ وَإِيَّاكَ نَسْتَعِينُ

(٥) اهْدِنَا الصِّرَاطَ الْمُسْتَقِيمَ (٦) صِرَاطَ الَّذِينَ

أَنْعَمْتَ عَلَيْهِمْ غَيْرِ الْمَغْضُوبِ عَلَيْهِمْ وَلَا

الضَّالِّينَ (٧-١) الفاتحة

﴿ (٧) الضَّالِّينَ ﴾

The seminal principles, and even the real basis of Islamic
 economies declare that the earth is Allâha's own property. This
 principle, however, is a self- evident fact since originally Allâh
 alone created the earth - no body whoever can arrogate its pos-
 session to himself or rather can claim that he was the creator.
 All human beings were, and are still, created out of its very dust
 and water (mud or clay). The Qur'ân says:

1- “ From it (the earth) did We create you and into it shall we return you back....”

- Tâhâ (55) -

﴿ مِنْهَا خَلَقْنَاكُمْ وَفِيهَا نُعِيدُكُمْ ﴾ طه (٥٥)

2- “ And Allâh has produced you from the earth growing. Then into it He returns you back..”

- Nooh (17 - 18) -

﴿ وَاللَّهُ أَنْبَتَكُمْ مِنَ الْأَرْضِ نَبَاتًا (١٧) ثُمَّ يُعِيدُكُمْ فِيهَا ﴾ نوح (١٧-١٨)

3- “... He (Allâh) has produced you from the earth and settled you therein...”

- Hûd (61) -

﴿ هُوَ أَنْشَأَكُمْ مِنَ الْأَرْضِ وَاسْتَعْمَرَكُمْ فِيهَا ﴾

هود (٦١)

4- “ And to Allâh belongs the dominion of the heavens and the earth....”

- Âl-‘Imrân (189) -

﴿ وَلِلَّهِ مُلْكُ السَّمَوَاتِ وَالْأَرْضِ ﴾ آل عمران (١٨٩)

Allâh offered us the earth to dwell in, after being prepared by Him to yield its riches to man, provided man knows how to

handle this gift properly, Allâh The Almighty says:

5- “ **And indeed We have written in Az-Zabûr (David’s Book) after being in Adh-Dhikr that the earth is inherited by My worshippers who are fit for its goodness (to populate it).**”

(Al-Anbiyâ’ : 105)

﴿وَلَقَدْ كَتَبْنَا فِي الزَّبُورِ مِنْ بَعْدِ الذِّكْرِ أَنَّ الْأَرْضَ يَرِثُهَا عِبَادِيَ الصَّالِحُونَ﴾

الأنبياء (١٠٥)

III. Peace In Islâm

Peace means in Arabic the word (salâm). The same word is amongst the names of Allâh, as well as the name of the Paradise as quoted by the Qur'ân. The same word (salâm) is also the common salutation of greeting in Islâm.

1- “ **For them is Dar As-Salâm** (dwelling of peace) **granted to them by their Master and He is their Sustainer in recompense for their works.**”

(Al-An'âm : 127)

﴿لَهُمْ دَارُ السَّلَامِ عِنْدَ رَبِّهِمْ وَهُوَ وَلِيُّهُمْ بِمَا كَانُوا يَعْمَلُونَ﴾

الأنعام (١٢٧)

2- “ **And Allâh calls to Dar As-Salâm** (the abode of peace) **and He guides whom He wishes into the right way.**”

(Yûnus : 25)

﴿وَاللَّهُ يَدْعُو إِلَى دَارِ السَّلَامِ وَيَهْدِي مَنْ يَشَاءُ إِلَى صِرَاطٍ مُسْتَقِيمٍ﴾

يونس (٢٥)

Contrary to what appears to occur today by some fanatics in their efforts to propagate Islâm, Muslim advocates have to act in complete compliance with Allâh's words:

“ **Summon you to thy way of the Master with wisdom and with proper advice and argue them in the kindest manner;**

your Master best knows those who stray from His way and He best knows those who have yielded to His guidance.”

(An-Nahl : 125)

﴿ادْعُ إِلَى سَبِيلِ رَبِّكَ بِالْحُكْمَةِ وَالْمَوْعِظَةِ الْحَسَنَةِ وَجَادِلْهُمْ بِالَّتِي هِيَ أَحْسَنُ إِنَّ رَبَّكَ هُوَ أَعْلَمُ بِمَنْ ضَلَّ عَنْ سَبِيلِهِ وَهُوَ أَعْلَمُ بِالْمُهْتَدِينَ﴾

(النحل (١٢٥))

Muslim advocates never forced anybody to embrace Islâm. They fought only for defence and to ensure or establish peace.

Again, it is accepted that good and evil are inherent in the human race, but still there is a strife between them in the individual as well as in the society. For this reason, Islâm allows conditional warfare mainly to repel aggression.

Islâm also stimulates the faculties of the mind to the proper discharge of their functions and to arouse them to the activity for which they are created, notably to acquire immunity against teachings which, being inconsistent with man's life and nature do not stand to reason. For example, one reads in the Qur'ân:

1- “ O man, consider your food. We cause rain to pour down in copious measures. Then We cleave the earth into clefts; and We cause grain to grow in it; and grapes and clover; and the olive and the palm; and gardens of various trees; and fruit and herbage; for your own benefit and for your cattle.”

(‘Abasa : 24 - 32)

﴿فَلْيَنْظُرِ الْإِنْسَانُ إِلَى طَعَامِهِ (٢٤) أَنَا صَبَّبْنَا الْمَاءَ صَبًّا (٢٥) ثُمَّ شَقَقْنَا الْأَرْضَ شَقًّا (٢٦) فَأَنْبَتْنَا فِيهَا حَبًّا (٢٧) وَعَنْبًا وَقَضْبًا (٢٨) وَزَيْتُونًا وَنَخْلًا (٢٩) وَحَدائقَ غُلًّا (٣٠)

وَفَاكِهَةً وَأَبًّا (٣١) مَتَاعًا لَكُمْ وَلِأَنْعَامِكُمْ ﴿٣٢﴾ عبس (٢٤ - ٣٢)

Does this not urge man to reflect on the way his food is produced? Is it not part of the science now called (botany)!

2- “ **Do they not (the disbelievers) contemplate the Kingdom of the Heavens and the Earth and all things that Allâh has created and consider that peradventure their death may be drawing near.? So in what sort of book after it (the Qur’ân) will they believe? ”**

(Al-A‘râf : 185)

﴿أَوَلَمْ يَنْظُرُوا فِي مَلَكُوتِ السَّمَاوَاتِ وَالْأَرْضِ وَمَا خَلَقَ اللَّهُ مِنْ شَيْءٍ وَأَنْ عَسَى أَنْ يَكُونَ قَدِ اقْتَرَبَ أَجَلُهُمْ فَبِأَيِّ حَدِيثٍ بَعْدَهُ يُؤْمِنُونَ﴾

(الأعراف (١٨٥)

3- “ **Have they not journeyed through the earth and seen what has been the end of those who came before them? They were by far mightier and they broke up the earth (for water and minerals) and rendered the land more populous and prosperous and their apostles came to them with evident proofs of their missions, yet Allâh would not wrong them but they wronged themselves.”**

(Ar-Rûm : 9)

﴿أَوَلَمْ يَسِيرُوا فِي الْأَرْضِ فَيَنْظُرُوا كَيْفَ كَانَ عَاقِبَةُ الَّذِينَ مِنْ قَبْلِهِمْ كَانُوا أَشَدَّ مِنْهُمْ قُوَّةً وَأَثَارُوا الْأَرْضَ وَعَمَرُوهَا أَكْثَرَ مِمَّا عَمَرُوهَا وَجَاءَتْهُمْ رُسُلُهُم بِالْبَيِّنَاتِ فَمَا

كَانَ اللَّهُ لِيُظْلِمَهُمْ وَلَكِنْ كَانُوا أَنْفُسَهُمْ يَظْلِمُونَ ﴿٩﴾

الروم (٩)

For sure, people to whom such revelation could be given (Muslims), would not escape understanding technical expeditions to investigate the conditions and status in the past nations. Such investigations naturally lead to the study of (history) and (sociology).

Thus, Islâm urges its followers to study and investigate all sides of Allâh creations in heavens and on earth. During the first few hundred years that followed the revelation, Muslims did so. That glorious age was soon followed by the spreading out of misleading thought and degeneration.

The present atmosphere of religion (faith) is almost saturated with diversity, divergence and even enmity! But, however, Islâm invites those who are votaries and believers to come to one principle comprising :

- 1- Worshipping Allâh only.
- 2- Co-operation
- 3- Progress and civilization are not other names for differentiation.

In the tribal days, when the world was in its primitive stages, homogeneity worked well in every family. Every person did almost everything for himself, and cared for the needs of his family only. Three prevailed stagnation with almost no progress.

By some way or another, man gradually came to discover

the value of division of labour. Occupations were ultimately given to different units of one and the same family. Villages came into existence and grew into towns and cities, which, brought together, gave birth to countries...

The question thus arises :

If this represents the natural way of progress in our material life, why should it not apply to religion? Certainly, religion is higher and nobler than that. It is something elevating. Its essence comprised and developed into (morality) and (ethics). In other words, religion turned our deadly and vanishable materialism into alive and eternal faith. The history of religions is, therefore, a history of the development of ethereal specks into ethics, and variety in religion is merely a result of natural progress and development of mental and faithful thought.

The world of our day is, however, on the move to universality. All the congresses, conferences and international leagues are mere hankering of man towards universal brotherhood.

Again, as regards differences in religions, the common feature is that every person believes that only his faith came from Allâh! This belief is most emphasized by some fanatics pretending to devote themselves to religion. However, this state of affairs went on for centuries, and unfortunately it goes up till now.

Allâh makes no differences between the individuals. He knows no distinction between races, colours... Every one of us is responsible for his own deeds only in the present earthly life and in the Hereafter Allâh made the same earth, the same sun and the same moon to benefit the world. He says in the Qur'ân what means:

“ Surely, those who believe (the Muslims) and those who follow the Jewish (Scriptures) and the Sabians and the

Christians, of them who believe in Allâh and the Last Day and work righteousness, then on them shall be neither fear nor shall they grieve.”

(Al-Mâ'idah : 69)

﴿إِنَّ الَّذِينَ آمَنُوا وَالَّذِينَ هَادُوا وَالصَّابِقُونَ وَالنَّصَارَىٰ مِنْ آمَنَ بِاللَّهِ وَالْيَوْمِ الْآخِرِ وَعَمِلُوا صَالِحًا فَلَا خَوْفٌ عَلَيْهِمْ وَلَا هُمْ يَحْزَنُونَ﴾

المائدة (٦٩)

Evidently, it is Islâm which declared these Gospels of universalism, for the first time in history, in order to bring different religions into closer good relations of fraternity.

Surely, every nation has been given a Messenger from Allâh, and there has been no class of people but had its Warner from Allâh. The Qur'ân says :

1- “And for sure We have sent in every nation a Messenger...”

(An-Nahl : 36)

﴿وَلَقَدْ بَعَثْنَا فِي كُلِّ أُمَّةٍ رَسُولًا﴾ النحل (٣٦)

2- ... There has been no nation (or people) but had its Warner (from Allâh).

(Fâtir : 24)

﴿..... وَإِنْ مِنْ أُمَّةٍ إِلَّا خَلَا فِيهَا نَذِيرٌ﴾ فاطر (٢٤)

3- “ Say (you Muslims) we believe in Allâh and (in) that which has been revealed to us and (in) that which has been revealed to Ibrâhîm and Ismâ‘il and Isaac and Jacob and the tribes and (in) that which was given to Moses and Jesus and (in) that which was given to the Prophets from their Lord; we do not make any distinction between any of them, and to Him we submit.”

(Al-Baqarah : 136)

﴿قُولُوا آمَنَّا بِاللَّهِ وَمَا أُنْزِلَ إِلَيْنَا وَمَا أُنْزِلَ إِلَىٰ إِبْرَاهِيمَ وَإِسْمَاعِيلَ وَإِسْحَاقَ وَيَعْقُوبَ
وَالْأَسْبَاطِ وَمَا أُوتِيَ مُوسَىٰ وَعِيسَىٰ وَمَا أُوتِيَ النَّبِيُّونَ مِنْ رَبِّهِمْ لَا نُفَرِّقُ بَيْنَ أَحَدٍ
مِّنْهُمْ وَنَحْنُ لَهُ مُسْلِمُونَ﴾

البقرة (١٣٦)

Muslims therefore find no difficulty in accepting the Divine origin of every other religion besides Islâm, Allâh The Al-mighty says what means:

“ All people were a single nation, so Allâh raised Prophets as bearers of Good News and as Warners and He revealed with them the Book with the truth...”

(Al-Baqarah : 213)

﴿كَانَ النَّاسُ أُمَّةً وَاحِدَةً فَبَعَثَ اللَّهُ النَّبِيِّينَ مُبَشِّرِينَ وَمُنْذِرِينَ وَأَنْزَلَ مَعَهُمُ الْكِتَابَ
بِالْحَقِّ.....﴾

البقرة (٢١٣)

Undoubtedly, all of us are worshipping One God, Who is the common source of all guidance to the human race. No two revealed religions, in their original purity, could ever minister to humanity principles contradictory or baneful teachings to human salvation. Allâh The Almighty says:

“ Say you believers in the different Books, come to a right-ful agreement between us and you : not to worship except Allâh and not to associate with Him any other thing....”

(Âl-‘Imrân : 64)

﴿ قُلْ يَا أَهْلَ الْكِتَابِ تَعَالَوْا إِلَى كَلِمَةٍ سَوَاءٍ بَيْنَنَا وَبَيْنَكُمْ أَلَّا نَعْبُدَ إِلَّا اللَّهَ وَلَا نُشْرِكَ بِهِ شَيْئًا..... ﴾
آل عمران (٦٤)

In Islâm one is supposed to live mainly in order to work out what is conducive to the best interests of his people and of humanity in general, in terms of obeying Allâh and not going astray. Allâh the Almighty says :

“ Say, for sure my prayers and my rites and my life and my death are all for Allâh the Lord of the worlds.”

(Al-An‘âm : 162)

﴿ قُلْ إِنَّ صَلَاتِي وَنُسُكِي وَمَحْيَايَ وَمَمَاتِي لِلَّهِ رَبِّ الْعَالَمِينَ ﴾
الأنعام (١٦٢)

The Qur’ân is, in fact, the outstanding present support for the truthfulness of most of the Prophets. For example, the fact

that Jesus had no father receives convincing defense from the Qur'ân....

Let us do away with the gulf separating followers of the various creeds. Let us kill our disputes in adoration of Allâh, and worship One, God Only.

“ Certainly, Allâh dose not forgive associating others with Him and forgives lesser sins to whom He pleases.”

(An-Nisâ' : 48)

﴿إِنَّ اللَّهَ لَا يَغْفِرُ أَنْ يُشْرَكَ بِهِ وَيَغْفِرُ مَا دُونَ ذَلِكَ لِمَنْ يَشَاءُ﴾

النساء (٤٨)

Most of the troubles can be got over through worshipping One God. This is the natural, universal and ideal religion. In this sense Allâh addresses the Prophet Muh _ammad (prayers and peace be upon him) by saying:

“ And We have not sent you but for all the peoples as bearer of Good News and as Warner.”

(Saba' : 28)

﴿وَمَا أَرْسَلْنَاكَ إِلَّا كَافَّةً لِلنَّاسِ بَشِيرًا وَنَذِيرًا﴾

سبأ (٢٨)

THE MUSLIM WOMAN

I. The Veil

The position of women in the Muslim Society is unique and outstanding according to the teachings of the Qur'ân. Adultery is strictly prohibited and fundamentals of decency and good behaviour are proclaimed. There is not a single verse which orders (harîm life). Even conservative authorities do not feel it necessary to communicate the Turks or the Iranians in this respect. Most of them have already given up seclusion.

To cover, by any dress, certain parts of our bodies which are not normally left naked is essential, but still the Qur'ân gives priority to the dress of decency and good behaviour. Allâh The Almighty says:

“ O sons of Âdam, We did send down upon you dresses to overlay your shameful parts and a vestrue and the dress of piety and fear from Allâh which is the best; such are of the signs of Allâh that they may reckon.”

(Al-A'râf : 26)

﴿يَا بَنِي آدَمَ قَدْ أَنْزَلْنَا عَلَيْكُمْ لِبَاسًا يُورِي سَوَاءَاتِكُمْ وَرِيشًا وَلِبَاسُ التَّقْوَىٰ ذَٰلِكَ خَيْرٌ ذَٰلِكَ مِنْ آيَاتِ اللَّهِ لَعَلَّهُمْ يَذَّكَّرُونَ﴾

الأعراف (٢٦)

It happened that in order to assure protection for the wives

of the Prophet (prayers and peace be upon him) and for members of the families of the early Muslims when they mingled with the people in Al-Madînah, which was a centre for numerous groups of disbelievers, the Qur'ân said:

“ O Prophet say to your wives and your daughters and the women of the believers that they draw together their overgarments; this will be more proper, that they may be known and thus they will not face trouble, and Allâh is Ever-Forgiving Ever-Merciful.”

(Al-Ahzâb : 59)

﴿يَا أَيُّهَا النَّبِيُّ قُلْ لَأَزْوَاجِكَ وَبَنَاتِكَ وَنِسَاءَ الْمُؤْمِنِينَ يُدْنِينَ عَلَيْهِنَّ مِنْ جَلَابِيبِهِنَّ ذَلِكَ أَدْنَى أَنْ يُعْرَفْنَ فَلَا يُؤْذَيْنَ وَكَانَ اللَّهُ غَفُورًا رَحِيمًا﴾

الأحزاب (٥٩)

However, there is a verse of direct concern with the problem of veil. This verse says:

“ Say to the believing men that they should cast down their looks and guard their private parts, that is purer for them; surely, Allâh is aware of what they do. And say to the believing women that they should cast down their looks and guard their private parts and not display their ornaments except what appears thereof, and let them wear their head-coverings over their bosoms, and not display their ornaments except to their husbands or their fathers or the fathers of their husbands, or their sons, or their sister's sons,

or their women, or those whom their right hands possess, or the male servants not having need (of women), or the children who have not attained knowledge of what is hidden of women, and let them not strike their feet so that what is hidden of their ornaments may be known, and repent to Allâh all of you, O believers, so that you may be prosperous.”

(An-Nûr : 30 - 31)

﴿قُلْ لِلْمُؤْمِنِينَ يَغُضُّوا مِنْ أَبْصَارِهِمْ وَيَحْفَظُوا فُرُوجَهُمْ ذَلِكَ أَزْكَى لَهُمْ إِنَّ اللَّهَ خَبِيرٌ بِمَا يَصْنَعُونَ (٣٠)﴾ وَقُلْ لِلْمُؤْمِنَاتِ يَغْضُضْنَ مِنْ أَبْصَارِهِنَّ وَيَحْفَظْنَ فُرُوجَهُنَّ وَلَا يُبْدِينَ زِينَتَهُنَّ إِلَّا مَا ظَهَرَ مِنْهَا وَلْيَضْرِبْنَ بِخُمُرِهِنَّ عَلَى جُيُوبِهِنَّ وَلَا يُبْدِينَ زِينَتَهُنَّ إِلَّا لِبُعُولَتِهِنَّ أَوْ آبَائِهِنَّ أَوْ أَبْنَاءِ بُعُولَتِهِنَّ أَوْ إِخْوَانِهِنَّ أَوْ بَنِي إِخْوَانِهِنَّ أَوْ بَنِي أَخَوَاتِهِنَّ أَوْ نِسَائِهِنَّ أَوْ مَا مَلَكَتْ أَيْمَانُهُنَّ أَوِ التَّابِعِينَ غَيْرِ أُولِي الْإِرَةِ مِنَ الرِّجَالِ أَوْ الْطِفْلَ الَّذِينَ لَمْ يَظْهَرُوا عَلَى عَوْرَاتِ النِّسَاءِ وَلَا يَضْرِبْنَ بِأَرْجُلِهِنَّ لِيُعْلَمَ مَا يُخْفِينَ مِنْ زِينَتِهِنَّ وَتُوبُوا إِلَى اللَّهِ جَمِيعًا أَيُّهَا الْمُؤْمِنُونَ لَعَلَّكُمْ تُفْلِحُونَ (٣١)﴾

النور (٣٠ - ٣١)

The interpretation of learned Muslim commentators regards the word (ornaments) as referring to both jewellery and fancy articles of clothing. The phrase (let them not strike their feet) is interpreted as an order to refrain from rattling their anklets or anything that might suggest a lascivious glance.

II. Marriage

Muslim women sometimes sacrifice independence of action, notably marriage, to gain social prestige. In Islâm, however, there is no specific age for the marriage of adult girls, but related to the modern ideal of marriage, which is determined by the choice of the individual and not the arrangement of parents, is the marked trend towards a suitable marriage age for girls. Generally, the ideal of marriage by individual choice leads to a later marriage age.

In the Middle East and in the Near East, recent studies indicate that generally in the upper classes, notably among the educated, the age of marriage tends to be higher than in the lower classes.

Throughout the East, parents, especially mothers, are usually afraid that the daughter's marriage chances may be jeopardized if postponed beyond the usual custom of the country, or even the family. Generally speaking, in most countries the legal age of marriage for girls exceeds sixteen years and for boys it exceeds eighteen years of age.

Polygamy is permitted in Islâm, but only under very strict conditions. This is also the case of divorce. Polygamy is limited to those who can live on good terms and care for the family they already have charged of. Lack of sons or sterility are the inevitable causes for the husband's second or third marriage. The

Qur'ân says is this respect:

1. “ ... And marry women of your (own) choice, two or three or four, but if you fear that you shall not be able to deal justly with them then only one...”

(An-Nisâ' : 3)

﴿..... فَأَنْكِحُوا مَا طَابَ لَكُمْ مِنَ النِّسَاءِ مَثْنَى وَثُلَاثَ وَرُبَاعَ فَإِنْ خِفْتُمْ أَلَّا تَعْدِلُوا فَوَاحِدَةً.....﴾
النساء (٣)

- 2- “ And you will never be able to deal justly with women even if you are keen to be so...”

(An-Nisâ : 129)

﴿وَلَنْ تَسْتَطِيعُوا أَنْ تَعْدِلُوا بَيْنَ النِّسَاءِ وَلَوْ حَرَصْتُمْ.....﴾ النساء (١٢٩)

Polygamy and divorce bear a close relationship in regard to the problem of prestige, and they are now no longer considered quite respectable.

Generally, by nature, the normal man excels the normal woman. Here Allâh The Almighty says:

“ Men are the maintainers of women, because Allâh has made some to excel others; and because they (men) spend out their property; the good women are therefore pious, guarding in the absence (of their men) what Allâh has ordained...”

(An-Nisâ' : 34)

﴿الرِّجَالُ قَوَّامُونَ عَلَى النِّسَاءِ بِمَا فَضَّلَ اللَّهُ بَعْضَهُمْ عَلَى بَعْضٍ وَبِمَا أَنْفَقُوا مِنْ

أَمْوَالِهِمْ فَالصَّالِحَاتُ قَانِتَاتٌ حَافِظَاتٌ لِّلْغَيْبِ بِمَا حَفِظَ اللَّهُ ﴿النساء (٣٤)﴾

According to Islâm, Muslim women have the right to include in the marriage contract certain articles on which they may be granted a divorce according to their demand.

The great majority of Muslim women prefer not to be independent wage - earners, but by working in their houses they always contribute to the income to their families. The Muslim woman, from this point of view, is an economic asset to her home, but still not generally economically independent.

III. Status Of The Muslim Woman

Before the age of Science, religion has always been the effective tool for social action. In the earlier days of Islâm, the Prophet (prayers and peace be upon him) was taught by the ideal of elevating the position of women of his day and improving social conditions without violating the prevailing concept of masculine superiority. The teachings of the Qur'ân represented a social reform movement against the existing practices which were significant for those days, and so included mainly:

- 1- Abolition of infanticide.
- 2- Putting limits and restrictions to polygamy.
- 3- Protection of widows and orphans.
- 4- Declaration of marriage contract.
- 5- Establishment of inheritance right to women.
- 6- Bounds of veil to the purpose.

At present, in the light of scientific progress, which is also the message of Islâm, vast changes have taken place in the position of the Muslim women. These changes represent phases of fundamental renaissance including:

- 1- Educational opportunities.
- 2- Occupying various jobs.
- 3- Widening of the field of woman's interest beyond the walls of her home.

Some authoritis now argue that harmonizing the teachings of Islâm with modern thought represents various stages of advance. Nevertheless, almost all Muslims recognize the authority of Islâm to determine the bounds of social progress.

In the last few decades, Al-Azhar authorities in Egypt achieved the foundation of several new Faculties under the name of "Al-Azhar University", which is responsible for teaching boys and girls segregated, modern languages, science, literature, medicine, agriculture and engineering..

Naturally, unions of welfare and philanthropy, care of orphans, charity affairs, simple embroidery, workshops... and employment scheme, furnish the objectives for societies or clubs of high-class women as organizers. However, education of women now furnishes the motif concerning group action amongst women, notably those who became ministers.

Finally, according to the spirit and teachings of Islâm, Muslim women have become aware of their responsibility to promote peace, and the Muslim educated woman already assumes her responsibility as a world wide citizen.

Once more, the major factors in the decline of the Muslim World was the closing of the Door of Regeneration, notably in the woman world after being mingled with several old customs in the various countries reached by Muslims. For such reasons, Muslim authorities now have to do their best in order to direct the course of event to the true Muslim virtues for the good of the world at large.

FAITH

A NECESSITY

I. The Meaning Of Faith In Islâm

Faith is regarded as the base and first outstanding principle in Islâm. The Prophet (prayers and peace be upon him) had to stay about thirteen years at the beginning of his mission to affirm this principle. His common definition of faith (as Tradition) is that: (Faith is something embedded in the heart and justified by deeds and behaviour).

As a matter of extreme regret, one observes that, nowadays faith has been widely misunderstood and Islâm has been greatly misconceived by various numerous agglomerations of Muslims going rather astray. Amongst these are:

A- The fanatics who are not righteous followers of the Qur'ân which says:

1- “ **Invite (people) to the way of your Lord with wisdom and good advice and argue them with the ideal...**”

(An-Nahl : 125)

﴿ادْعُ إِلَى سَبِيلِ رَبِّكَ بِالْحُكْمَةِ وَالْمَوْعِظَةِ الْحَسَنَةِ وَجَادِلْهُمْ بِالَّتِي هِيَ أَحْسَنُ

..... ﴿النحل (١٢٥)

2- “ **And fight in the way of Allâh against those who fight against you, but begin not hostility; so Allâh loves not the aggressors.**”

(Al-Baqarah : 190)

﴿وَقَاتِلُوا فِي سَبِيلِ اللَّهِ الَّذِينَ يَقَاتِلُونَكُمْ وَلَا تَعْتَدُوا إِنَّ اللَّهَ لَا يُحِبُّ الْمُعْتَدِينَ﴾

(البقرة (١٩٠))

3- “ And if they incline to submission, you also incline to it and trust in Allâh; Lo; He is The Ever-Hearing, The Ever-Knowing.”

(Al-Anfâl : 61)

﴿وَأَن جَنَحُوا لِلسَّلَامِ فَاجْنَحْ لَهَا وَتَوَكَّلْ عَلَى اللَّهِ إِنَّهُ هُوَ السَّمِيعُ الْعَلِيمُ﴾ (٦١)

(الأنفال (٦١))

4- “ Do they not (the disbelievers) contemplate the Dominion of the heavens and the earth and the things that Allâh has created and consider that peradventure their death may be drawing near; in what other will they believe if they reject it (The Qur’ân)?”

(Al-A‘râf : 185)

﴿أَوَلَمْ يَنْظُرُوا فِي مَلَكُوتِ السَّمَوَاتِ وَالْأَرْضِ وَمَا خَلَقَ اللَّهُ مِنْ شَيْءٍ وَأَن عَسَىٰ أَن

يَكُونَ قَدْ أَفْتَرَبَ أَجْلُهُمْ فَبِأَيِّ حَدِيثٍ بَعْدَهُ يُؤْمِنُونَ﴾ (الأعراف (١٨٥))

B- Some of the Prophet’s Traditions, and even the Qur’ânic Verses, have been misinterpreted, and led certain agglomerations of primitive Muslims to go astray and to provide false examples as regards the Muslim communities.

C- The selfish motives of some of the so-called “religious

personal” are responsible - to some extent for the unhappy state of affairs, notably amongst those who blow their trumpets as the true followers of Islâm!!

D- Some people, particularly those who know little about Islâm, call it “Muh_ amadanism”, after the name of Muh _ammad (prayers and peace be upon him). For sure, there is no relation whatsoever between the two names

Islâm is not the monopoly of any man or tribe. All people who submit themselves to the will and laws of Allâh come within its fold and are called Muslims.

In fact, literally, the word Islâm means submission, of course submission to Allâh, The Creator, The Almighty, wholeheartedly and with no mental reservation

In Book 1, 2 and 3 of this series, it had been emphasized and made after clear that the greater part of the Qur’ân verses are cosmic verses which urge us to discover the secret of Allâh's creation of all sorts of matter.

If we look into the universe with a will to understand and realize what is behind it, we can at once see that it is governed and controlled by (physical laws) which are unaltered neither with space nor with time.

Man, gifted with talents and intelligence, is born and brought up under the influence and control of systems which are defined by the so-called “human physiology”, and which function within the limitations of fixed laws.

Naturally, the disbelievers do not recognise the above mentioned facts, and the indisputable truth behind the universe and its laws, which Muslims call Allâh, The Almighty. The disbelievers dismiss (as fables of the olden times), the fact that

Islâm is the last righteous religion on earth! They feel ashamed of admitting that (Âdam) and (Hawwâ') are our father and mother, as the Qur'ân says, and yet they feel proud of claiming themselves to be the descendants of monkeys!! The Qur'ân says what means:

“ Those (the disbelievers) are like cattle; nay, more in error for those are the heedless.”

(Al-A'râf : 179)

.....أُولَئِكَ كَالْأَنْعَامِ بَلْ هُمْ أَضَلُّ أُولَئِكَ هُمُ
الْغَافِلُونَ ﴿١٧٩﴾

Now, is it not disappointing and disheartening that man, who can acquire more and more knowledge by progress in science, goes astray and unmindful of faith, even nominal faith?! Is it not much better to become under the class of people who could earn Allâh's Favor? Let us see what the Qur'ân says as examples concerning this matter:

1- “ And when they meet those who believe, they say we believe, but when they become alone with their devils they say we are with you, we were merely mocking.”

(Al-Baqarah : 14)

﴿وَإِذَا لَقُوا الَّذِينَ آمَنُوا قَالُوا آمَنَّا وَإِذَا خَلَوْا إِلَىٰ شَيَاطِينِهِمْ قَالُوا إِنَّا مَعَكُمْ إِنَّمَا نَحْنُ مُسْتَهْزَؤُونَ﴾
البقرة (١٤)

2- “ Say: who is it that sustains you (in life) from the sky and from the earth? Or who is it that has power over hearing and sight? And who is it that brings out the alive from

the dead and the dead from the alive? And who is it that rules and regulates all affairs? They will say Allâh; say then will you not show piety (to Allâh).”

(Yûnus : 31)

﴿قُلْ مَنْ يَرْزُقُكُمْ مِنَ السَّمَاءِ وَالْأَرْضِ أَمَّنْ يَمْلِكُ السَّمْعَ وَالْأَبْصَارَ وَمَنْ يُخْرِجُ الْحَيَّ مِنَ الْمَيِّتِ وَيُخْرِجُ الْمَيِّتَ مِنَ الْحَيِّ وَمَنْ يَدَبِرُ الْأَمْرَ فَسَيَقُولُونَ اللَّهُ فَقُلْ أَفَلَا تَتَّقُونَ﴾
يونس (٣١)

3- “I have not created jinns and men except to worship Me.”

(Adh-Dhâriyât : 56)

﴿وَمَا خَلَقْتُ الْجِنَّ وَالْإِنْسَ إِلَّا لِيَعْبُدُونِ﴾
الذاريات (٥٦)

Allâh has given Books comprising His commandments to some of Prophets such as: Mûsâ, Dawood, 'Îsâ and Muhammad. They had been respectively given the: Tawrah, Zabûr, Injîl and the Qur'ân.

They all agree about the so-called Last Day. Subsequent to that Day, all wise living beings will be brought to trial. It is incumbent on everyone to believe that all his good deeds and his evil deeds will be considered and weighed.

In a word, one can say that faith in Islâm means to believe in : (1) Allâh, (2) the Angels of Allâh, (3) the Books, (4) the Prophets of Allâh and (5) the Last Day.

In the past time, and to a limited extent at present, people worshipped the sun, the moon, the planets, the sea, the fire and even the cow!! All Allâh's Prophets invited people to believe in the Oneness of God, and the Qur'ân records many instances when most Prophets were ridiculed, ignored and even presecuted. This used to take place in spite of the fact that each Prophet came for the enlightenment of his own people and for guiding them to the righteous way. Only Muh_ammed (prayers and peace be upon him) came for the good of the people on earth. Allâh the Almighty says:

“ And We have not sent you but as a mercy to the worlds.”

(Al-Anbiyâ' : 107)

الأنبياء (١٠٧)

﴿وَمَا أَرْسَلْنَاكَ إِلَّا رَحْمَةً لِّلْعَالَمِينَ﴾

This, naturally, means that every Mulsim is invited and requested to deliver the messages of Islâm and to teach it to non-Muslims within his reach.

This readily means that the message of Islâm is an everlasting responsibility.

II. Goodness or Kindness in Islâm

Goodness or kindness is a natural result of faith and outstanding virtues of hummanity. the Arabic word in common use for goodness is ('ih_sân), which may stand for several meanings such as: excellence in work, chairty affairs, bestowing favour, mercifulness, doing things well...Another equal words is (birr).

When a man performs his duty towards Allâh and people as well, he is regarded in Islâm to have done and acheieved favour to himself. Allâh says:

“ Whoso does good it is for himself and who does evil it is against it and your Lord is not an unjust to His servants.”
(Fuṣṣilat : 46)

﴿ مَنْ عَمِلْ صَالِحًا فَلِنَفْسِهِ وَمَنْ أَسَاءَ فَعَلَيْهَا وَمَا رَبُّكَ بِظَلَّامٍ لِلْعَبِيدِ ﴾

فصلت (٤٦)

Some Muslims argue that ('Ihsân) meaning goodness has two phases namely : 1-Bestowing favour on others, and 2-Ecelence in work - The Qur'ân quotes tell us:

1- **“ Lo! Allâh enjoins justice and kindness....”**

(An-Nahl : 90)

﴿ إِنَّ اللَّهَ يَأْمُرُ بِالْعَدْلِ وَالْإِحْسَانِ ﴾ النحل (٩٠)

2- **“ Lo! Allâh favours those who go righteously and those who are kind.”**

(An-Nahl : 128)

﴿إِنَّ اللَّهَ مَعَ الَّذِينَ اتَّقَوْا وَالَّذِينَ هُمْ مُحْسِنُونَ﴾ النحل (١٢٨)

3- “... And do fair deeds, for sure Allâh loves the fair-doers.”

(Al-Baqarah : 195)

﴿.....وَأَحْسِنُوا إِنَّ اللَّهَ يُحِبُّ الْمُحْسِنِينَ﴾ البقرة (١٩٥)

In Islâm, however, goodness, in the broadest meaning, is one of the highest levels of worship. It is the essence spirit and accomplishment of faith.

4- “ Is the reward of fairness aught save fairness?”

(Ar-Rah_mân : 60)

﴿هَلْ جَزَاءُ الْإِحْسَانِ إِلَّا الْإِحْسَانُ﴾ الرحمن (٦٠)

The Prophet Muh_ammad (Allâh’s prayers and peace be upon him) said concernig goodness: (That you worship Allâh as if you see Him, and if you do not see Him, He sees you). This points out to the absolute presence with Allâh, and the necessity of bearing Him in mind. to fear, and still to love, Him, and thus to submit and become sincere to Him.

However, Allâh knows every thing and He says, for example:

1- “We verily created man and We know that his self whispers to him and We are nearer to him than his jugular vein.”

(Qâf :16)

﴿ وَلَقَدْ خَلَقْنَا الْإِنْسَانَ وَنَعْلَمُ مَا تُوَسْوِسُ بِهِ نَفْسُهُ وَنَحْنُ أَقْرَبُ إِلَيْهِ مِنْ حَبْلٍ
الْوَرِيدِ ﴾
ق (١٦)

2- “ Have you not seen that Allâh knows what is in heavens and what is in the earth; there is no secret conference of the three but He is their fourth, nor of five but He is their sixth, nor of less than that or more but He is with them wheresoever they may be, and later, on the day of Resurrection, He will inform them of what they did. Lo! Allâh is Knower of all things.”

(Al-Mujâdalah : 7)

﴿ أَلَمْ تَرَ أَنَّ اللَّهَ يَعْلَمُ مَا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ مَا يَكُونُ مِنْ نَجْوَى ثَلَاثَةٍ إِلَّا هُوَ رَابِعُهُمْ وَلَا خَمْسَةٍ إِلَّا هُوَ سَادِسُهُمْ وَلَا أَدْنَى مِنْ ذَلِكَ وَلَا أَكْثَرُ إِلَّا هُوَ مَعَهُمْ أَيْنَ مَا كَانُوا ثُمَّ يُنَبِّئُهُمْ بِمَا عَمِلُوا يَوْمَ الْقِيَامَةِ إِنَّ اللَّهَ بِكُلِّ شَيْءٍ عَلِيمٌ ﴾

المجادلة (٧)

On top of all this, goodness also means spending money in aspects of vital importance to the community such that the giver, the taker and the whole nation achieve happiness. Allâh says:

“ It is not righteousness that you turn your faces to the east and the west but righteous is he who believes in Allâh and the Last Day and the Angels and the Book and the Prophets and gives wealth, for love Him, to

kinsfolk and to the orphans and the needy and the wayfarer and to those who ask and to set slaves free, and observes (proper) prayer and pays the poor-due and those who keep their covenant when they make one, and the patient in tribulation and adversity and time of distress; such are they who are sincere; such are the pious.”

(Al-Baqarah : 177)

﴿لَيْسَ الْبِرَّ أَنْ تُوَلُّوا وُجُوهَكُمْ قِبَلَ الْمَشْرِقِ وَالْمَغْرِبِ وَلَكِنَّ الْبِرَّ مَنْ آمَنَ بِاللَّهِ وَالْيَوْمِ الْآخِرِ وَالْمَلَائِكَةِ وَالْكِتَابِ وَالنَّبِيِّينَ وَآتَى الْمَالَ عَلَى حُبِّهِ ذَوِي الْقُرْبَىٰ وَالْيَتَامَىٰ وَالْمَسْكِينِ وَابْنَ السَّبِيلِ وَالسَّائِلِينَ وَفِي الرِّقَابِ وَأَقَامَ الصَّلَاةَ وَآتَى الزَّكَاةَ وَالْمُوفُونَ بِعَهْدِهِمْ إِذَا عَاهَدُوا وَالصَّابِرِينَ فِي الْبَأْسَاءِ وَالضَّرَّاءِ وَحِينَ الْبَأْسِ أُولَئِكَ الَّذِينَ صَدَقُوا وَأُولَئِكَ هُمُ الْمُتَّقُونَ﴾
البقرة (١٧٧)

Goodness may also mean originality, depth the accuracy in our deeds. This particular meaning is made clear in the Prophet's Tradition, such as: (For sure Allâh wishes from anyone of you doing something to accomplish it excellently).

Goodness may also mean giving gallantly, warding off evil and paying an ill-deed with a good one. Thus, one reads in the Qur'ân what means:

“And the good deed and the evil deed are not alike; repel the evil deed with one which is better, then Lo! he between whom you there was enmity (will become) as though he was a close friend. But none is granted it save those who are steadfast and none is granted it save the owner of a great fortune.”

(Fuṣṣilat : 34 - 35)

﴿ وَلَا تَسْتَوِي الْحَسَنَةُ وَلَا السَّيِّئَةُ ۚ ادْفَعْ بِالَّتِي هِيَ أَحْسَنُ فَإِذَا الَّذِي بَيْنَكَ وَبَيْنَهُ عَدَاوَةٌ كَأَنَّهُ وَلِيٌّ حَمِيمٌ ۚ ﴾ (٣٤) وَمَا يُلْقَاهَا إِلَّا الَّذِينَ صَبَرُوا وَمَا يُلْقَاهَا إِلَّا ذُو حَظٍّ عَظِيمٍ ﴿

فصلت (٣٤ - ٣٥)

2- “ It was by the mercy of Allâh that you were lenient with them (O Muhammad), for if you had been stern and fierce of heart, they would have dispersed from round about you.”
(Âl -‘Imrân : 159)

﴿ فَبِمَا رَحْمَةٍ مِنَ اللَّهِ لِنْتَ لَهُمْ وَلَوْ كُنْتَ فَظًّا غَلِيظَ الْقَلْبِ لَانْفَضُّوا مِنْ حَوْلِكَ ﴾
آل عمران (١٥٩)

3- Allâh describes the Prophet Muhammad (Allâh’s prayers and peace be upon him) in a verse which says that means:
“Your are of a magnificent character.”

(Al-Qalam : 4)

﴿وَإِنَّكَ لَعَلَىٰ خَلْقٍ عَظِيمٍ ﴾ القل (٤)

THE MUSLIM THOUGHT

I- Outstanding Characteristics Of Islâm

Islâm as a religion is distinguished from other religions by an outstanding characteristic quality established by the verse which says what means :

“ Lo. The worst of beasts in Allâh’s sight are the deaf, the dumb who have no sense.”

(Al- Anfâl : 22)

﴿إِنَّ شَرَّ الدَّوَابِّ عِنْدَ اللَّهِ الصُّمُّ الْبُكْمُ الَّذِينَ لَا يَعْقِلُونَ﴾ (٢٢) الأنفال (٢٢)

The verse declares that Islâm categorically discards ignorance from the qualities of faithful Muslims.

As was mentioned before (in Books 1, 2, 3), Islâm, in effect, combines faith and knowledge comprizing study of the material universe. The two form one whole in which knowledge is the food and faith is the cure which cannot be effective without food.

Islâm fights out ignorance and its teachings urge towards enlightenment and scientific research, because it regards science the principal means for advancement and the proper way for civilization. It is the straight way along which the faithful can achieve happiness in the earthly life and in the Hereafter. In this meaning one reads in the Qur’ân what means :

1- **“.....Allâh will raise those of you who believe**

and those (of you) who are given knowledge to even higher grades of honour...”

(Al-Mujâdah : 11)

﴿..... يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ ۖ﴾

المجادلة (١١)

2 - “ And We have brought to them (the disbelievers) a Book We explained the meaning thereof with knowledge”

(Al-A‘râf : 52)

﴿وَلَقَدْ جِئْنَاهُمْ بِكِتَابٍ فَصَّلْنَاهُ عَلَىٰ عِلْمٍ﴾ الأعراف (٥٢)

As we have already seen, the Qur’ân is full of verses that depict the scientific action and reaction of cosmic bodies and natural phenomena in the universe.

3 - “ We shall show them Our signs in the horizons and within themselves until it will be evident to them that it is the truth; do not your Lord suffice since He is witness over all things?”

(Fussilat : 53)

﴿سَنُرِيهِمْ آيَاتِنَا فِي الْآفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ أَوَلَمْ يَكْفِ بِرَبِّكَ أَنَّهُ عَلَىٰ كُلِّ شَيْءٍ شَهِيدٌ﴾

فصلت (٥٣)

4 - “..... We have neglected nothing in the Book”

(Al- An‘âm : 38)

﴿..... مَا فَرَّطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ.....﴾ الأنعام (٣٨)

5 - “O you assembly of jinns and men ! If it be you are able to penetrate through the diameters of the Heavens and the Earth, then do penetrate; you will never penetrate through them save with (Our) sanction.”

(Ar-Rah_mân : 33)

﴿يَا مَعْشَرَ الْجِنِّ وَالْإِنسِ إِنِ اسْتَطَعْتُمْ أَنْ تَنْفُذُوا مِنْ أَقْطَارِ السَّمَوَاتِ وَالْأَرْضِ فَانْفُذُوا لَا تَنْفُذُونَ إِلَّا بِسُلْطَانٍ﴾

الرحمن (٣٣)

This verse is regarded as an indication of man’s ability to dominate space when Allâh offers him the suitable theory and the technical means.

Space navigation is, however, faced by many obstacles, but amongst the main difficulties, comes the problem of protection against active cosmic rays and, high energy ultraviolet radiation. In this respect the Qur’ân again says what means :

6 - “ On you will be sent splinters of fire (cosmic radiation) and smokeless fire (ultraviolet radiation) and you lack defence.”

(Ar-Rah_mân : 35)

﴿يُرْسَلُ عَلَيْكُمَا شَوْاظٌ مِّن نَّارٍ وَنُحَاسٌ فَلَا تَنْتَصِرَانِ﴾ الرحمن (٣٥)

The interplanetary space is practically an extension of the solar atmosphere. It starts near the sun by an outflow of extremely hot gases upon which are imposed plasma flows. High energy particles (cosmic radiation) are ejected into space.

7 - “And you see the mountains: you deem them solid yet they fly with the flight of clouds...”

(An-Naml : 88)

﴿وَتَرَى الْجِبَالَ تَحْسِبُهَا جَامِدَةً وَهِيَ تَمُرُّ مَرَّ السَّحَابِ﴾ النمل (٨٨)

From the astronomical point of view is this verse not an evidence of the earth's rotations?

Naturally Allâh is aware of man's need for knowledge in this life; and so science is the message of Islâm.

The Prophet Muh_ammad (prayers and peace be upon him) says :

“Imbue wisdom from whatever source it may come from.”

The propagation of Islâm and Islamic thought has not been the work of men only, but the Muslim woman has also participated partly in jobs. The causes that contributed to the

success of Muslims in spreading their religion are numerous.

Of these causes are :

1 - No God save Allâh.

2 - Muḥammad is just one of the Prophets, and Islâm should not be called Muḥammadanism.

3 - Simplicity of Muslim creed.

4 - No contradiction between Islâm and science.

II. Socialism Of Knowledge And Education In Islâm

In the light of what has been mentioned before in this series of pocket - books, one can readily realize that Islâm had introduced vast impact on the progress of human thought and society. The Qur'ân distinguishes the learned people from all others for bearing the torch of Divine Light and being Allâh's agents to banish ignorance from the minds of mankind. The Qur'ân says what means :

“ ... Say, shall they who have knowledge and they who have it not be held equal?....”

(Az-Zumar : 9)

﴿ قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ ﴾ الزمر (٩)

Muḥammad (prayers and peace be upon him) said :

1 - “ The search for knowledge is obligatory upon all Muslims males and females.”

" طلب العلم فريضة على كل مسلم ومسلمة "

This, evidently means that every Muslim must learn and search for knowledge as a requisit by Islâm.

2 - “ He who goes in search of learning is in the path of Allâh until he returns back.”

Islâm also makes it incumbent upon those who have learned to teach others who have not. In most cases free instruction:

books, papers, pens, lamps, food and water were regularly supplied to the students. Board and lodging at the educational establishments were available without any charge. The ancient university of Al-Azhar (more than 1,000 years old) in Egypt is an example. In fact, Al-Azhar remains as a good example of the Islamic universities elsewhere...

The Prophet Muhammad (prayers and peace be upon him) also said about knowledge :

“ Seek knowledge even in China.”

As said before, knowledge in Islâm means all branches of learning conveyed by the word which the human mind could conceive of. This broad meaning is made clear by the Qur’ân which says what means :

“ Do you not see that Allâh sends down water from the sky; thus We produce thereby fruits of varied hues and that in the mountains there are white and red tracks of different intensity and others of raven black colour? And of people, beasts and cattle there are likewise different hues? Verily, of all Allâh’s worshippers those who are imbued with knowledge fear Him most; surely Allâh is Ever-Mighty, Ever-Forgiving.”

(Fâṭir : 27 – 28)

﴿ أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ ثَمَرَاتٍ مُخْتَلِفًا أَلْوَانُهَا وَمِنَ الْجِبَالِ جُدَدٌ بَيَضٌ وَحُمْرٌ مُخْتَلِفٌ أَلْوَانُهَا وَغَرَابِيبُ سُودٍ ﴾ (٢٧) وَمِنَ النَّاسِ وَالدَّوَابِّ

وَالْأَنْعَامِ مُخْتَلِفٌ أَلْوَانُهُ كَذَلِكَ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ إِنَّ اللَّهَ عَزِيزٌ غَفُورٌ ﴿٢٧﴾

فاطر (٢٧ - ٢٨)

Recently, Al-Azhar University has established faculties for teaching modern sciences. Originally it was specialised mainly in religious sciences such as : proper reading of the Qur'ân and its interpretation, the Traditions of the Prophet, language, and related fields...

III. About The Prophecy Of Muḥammad

Muḥammad (prayer and peace be upon him) would not have pretended to be a Prophet (or claim prophecy) and yet suffer for his claim the most severe, dangerous and cruellest afflictions for about 23 years, without having rest, security or even peace.

Tens of thousands of his followers (the Sahâbah) exposed themselves to loss of life and property without realizing from his claim any wealth, affluence, authority or splendour of the type which pretenders and their followers usually attain.

However, Muḥammad's people sometimes offered him valuable property and sometimes authority and kingship in order to withdraw from his call to Islâm which abolished their religions, discredited their intellects and nullified most of their habits.

Sometimes the revelation brought Muḥammad (prayers and peace be upon him) what caused him pain, or declared mistaken in an opinion he had held, or even blamed him for an action of his. The following is an example.

“ (The Prophet) Frowned and turned away; because there came to him the blind man (interrupting); but what could tell you that perchance he might grow in understanding; or that he might receive admonition and the teaching might profit him; as to him who regards himself self-sufficient; to him do you attend; though it is no blame on you if he grows not (in understanding); but as to him who came to you striving earnestly; and with fear in his heart; of him were you unmindful; oh no.....”

(‘Abasa :1 – 11)

﴿عَبَسَ وَتَوَلَّى (١) أَنْ جَاءَهُ الْأَعْمَى (٢) وَمَا يُدْرِيكَ لَعَلَّهٗ يُزَكَّى (٣) أَوْ يَذَّكَّرُ فَتَنْفَعَهُ الذِّكْرُ (٤) أَمَّا مِنْ اسْتَغْنَى (٥) فَأَنْتَ لَهُ تَصَدَّى (٦) وَمَا عَلَيْكَ أَلَّا يَزَكَّى (٧) وَأَمَّا مِنْ جَاءَكَ يَسْعَى (٨) وَهُوَ يَخْشَى (٩) فَأَنْتَ عَنْهُ تَلَهَّى (١٠) كَلَّا إِنَّهَا تَذْكِرَةٌ﴾
عبس (١ - ١١)

Moreover, whoever reads the Qur'ân will find in it arguments with the Jews and the Christians regarding their beliefs and philosophy notably those concerning God. For example Qur'ân says what means :

1 - “ And the Jews said : Allâh's hand is tied up; be their hands tied up and be they accused for the (blasphemy) they utter...”

(Al-Mâ'idah : 64)

﴿وَقَالَتِ الْيَهُودُ يَدُ اللَّهِ مَغْلُولَةٌ غُلَّتْ أَيْدِيهِمْ وَلَعِنَا بِمَا قَالُوا﴾ المائدة (٦٤)

2 - “And the Jews call ‘Uzair a son of Allâh and the Christians call Christ the son of Allâh; that is their saying by their mouths imitating what the disbelievers of old used to say; Allâh's curse be on them as long as they are deluded away from the truth.”

(At-Taubah : 30)

﴿وَقَالَتِ الْيَهُودُ عُزَيْرُ ابْنِ اللَّهِ وَقَالَتِ النَّصَارَى الْمَسِيحُ ابْنُ اللَّهِ ذَلِكَ قَوْلُهُمْ بِأَفْوَاهِهِمْ يُضَاهَوْنَ قَوْلَ الَّذِينَ كَفَرُوا مِنْ قَبْلُ قَاتَلَهُمُ اللَّهُ أَنَّى يُؤْفَكُونَ﴾

التوبة (٣٠)

3 - “ They do disbelieve who say : (surely) Allâh is the Christ son of Mary...”

(Al-Mâ'idah : 72)

المائدة (٧٢) ﴿لَقَدْ كَفَرَ الَّذِينَ قَالُوا إِنَّ اللَّهَ هُوَ الْمَسِيحُ ابْنُ مَرْيَمَ﴾

4 - “ They do disbelieve who say : Allâh is one of three in a trinity...”

(Al-Mâ'idah : 73)

المائدة (٧٣) ﴿لَقَدْ كَفَرَ الَّذِينَ قَالُوا إِنَّ اللَّهَ ثَلَاثٌ ثَلَاثَةٌ﴾

From the finance point of view, Islâm imposes upon every Muslim generally :

- 1 - A tax of 2.5 per cent when possessing ten gold pounds (or equivalent currency) per one year.
- 2 - An equivalent tax is also imposed upon trade goods.
- 3 - A tax on camels, sheep and goats whose proportion differed according to the difference in their number.
- 4 - A land tax and the tithe. A tenth of the harvest or a half, in accordance with the method of irrigation adopted, when the harvest amounts to fifty kilograms or more.
- 5 - The Fitr tax is paid for every individual every Ramadân (for himself and those whom he supports.).

For non-Muslims, only a sort of poll - tax is imposed, whose amount is four dinars a year for the rich, two for the middle class

and one only for the poor. From these are exempted, the old, children, women, those who are unable to earn a living, those who are devoted to worshipping and slaves. Evidently, this applies to the people who are free, sane, able to work and do earn money, in return for the general services achieved by the state for its subjects. Of these services are : defence, building, digging canals, paying salaries., etc..

Obviously, Islâm imposed a mild tax on the land in exchange for its use. Muslims were, by comparison with others, the most human and merciful people the world has ever known. Some European writers as : Gustav Le Bon, Sir Thomas Arnold, Norman Baines and many others have reached the same conclusion.

SKY AND HEAVENS ASTRONOMICALLY AND AS MENTIONED IN THE QUR'ÂN

I. What Sky And Heavens Mean

For reasonably acceptable interpretation of the Qur'ânic verses, it is preferable to use the word “sky” to stand only for the earth’s atmosphere and its blue dome which appears by day over our heads. The word “heavens” strictly means all the heavenly bodies from which the entire universe has been built up. The following verses readily reflect these two meanings :

1 - “ And We made the sky (the atmosphere) preserved roof yet they care not to recognize its (multiple) services.”

(Al-Anbiyâ' : 32)

﴿وَجَعَلْنَا السَّمَاءَ سَقْفًا مَحْفُوظًا وَهُمْ عَنْ آيَاتِهَا مُعْرِضُونَ﴾ (الأنبياء (٣٢)

As said before (in Book 3), the earth’s atmosphere renders vital services to living creatures on earth, notably human beings.

2 - “ ... And the water that Allâh sends down from the sky (nimbus clouds in the atmosphere), then gives life therewith to the earth after its death...”

(Al-Baqarah : 164)

﴿وَمَا أَنزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا﴾ (البقرة (١٦٤)

3 - “ That whom He wills to leave straying He makes his breast close and constricted as if he has to rise up in the sky.”

(Al-An‘âm : 125)

﴿وَمَنْ يُرِدْ أَنْ يُضِلَّهُ يَجْعَلْ صَدْرَهُ ضَيِّقًا حَرَجًا كَأَنَّمَا يَصْعَدُ فِي السَّمَاءِ﴾

(الأنعام (١٢٥)

It is well known that atmospheric oxygen decreases with increasing height above the earth’s surface. This is why any individual rising up in the sky without external protection soon feels as though his breast has been constricted, - see also Book (2).

4 - “ With power and skill did We construct the heavens and indeed We are expanding them.”

(Adh-Dhariyât : 47)=

﴿وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ﴾ (الذاريات (٤٧)

The receding of the galaxies and the consequent expansion of the universe are well known in astronomy.

5 - “And not the weight of an atom in the earth or in the heavens is hidden from your Lord.”

(Yûnus : 61)

﴿وَمَا يَعْزُبُ عَنْ رَبِّكَ مِنْ مِثْقَالِ ذَرَّةٍ فِي الْأَرْضِ وَلَا فِي السَّمَاءِ﴾ (يونس (٦١)

6 - “And nothing is hidden from Allâh either in the earth or in the heavens.”

(Ibrâhîm : 38)

﴿وَمَا يَخْفَىٰ عَلَى اللَّهِ مِنْ شَيْءٍ فِي الْأَرْضِ وَلَا فِي السَّمَاءِ﴾ إبراهيم (٣٨)

7 - “ And indeed We have made zodiac-signs in the heaven and We have made it fair seeming to the beholders.”

(Al-Hijr : 16)

﴿وَلَقَدْ جَعَلْنَا فِي السَّمَاءِ بُرُوجًا وَزَيَّنَّاهَا لِلنَّاظِرِينَ﴾ الحجر (١٦)

The planets and moon are always found in space within a narrow belt centered on the ecliptic, called the “Zodiac” or (the zone of the animals). The Zodiac was divided into twelve parts or “signs”. Their representation on paper looks almost like decoration : Aries (ram), Taurus (bull), Gemini (twins), Cancer (crab), Leo (Lion), Virgo (virgin), Libra (balance), Scorpio (scorpion), Sagittarius (archer), Capricornus (goat), Aquarius (waterbearer), and Pisces (fishes).

The blue sky which appears over our heads during daytime has no real existence. It is nothing more than the result of the scattering of sunlight in the lowest layers of the atmosphere extending to about 200 kilometers above the earth’s surface. Scattering is produced by air-molecules, water - vapour and dust-particles suspended in the air. For true scattering of light to take place, the particles must be smaller than the wave-length of the scattered light, otherwise diffuse reflection takes place instead of scattering.

The amount of light-energy which may be scattered is inversely proportional to the fourth power of the wave length of the scattered light. In other words, when two waves of light of length 0.6 and 0.5 micron respectively are scattered, the ratio of the scattered energy will be :

$$\frac{\text{scattered energy (1) } .5 \times .5 \times .5 \times .5}{\text{scattered energy (2) } .6 \times .6 \times .6 \times .6} = \frac{625}{1296} = \frac{1}{2}$$

The sun radiates maximum light-energy in the blue wavelength which is relatively short compared with the yellow or red wave lengths. Maximum scattering of Sunlight, therefore, takes place in the range of the blue light, within the first 200 kilometers of the atmosphere and give rise to the blue colour of the sky.

II. Are We Alone In The Material Universe?

This question was raised probably since man dwelt the earth, but has not yet received the final answer. Scientifically speaking, it is acceptable to assume that wherever physical environments like these of the earth prevail over any other planets in the vast universe, life can evolve and beings can nourish and flourish with the passage of sufficient time up to the stage of human beings.

Miraculously enough, the Qur'ân gave the answer to this question about 1500 year ago. Several verses refer (in various ways) to the existence of wise beings in heavens. Thus we read, for example what means :

1 - “ Seek they then other than Allâh’s religion? And to Him submitted whoever in the heavens and the earth.”

(Âl-‘Imrân : 83).

﴿أَفَغَيْرَ دِينِ اللَّهِ يَبْغُونَ وَلَهُ أَسْلَمَ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ﴾

آل عمران (٨٣)

2 - “ Whoever in the heavens and the earth ask Him...”

(Ar-Rah_mân : 29)

﴿يَسْأَلُهُ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ﴾ الرحمن (٢٩)

3 - “ And your Lord best knows those who are in the heavens and the earth....”

(Al-Isrâ' : 55)

﴿وَرَبِّكَ أَعْلَمُ بِمَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ﴾ الاسراء (٥٥)

4 - “ All those in the heavens and the earth ask of Him; every moment He is in a state (of glory).”

(Ar-Rah_mân : 29)

﴿يَسْأَلُهُ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ كُلَّ يَوْمٍ هُوَ فِي شَأْنٍ﴾ الرحمن (٢٩)

5 - “ There is none in the heavens and the earth but comes to Ar-Ra_hmân (The All-Merciful) as a slave.”

(Mariam : 93)

﴿إِنْ كُلُّ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ إِلَّا آتَى الرَّحْمَنِ عَبْدًا﴾ مريم (٩٣)

6 - “ Have you not seen that to Allâh makes submission whoever is in the heavens and whoever is in the earth....”

(Al-Hajj : 18)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَسْجُدُ لَهُ مَنْ فِي السَّمَاوَاتِ وَمَنْ فِي الْأَرْضِ...﴾ الحج (١٨)

7 - “ Have you not seen that Allâh do prostrate for Him all those who are in the heavens and the earth....”

(An-Nur : 41)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَسْجُدُ لَهُ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ﴾ النور (٤١)

8 - “ Say : No one in the heavens and the earth knows the unseen but Allâh...”

(An-Naml : 65)

﴿قُلْ لَا يَعْلَمُ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ الْغَيْبَ إِلَّا اللَّهُ﴾ النمل (٦٥)

9 - “And to His signs is the creation of the heavens and the earth and what He has spread forth in both of them of living beings; and He is All-Powerful to gather them together when He wills.”

(Ash-Shûrâ : 29)

﴿وَمِنْ آيَاتِهِ خَلْقُ السَّمَاوَاتِ وَالْأَرْضِ وَمَا بَثَّ فِيهِمَا مِنْ دَابَّةٍ وَهُوَ عَلَى جَمْعِهِمْ إِذَا يَشَاءُ قَدِيرٌ﴾ (٢٩) الشورى (٢٩)

10 - “ And to Allâh makes obeisance every living creature that is in the heavens and that is in the earth and the angels (too) and they are not proud.”

(An-Nahl : 49)

﴿وَلِلَّهِ يَسْجُدُ مَا فِي السَّمَاوَاتِ وَمَا فِي الْأَرْضِ مِنَ الدَّابَّةِ وَالْمَلَائِكَةِ وَهُمْ لَا يَسْتَكْبِرُونَ﴾ (٤٩) النحل (٤٩)

(٤٩) النحل

This last verse is amongst the verses which clearly differentiate between angels and other beings, or material creatures, on planets (similar to our own earth) dispersed through the vast universe. In the age of science, astronomers believe that we are not alone in the entire universe.

III. Seven Heavens

Celestial bodies are of different sizes, nature and forms. The most common are : stars (including suns), planets, satellites (like the earth's moon), comets, meteorites and meteors. The so-called galaxies are formed of billions of stars within each individual galaxy. Solar systems generally include unique systems composed of : sun, planets, satellites, meteorites, comets and meteors.

Evidently, these members comprise six types of celestial bodies, apart from the earth's atmosphere which also exists over our heads. Their total number is seven! Number seven, therefore, may be taken to stand for the different types of structure appearing over our heads. Qur'ân says what means :

1 - "Blessed is He Who made zodiacs in the heavens and made therein a lamp and a bright moon (reflecting light)."

(Al-Furqân : 61)

﴿تَبَارَكَ الَّذِي جَعَلَ فِي السَّمَاءِ بُرُوجًا وَجَعَلَ فِيهَا سِرَاجًا وَقَمَرًا مُنِيرًا (٦١)﴾

الفرقان (٦١)

2 - " And He has made subservient the sun and the moon, each one moves swiftly to an appointed time."

(Luqmân : 29)

﴿وَسَخَّرَ الشَّمْسَ وَالْقَمَرَ كُلٌّ يَجْرِي إِلَىٰ أَجَلٍ مُّسَمًّى﴾ لقمان (٢٩)

3 - "And all float on in orbits."

(Yâsîn : 40)

﴿وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ﴾ (٤٠) يس (٤٠)

4 - " Allâh is He Who raised the heavens without any pillars that you can see...."

(Ar-Ra'd : 2)

﴿اللَّهُ الَّذِي رَفَعَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا.....﴾ الرعد (٢)

5 - " And He withholds the heavens from falling on the earth except with His permission."

(Al-Hajj : 65)

﴿وَيُمْسِكُ السَّمَاءَ أَنْ تَقَعَ عَلَى الْأَرْضِ إِلَّا بِإِذْنِهِ﴾ الحج (٦٥)

Surely, nothing falls from outer space and may reach the earth's surface except meteorites. The earth's atmosphere plays a big role in splitting them into fine dust, apart from a limited number of occasions in which the meteorites reached the earth's surface.

For a long time, some people used to think that the heavens may be regarded as dwelling homes, mainly for ghosts, and could be angels too!

Again, astronomically speaking, with respect to us on earth, however, the entire universe can be regarded as composed of seven heavens, one after the other as follows :

1 - The solar system (5 light hours in diameter).

2 - Our galaxy, or the so-called the "Milky Way", (100,000 light years in diameter).

3 - The "Local group", which contains 17 known galaxies spread over a region in space about 3 million light years. The nearest galaxy (in space) to our galaxy is called Andromeda. It is a member of this group, and lies a distance equal to 750.000 light years from the Milky Way. There may exist a few undiscovered members, notably in regions hidden by the dust of Milky Way. The diameter of the sphere enclosing all the members of the local group averages 2.3 million light years.

4 - The cluster of the first order :

Beyond the local group, at a distance of a few times its diameter, we find another similar group of galaxies like the local group. The nearest rich cluster of galaxies is the Virgo cluster. It lies at about 50 - 70 million light years from us. The linear diameter of the cluster is about 7 million light years.

5 - The cluster of the second order :

Several experts in astronomy are of the opinion that a large collection of clusters of the first order comprises a second order cluster. The overall diameter of this super-cluster is between 100 and 150 million light years. The total mass of super-cluster is not less than 10^{15} solar masses.

6 - Clusters of the third order :

These are supposed to be groups of clusters that exist beyond the second order cluster. They are not easily conspicuous to us. The most remote clusters of this order are at distances between 2 and 3 billion light years. The total volume of the space occupied by the remote clusters is 10^{14} times the space occupied by our own galaxy.

Evidently, the universe is a universe of galaxies. Also, there is a tendency for galaxies to be found in clusters, and for the clusters themselves to be grouped in second order clusters.

7 - Galaxies as Radio Sources :

Since World War (1), some thousands of discrete radio sources, each occupying a small region in space, have been discovered and catalogued. There is evidence that most of those distant sources are extra-galactic. At present, there are about 100 radio sources that have been identified with individual galaxies. The radio galaxies fall into two groups: normal and peculiar galaxies emitting radio waves. Some of these galaxies have been observed to be receding from us at about 15 per cent of the speed of light! Others recede at greater speeds, approaching 80 per cent of the velocity of light!! They are called (quasi - stars) or (quasars). They are between 5 and 15 billion light years away from us. Allâh says in the Qur'ân what means :

1 - “ Indeed I could swear by the sites of the stars; and it is a great oath if you are aware of them.”

(Al-Wâqi'ah : 75-76)

﴿ فَلَا أُقْسِمُ بِمَوَاقِعِ النُّجُومِ (٧٥) وَإِنَّهُ لَقَسَمٌ لَّوْ تَعْلَمُونَ عَظِيمٌ (٧٦) ﴾

(الواقعة (٧٥ - ٧٦)

2- “ Verily, in the creation of the heavens and the earth, and in the variation of night and day, are signs for those of understanding.”

(Âl-‘Imrân : 190)

﴿ إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِأُولِي الْأَبْصَارِ (١٩٠) ﴾

آل عمران (١٩٠)

3 - “ ... Those who muse on the creation of the heavens and of the earth : O our Lord, say they, You have not created this in vain; glory be to You...”

(Âl-‘Imrân : 191)

﴿وَيَتَفَكَّرُونَ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ رَبَّنَا مَا خَلَقْتَ هَذَا بَاطِلًا سُبْحَانَكَ﴾

آل عمران (١٩١)

4 - “ Do they not consider the kingdom of the heavens and the earth and what things Allâh has created?....”

(Al-A‘râf : 185)

﴿أَوَلَمْ يَنْظُرُوا فِي مَلَكُوتِ السَّمَاوَاتِ وَالْأَرْضِ وَمَا خَلَقَ اللَّهُ مِنْ شَيْءٍ﴾

الأعراف (١٨٥)

5 - “ Surely, Allâh upholds the heavens and the earth lest they come to naught, and if they come to naught none can uphold them after Him....”

(Fâtîr : 41)

﴿إِنَّ اللَّهَ يُمْسِكُ السَّمَاوَاتِ وَالْأَرْضَ أَنْ تَزُولَا وَلَئِنْ زَالَتَا إِنْ أُمْسِكَهُمَا مِنْ أَحَدٍ مِنْ بَعْدِهِ.....﴾

فاطر (٤١)

Finally, to those who just argue without background of knowledge, the Qur’ân says what means :

6 - “ Say: have you any knowledge so you would bring it forth to us? You only follow conjecture and you only tell lies”

(Al-An‘âm : 148)

﴿قُلْ هَلْ عِنْدَكُمْ مِنْ عِلْمٍ فَتُخْرِجُوهُ لَنَا إِنْ تَتَّبِعُونَ إِلَّا الظَّنَّ وَإِنْ أَنْتُمْ إِلَّا تَخْرُصُونَ (١٤٨)﴾

(الأنعام (١٤٨)

7 - “ And when it is said to them come to that which Allâh has revealed and to the Messenger, they say : Sufficient for us is that wherein we found our fathers; (what!) even though their fathers knew nothing and had no guidance!”

(Al-Mâ'idah : 104)

﴿وَإِذَا قِيلَ لَهُمْ تَعَالَوْا إِلَىٰ مَا أَنْزَلَ اللَّهُ وَإِلَى الرَّسُولِ قَالُوا حَسْبُنَا مَا وَجَدْنَا عَلَيْهِ آبَاءَنَا أَوْ لَوْ كَانَ آبَاؤُهُمْ لَا يَعْلَمُونَ شَيْئًا وَلَا يَهْتَدُونَ (١٠٤)﴾

(المائدة (١٠٤)

ISLÂM AND SCIENCE

- 5 -

1. FOREWORD

Islâm, in the true essence, is not merely theoretical, but also practical on a large scale. Its teachings match the physical laws of nature, and do not neglect the normal needs of human beings and their life. In this respect the Qur'ân says, for example:

“And do not forget your portion of the earthy life and fair as Allâh has been Fair to you.”

(Al-Qaşas : 77)

﴿وَلَا تَنْسَ نَصِيبَكَ مِنَ الدُّنْيَا وَأَحْسِنَ كَمَا أَحْسَنَ اللَّهُ إِلَيْكَ﴾ القصص (٧٧)

In order to lead man to the righteous path and to moral values, the Prophet's Traditions and the Qur'ân guided him together fully and in detail. They both call for obeying Allâh, superior manners and sincerity. A real Muslim is he whose efforts are directed mostly to the benefit of the community indiscriminately;

“ Those who will remember Allâh are those who are apprehensive of Allâh.”

(Al-'A'lâ : 10)

﴿سَيَذَكَّرُ مَنْ يَخْشَى﴾ الأعلى (١٠)

“ And keep the covenant. Lo, of the covenant it will be asked”

(Al-Isrâ' : 34)

﴿..... وَأَوْفُوا بِالْعَهْدِ إِنَّ الْعَهْدَ كَانَ مَسْئُولًا﴾ الإسراء (٣٤)

No doubt, the values of fear of Allâh, sincerity and mercy are the outstanding values that lead the Muslim directly towards (A state of faith and science), comprizing ardency, diligence and faithfulness adhering to the bright illuminative values:

“And this is My path; it is straight so follow it; and follow not other ways lest you would be parted away from His way; this is Allâh’s advice that you may be pious.”

(Al-An‘âm: 153).

﴿وَأَنَّ هَذَا صِرَاطِي مُسْتَقِيمًا فَاتَّبِعُوهُ وَلَا تَتَّبِعُوا السُّبُلَ فَتَفَرَّقَ بِكُمْ عَنْ سَبِيلِهِ ذَلِكُمْ وَصَّاكُمْ بِهِ لَعَلَّكُمْ تَتَّقُونَ﴾
 الأنعام (١٥٣)

When we call Allâh by His Names the Beneficent and the Merciful, we generally mean abstract goodness and tenderness:

“Say ask Allâh or ask the All-Merciful, whichever you ask; His are the utmost Magnificent Names.”

(Al-Isrâ’ : 110).

﴿قُلْ ادْعُوا اللَّهَ أَوْ ادْعُوا الرَّحْمَنَ أَيًّا مَا تَدْعُوا فَلَهُ الْأَسْمَاءُ الْحُسْنَىٰ﴾
 الإسراء (١١٠)

Muslims usually start their work with the name of Allâh, followed by The All-Merciful and The Ever-Merciful. However, it is said that one is general, while the other is particular.

1. **“..... And My Mercy embraces everything ...”**

(Al-A‘râf : 156).

١ - ﴿... وَرَحْمَتِي وَسِعَتْ كُلَّ شَيْءٍ...﴾ (الأعراف (١٥٦))

2. “Say Allâh has prescribed for Himself Mercy ...”

(Al-An‘âm: 12)

٢ - ﴿... قُلْ لِلَّهِ كُتِبَ عَلَى نَفْسِهِ الرَّحْمَةُ...﴾ (الأُنعام (١٢))

This is why a true Muslim is assumed to help those who deserve being helped irrespective of nationality, race or even religion, by various ways, such as “medical treatment, education, financial support...”

1. “And We have not sent you but mercy to mankind.”

(Al-Anbiyâ :107)

١ - ﴿وَمَا أَرْسَلْنَاكَ إِلَّا رَحْمَةً لِّلْعَالَمِينَ﴾ (الأنبياء (١٠٧))

This verse concerns the Prophet Muhammad. Referring to the followers of Jesus, the Qur’ân says.

2. “.... And placed compassion and mercy in the hearts of those who followed him ...”

(Al-Hadîd : 27)

٢ - ﴿وَجَعَلْنَا فِي قُلُوبِ الَّذِينَ اتَّبَعُوهُ رَأْفَةً وَرَحْمَةً﴾ (الحديد (٢٧))

Referring to the scripture revealed to Moses, the Qur’ân says:

3. “... And before it was the Book of Moses a leader and a mercy ...”

(Al-Ahqâf :12)

In the sense of opening the gates of good odour, the Qur'ân says:

4. “That which Allâh opens to mankind of mercy none can withhold it ...”

(Fâṭir : 2)

The principal aim of the present series is not merely to interpret, or comment on, some verses of the Qur'ân which are bearing on science, but also to present to the reader the mental peace required, or at least to offer him the chance, in order to think over his situation and thus place him directly with his essential problems, namely the religious problems.

In fact, the question is not simply either to believe or not to believe ... One has first to be convinced (mentally). Our belief should neither be merely paradoxical nor dogmatic. Argumentation regarding this problem is natural and necessary in order to reach a balanced state of mental satisfaction, and avoid despair and the tendency of indifference which do not afford peace. Fear from the future and not being free from agony are the ultimate result.

For such reasons the Qur'ân rejects blind belief.

ARGUMENTATION IN THE QUR'ÂN

I. Foreword

Islâm rejects blind belief and gives unique directions to think freely, and to discuss the outstanding topics on which man's belief should be built.

The arguments of the Qur'ân are formulated in a sublime style which strikes the minds with its logic and simplicity. Some are unprecedented to strike the hearts too. The following are examples:

1) Concerning the existence of the Creator (Allâh):

“Were they created of nothing? Or were they (themselves) the creators? Or did they create the heavens and the earth? Nay they have no certitude. Or are the treasures of your Lord with them? Or are they the dominators (of affairs)?”

(At-Tûr : 35-37)

﴿أَمْ خَلَقُوا مِنْ غَيْرِ شَيْءٍ أَمْ هُمُ الْخَالِقُونَ (٣٥) أَمْ خَلَقُوا السَّمَوَاتِ وَالْأَرْضَ بَلْ لَّا يُوقِنُونَ (٣٦) أَمْ عِنْدَهُمْ خَزَائِنُ رَبِّكَ أَمْ هُمُ الْمَسْطُورُونَ﴾

الطور (٣٧-٣٥)

2) The Hereafter is by all means believed to be a (religious) fact. In this respect the Qur'ân says, for example:

“And he (the disbeliever) gave us an example and forgot himself being created; He said Who resurrects (raises up) the rotten once more? Say He Who formerly created them for the first time raises them up (resurrects them) back again to life and He is Ever-Knowing of every creation.”

(Yâsîn : 78-79)

﴿وَضَرَبَ لَنَا مَثَلًا وَنَسِيَ خَلْقَهُ قَالَ مَنْ يُحْيِي الْعِظَامَ وَهِيَ رَمِيمٌ ﴿٧٨﴾ قُلْ يُحْيِيهَا الَّذِي

أَنْشَأَهَا أَوَّلَ مَرَّةٍ وَهُوَ بِكُلِّ خَلْقٍ عَلِيمٌ ﴿٧٩﴾﴾

يس (٧٨ - ٧٩)

3) Regarding the Oneness of The Almighty Allâh; He says:

“If there were in them (the heavens and the earth) other gods besides Allâh there would have been corruption in both”

(Al-Anbiyâ' : 22)

الأنبياء (٢٢)

﴿لَوْ كَانَ فِيهِمَا آلِهَةٌ إِلَّا اللَّهُ لَفَسَدَتَا﴾

4) **“No son did Allâh beget, nor is there any god along with Him, behold, othwise each god would have gone away what he with created and some would have exalted themselves over others.”**

(Al-Mu'minûn : 91)

﴿مَا اتَّخَذَ اللَّهُ مِنْ وَلَدٍ وَمَا كَانَ مَعَهُ مِنْ إِلَهٍ إِذَا لَذَهَبَ كُلُّ إِلَهٍ بِمَا خَلَقَ وَلَعَلَّ بَعْضُهُمْ

المؤمنون (٩١)

﴿عَلَىٰ بَعْضٍ ...﴾

5) The following verse is an ideal example of argumentation concerning standing to reason in the Qur'ân :

“Have you (Muḥammad) not seen the one who argued with Abraham about his Lord, That Allâh gave him the kingship. Abraham thus said: My Master is He Who offers life and inflicts death, He said: And I offer life and inflict death.

Abraham said: Certainly, My Lord brings the sun from the east, and you have to bring it from the west. He, who did not believe, became confounded and Allâh does not guide the unjust people.”

(Al-Baqarah : 258)

﴿ أَلَمْ تَرَ إِلَى الَّذِي حَاجَّ إِبْرَاهِيمَ فِي رَبِّهِ أَنْ آتَاهُ اللَّهُ الْمُلْكَ إِذْ قَالَ إِبْرَاهِيمُ رَبِّي
الَّذِي يُحْيِي وَيُمِيتُ قَالَ أَنَا أُحْيِي وَأُمِيتُ قَالَ إِبْرَاهِيمُ فَإِنَّ اللَّهَ يَأْتِي بِالشَّمْسِ مِنَ
الْمَشْرِقِ فَأْتِ بِهَا مِنَ الْمَغْرِبِ فَبُهِتَ الَّذِي كَفَرَ وَاللَّهُ لَا يَهْدِي الْقَوْمَ الظَّالِمِينَ ﴾
البقرة (٢٥٨)

II. The Novelette Of Abraham

Historically, the people of the prophet Abraham (Babylonians) worshipped idols which were taken to stand for various heavenly bodies, on the top of which Marduk represented the planet Jupiter.

Abraham's father, 'Âzar, was chief of his people. His name was found among the names of the kings of Babylone (from 1126 to 1105 B.C). It possible, however, that Abraham lived in Oar, long before this date as may be deduced from the Qur'ân, which, as far as an astronomer may readily conclude, describes excellently an occasion of total solar eclipse. The event was followed carefully by Âbraham who thus realized the actual status of Jupiter, the moon and the sun, together with the status of their major idols. He became sure that none of them was god.

Eclipses have traditionally struck terror into mankind. But when the arrangement of the Solar System was understood, they could be seen as consequences of geometry. The earth and the moon throw long conical shadows in sunlight. The earth's shadow causes eclipses of the moon and the moon's shadow gives rise to solar eclipses.

A solar eclipse may be total in the part where the cone of shadow of the moon just touches the earth's surface at some place, and may be annular elsewhere. Annual eclipses are more frequent than total eclipses.

Within the moon's shadow daylight is rapidly cut short as the sun's disc disappears behind the body of the moon, and the light fades into twilight. The moon's shadow sweeps very fast across the earth's surface, and a total eclipse thus lasts a very short time. It is not amazing, therefore, that the Qur'ân introduces the word (janna) to express such rapid and abnormal changes in daylight

The actual speed of the shadow across the earth's surface varies with the latitude of the place. At the equator the longest possible total solar eclipse lasts 7 min. and 40 sec.; while at latitude 45 degrees it is 6.5 minutes. At Oar it is within the range 6 to 7 minutes.

When light fades into twilight, only one planet appears in the sky. This planet is (as usual) Venus, but it soon disappears. This stage is followed by the appearance of the edge of moon's disc against the sun. The eclipse is over as soon as the last dent in the sun's disc vanishes.

The Qu r'ân narrates in the story of Abraham :

“Lo! Abraham said to his father 'Āzar: Do you take idols for gods? For sure I see you and your people in manifested error. So also did We show Abraham the nature and wonders of the heavens and the earth that he might have certituted (with understanding). When the night rapidly covered him, he saw a planet. He said: This is My Lord, but when it disappeared, he said I love not those who disappear. And when he saw the moon appearing in splendour, he said: This is My Lord. But when it disapeared, he said: Unless My Lord guides me I shall surely become among the erring people. And when he saw the sun appearing in splendour, he said: This is My Lord. This is larger. But when the sun set, he said: O my people, I am (now) free from your (sin) of believing in partners to Allâh. I have directed my face towards Allâh Who created the heavens and the earth and I do not belong to those who associate partners to Allâh.”

(Al-An'âm : 74-79)

﴿وَإِذْ قَالَ إِبْرَاهِيمُ لِأَبِيهِ آزَرَ اتَّخِذْ أَصْنَامًا آلِهَةً إِنِّي أَرَاكَ وَقَوْمَكَ فِي ضَلَالٍ مُّبِينٍ (٧٤) وَكَذَلِكَ نُرَى إِبْرَاهِيمَ مَلَكُوتَ السَّمَوَاتِ وَالْأَرْضِ وَلَيَكُونُ مِنَ الْمُوقِنِينَ (٧٥) فَلَمَّا جَنَّ عَلَيْهِ اللَّيْلُ رَأَى كَوْكَبًا قَالَ هَذَا رَبِّي فَلَمَّا أَفَلَ قَالَ لَا أُحِبُّ الْآفِلِينَ (٧٦) فَلَمَّا رَأَى الْقَمَرَ بَازِعًا قَالَ هَذَا رَبِّي﴾

فَلَمَّا أَفَلَ قَالَ لَئِنْ لَمْ يَهْدِنِي رَبِّي لَأَكُونَنَّ مِنَ الْقَوْمِ الضَّالِّينَ (٧٧) فَلَمَّا رَأَى الشَّمْسُ بَازِغَةً
قَالَ هَذَا رَبِّي هَذَا أَكْبَرُ فَلَمَّا أَفَلَتْ قَالَ يَا قَوْمِ إِنِّي بَرِيءٌ مِمَّا تُشْرِكُونَ (٧٨) إِنِّي وَجْهَتُ
وَجْهِيَ لِلَّذِي فَطَرَ السَّمَوَاتِ وَالْأَرْضَ حَنِيفًا وَمَا أَنَا مِنَ الْمُشْرِكِينَ ﴿٧٩﴾

الأنعام (٧٤ - ٧٩)

III. Abraham Smashes The Idols

Abraham, ultimately, decided to smash into pieces the idols which were all kept in the temple; but he did not touch the largest idol, in order that he might later accuse (him) (sarcastically) in the presence of his people when they return back and observe their smashed idols!

The moment Abraham became alone in the temple, he did accomplish his decision. Eventually, his people, on discovering the incident, declared that they had heard a young man called Abraham arguing about them. On questioning Abraham about the matter, he told them (sarcastically) that it was the chief idol (Marduck) which should be accused, and added that they could request confirmation of his accusation from the idols if they could speak!!

Concerning this event, the Qur'ân says:

“Remember when he (Abraham) said to his father and his people: What are these images to which you are so intimately devoted? They said: We found our fathers worshipping them. He said: Indeed both you and your fathers have been in evident error. They said: Do you sincerely tell us the truth or are you jesting with us? He answered: Verily, your Lord is the Lord of the heavens and the earth. It is He Who has created them and I am one of those who have witness thereof. And by Allâh I will surely devise a plot against your idols after you have retired from them and turned your backs. Consequently, he broke them all to pieces, except the largest of them which in he did not touch that they might lay the blame upon it. They asked

(inquiring) : Who has done this to our gods? Indeed, he is one of those who are (to be held) guilty. They said: 'We have heard a young man who mentioned them. He is called Abraham. They added: Bring him before the eyes of the people that they may here be witnesses. They asked: Have you done this to our idols, O Abraham? He answered: Nay, that biggest of them have done it, So ask them if they can speak. They returned to themselves and said to one another: Verily, you are yourselves the guilty. Then they returned into their former obstinacy and said: Surely, you have known that these speak not. He said: Do you thus worship beside Allâh that which neither profits you at all nor can it hurt you!? Fie upon you and upon that which you worship beside Allâh; are you not wise?"

(Al-Anbiyâ' : 52-67)

﴿إِذْ قَالَ لِأَبِيهِ وَقَوْمِهِ مَا هَذِهِ التَّمَاثِيلُ الَّتِي أَنْتُمْ لَهَا عَاكِفُونَ ﴿٥٢﴾ قَالُوا وَجَدْنَا آبَاءَنَا لَهَا عَابِدِينَ ﴿٥٣﴾ قَالَ لَقَدْ كُنْتُمْ أَنْتُمْ وَآبَاؤُكُمْ فِي ضَلَالٍ مُبِينٍ ﴿٥٤﴾ قَالُوا أَجِئْتَنَا بِالْحَقِّ أَمْ أَنْتَ مِنَ اللَّاعِبِينَ ﴿٥٥﴾ قَالَ بَلْ رَبُّكُمْ رَبُّ السَّمَوَاتِ وَالْأَرْضِ الَّذِي فَطَرَهُنَّ وَأَنَا عَلَىٰ ذَلِكُمْ مِنَ الشَّاهِدِينَ ﴿٥٦﴾ وَتَاللَّهِ لَأَكِيدَنَّ أَصْنَامَكُمْ بَعْدَ أَنْ تُولُوا مَدْبَرِينَ ﴿٥٧﴾ فَجَعَلَهُمْ جَذَازًا إِلَّا كَبِيرًا لَهُمْ لَعَلَّهُمْ إِلَيْهِ يَرْجِعُونَ ﴿٥٨﴾ قَالُوا مِنْ فَعَلِ هَذَا بِالْهِنَا إِنَّهُ مِنَ الظَّالِمِينَ ﴿٥٩﴾ قَالُوا سَمِعْنَا فَتًى يَذْكُرُهُمْ يُقَالُ لَهُ إِبْرَاهِيمُ ﴿٦٠﴾ قَالُوا فَأَتُوا بِهِ عَلَىٰ أَعْيُنِ النَّاسِ لَعَلَّهُمْ يَشْهَدُونَ ﴿٦١﴾ قَالُوا أَأَنْتَ فَعَلْتَ هَذَا بِالْهِنَا يَا إِبْرَاهِيمُ ﴿٦٢﴾ قَالَ بَلْ فَعَلَهُ كَبِيرُهُمْ هَذَا فَاسْأَلُوهُمْ إِنْ كَانُوا يَنْطِقُونَ ﴿٦٣﴾ فَرَجَعُوا إِلَىٰ أَنْفُسِهِمْ فَقَالُوا إِنَّكُمْ أَنْتُمُ الظَّالِمُونَ ﴿٦٤﴾ ثُمَّ نَكَسُوا عَلَىٰ رُءُوسِهِمْ لَقَدْ عَلِمْتَ مَا هَؤُلَاءِ يَنْطِقُونَ ﴿٦٥﴾ قَالَ أَفَتَعْبُدُونَ مِنْ دُونِ اللَّهِ مَا لَا يَنْفَعُكُمْ شَيْئًا وَلَا يَضُرُّكُمْ ﴿٦٦﴾ أَفَلَا تَعْقِلُونَ﴾

(الأنبياء (٥٢ - ٦٧)

IV. The Qur'ân Argues In Plain Terms That The Hereafter Is Doubtless

Generally, proofs of this type bring us to (terms), taking into account that man has become already wise enough to think them over. They do not compel argumentation. Consider, for example, the question: When can dead people be raised to life? According to the theory of (Adh-Dhâiriyya) in brief, there is neither hereafter nor further life. The Qur'ân says about this old theory.

“And they said: There is nothing beyond our worldly. We shall die and we live but nothing perishes us except the time marshing on. Nay, about that they have no knowledge. They only guess. When Our evident verses are recited to them they have no argument except saying. Bring back our fathers if you are telling the truth. Say, Allâh offers you life then He calls you to die then He raises you up for the Last Day. There is no suspicion in this, but most people know not.”

(Al-Jâthiyah: 24-26)

﴿وَقَالُوا مَا هِيَ إِلَّا حَيَاتُنَا الدُّنْيَا نَمُوتُ وَنَحْيَا وَمَا يُهْلِكُنَا إِلَّا الدَّهْرُ وَمَا لَهُمْ بِذَلِكَ مِنْ عِلْمٍ إِنْ هُمْ إِلَّا يَظُنُّونَ (٢٤) وَإِذَا تَتْلَىٰ عَلَيْهِمْ آيَاتُنَا بَيِّنَاتٍ مَا كَانَ حُجَّتُهُمْ إِلَّا أَنْ قَالُوا اقْتُلُوا أَبَاءَنَا إِنْ كُنْتُمْ صَادِقِينَ (٢٥) قُلِ اللَّهُ يُحْيِيكُمْ ثُمَّ يَمِيتُكُمْ ثُمَّ يَجْمَعُكُمْ إِلَىٰ يَوْمِ الْقِيَامَةِ لَا رَيْبَ فِيهِ وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ﴾
الْجَاثِيَةِ (٢٤ - ٢٦)

Naturally, one should expect that the Resurrection in the Hereafter should be much easier than the creation. In the Qur'ân one reads what means:

“O mankind if you are in doubt about the Resurrection, (consider) that We have created you out of dust, then out of sperm, then out of a leech-like clot, then out of a morsel of flesh, partly formed and partly unformed, in order that We may make evident Our power to you; and We cause whom We will to rest in the wombs for an appointed term, then do We bring you out as babies, then foster you that you may reach your age of full strength, and some of you are called to die, and some are sent back to the feeblest old age, so that they know nothing after having known (something) ; and further, you see the ground barren and lifeless, but when We let rains fall on it, it stirs and swells, and puts forth every type of beautiful pairs of growth, This is so because Allâh is the Truth⁽¹⁾ and it is He Who gives life to the dead, and it is He Who has power over all things. And Verily, the hour (or The Last Day) will come, there can be no doubt about it, and about the fact that Allâh will up all who are dead.”

(Al-Hajj : 5-7)

﴿يَا أَيُّهَا النَّاسُ إِن كُنْتُمْ فِي رَيْبٍ مِّنَ الْبَعْثِ فَإِنَّا خَلَقْنَاكُمْ مِّن تَرَابٍ ثُمَّ مِّن نُّطْفَةٍ ثُمَّ مِّن عَلَقَةٍ ثُمَّ مِّن مُّضْغَةٍ مُّخَلَّقَةٍ وَغَيْرِ مُخَلَّقَةٍ لِّنُبَيِّنَ لَكُمْ وَنُقَرُّ فِي الْأَرْحَامِ مَا نَشَاءُ إِلَىٰ أَجَلٍ مُّسَمًّى ثُمَّ نَخْرِجُكُمْ طِفْلًا ثُمَّ لَتَبَلِّغُوا أَشَدَّكُمْ وَمِنْكُمْ مَّن يَتَوْفَّىٰ وَمِنْكُمْ مَّن يَرُدُّ إِلَىٰ أَرْدَلِ الْعُمُرِ لِكَيْلَا يَعْلَمَ مَن بَعْدَ عِلْمٍ شَيْئًا وَتَرَى الْأَرْضَ هَامِدَةً فَإِذَا أَنزَلْنَا عَلَيْهَا الْمَاءَ اهْتَزَّتْ وَرَبَتْ وَأَنْبَتَتْ مِّن كُلِّ زَوْجٍ بَهِيجٍ ﴿٥﴾ ذَلِكَ بِأَنَّ اللَّهَ هُوَ الْحَقُّ

(1) The Truth is one of the 99 names of Allâh.

وَأَنَّهُ يُحْيِي الْمَوْتَىٰ وَأَنَّهُ عَلَىٰ كُلِّ شَيْءٍ قَدِيرٌ ﴿٦﴾ وَأَنَّ السَّاعَةَ آتِيَةٌ لَا رَيْبَ فِيهَا وَأَنَّ اللَّهَ يَبْعَثُ مَنْ فِي الْقُبُورِ ﴿٧﴾ الْحَج (٥ - ٧)

Naturally, the belief in creation (as described by the above verses) involves directly the belief in Resurrection. The method of argumentation in the verses proves without the least doubt that He Who created man from dust can readily resurrect him or make him rise to life again, after death: Allâh says.

a — **“And of the people are some who argue about Allâh without (any) knowledge, and with neither faithful guidance nor an enlightening Book.”**

(Al-Hajj : 8)

أ - ﴿وَمِنَ النَّاسِ مَن يُجَادِلُ فِي اللَّهِ بِغَيْرِ عِلْمٍ وَلَا هُدًى وَلَا كِتَابٍ مُّنِيرٍ﴾ الْحَج (٨)

Evidently, the Qu r'ân pre-supposes every sort of argument, for both the simple and the highly educated man. One has to conceive how simple and clearly convincing was, is and shall ever be, the Islamic Call.

b — **“And they (the infidels) uttered: Had we been not heedless of listening (to the righteous words) , or had been wise, we could have escaped being with those who are driven to the torment of fire.”**

(Al-Mulk : 10)

ب - ﴿وَقَالُوا لَوْ كُنَّا نَسْمَعُ أَوْ نَعْقِلُ مَا كُنَّا فِي أَصْحَابِ السَّعِيرِ﴾ الْمَلِك (١٠)

One also reads in the Qur'ân a set of verses in which Allâh's argumentation tells him directly to stand to logic and to use his mind. The following are some verses of this type:

c — "Lo! is it that He Who creates is like that which does not create? Do you (the infidels) mind not?"

(Al-Nahl : 17)

ج - ﴿ أَفَمَن يَخْلُقُ كَمَن لَّا يَخْلُقُ أَفَلَا تَذَكَّرُونَ ﴾ النحل (١٧)

d — "And does man consider not that We created him formerly and that he was nothing?"

(Maryam : 67)

د - ﴿ أَوَلَا يَذْكُرُ الْإِنسَانُ أَنَّا خَلَقْنَاهُ مِن قَبْلُ وَلَمْ يَكْ شَيْئًا ﴾ مريم (٦٧)

e — "Surely the creation of the heavens and the earth is greater than the creation of the human beings but most of mankind know not."

(Ghâfir : 57)

هـ - ﴿ خَلَقَ السَّمَوَاتِ وَالْأَرْضِ أَكْبَرُ مِنْ خَلْقِ النَّاسِ وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ ﴾ غافر (٥٧)

f — "Is it not that He Who created the heavens and the earth is by all means able to create the like of them? Nay! And He is The Superb Creator the Ever-Knowing."

(Yâsîn : 81)

و - ﴿ أَوَلَيْسَ الَّذِي خَلَقَ السَّمَوَاتِ وَالْأَرْضَ بِقَادِرٍ عَلَىٰ أَن يَخْلُقَ مِثْلَهُمْ بَلَىٰ وَهُوَ الْخَلَّاقُ الْعَلِيمُ ﴾

يس (٨١)

ISLAMIC VALUES AND THEIR IMPACT ON SCIENCE

I. Truth

Truth on the part of all people is commendable and on the part of scientists is more, so science progress depends entirely on reporting the truth regarding any scientific report or discovery. However, telling the truth is a character inspired by galantry, and a requisite demanded for the success of any scientific research. The Prophet Muh _ammad (prayers and peace be upon him) says:

(Tell the truth even if it hurts you with the fire of threat..)

Generally speaking, telling the truth and lying both have their roots in: Uttering, premissis research work which express is a bit of news, either to exclude or to support other statements, or even to add new statements. The Qur'ân says what means:

a. **“And who is more sincere than Allâh, in discourse?”**

(An-Nisâ' : 87)

النساء (٨٧) أ - ﴿وَمَنْ أَصْدَقُ مِنَ اللَّهِ حَدِيثًا﴾

b. **“Surely, he (Ismaeel) was sincere in his promise...”**

(Maryam : 54)

مريم (٥٤) ب - ﴿إِنَّهُ كَانَ صَادِقَ الْوَعْدِ﴾

Telling the truth is a fundamental virtue essential for the human society and its progress, Had it not been for these values then no righteous paths would have been illuminated, no scientific progress would have been realized, not art developed.

Hypocrites are also liars and do not tell the truth for some reason or another, concerning them, the Qur'ân says:

“When the hypocrites come to you (Muhammad), they say we do witness that you are Allâh’s Messenger, and Allâh witnesses that you are His Messenger, but Allâh witnesses that the hypocrites surely speak false.”

(Al-Munâfiqûn : 1)

﴿إِذَا جَاءَكَ الْمُنَافِقُونَ قَالُوا نَشْهَدُ إِنَّكَ لَرَسُولُ اللَّهِ وَاللَّهُ يَعْلَمُ إِنَّكَ لَرَسُولُهُ وَاللَّهُ يَشْهَدُ إِنَّ الْمُنَافِقِينَ لَكَاذِبُونَ﴾
(المُنافِقُونَ (١))

The Messenger’s public call to Islâm in Makkah was based (to a certain extent) on the truth of which he was well-known among his kindred. He said: What would you say if I told you that beyond this valley there were horsemen wishing to assault you? Would you believe me? They said: Yes. We have never known you to be a liar. He said: I am a warner to you in face of a terrific doom.

Allâh Almighty commanded His Messenger to ask Him to make his way in and way out based on truth:

“And say my Lord cause me to come in with a truth incoming and to go out with a truth outgoing and offer me from Your presence a sustaining authority.”

(Al-Isrâ’ : 80)

﴿وَقُلْ رَبِّ أَدْخِلْنِيْ مُدْخَلَ صِدْقٍ وَأَخْرِجْنِيْ مُخْرَجَ صِدْقٍ وَاجْعَلْ لِّيْ مِنْ لَّدُنْكَ سُلْطٰنًا نَّصِيْرًا﴾
(الإِسْرَاءُ (٨٠))

It may be seen that in the Qur'ân Allâh classifies people into truthful and hypocrites:

“In order that Allâh rewards the truthful men for their truth and punish the hypocrites if He wills, or relent towards them ...”

(Al-Ahzâb : 24)

﴿لِيَجْزِيَ اللَّهُ الصَّادِقِينَ بِصِدْقِهِمْ وَيُعَذِّبَ الْمُنَافِقِينَ إِنْ شَاءَ أَوْ يَتُوبَ عَلَيْهِمْ﴾

(الأحزاب (٢٤)

Allâh says that on the Day of Resurrection nothing benefits or saves man from the dread of that day except truth. Allâh says:

“Allâh said this is a Day on which the truthful profit by their truthfulness; for them are gardens underneath which rivers run, wherein they are secure forever; Allâh is satisfied with them and they in Him. That is the utmost triumph.”

(Al-Mâ'idah : 119)

﴿قَالَ اللَّهُ هَذَا يَوْمُ يَنْفَعُ الصَّادِقِينَ صِدْقُهُمْ لَهُمْ جَنَّاتٌ تَجْرِي مِنْ تَحْتِهَا الْأَنْهَارُ خَالِدِينَ فِيهَا أَبَدًا رَضِيَ اللَّهُ عَنْهُمْ وَرَضُوا عَنْهُ ذَلِكَ الْفَوْزُ الْعَظِيمُ﴾

(المائدة (١١٩)

A man of letters once said: There is no sword like right and no help like truthfulness.

The value of truth regarding science and scientific research is highly essential. Delicate instruments and sensitive tools have been devised in order to collect true and correct readings from the universe necessary for the various fields of science. Some

people, for some one reason or another, cook the readings, or fabricate the observations!! They are liars in this sense, or even they are hypocrites. The Qur'ân says about those who lie with respect to Allâh:

“And on the Day of Resurrection you (Muḥammad) see those who lied (concerning) Allâh with their faces blackened; is not in hell the home of the proud.”

(Az-Zumar : 60)

﴿وَيَوْمَ الْقِيَامَةِ تَرَى الَّذِينَ كَذَبُوا عَلَى اللَّهِ وُجُوهُهُم مُّسْوَدَّةٌ أَلَيْسَ فِي جَهَنَّمَ مَثْوًى

الزمر (٦٠)

لِلْمُتَكَبِّرِينَ﴾

II. Perfection In Work And Duties

Islâm urges Muslims to do their best to accomplish their work properly, and to ensure high quality of production this value comromises both success and security. It cannot be realized unless every Muslim who is entrusted with any work or thing to do is bound by it. It this sense the Qur'ân says:

“Fulfil the covenant of Allâh when you have covenant-ed, and break not your oaths after the assertion of them, and after you have made Allâh knows what you do.”

(An-Nah1 : 91)

﴿وَأَوْفُوا بِعَهْدِ اللَّهِ إِذَا عَاهَدْتُمْ وَلَا تَنْقُضُوا الْأَيْمَانَ بَعْدَ تَوْكِيدِهَا وَقَدْ جَعَلْتُمُ اللَّهَ عَلَيْكُمْ كَفِيلًا إِنَّ اللَّهَ يَعْلَمُ مَا تَفْعَلُونَ﴾

النحل (٩١)

The Prophet Muh_ammad (prayers and peace be upon him) says: “Allâh likes from every one of you when doing some work to do it properly.”

(إن الله يحب من أحدكم إن عمل عملاً أن يتقنه)

The true Muslim is he whose acts abound, and whose deeds and activities benefit others. Disregarding such values and behaving in a different manner does not belong to true Islâm:

“(O Muḥammed) set your purpose for religion as a man by nature right, the nature (firmed) by Allāh in which He has created mankind. There is no altering for the creation of Allāh; that is the upright religion, but most people know not.”

(Ar-Rûm 30)

﴿فَأَقِمْ وَجْهَكَ لِلدِّينِ حَنِيفًا فِطْرَتَ اللَّهِ الَّتِي فَطَرَ النَّاسَ عَلَيْهَا لَا تَبْدِيلَ لِخَلْقِ اللَّهِ ذَلِكَ الدِّينُ الْقِيمُ وَلَكِنِ أَكْثَرُ النَّاسِ لَا يَعْلَمُونَ﴾
الروم (٣٠)

Islām, in order to lead man to such values, has guided him thereto explicitly in full detail. When one reads Allāh’s explicit verses and seeks their implications, he shall find in them such constructive values that sublimates man and place him in the pinnacle of the destined good and success.

The true Muslim (disregarding the present status of some wicked Muslims following various misleading man made teachings which contradict the true Islām) is he who affords himself and his society a stock of superior manners and fruitful work:

“Whosoever does right it is for himself and whosoever does wrong it is against it, and your Lord is never unjust to His servants (people).”

(Fuṣṣilat : 46)

﴿مَنْ عَمِلْ صَالِحًا فَلِنَفْسِهِ وَمَنْ أَسَاءَ فَعَلَيْهَا وَمَا رَبُّكَ بِظَلَّامٍ لِلْعَبِيدِ﴾

فصلت (٤٦)

Doing things well means achieving them accurately, bearing Allâh in mind and fearing Him in private and in public.

It is said that: If man's actions in private are compatible with his actions in public, this is just; and when his actions in private are better than his actions in public, this is a favour; but if his actions in public are better than his actions in private, this is injustice!

Righteousness in work affords numerous offshoots which, however diverse, go a back to the occupying one's mind, one's effort and one's time in the hope of gaining Allâh's and people's consent.

People's treaties among themselves are represented by contracts of various affairs, financial commitments or otherwise that are drawn among them, as well as the treaties between nations defining rights or obligations which must all be kept unless they commit a sin by deprivation of a right or causing serious harm or damage to individuals or a nation. The Qur'ân has been very keen on urging the keeping of treaties:

1. **“That He may ask the truthful of their truthfulness ...”**
(Al-Ahzâb : 8)

١ - ﴿لِيَسْأَلَ الصَّادِقِينَ عَنْ صِدْقِهِمْ﴾ الأحزاب (٨)

2. **“Among the believers are men who are true to that which they covenanted with Allâh...”**

(Al-Ahzâb : 23)

٢ - ﴿مِنَ الْمُؤْمِنِينَ رِجَالٌ صَدَقُوا مَا عَاهَدُوا اللَّهَ عَلَيْهِ﴾ الأحزاب (٢٣)

3. **“... Lo! We waste not the reward of one whose work is goodly”**

(Al-Kahf : 30)

٣ - ﴿إِنَّا لَا نُنْصِيعُ أَجْرَ مَنْ أَحْسَنَ عَمَلًا﴾ الكهف (٣٠)

III. Islâm Gives Science The Utmost Value

Disregarding the generally observed feature that most Muslims have become, during the last few centuries, well behind the caravan of science progress for several factors, one cannot deny the principal role layed by the Muslim scientists in establishing the principles of basic science as urged by the Qur'ân — Refer to Book 3 — This was achieved during the so-called (Dark Ages) or (Middle Ages) by means of true Muslims. — Refer to Books 1 and 6.

One of the outstanding factors that led to the degeneration of the Muslim world was the insertion into the meanings of various verses of the Qur'ân and the Traditions — see Book 4 — misleading interpretations, fairy tales and gossips now known as (isrâ'ilyât).

In fact, the very first verse of the Qur'ân gave incentive to gain knowledge and to glorify it. It was the signal for the dawn of the Age of Science and a forerunner of giving knowledge its due dignity. The Qur'ân thus says:

1) **“Read in the name of your Lord Who created. Created man from a clot. Read and your Lord is Most Generous. Who taught by the pen. Taught man what he knew not.”**

(Al-'Alaq:1-5)

﴿اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (١) خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (٢) اقْرَأْ وَرَبُّكَ الْأَكْرَمُ (٣) الَّذِي عَلَّمَ بِالْقَلَمِ (٤) عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ﴾
العلق (١-٥)

At different stages of the revelation, the Qur'ân explained the meaning of science or knowledge, and pointed out to the importance of studying the universe, including its matter, radiation and living beings. For example, the Qur'ân says.

2) “... Those of His servants only who are possessed of knowledge fear surely Allâh is Allâh is Ever-Mighty, Ever - Forgiving.”

(Fatîr : 28).

١ - ﴿ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ إِنَّ اللَّهَ عَزِيزٌ غَفُورٌ ﴾ فاطر (٢٨)

2) “Indeed, in the heavens and the earth there are signs for the believers.”

(Al-Jâthiyah : 3)

٢ - ﴿ إِنَّ فِي السَّمَوَاتِ وَالْأَرْضِ لَآيَاتٍ لِلْمُؤْمِنِينَ ﴾ الحجرات (٣)

3) “... Say are those who know and those who know not equal.”⁸

(Az-Zumar : 9)

٣ - ﴿ قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ ﴾ الزمر (٩)

A great number of verses not only speak highly of science and scientists, but also urge us to pursue science and to discover the secrets embedded in the buildup of the universe. Physical laws are nothing but exact interpretations of different

phenomena in the world. Scientists do not claim absolute authenticity of such laws, but they agree that the physical laws represent the largest possible amount of authenticity and precision. In the light of growing accuracy and progress in the field of observation, generalisations (and additions) in some of the laws are made so as to bring them closer to what may be referred to as (facts):

1) **“They know (only) what is outward of the earthly life...”**

(Ar-Rûm : 7)

١ - ﴿يَعْلَمُونَ ظَاهِرًا مِّنَ الْحَيَاةِ الدُّنْيَا﴾ الروم (٧)

2) **“See they not what is before them and what is behind them of the heavens and the earth?...”**

(Saba' : 9)

٢ - ﴿أَفَلَمْ يَرَوْا إِلَىٰ مَا بَيْنَ أَيْدِيهِمْ وَمَا خَلْفَهُم مِّنَ السَّمَاءِ وَالْأَرْضِ﴾ سبأ (٩)

3) **“And of His signs is the creation of the heavens and the earth and the diversity of your tongues and colours. Surely there are signs in this for the learned.”**

(Ar-Rûm : 22)

٣ - ﴿وَمِنْ آيَاتِهِ خَلْقُ السَّمَوَاتِ وَالْأَرْضِ وَاخْتِلَافُ أَلْسِنَتِكُمْ وَأَلْوَانِكُمْ إِنَّ فِي ذَٰلِكَ لَآيَاتٍ لِّلْعَالَمِينَ﴾ الروم (٢٢)

The Middle Ages witnessed (in Europe) a long period of strife between the advocates of religion and the advocates of science. Islâm has never witnessed such a struggle. It has always encouraged research about the universe in the hope of uncovering secrets, signs of the Creator and physical laws governing the universe.

However, as time marched on, science progressed rapidly in Europe within the last two or three centuries, but Muslims assumed that the interpretations of their old masters, notably in the field of science were final and applicable to all times. Evidently, this was but a twist of mind which expressed ignorance of the dynamics of social life, and retardation behind the caravan of scientific discoveries and making use the sources of energy and power in nature. But Allâh says:

“And say: O my Lord (Allâh), I beg for increasing my knowledge.”

(Tâhâ : 114)

طه (١١٤)

﴿ وَقُلْ رَبِّ زِدْنِي عِلْمًا ﴾

The beginning of this decline was a result of the so called: Closing of Bab al-ijtihâd (= research). But, however, most Muslims now work hard to change the course in the direction of true Islâm for the good of the world at large.

IV. The Value Of The Distribution Of Wealth

Islâm declares the idea that all the wealth of the people belongs to Allâh:

a) **“And to Allâh belongs whatever is in the heavens and whatever is in the earth...”**

(An-Najm : 31)

النجم (٣١) ﴿وَلِلَّهِ مَا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ﴾

Allâh orders that wealth should not be monopolized by some persons only:

“And give them of the wealth of Allâh which He has brought you ...”

(An-Nûr : 33)

النور (٣٣) ﴿وَأَتَوْهُمْ مِّن مَّالِ اللَّهِ الَّذِي آتَاكُمْ﴾

In general, Islâm decrees that the acquisition of wealth should not be regarded as ownership, but as mere “trust” or a “medium”. The Muslims are requested to keep the “trust”, and the true Muslims are those described in the Qur’ân which says:

“And those who are keepers of their trusts and their covenant.”

(Al-Mû’minûn : 8)

المؤمنون (٨) ﴿وَالَّذِينَ هُمْ لِأَمَانَاتِهِمْ وَعَهْدِهِمْ رَاعُونَ﴾

Actually, Islâm's principles of distribution are clear, and according to them everybody has first to obtain his needs:

a) "And give to the near of kin his due and to the indigent ..."

(Al-Isrâ' : 26)

﴿وَاتِّذَا الْقُرْبَىٰ حَقَّهُ وَالْمِسْكِينَ﴾ ١

الإسراء (٢٦)

2) "And those in whose wealth there are known rights; for the beggar and the dispossessed."

(Al-Ma'ârij : 24-25)

﴿وَالَّذِينَ فِي أَمْوَالِهِمْ حَقٌّ مَّعْلُومٌ* (٢٤) لِلسَّائِلِ وَالْمَحْرُومِ﴾ ٢

المعارج (٢٤ - ٢٥)

3) "Have you seen him who belies religion? For sure that is the one who is repulses the orphan; and urges not the feeding of the indigent."

(Al-Mâ'ûn : 1-3)

﴿أَرَأَيْتَ الَّذِي يُكَذِّبُ بِالْإِيمَانِ (١) فَذَلِكَ الَّذِي يَدْعُ الْيَتِيمَ (٢) وَلَا يُحِضُّ عَلَىٰ طَعَامِ الْمِسْكِينَ﴾ ٣

الماعون (١ - ٣)

When every member of the community is able to meet his essential requirements of food, clothing, dwelling or shelter, thus living at the level, or limit, of sufficiency, then the distribution of wealth is to be made according to factors such as:

each individual's effort and perfection of work ... the Qur'ân says:

4) **"... For men is the benefit of what they earn and for women is the benefit of what they earn ..."**

(An-Nisâ : 32)

٤ - ﴿لِّلرِّجَالِ نَصِيبٌ مِّمَّا اكْتَسَبُوا وَلِلنِّسَاءِ نَصِيبٌ مِّمَّا اكْتَسَبْنَ﴾

النساء (٣٢)

Evidently, Islâm does allow opulence, provided that everyone in the community has reached a level of sufficiency, notably through being given suitable work. Islâm also does not permit disparity between the wealthy and the poor. Wealth could accumulate only after poverty is eradicated:

5) **"... And they ask you (Muḥammad) as to what they should spend: Say: What you can spare ..."**

(Al-Baqarah : 219)

٥ - ﴿وَيَسْأَلُونَكَ مَاذَا يُنْفِقُونَ قُلِ الْعَفْوَ﴾

البقرة (٢١٩)

Does not such an attitude put an end to crime and strife among the people!

6) **"Whatever Allâh restored to His Messenger from the people of the towns, it is for Allâh and the Messenger and for the near of kin and the orphans and the wayfarer, so that it be not taken by turns by the rich among you ..."**

(Al-Ḥashr : 7)

٦ - ﴿ مَا أَفَاءَ اللَّهُ عَلَى رَسُولِهِ مِنْ أَهْلِ الْقُرَى فَلِلَّهِ وَلِلرَّسُولِ وَلِذِي الْقُرْبَىٰ وَالْيَتَامَىٰ
وَالْمَسَاكِينِ وَابْنِ السَّبِيلِ كَيْ لَا يَكُونَ دُولَةً بَيْنَ الْأَغْنِيَاءِ مِنْكُمْ ﴾

الحشر (٧)

7) “... And the unjust pursued the luxury of plenty and they were criminals.”

(Hûd : 116)

٧ - ﴿ وَاتَّبَعَ الَّذِينَ ظَلَمُوا مَا أُتْرِفُوا فِيهِ وَكَانُوا مُجْرِمِينَ ﴾

هود (١١٦)

8) “And when we wish to cause a town to perish We let it be commanded by its people who lead luxurious life, thus they when immoral therein, and the word proves true against it, so We destroy it with utter destruction.”

(Al-Isrâ : 16)

٨ - ﴿ وَإِذَا أَرَدْنَا أَنْ نُهْلِكَ قَرْيَةً أَمَرْنَا مُتْرَفِيهَا فَفَسَقُوا فِيهَا فَحَقَّ عَلَيْهَا الْقَوْلُ فَدَمَرْنَاهَا تَدْمِيرًا ﴾

الإسراء (١٦)

In conculsion, Islâm requests the eradication of poverty, not only through charity, or by reformatory measures. In order to eliminate poverty, Islâm has not only urged perfection of work and increase in production, both of them being regarded a form of worship, but also asked for sufficiency for everybody and for the sake of the elimination of disparity in incomes.

ONCE MORE: WHY ISLÂM?

I. The Age Of Science Puts A Severe Test To All Religions

This is a problem which faces most religions albeit, bruised and bleeding, but this does not apply to Islâm, which alone has faced this challenge and has overcome its destructive effects.

Beforehand, as we have shown briefly in this series of books (Islâm and Science), no contradiction arises between Islâm and science. Needless to say that the teachings of Islâm are in favour of science and scientific progress.

As a rule, however, religion must cope with it if it is to have real place in the modern world, and to survive against atheism. Three main issues arise in this respect. These are:

II. The Freudian Probe

In some religions, other than Islâm, if the true believers find themselves in a conflict as to satisfy their natural desires or to achieve spiritual comfort in abstaining from them, legitimate and correct as they may be, true Muslims do not suffer from this schizophrenia. To them there exists no curse whatever that may attach the body, nor is it regarded as filthy and profane. In Islâm, there is no conflict whatever between leading a life of physical pleasure and being conscientious at the same time. The Qur'ân says for example:

1. **“O children of Âdam, wear your beautiful apparel at every mosque and eat and drink but waste not by excess, for He (Allâh) likes not the wasters. Say: Who has forbidden the beautiful gifts of Allâh which He has produced for His servants...”**

(Al-A'râf : 31-32)

١ - ﴿يَا بَنِي آدَمَ خُذُوا زِينَتَكُمْ عِنْدَ كُلِّ مَسْجِدٍ وَكُلُوا وَاشْرَبُوا وَلَا تُسْرِفُوا إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ (٣١) قُلْ مَنْ حَرَّمَ زِينَةَ اللَّهِ الَّتِي أَخْرَجَ لِعِبَادِهِ﴾

الأعراف (٣١ - ٣٢)

2- “And when the prayer is over then you may disperse through the land and seek of the grace of Allâh and remember Allâh often and without stint that you may prosper.”

(Al-Jumu‘ah : 10)

٢ - ﴿فَإِذَا قُضِيَتِ الصَّلَاةُ فَانْتَشِرُوا فِي الْأَرْضِ وَابْتَغُوا مِنْ فَضْلِ اللَّهِ وَاذْكُرُوا اللَّهَ كَثِيرًا لَّعَلَّكُمْ تُفْلِحُونَ﴾

الجمعة (١٠)

Evidently, such honourable treatment of the material body from a basic Islamic notion, namely its conception of a whole universe without conflict between matter, body, and mind, is unique. There is no dualism of the world. The existence as a whole is mastered by Allâh alone, and there is no world under the lordship of the devil. Muslims are so saved the pyschological conflict between natural bodily desires and conscientious righteousness.

III. The Era Of Space Probe

This issue comprises the great possibility of man's new power to communicate with other wise creatures living on other planets outside the Solar System. The theory of probability points out to the existence in our galaxy of not less than two million inhabitable planets like our own earth! Muslim's (according to their faith) do not see at all that this is impossible, because Islâm does not rule out this great possibility. For example, the Qur'ân says:

“And among His signs is the creation of the heavens and the earth and the living creatures that He has dispersed through them; and He is most able to gather them together when He decides”

(Ash-Shûrâ : 29)

﴿وَمِنْ آيَاتِهِ خَلْقَ السَّمَوَاتِ وَالْأَرْضِ وَمَا بَثَّ فِيهِمَا مِنْ دَابَّةٍ وَهُوَ عَلَىٰ جَمْعِهِمْ إِذَا يَشَاءُ قَدِيرٌ﴾

الشورى (٢٩)

Again, if the modern man, equipped by modern science and technology, feels that he has acquired some new mastery and power over the universe, true Muslims do not experience that feeling. This has already been pointed to him by the Qur'ân which says:

1. **“Have you not seen that Allâh has subjected to you all things in the heavens and the earth and has made His bounties flow to you in exceeding measure seen and unseen...”**

(Luqmân : 20)

١ - ﴿أَلَمْ تَرَوْا أَنَّ اللَّهَ سَخَّرَ لَكُمْ مَّا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ وَأَسْبَغَ عَلَيْكُمْ نِعَمَهُ ظَاهِرَةً وَبَاطِنَةً﴾

لقمان (٢٠)

2. “And if you count the bounties of Allâh you are bound to find them unlimited ...”

(Ibrâhîm : 34)

٢ - ﴿وَإِنْ تَعَدُّوا نِعْمَتَ اللَّهِ لَا تَحْصُوهَا﴾

إبراهيم (٣٤)

IV. World Interdependence

This is the third issue and as mentioned in book (3) of this series, it is not strange to Islâm, being one of its principal commandments. The following are examples of verses from the Qur'ân which mean:

1. **“O mankind! We created you from a single pair of a male and a female, and made you into nations and tribes so that you may get acquainted with each other. Verily, the most honoured of you in the sight of Allâh is he who is the most pious...”**

(Al-Hujurât : 13)

١ - ﴿يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاكُمْ﴾

الحجرات (١٣)

For sure, Allâh is not the Lord of a certain group, tribe, race, or sect of people, but the Lord of the world's inhabitants.

2. The first three verses, and the most often repeated verses that Muslims recite on various occasions form the opening of Al-Fâtihah — see book (4) :

“In the name of Allâh Ar-Rahmân (The All-Merciful) Ar-Rahîm (The Ever - Merciful) . Praise be to Allâh Lord of all mankind. Ar-Rahmân Ar-Rahîm.”

(Al-Fâtihah : 1-3)

﴿بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ (١) الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ (٢) الرَّحْمَنِ الرَّحِيمِ﴾

الفاتحة (١-٣)

The Prophet Muh_ammad, prayers and peace be upon him, said:

1. **“There is no special virtue of an Arab over a non-Arab except by righteousness and piety.”**

١ - (لا فضل لعربي على عجمي إلا بالتقوى)

2. **“All mankind are as equal as the teeth of a comb.”**

٢ - (الناس سواسية كأسنان المشط)

So Islâm forbids segregation according to colour, sect, creed or nationality. Regarding true Muslims they must be together:

“Like the body, if an organ thereof feels sick, the rest of the organs will call up to its aid by awakesness and fever.”

٣ - (كالجسد إذا اشتكى منه عضو تداعت له سائر الأعضاء بالسهر والحمى)

Here, the question arises: Do Muslims now really behave according to the Prophet's sayings?

ISLÂM ALONE COMPRISES THE WHOLE TRUTH

I. Islâm Satisfies Its Adherents

As outlined in books (1), (2), (3) and (4), Islâm's adherents are provided with a comprehensive way of life in which the relation of the individual to society and the material to the religious are balanced in perfect harmony.

When one studies carefully the beliefs of the major faiths, he comes to the conclusion that originally all the outstanding religions were one, but as time passed they deviate and became corrupted. In fact, this rule applies to all religions concerned in the Qur'ân which says:

“... And not a single nation but had in the past its warner.”

(Faṭir : 24)

فاطر (٢٤)

﴿... وَإِنْ مِنْ أُمَّةٍ إِلَّا خَلَا فِيهَا نَذِيرٌ﴾

Idol worship, the idea of reincarnation and the caste system began to permeate Hinduism. Passivity became characteristic of Buddhism, ancestor worship of Confucianism. The doctrine of original sin, the Trinity and the divinity of Jesus resulted in an anthropomorphic conception of God and the atonement by the death on the cross of Christianity and the exclusive chosen people the idea of Judaism.

II. Marmaduke Pickthall's Comment:

Marmaduke Pickthall, who translated the meaning of the Qur'ân and whose work has proved to represent one of the best translations available (in 693 medium size pages) says:

(There is no blessing bestowed on man better than opening his breast to Islâm. It is Islâm that guides man to the proper path and establishes in him the intuition to properly distinguish between good and evil and between happiness and misery. I prostrate myself before The Almighty God in complete submission and gratitude for the benediction which fills my heart with bliss and provides me with a good opportunity to live as a Muslim under the shadow of Islamic brotherhood).

So Says The Qur'ân

“When comes the victory of Allâh and the conquest and you see the people enter Allâh’s religion in troops. Celebrate the Lord praises of your Lord and pray for His forgiveness for His oft-relenting in grace and mercy.”

(An-Nasr :1-3)

﴿إِذَا جَاءَ نَصْرُ اللَّهِ وَالْفَتْحُ ﴿١﴾ وَرَأَيْتَ النَّاسَ يَدْخُلُونَ فِي دِينِ اللَّهِ أَفْوَاجًا ﴿٢﴾ فَسَبِّحْ بِحَمْدِ رَبِّكَ وَاسْتَغْفِرْهُ إِنَّهُ كَانَ تَوَّابًا﴾

النصر (١-٣)

III. Muslim's Contribution To The Advancement Of The World

History and thousands of Al-Makhtûtât (old handwritten books) tell us that Muslims contributed to the advancement of the world and establishment of numerous branches of science.

Early in the seventh century A.C., a new spring of thought flooded the Arabian Peninusula and rapidly swelled into a large river flooding and flourishing with life. This was the universal religion Islâm.

It initiated in every field of human life a spirit which has never been known in the history of mankind. The two extensive empires of that time (Persian and Buzantian) tried to stem its rising flood build, but in the struggle they soon were swept away, and the Muslims could build an extended state greater than the Roman Empire at its Zenith. Its industries, trade and culture became wide-spread. Until now, many of the words used in Europe for example bear an Arabîc origing. Needless to say that Muslims set ideals of civic-life, family life, hygiene, agriculture, architecture, irrigation, music, dress, food, calligraphy and games for every country they came into contact with.

After Herodotus, Muslims were the outstanding historians of the word. Some of them (like Ibn Battûtah for example) undertook long journeys to collect suitable material.

During the Abbâsîd period, paper manufacture became an indigenous industry. Books were thus written and sold on a large-scale by book agencies and libraries.

Moreover, Muslims experienced various jobs. They dived deep into the ocean to bring out pearls, and penetrated low into the earth's crust to dig out ores of iron, silver, gold, lead, mercury and the like.

... They also digged various networks of canals and supplied the west with spices, scents, ginger and sugar ...

In the Muslim world, education centers soon became widespread. There was no village without a mosque, elementary or secondary school for teaching. They were supported by the endowments granted to them.

As mentioned before in books 1-4, it was mainly the result of the teachings of the Qur'ân that urged Muslims to initiate the principles of various branches of science. Even measured songs, or music became well-known to Muslims for centuries before Europe became familiar with it.

Finally, for sure, true Islâm is a grand gift granted by Allâh to those whom He wishes.

HUMANITY REQUESTS ISLÂM

I. Dynamism Of Islâm

Islâm, being encompassed in some characteristic acts, of good behaviour, prescribed formulas and prayers at stated times, was always able to cope with heterogenous elements. It is an all-pervading faith that permeates all phases of the true Muslim's life and involves his whole being.

Throughout the creative centuries of Medieval Islâm, the discussion of the main problems of the philosophy of religions almost always occupied the Muslim mind. This debate was a sign of the dynamic power of Islâm. Now, in the Age of Science, it is in progress. Muslim thought, moral values, social theories and science progress are again being emphasized.

However, there is now an apparent struggle between two main educated groups: The representatives of anti-dynamism and the proponents of dynamism. Whatever may be the case, the five pillars on which Islâm is built are never touched. These are:

1. Witnessing that there is no God save Allâh, and that Muḥammad is Allâh's Messenger.
2. Performing the daily prayers.
3. Paying the poor-dues (Zakât).
4. Keeping Ramadân (Fasting)
5. Performing the pilgrimage if possible (Al-H _ajj)

In any case, the common man is usually unable to express his fears or hopes, but surely, he enjoys hearing about the amazing relation between science and Islâm.

The Muslim society is still well integrated: traditional standards the upheld. Family ties remain strong mutual help and feeling of responsibility for one's extended family are still unweakened. So, the family actually provides support for every need. The modern ways are suspect as a threat to that strongly knit social unit, and opposition to intrusion is great.

Nowadays, in most of the Muslim countries however, there is no discrimination between men and women with regard to employment and wages. Educated women have been already appointed in various posts. The number of lady-doctors, journalists, writers, lawyers, university professors, mechanical and agricultural engineers ... and teachers are ever-increasing.

II. Education

In many Muslim countries, the internal enemies are still ignorance, poverty and sickness. These are interlocked in a vicious circle. Undoubtedly, Islâm is not to be blamed for such conditions. Education has always ranked high in Muslim societies during the Middle Ages. Nowadays, Muslims point out with justifiable pride to the decisive role played by their scholars during the Middle Ages in the development of modern civilization

The Muslim scholars built up on the teachings and fundamentals laid by the Qur'ân achieved basic creative contributions of their own in various branches of science, notably mathematics, astronomy, meteorology, physics and medicine. (Refer to book (1) and book (3). In particular, however, mathematics and astronomy were stimulated by religious needs.

At present, the educated Muslim still lives intellectually in one and the same world which is dominated by religion and science together. This is because science is the message of 'Islâm as described in this series of books. In fact, most educated Muslims continue to adhere to the traditional forms, beliefs, rites and ceremonies prescribed by Islâm.

The outstanding feature is that the faith of most educated Muslims is indeed as strong as ever. Islâm has never been hostile to the spread of knowledge into wide circles. It has always regarded learning, at least as a useful tool to bring a good Muslim acting according to its principles and ethics:

“And say: O my Lord I beg for increasing my knowledge.”

(Tâhâ : 114)

طه (١١٤)

﴿ وَقُلْ رَبِّ زِدْنِي عِلْمًا ﴾

The study of the Q ur'ân and the traditions is generally an act of religious piety and intellectual search for guidance in one's personal conduct.

As described in book (4) one of the most outstanding topics of Islâm is the introduction of unique regulations concerning the distribution of property left by a Muslim after his death. The Muslim woman feels her position in that respect to be superior to that of woman of some other religions or nations.

III. War In Islâm

Practically, war in Islâm can be regarded as an extension to the previous articles concerning argumentation in the Qur'ân, and also Universaity of Islam in book (4).

Principally, Islâm is a cosmopolitan invocation which aims at the benefit and happiness of the human race and the spread of knowledge and equality among mankind, It is neither a racial nor a regional invocation which aims at setting up the sovereignty of any race or the authority of any region, over others. The Qur'ân says, for example.

1. **“And We have not sent you (O Muh_ammad) except as a bringer of good tidings and a warner to all mankind, but most of mankind know not.”**

(Saba' : 28)

١ - ﴿وَمَا أَرْسَلْنَاكَ إِلَّا كَافَّةً لِّلنَّاسِ بَشِيرًا وَنَذِيرًا وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ﴾

سبأ (٢٨)

2. **“Blessed is He Who has revealed to His servant the Criterion that he may be a warner to all the worlds.”**

(Al-Furqân :1)

٢ - ﴿تَبَارَكَ الَّذِي نَزَّلَ الْفُرْقَانَ عَلَى عَبْدِهِ لِيَكُونَ لِلْعَالَمِينَ نَذِيرًا﴾

الفرقان (١)

It was only natural, therefore, that:

(1) "Allâh ordered Muhammad to stick to wisdom, fair exhortation and argue with the people leniently."

(2) Every true Muslim is responsible for informing non-Muslims, within his circle of ability, about true Islām and to be a good example of true Muslims in every respect.

1. “Call to the way of your Lord with wisdom and fair exhortation and argue with them in the better way. Lo! Your Lord is best aware of him who errs from His way, and He is best aware of those who go aright.”

(An-Nahl 125)

١ - ﴿ادْعُ إِلَى سَبِيلِ رَبِّكَ بِالْحُكْمِ وَالْمَوْعِظَةِ الْحَسَنَةِ وَجَادِلْهُمْ بِالَّتِي هِيَ أَحْسَنُ إِنَّ رَبَّكَ هُوَ أَعْلَمُ بِمَنْ ضَلَّ عَنْ سَبِيلِهِ وَهُوَ أَعْلَمُ بِالْمُهْتَدِينَ﴾

النحل (١٢٥)

2. “There is no compulsion in religion; right-mindedness is henceforth distinct from misguidance and he who disbelieves false gods and believes in Allāh has grasped a firm handhold which wil never break; and Allāh is Ever-Hearing, Ever-Knowing.”

(Al-Baqarah: 256)

٢ - ﴿لَا إِكْرَاهَ فِي الدِّينِ قَدْ تَبَيَّنَ الرُّشْدُ مِنَ الْغَيِّ فَمَنْ يَكْفُرْ بِالطَّاغُوتِ وَيُؤْمِنْ بِاللَّهِ فَقَدْ اسْتَمْسَكَ بِالْعُرْوَةِ الْوُثْقَىٰ لَا انْفِصَامَ لَهَا وَاللَّهُ سَمِيعٌ عَلِيمٌ﴾

البقرة (٢٥٦)

3. “And if your Lord willed, then all who are in the earth would have believed all of them altogether, Lo! Would you (Muhammad) compel the people until they become believers?”

(Yûnus : 99)

﴿ وَلَوْ شَاءَ رَبُّكَ لَآمَنَ مَن فِي الْأَرْضِ كُلُّهُمْ جَمِيعًا أَفَأَنْتَ تَكْرَهُ النَّاسَ حَتَّىٰ يَكُونُوا مُؤْمِنِينَ ﴾
يونس (٩٩)

Clearly, therefore, Islâm is mainly a religion of justice, peace and guidance. Undoubtly, if the foes of Islâm had allowed the new faith freedom of action an argumentation and had not murdered, or torture, individual Muslims, then the latter would have not held any weapon against them.

However, Allâh allowed Muslims to fight their foes just to put an end to their aggression and tyranny:

“Those who have been driven from their homes unjustly only because they said or Lord is Allâh; for had it not been for Allâh’s repelling some men by means of others, cloisters and churches and oratories and mosques, wherein the name of Allâh is oft-mentioned, would assuredly have been pulled down; Verily, Allâh supports one who supports Him. Lo! Surely, Allâh is Strong and Almighty.”

(Al-Hajj : 40)

﴿ الَّذِينَ أُخْرِجُوا مِنْ دِيَارِهِمْ بِغَيْرِ حَقٍّ إِلَّا أَنْ يَقُولُوا رَبُّنَا اللَّهُ وَلَوْلَا دَفْعُ اللَّهِ النَّاسَ بَعْضَهُمْ بِبَعْضٍ لَّهُدِمَتْ صَوَامِعُ وَبِيَعٌ وَصَلَوَاتٌ وَمَسَاجِدُ يُذْكَرُ فِيهَا اسْمُ اللَّهِ كَثِيرًا وَلَيَنْصُرَنَّ اللَّهُ مَن يَنْصُرُهُ إِنَّ اللَّهَ لَقَوِيٌّ عَزِيزٌ ﴾
الحج (٤٠)

Muslims had to wait long before Allâh allowed those who were oppressed under the yoke of their foe to take up their arms:

1. “Permission is given to those who fight because they have been wronged and indeed Allâh is able to give them victory.”

(Al-Hajj : 39)

١ - ﴿أُذِنَ لِلَّذِينَ يُقَاتِلُونَ بِأَنَّهُمْ ظَلَمُوا وَإِنَّ اللَّهَ عَلَىٰ نَصْرِهِمْ لَقَدِيرٌ﴾

الحج (٣٩)

2. “And fight in the way of Allâh against those who fight against you, but do not be aggressive. Lo! Allâh loves not the aggressors.”

(Al-Baqarah : 190)

٢ - ﴿وَقَاتِلُوا فِي سَبِيلِ اللَّهِ الَّذِينَ يُقَاتِلُونَكُمْ وَلَا تَعْتَدُوا إِنَّ اللَّهَ لَا يُحِبُّ الْمُعْتَدِينَ﴾

البقرة (١٩٠)

IV. Today's World Needs Islâm

According to Islâm, man is honoured without any discrimination whatever. He was honoured from the beginning of creation, since Allâh made him His life on earth, an ordered His Angels to prostrate for him. He indicate that He has endowed man with the ability to acquire knowledge in order to be able to master what exists on earth, and harness it to his will by means of his intellect. In this respect, the Qur'ân says for example what means:

“And behold; your Lord said to the angels: “I will create a successor on earth”. They said: “Will You place therein (beings) who make mischief therein and shed blood? Whilst we do celebrate Your praises and glorify Your Name?” He said: “Surely, I know what you know not.” And He taught Âdam the nature (or secrets) of all things, then He exhibited them before the angels and said:

“Tell me the names of these if you are right.” They said: “Glory to You; regarding knowledge we are aware of nothing save what You have taught us. For sure, it is You Who are absolute in knowledge and wisdom.” He said: “O Âdam! tell them their names.” When he had told them their names, Allâh said: “Did I not tell you that I know the secrets of the heavens and the earth, an I know what you reveal, and what you had been concealing?” And behold, “We said to the angels:

“ Prostrate to Âdam; and they prostrated, not so Iblîs. He refused and was proud. He was of the disbelievers.”

(Al-Baqarah: 30-34)

﴿وَإِذْ قَالَ رَبُّكَ لِلْمَلَائِكَةِ إِنِّي جَاعِلٌ فِي الْأَرْضِ خَلِيفَةً قَالُوا أَتَجْعَلُ فِيهَا مَنْ يُفْسِدُ فِيهَا وَيَسْفِكُ الدِّمَاءَ وَنَحْنُ نُسَبِّحُ بِحَمْدِكَ وَنُقَدِّسُ لَكَ قَالَ إِنِّي أَعْلَمُ مَا لَا تَعْلَمُونَ (٣٠) وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى الْمَلَائِكَةِ فَقَالَ أَنْبِئُونِي بِأَسْمَاءِ هَؤُلَاءِ إِنْ كُنْتُمْ صَادِقِينَ (٣١) قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ (٣٢) قَالَ يَا آدَمُ أَنْبِئْهُمْ بِأَسْمَائِهِمْ فَلَمَّا أَنْبَأَهُمْ بِأَسْمَائِهِمْ قَالَ أَلَمْ أَقُلْ لَكُمْ إِنِّي أَعْلَمُ غَيْبَ السَّمَوَاتِ وَالْأَرْضِ وَأَعْلَمُ مَا تُبْدُونَ وَمَا كُنْتُمْ تَكْتُمُونَ (٣٣) وَإِذْ قُلْنَا لِلْمَلَائِكَةِ اسْجُدُوا لِآدَمَ فَسَجَدُوا إِلَّا إِبْلِيسَ أَبَى وَاسْتَكْبَرَ وَكَانَ مِنَ الْكَافِرِينَ﴾

البقرة (٣٠ - ٣٤)

These verses reveal three principal facts:

First: Man is the commanded by Allâh to inhabit the earth consequently, the Solar System, Allâh gave him authority over it by virtue of his humanity and intellect.

Second: Allâh enabled man to investigate the earth because of his ability by nature to know things and to uncover the secrets or the laws of the universe. He says:

“ And We have placed you with authority on earth and provided you therein with means for the fulfilment of your life: Few are the thanks that you give.”

(Al-A‘râf: 10)

﴿وَلَقَدْ مَكَّنَّاكُمْ فِي الْأَرْضِ وَجَعَلْنَا لَكُمْ فِيهَا مَعَايِشَ قَلِيلًا مَّا تَشْكُرُونَ﴾

الأعراف (١٠)

Third: Man may surpass the angels by his deeds. If people do not degenerate in their earthly life to the standard of the animals they would be better than angels. One reads in the Qur'ân:

“And We have honoured the sons of Âdam and provided them with transport on land and sea and given them for sustenance things good and pure and conferred on them special grace above a great number of Our creation.”

(Al-Isrâ' : 70)

﴿وَلَقَدْ كَرَّمْنَا بَنِي آدَمَ وَحَمَلْنَاهُمْ فِي الْبَرِّ وَالْبَحْرِ وَرَزَقْنَاهُمْ مِنَ الطَّيِّبَاتِ وَفَضَّلْنَاهُمْ عَلَى كَثِيرٍ مِمَّنْ خَلَقْنَا تَفْضِيلًا﴾

الإسراء (٧٠)

Obviously, the dignity which Islâm emphasizes is granted to humanity only because he is a human being possessing the qualities of humanity, irrespective of any other qualities such as colour, nationality or race.

THE ETERNAL MIRACLE

I. Foreword

As was mentioned in book (1), nothing can remain on earth forever as an eternal miracle except a unique book. The inimitable elocution and teachings of such a book must be conspicuous and convincing at all stages and types of human civilization.

Any other sort of miracles, notably those which are not within the laws of nature, such as calling the dead to rise up for a while, cannot be eternal, and are limited in all respects to their particular place and time.

In the present age (Age of Science) the above statement has been justified in the light of the recent interpretation of a great number of verses in the Qur'ân which revealed scientific facts in various fields. Detailed comments are given below concerning some of these verses.

II. The Earth's Fresh Water

Rain is the direct and indirect source of fresh water on earth, whether we take it from rivers, tributaries, wells or fountains ... Subsoil fresh water also has its origin as rain.

Rain falls from clouds which are known in science (meteorology) as nimbus clouds. Two different types of nimbus clouds exist. These are:

a) Nimbo-stratus clouds, which form and grow or, spread, in single layers or strata. This is why they are called stratus.

b) Cumulo-nimbus clouds, which develop and grow vertically to reach levels as high as 10-20- kilometers, and thus appear like mountains. These are the only type of clouds in which hail forms, and lightning, thunderstorms and thunderbolts occur. Amazingly enough, the Qur'ân says for example:

1. “And have you seen the water which you drink? Have you made it fall from the nimbus (clouds), or is it We Who send it down?”

(Al-Wâqi‘ah : 68-69)

١ - ﴿أَفَرَأَيْتُمُ الْمَاءَ الَّذِي تَشْرَبُونَ (٦٨) أَأَنْتُمْ أَنْزَلْتُمُوهُ مِنَ الْمُزْنِ أَمْ نَحْنُ الْمُنْزِلُونَ﴾

الواقعة (٦٨ - ٦٩)

2. “Have you not seen that Allâh sends down rain from the sky and leads it through springs in the earth? Then He causes to grow therewith plantation of various colours; then it withers; then you see it grow yellow; then He makes it dry and crumble away. Truly this is a message of remembrance to men with intellects.”

(Az-Zumar : 21)

٢ - ﴿أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَسَلَكَهُ يَنَابِيعَ فِي الْأَرْضِ ثُمَّ يُخْرِجُ بِهِ زَرْعًا مُخْتَلِفًا أَلْوَانُهُ ثُمَّ يَهِيجُ فَتَرَاهُ مُصْفَرًّا ثُمَّ يَجْعَلُهُ حُطَامًا إِنَّ فِي ذَلِكَ لَذِكْرًا لِأُولِي الْأَلْبَابِ﴾

الزمر (٢١)

With respect to nimbo-stratus clouds one reads:

3. “Allâh is He who sends forth the winds so they raise clouds, the does He spread them (in strata) in the sky as He pleases and He makes them partially thick so that you see the rain coming from inside them; then when He causes it to fall upon whom He pleases of His worshippers they rejoice.”

(Ar-Rûm : 48)

٣- ﴿اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتُثِيرُ سَحَابًا فَيَبْسُطُهُ فِي السَّمَاءِ كَيْفَ يَشَاءُ وَيَجْعَلُهُ كُسْفًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خَلَالِهِ فَإِذَا أَصَابَ بِهِ مِنْ يَشَاءُ مِنْ عِبَادِهِ إِذَا هُمْ يَسْتَبْشِرُونَ﴾

الروم (٤٨)

Concerning the cumulo-nimbus clouds, one reads:

4. "Have you not seen that Allâh drives along bits of clouds, then joins them together, then makes them into heaps of cumulus then you will see rain drops issuing from their inside and He sends down from the sky mountain masses of cumulus wherein is hail afflicting therewith whom He pleases and turning it away from whom He pleases; the vivid flash (splendor) of its lightning (whose electric charge is due to hail) almost takes away the sight."

(An-Nûr : 43)

٤- ﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَزْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خَلَالِهِ وَيَنْزِلُ مِنَ السَّمَاءِ مِنْ جِبَالٍ فِيهَا مِنْ بَرَدٍ فَيُصِيبُ بِهِ مَنْ يَشَاءُ وَيَصْرِفُهُ عَنِ مَنْ يَشَاءُ يَكَادُ سَنَا بَرْقِهِ يَذْهَبُ بِالْأَبْصَارِ﴾

النور (٤٣)

The stages of the formation of the cumulo-nimbus cloud have been photographed, and it has been made clear that generally it passes by the following stages:

First: Small cells of cumulus appear in the sky.

Second: Two or more cells unite together to form the growing cumulus.

Third: The cloud so formed continues to grow rapidly to the cumulonimbus stage and thus appears like a huge mountain from which rain and hail issue.

Fourth: Hail plays the role in charging the cloud with electricity. (Refer to book(1), p. 25). An observer located near the cloud by some means or another, loses his sight for a while on looking at the lightning flashes.

III. The Fresh Water Cycle

It is now accepted that the earth's fresh water goes through a cycle between the earth's water surfaces and the atmosphere. Water is perpetually evaporating from water surfaces such as oceans and seas by virtue of solar radiation and air currents and is carried upwards in the atmosphere to form clouds and nimbus clouds.

In order that rain might fall from the nimbus clouds, winds must continue to supply (or seed or even fertilize) the clouds with: (1) water — vapour necessary for condensation and (2) nuclei of condensation which have affinity to water, or absorb it. On these nuclei rain drops or ice crystals develop according to the prevailing temperature.

In ancient times it was believed that the fresh water was stored somewhere high in the sky. The Qur'ân rejected this belief and said:

“And We send the winds seeding (the clouds) thus cause water to descend from the sky, therewith providing you with it to drink and you are not storing it (in the sky).”

(Al-Hijr : 22)

﴿وَأَرْسَلْنَا الرِّيَّاحَ لَوَافِحَ فَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَسْقَيْنَاكُمُوهُ وَمَا أَنْتُمْ لَهُ بِخَازِنِينَ﴾

الحجر (٢٢)

IV. On The Origin Of The Universe

A limited number of theories concerning the origin of the universe has been available in the Age of Science. A long time ago, astronomers used to believe a the stars to be clustered together in a single “isle and universe”, or galaxy — the Milky Way — embedded in empty infinity of space.

Gradually, with the advance of the tools of observation and in the light of the Theory of Relativity, astronomers became aware of the fact that our universe is a universe of galaxies similar to our own and they are unlimited in number. They are receding from us and the universe is expanding. Miraculously, this is also justified by the Qur’ân which says:

“With power and skill did We construct the heavens (universe) and indeed We are expanding them.”

(Adh-Dhâriyât : 47)

﴿وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ﴾

الذاريات (٤٧)

By the aid of spectrum analysis (the so-called red-shift or Doppler effect) it was revealed that billions of years had to pass since galaxies external to our own were condensed together in an extremity limited space of unimaginable density.

Now, the Qur’ân, being an iternal miracle, predicted these results since about 1500 years ago! It says for example what means:

1. **“Are then, they who disbelieve aware that the heavens and the earth were (originally) one single entity which We then**

parted asunder and We made of water every living thing, do not they thus believe?!"

(Al-Anbiyâ' : 30)

١ - ﴿أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ أَفَلَا يُؤْمِنُونَ﴾

الأنبياء (٣٠)

Evidently, this verse indicates that: (1) The material of the universe was originally a single entity whose parts must have been close together. (2) The separation took place systematically, and galaxies were grouped in clusters to orbit about their common centers of mass. The process is reversible:

2. "On that Day We shall roll up the heavens like the rolling up of the scrolls. As We originated the first creation We shall bring it forth again; a promise incumbent on Us, so shall We do."

(Al-Anbiyâ' : 104)

٢ - ﴿يَوْمَ نَطْوِي السَّمَاءَ كَطَيِّ السِّجِلِّ لِلْكُتُبِ كَمَا بَدَأْنَا أَوَّلَ خَلْقٍ نُعِيدُهُ وَعَدًا عَلَيْنَا إِنَّا كُنَّا فَاعِلِينَ﴾

الأنبياء (١٠٤)

This verse indicates clearly that:

a) All the galaxies, in spite of the fact that they are receding since the beginning of creation, yet they will be brought

by Allâh in contact again within limited space as they happened to be at the beginning of creation.

b) The above statements are made sure by the Qur'ân, being a promise incumbent on Allâh. However, a great number of astronomers say that the expanding universe should ultimately collapse by gravity into a limited space.

3. "... And the earth shall all be His handful on the Day of Resurrection and the heavens shall be folded in His right hand (so belittled) ..."

(Az-Zumar : 67)

٣ - ﴿وَالْأَرْضُ جَمِيعًا قَبْضَتُهُ يَوْمَ الْقِيَامَةِ وَالسَّمَوَاتُ مَطْوِيَّاتٌ بِيَمِينِهِ﴾

الزمر (٦٧)

The verse predicts that the entire universe (earth and heavens) will ultimately be one unit under Allâh's vivid power on the Last Day.

4. "Then He took hold of the heaven when it was gas and said to it and to the earth come willingly or unwillingly, they both said: We come willingly."

(Fuṣṣilat : 11)

٤ - ﴿ثُمَّ اسْتَوَىٰ إِلَى السَّمَاءِ وَهِيَ دُخَانٌ فَقَالَ لَهَا وَلِلْأَرْضِ ائْتِيَا طَوْعًا أَوْ كَرْهًا قَالَتَا أَتَيْنَا طَائِعِينَ﴾

فصلت (١١)

This verse indicates clearly that everything in the universe obeys Allâh's physical laws, which are fixed with changing

space and time. This fact enabled man to acquire knowledge and deduce theories by careful observation and examination of the various things in the universe. The outstanding available theory is known as “the Big-bang” theory. It provides us with a reasonable answer to the question concerning the origin of the universe.

It has not been familiar in the present series of books (Islâm and Science) to refer to mere theories which are man made. However, regarding the creation of the universe in particular, Allâh says:

1. **“I did not call them to witness the creation of the heavens and the earth ...”**
(Al-Kahf : 51)

١ - ﴿ مَا أَشْهَدْتُهُمْ خَلْقَ السَّمَوَاتِ وَالْأَرْضِ ﴾

الكهف (٥١)

2. **“For sure the creation of the heavens and the earth is greater than the creation of mankind but most people know not.”**
(Ghâfir : 57)

٢ - ﴿ خَلَقَ السَّمَوَاتِ وَالْأَرْضِ أَكْبَرَ مِنْ خَلْقِ النَّاسِ وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ ﴾

غافر (٥٧)

However, Allâh supports us with suitable and proper knowledge. He says:

- “... And they (men) are not encompass anything of His knowledge except what He decides (to offer) ...”**

(Al-Baqarah : 255)

﴿ وَلَا يُحِيطُونَ بِشَيْءٍ مِّنْ عِلْمِهِ إِلَّا بِمَا شَاءَ ﴾

البقرة (٢٥٥)

V. The Big-bang Theory

The big-bang is a theory of cosmology in which the expansion of the universe is presumed to have begun in a primeval explosion. In this theory the following principles are to be regarded unquestionable:

1) Observations:

Our observations supply us with information applicable to the universe as a whole. In other words, the part of the universe that we actually observe represents the entire cosmos. Allâh says:

“... And indeed you will never find any alteration in 'Allâh's order (and laws) nor will you ever find any deformation in Allâh's enactment (and laws).”

(Fâtîr: 43)

﴿ فَلَنْ تَجِدَ لِسُنَّتِ اللَّهِ تَبْدِيلًا وَلَنْ تَجِدَ لِسُنَّتِ اللَّهِ تَحْوِيلًا ﴾ فاطر (٤٣)

2) The expanding universe:

If no new matter is being added to the expanding universe, then the total mass of the entire universe remains constant. This simply means that all the matter in the universe must have once been close together. Once more, amazingly enough, one reads in the Qur'ân:

a) “With power and skill did We construct the heavens (the universe) and indeed We are expanding them.”

(Adh-Dhâriyât : 47)

﴿ وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ ﴾ الذاريات (٤٧)

b) “Do not the disbelievers see that the heavens and the earth were joined together as one until before We split them apart ...”
(Al-Anbyâ’ : 30)

ب - ﴿أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا﴾

الأنبياء (٣٠)

Evidently, this means that once (before time) some original big explosion started-galaxies moving away from each other, and the red-shift law began to apply.

3) The universe must have a finite age:

Disregarding gravity, galaxies moving in space should have their speeds not changed since the explosion took place. A galaxy at a distance S units moving at a speed V units must have been receding from us for the time.

$$t = \frac{S}{V} =$$

$$= 10 \text{ to } 20 \text{ billion years}$$

This represents the limits of the age of the universe.

4) About the geometry and space:

According to the general theory of Relativity, the geometry of space is affected by the presence of matter in it, and traveling in space is thus accomplished in curved lines. The Qur’ân refers to this effect by the word (ya’ruj), as mentioned in book (3) P. (115-116). The word means to move in curved all lines:

He (Allâh) knows all that goes into the earth and all that comes out thereof; all that comes down from the heaven and all that yan’nuj (mounts) t hereto and He is Ar-Rahîm Al-Ghafûr.

(Saba’ : 2)

﴿يَعْلَمُ مَا يَلِجُ فِي الْأَرْضِ وَمَا يَخْرُجُ مِنْهَا وَمَا يَنْزِلُ مِنَ السَّمَاءِ وَمَا يَعْرَجُ فِيهَا وَهُوَ الرَّحِيمُ
الْعَفُورُ﴾

سبأ (٢)

5) The velocities of escape of galaxies from each other depend on the mean density of matter in the universe. This has been estimated to be between 10^{-29} to 10^{-31} gram per cm^3 .

Galaxies would eventually fall back together as soon as they start moving slower than some critical velocity of escape. This is made sure by the Qur'ân which says for example:

“On that day (the Hereafter) We shall roll up the heavens like the rolling up of the scrolls. As We originated the first creation We shall bring it forth again; a promise incumbent on Us; so shall We perform.”

(Al-Anbiyâ' : 104)

﴿يَوْمَ نَطْوِي السَّمَاءَ كَطَيِّ السِّجْلِ لِلْكِتَابِ كَمَا بَدَأْنَا أَوَّلَ خَلْقٍ نُعِيدُهُ وَعَدًا عَلَيْنَا إِنَّا كُنَّا
فَاعِلِينَ﴾

الأنبياء (١٠٤)

In conclusion, observational and theoretical evidences show that the universe is expanding as a result of its evolution from a big-bang billions of years ago. After the stage of expansion, the entire universe will collapse and shrink by gravity into a limited space as it happened to be at the beginning of creation. These conclusions also find support in some cosmic verses in the

SOME EVENTS FORETOLD BY THE QUR'ÂN

I. Past Events

Some verses in the Qur'ân have revealed certain events:

“Who (Allâh) is aware of the futurity (and unseen) ; and from Him is not hidden an atom’s weight neither in the heavens nor in the earth, nor is there anything less than that or greater but in an evident Book.”

(Saba’: 3)

﴿عَالِمِ الْغَيْبِ لَا يَعْزُبُ عَنْهُ مِثْقَالُ ذَرَّةٍ فِي السَّمَوَاتِ وَلَا فِي الْأَرْضِ وَلَا أَصْغَرُ مِنْ ذَلِكَ
وَلَا أَكْبَرُ إِلَّا فِي كِتَابٍ مُبِينٍ﴾

سَبَأُ (٣)

Some events have already taken place exactly as they had been predicted by the Qur'ân. These are past events. Others still remain to take place. The following is an example of the past events.

Early Muslims were generally sympathetic with the Romans because they professed a heavenly religion and had a heavenly book (the Bible). The case was not so with the Persians.

In the first year of Al-Hijrah since Muh _ammad, (prayers and peace be upon him, left Macca to Al-Madîna), Muslims became distressed when the Romans were defeated by the Persians at the battle of (Zikar) as well as at other battles. The polytheists of the Arabian Peninsula celebrated those victories and gloated over the Muslim’s disappointment.

The polytheists said to the Muslims: "Remember you Muslims that the Roman's defeat is an evident proof that our religion, of worshipping several gods, is the true religion and that we are going to win the victory over you".

On recording these feelings, the Qur'ân not only promised victory for the Romans over the Persians but also promised victory for the Muslims over all of them. History proved that this promise was fully fulfilled. Allâh says what means:

"The Romans have been defeated in a land close by, but they even after this defeat of theirs they will soon be victorious within a few years; with Allâh is the decision in the past and in the future, and on that day shall the believers rejoice with victory from Allâh. He leads to victory whom He decides and He is The Ever-Almighty The Ever-Merciful; Allâh's promise, Allâh never breaks down His promise but most people know not."

(Ar-Rûm : 2-6)

﴿ غَلَبَتِ الرُّومُ (٢) فِي أَدْنَى الْأَرْضِ وَهُمْ مِنْ بَعْدِ غَلَبِهِمْ سَيَغْلِبُونَ (٣) فِي بَضْعِ سِنِينَ لِلَّهِ الْأَمْرُ مِنْ قَبْلُ وَمِنْ بَعْدِ وَيَوْمَئِذٍ يَفْرَحُ الْمُؤْمِنُونَ (٤) بَنَصَرَ اللَّهُ يَنْصُرُ مَنْ يَشَاءُ وَهُوَ الْعَزِيزُ الرَّحِيمُ (٥) وَعَدَ اللَّهُ لَا يَخْلِفُ اللَّهُ وَعْدَهُ وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ ﴾

الروم (٢ - ٦)

II. Present Events

Within the last and present centuries, the means of communication, transportation .. improved totally in rapidly ascending steps. Various vehicles now carry people in and over water, on land, in the air and through space. Allâh is He Who offers man the knowledge and ability required in order to manufacture everything he needs in various fields.

With respect to the means of communications and travelling, for example, the Qur'ân says:

1. **"And the horses and mules and donkeys to ride and an adornment and He creates what you know not."**

(An-Nah1 : 8)

١- ﴿وَالْخَيْلَ وَالْبِغَالَ وَالْحَمِيرَ لِتَرْكَبُوهَا وَزِينَةً وَيَخْلُقُ مَا لَا تَعْلَمُونَ﴾

النحل (٨)

2. **"And if We open upon them a door of the sky that they may go on ascending (curvilinearly), therein they will say: stupefied are our sights, or even we are people bewitched."**

(Al-Hijr : 14-15)

٢- ﴿وَلَوْ فَتَحْنَا عَلَيْهِمْ بَابًا مِّنَ السَّمَاءِ فَظَلُّوا فِيهِ يَعْرَجُونَ ﴿١٤﴾ لَقَالُوا إِنَّمَا سُكِّرَتْ أَبْصَارُنَا بَلْ نَحْنُ قَوْمٌ مَّسْحُورُونَ﴾

الحجر (١٤-١٥)

At present, in the Age of Space, man has become aware of the fact that space travel comprises unusual serious difficulties capable of initiating the feeling of the interference of some sort of magic power leading, for example to:

1. Disappearance of gravity.
2. Absolutely dim environment (space).
3. No daylight.
4. Abnormal number of stars.
5. Unbearable vehicle vibrations.

The Qu r'ân also described parts of the earth's surface which were unknown to the Arabs during the time of revelation such as the polar cap. "Refer to Book (1) P.(20).

III. Future Events

Muslims do believe in the Last Day or Day of Resurrection or the so-called the Hour. Its approach is preceded by certain signs. The Qu r'ân uncovers one of them and says :

“When the Hour approaches the moon splits”.

(Al-Qamar : 1)

القمر (١)

﴿ اقْتَرَبَتِ السَّاعَةُ وَانْشَقَّ الْقَمَرُ ﴾

Further details are given in book (6)

IV. The Qur'ân :

The Unique Source Of Happiness

The most sincere words describing the Qu r'ân were those of the Prophet Muh_ammad when he said:

“Allâh revealed the Q ur'ân as order as well as a restraint, a running tradition and prevailing example. In it, you find a prophetic account about yourselves, your predecessors and your successors. The Books is, in itself, of everlasting novelty and countless marvels; a book of justice and void of jest. Who speaks its word is truthful, who judges by its laws is just, who vows by it eradicates all doubts, who follows its teachings will be recompensed, who adheres to its guidance leads himself to the right path, who seeks another guide is astray and who rules not by its laws will be stopped short by Allâh. It is the true word of wisdom, resplendent light, the right way, a shelter to which those who resort are preserved by The Almighty, It is the salvation for its followers with no deviations to be put right and no faults to be remedied.”

THE QUR'ÂN'S MARVELS ARE EVERLASTINGLY
ILLUMINATING AND ETERNALLY NEW.

ISLÂM AND SCIENCE

- 6 -

Foreword

It is a fact that Islâm is up till now misunderstood by a great number of people, notably in the West. Unfortunately, this misunderstanding has led to hatred and even war since the Middle Ages. Some of the reasons are :

- a) The Qur'ân's interpretations are mostly literal and does not always convey the true meaning. See also P. 140 book (4).
- b) The degeneration of the Muslim World. Refer also to book (3) PP. 128-129.

The principal aim from the present series is to make clear, by scientific evidence, that the Qur'ân is not of man's making, but Allâh's final message to mankind comprising a code for the whole humanity. In this sense, the Qur'ân says for example.

1. **“And it (the Qur'ân) is no more than (wisdom) for all the worlds.”**

(Al-Qalam : 52).

2. “And We sent it (the Qu’rân) in truth and in truth has it descended; and We sent thee but to give glad tidings and to warn (people).”

(Al-Isrâ’ : 105).

﴿وَبِالْحَقِّ أَنزَلْنَاهُ وَبِالْحَقِّ نَزَلَ وَمَا أَرْسَلْنَاكَ إِلَّا مُبَشِّرًا وَنَذِيرًا﴾ الإسراء (١٠٥)

3. “And Verily it (the Qur’ân) has been sent down by the Lord of all the worlds.”

(Ash-Sh‘uarâ’ : 192).

﴿وَأَنَّهُ لَتَنْزِيلُ رَبِّ الْعَالَمِينَ﴾ الشعراء (١٩٢)

4. “No falsehood can approach it (the Qur’ân) from before or from behind it, it is sent down by Hakîm (One full of wisdom) Hamîd (One worthy of all praise) .”

(Fuṣṣilat : 42).

﴿لَا يَأْتِيهِ الْبَاطِلُ مِنْ بَيْنِ يَدَيْهِ وَلَا مِنْ خَلْفِهِ تَنْزِيلٌ مِّنْ حَكِيمٍ حَمِيدٍ﴾ فصلت (٤٢)

5. “O people of the Book (Jews and Christians) there has come to you our Messenger (Muḥammad) , clearing to you much that you used to hide in the Book, and passing over much. There has come to you from Allâh Light (the Qur’ân) and a perspicuous Book.”

(Al-Mâ’idah : 15).

﴿يَا أَهْلَ الْكِتَابِ قَدْ جَاءَكُمْ رَسُولُنَا يُبَيِّنُ لَكُمْ كَثِيرًا مِّمَّا كُنْتُمْ تُخْفُونَ مِنَ الْكِتَابِ

وَيَعْفُو عَنْ كَثِيرٍ قَدْ جَاءَكُمْ مِنَ اللَّهِ نُورٌ وَكِتَابٌ مُبِينٌ﴾ المائدة (١٥)

ALLÂH REVEALS THE TRUTH IN THE QUR'ÂN AND THE UNIVERSE

I. Introduction :

A great number of verses in the Qur'ân are in fact, mainly Scientific, dealing with various aspects of science. Some examples have been given in books (1 to 5) of the present series «Islâm and Science». At least, in our Age of Science such verses bear testimony that the Qur'ân is an Eternal Miracle. Amazingly enough, Muh_ammad-prayers and peace be upon him-was unlettered, and there is no way, whatever, to regard those (scientific) verses as Muh_ammad's own words, In fact, Muhammad only conveyed the Messages of Allâh to man on earth :

“Say : O men! For sure I am sent to you all as the Messenger of Allâh to Whom belongs the Kingdom of the heavens and the earth : There is no god but He. It is He Who offers life and death. So believe in Allâh and His Messenger, the unlettered Prophet, who believes in Allâh and His Words, and follow Him so that you may be guided.”

(Al-A'râf : 158).

﴿قُلْ يَا أَيُّهَا النَّاسُ إِنِّي رَسُولُ اللَّهِ إِلَيْكُمْ جَمِيعًا الَّذِي لَهُ مُلْكُ السَّمَوَاتِ وَالْأَرْضِ لَا إِلَهَ إِلَّا هُوَ يُحْيِي وَيُمِيتُ فَآمِنُوا بِاللَّهِ وَرَسُولِهِ النَّبِيِّ الْأُمِّيِّ الَّذِي يُؤْمِنُ بِاللَّهِ وَكَلِمَاتِهِ وَاتَّبِعُوهُ لَعَلَّكُمْ تَهْتَدُونَ﴾
(الأعراف (١٥٨))

Practically, little or no harmony was seen to exist between Islâm- the monotheistic religion- and modern science until Al-Fandy the

author of the present series- began to publish his work regarding this subject early in the sixties of this century.

Contrary to what happened, for example, to Galileo (1615) in the Christian world, no measures, whatever, were taken against me in the Muslim World. While Galileo was tried for having followed Copernicus's discoveries regarding the earth's rotation, many Muslim writers followed me. At present, conferences are being held in many Muslim countries by specialists in the various branches of science in order to reveal their amazing achievements in this matter.

The greater part of the Qur'ânic verses are either revealing (facts) concerning the universe, or urging man to discover such facts :

1. **"... Allâh raises up (the ranks) of those of you who believe and who have been granted knowledge..."**

(Al-Mujâdalah : 11).

١ - ﴿يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ ۚ﴾ المجادلة (١١)

2. **"We will show them Our signs in the horizons and in themselves until it becomes manifest to them that it (the Qur'ân) is the (whole) Truth..."**

(Fuṣṣilat : 53).

٢ - ﴿سَنُرِيهِمْ آيَاتِنَا فِي الْآفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ﴾ فصلت (٥٣)

3. **"Did you not see that Allâh sends down water from the sky; thus We produce thereby fruits of varied hues and that in the mountains there are white and red tracts of different shades of colour, and others of raven black**

colour? And of humanity and crawling creatures and cattle there are likewise different hues? Verily, of all Allâh's worshippers those who are imbued with knowledge fear Allâh most. Verily, Allâh is Ever-Mighty, Ever-Forgiving."

(Fâtîr : 27-28).

۳ - ﴿أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ ثَمَرَاتٍ مُخْتَلِفًا أَلْوَانُهَا وَمِنَ الْجِبَالِ جُدَدٌ بَيَضٌ وَحُمْرٌ مُخْتَلِفٌ أَلْوَانُهَا وَغَرَابِيبُ سُودٍ ۚ (۲۷) وَمِنَ النَّاسِ وَالدَّوَابِّ وَأَلْأَنْعَامِ مُخْتَلِفٌ أَلْوَانُهُ كَذَلِكَ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ إِنَّ اللَّهَ عَزِيزٌ غَفُورٌ﴾
(فاطر (۲۷-۲۸))

4. "Allah is He Who sends forth the winds so that they stir up clouds"

(Ar-Rûm : 48).

﴿اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتُثِيرُ سَحَابًا﴾
(الروم (٤٨))

This verse postulates for the first time that clouds are formed by air currents (winds). Only recently, in the Age of Science, we have become aware of the fact that air may move either horizontally or vertically, or even in both directions together. We also are aware of the fact that clouds are formed when moist air rises in the atmosphere.

When air rises, its temperature decreases under the effect of the so-called adiabatic cooling, or cooling by mere decrease of pressure. Air holds and carries with it water-vapour. As air cools down its

ability to hold water- vapour decreases until it becomes saturated or it becomes no longer able to hold its content of water- vapour. This is the stage when condensation begins to take place. Condensation means the transformation of water-vapour into water- drops or ice crystals, according to the prevailing temperature. Clouds are nothing but aggregations of water- drops in bottom and ice crystals on top.

II. Detailed Scientific Comments Concerning Some Selected Verses

1 - INTRODUCTION :

In addition to the various verses selected in books (1-5) of this series in order to illustrate the scientific attitude in Islâm, further verses are also given below and interpreted on detailed scientific basis in order to reveal and assure the fact that the Qur'ân still proves to be miraculously convincing in the Age of Science :

- a) “And indeed, We have put forth for mankind in this Qur'ân every sort of parable...”

(Az-Zumar : 27)

(أ) ﴿وَلَقَدْ ضَرَبْنَا لِلنَّاسِ فِي هَذَا الْقُرْآنِ مِنْ كُلِّ مَثَلٍ﴾ الزمر (٢٧)

“And indeed. We have fully explained to mankind, in this Qur'ân, every kind of similitude”

(Al-Isrâ' : 89).

﴿وَلَقَدْ صَرَّفْنَا لِلنَّاسِ فِي هَذَا الْقُرْآنِ مِنْ كُلِّ مَثَلٍ فَأَبَى أَكْثَرُ النَّاسِ إِلَّا كُفُورًا﴾
الإسراء (٨٩)

“And indeed, We have set forth for mankind, in this Qur'ân every kind of parable”

(Ar-Rûm : 58).

﴿وَلَقَدْ ضَرَبْنَا لِلنَّاسِ فِي هَذَا الْقُرْآنِ مِنْ كُلِّ مَثَلٍ﴾ الروم (٥٨)

b) “... We have ignored not any (subject) matter in the Book .”

(Al-An‘âm : 38).

﴿ مَا فَرَطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ ۚ ﴾
الأنعام (٣٨)

c) “We shall show them our portents (signs) in the horizons and within themselves until becomes manifest to them that it (the Qur’ân) is the (whole) Truth...”

(Fuṣṣilat: 53)

﴿ سَنُرِيهِمْ آيَاتِنَا فِي الْآفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ ۗ ﴾
فصلت (٥٣)

Compact review concerning the scientific details of some Qur’ânic verses are given below :

2 - Expansion Of The Universe (Heavens) :

“With power and skill did We construct the heavens and indeed We are expanding them.”

(Adh-Dhâriyât : 47)

﴿ وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ ﴾
الذاريات (٤٧)

This verse reveals a number of scientific achievements and discoveries realized long time after revelation.

To grasp an idea concerning the present size of the universe, let us consider a model in which the sun is represented by a ball 15 cms in diameter. In spite of this enormous reduction of scale, the model

of the solar system is reduced to the area of a small village. On this same scale, our earth is represented by a particle of dust, and the nearest stars in our galaxy (the Milky Way) are 300 kilometers away!

Light, which travels with the speed of 300,000 kilometers per second, takes five hours to travel along a diameter of the entire space occupied by the members of the Solar System (from one end to the other). Only part of the Solar System could be observed by the naked eye at the time of revelation. That part included, in addition to the sun and the moon, the planets : Mercury, Venus, Mars, Jupiter and Saturn. It was only lately, long after the discovery of the telescope, that the other members of the Solar System namely Uranus, Neptune and Pluto could be discovered, and thus the visible limits of our Solar System (and consequently heavens) expanded.

Again, the so-called fixed stars were generally regarded as lamps fixed in heavens!! In fact, they appear to be fixed because of their large distances away from us. Light takes several years to travel to us from the nearest stars. By means of telescopes many stars in the Milky Way (our galaxy) have been recently observed to lie at distances as much as 100,000 light years. A light year is the distance covered by light in one year. With improving telescopes, the visible limits of the universe (and consequently heavens) gradually expanded!!

Our sun lies at about 35,000 light years from the edge of the galaxy. It runs in space at a speed of about 65,000 kilometers per hour, Naturally, all the members of the Solar System follow it in this motion. However, the Qur'ân says :

“And the sun runs its course for a repository determined for it : That is the decree of (Allâh) Al-‘Azîz (The Ever-Mighty) Al-‘Alîm (The Ever-Knowing) .”

(Yâsîn : 38)

﴿وَالشَّمْسُ تَجْرِي لِمُسْتَقَرٍّ لَّهَا ذَلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ﴾ (يس (٣٨))

It is now accepted in astronomy that our universe is a universe of galaxies. It is composed of billions of galaxies. The nearest galaxy to our own galaxy (the Way) is called Andromeda. It lies at about 750,000 light years from the Milky Way!

It has also been finally accepted that galaxies are receding away (from us and from each other) at increasing velocities into the deep space, which means that the universe is expanding!! This result was first established by the Theory of Relativity and then confirmed by actual observations!!

Finally, a galaxy at a remote distance from us (exceeding ten billion light years) appears as a single star only! Galaxies of this type are called quasi-stars. They have been discovered recently, and are studied by means of the so-called radio-telescopes.

Amazingly and miraculously enough, the Qur’ân refers to such stars at remote distances from us and says :

“Indeed I could swear by the sites of the stars. And it is a great oath if you know that.”

(Al-Wâqî‘ah : 75-76)

﴿فَلَا أُفْسِمُ بِمَوَاقِعِ النُّجُومِ (٧٥) وَإِنَّهُ لَقَسَمٌ لِّوَعْلَمُونَ عَظِيمٌ﴾ الواقعة (٧٥-٧٦)

3 - The Fresh-Water Cycle On Earth :

The fact that, contrary to any other planet, not less than three quarters of the earth's surface is covered with water, suggests that in the early stages of the development of the solar system, our earth gathered relatively great amounts of water constituents. Also, it must have had thick cover or atmosphere which acted as a ceiling effective in checking diffusion of water vapour upward into empty space.

It was only in the Age of Science that man became aware of the fact that the relatively great amount of water on earth was not in vain. Water plays an essential role in helping life to nourish and flourish against some natural hazards on earth. Allâh says.

“And We sent down water from the heavens according to a precise measure and thereby We caused it to dwell in the earth....”

(Al-Mu'minûn : 18)

﴿وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ﴾
المؤمنون (١٨)

Refer also to Book 3, p. 114, and Book 1 pp. 19-20.

At present, the earth's atmosphere is composed of a mixture of nitrogen (about 80 per cent by volume) and oxygen (about 20 per cent by volume), in addition to small amounts of rare gases and variable amounts of water-vapour in its lowest layer (the troposphere).

The atmosphere extends vertically to about 1000 kilometer above the earth's surface. It renders vital services to living creatures on earth (both the plant and the animal kingdom). — Refer to Book 3, pp. 87-88 and Book 4, p. 189. — According to the vertical distribution of temperature in the atmosphere, it can be divided into several distinct layers, including the known ozonosphere and the ionosphere above 100 kilometers with its strata which reflect back the radio-waves and render radio-communication possible on earth.

Again, the atmosphere obeys the laws of thermodynamics and as mentioned before air cools and its temperature decreases by mere decrease of pressure by ascent. (Refer to Book 2, p. 49). When the temperature of the rising air decreases, its ability to hold water-vapour decreases, until a stage is reached when condensation takes place on the so-called nuclei of condensation which are also carried up from the land and sea surfaces by rising air currents. They are mainly sea-salts or rock salts in the form of very small particles on which condensation begins. Allâh Says :

“And We send the winds impregnating (the clouds) and thereby cause water to precipitate down from the sky thus providing you with it to drink....”

(Al-Hijr : 22)

﴿وَأَرْسَلْنَا الرِّيَّاحَ لَوَاقِحَ فَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَسْقَيْنَاكُمُوهُ﴾ الحجر (٢٢)

The fresh water - cycle begins when rain (or snow or hail...) falls on large scales and supplies the various water sources with fresh water. Surplus water runs through rivers, canals..., and subsoil water pours back again, into the ocean and the sea, and a new fresh water-cycle starts again with the evaporation of water from the extensive water-surfaces on earth, comprising supplying the atmosphere with ample water-vapour.

The declaration of the cycle was first announced by the Qur'ân which says :

“And We send the winds impregnating (the clouds) and thereby cause water to precipitate from the sky thus providing you with it to drink, and you are in no way storing it.”

(Al-Hijr : 22)

﴿وَأَرْسَلْنَا الرِّيحَ لَوَاقِحَ فَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَسْقَيْنَاكُمُوهُ وَمَا أَنْتُمْ لَهُ بِخَازِنِينَ﴾

الحجر (٢٢)

The last statement in this verse as translated in Book 1, p. 27 and in Book 2, p. 47, does not follow the exact wording quoted by the Qur'ân. The present interpretation (and you are not storing it) is more representative.

4 - Sûrat (Chapter) Al-falaq (The Splitting Organism) :

According to the author's own interpretation, this chapter is readable as follows :

“Say I seek refuge with the help of the Lord of Al-Falaq (the splitting organisms) . From the mischief of such things He created. And from the mischief of pus over spreading (in the body). And from the mischief of the organisms which mingle with the knots (glands) . And from the mischief of an envious when practicing envy.”

(Al-Falaq : 1-5)

﴿قُلْ أَعُوذُ بِرَبِّ الْفَلَقِ (١) مِنْ شَرِّ مَا خَلَقَ (٢) وَمِنْ شَرِّ غَاسِقٍ إِذَا وَقَبَ (٣) وَمِنْ شَرِّ النَّفَّاثَاتِ فِي الْعُقَدِ (٤) وَمِنْ شَرِّ حَاسِدٍ إِذَا حَسَدَ (٥)﴾
الفلق (١-٥)

Probably no-nobody did not experience suffering on some scale from envy. It has not yet received any reasonable explanation.

Amongst the well-known splitting organisms is bacteria. The word was originally applied by microscopists to organisms shaped like rods, apparently belonging to the lowest orders of plant life. The term today is used to express a great variety of organisms.

Multiplication of bacteria occurs by mere splitting or direct division of the cell, hence the name (splitting organisms). It is estimated that under favourable conditions of food supply and temperature, the total number of bacteria resulting from one cell in 24 hours is :

75,000,000,000,000,

or 75×10^{12} !!

Pus is a collection of dead white blood corpuscles resulting from inflammation and suppuration by various types of bacteria.

Natural reaction of living tissue to an injury is inflammation. It is essentially a protective process which helps to prevent the effects of an injury from spreading. The most frequent cause of inflammations is infraction of the tissues by micro-organisms, and is followed by the accumulation of pus. Inflammation may, on spreading, give rise to fever and other constitutional symptoms.

As regard glands, they can be described as knots of tissues. There are two types of glands : the ductless and the duct glands. As the name signifies, the latter have small ducts or pipes leading to outer organs. Their functions are fairly well understood. To this class belong the secreting and digestive glands.

The liver is the largest gland in the body. Bile is secreted from it and poured into the intestines as is the pancreatic juice from the pancreas.

The mysterious ductless glands also secrete substances called hormones, but they have no distributing pipes. The sex glands are located in the ovaries in women and in the testes in men.

Glands are referred to in the Qur'ân (Chapter Al-Falaq) by the word knots.

Finally, a group of infecting agents producing diseases in animal, plant and man is called virus. This group is too small to be seen by optical microscopes.

5 - The Solar System :

Basically, the Solar System consists of : the sun, planets including their satellites such as the earth's moon, comets, meteorites and meteors. As mentioned before, light takes five hours to cross the space occupied by the entire system. According to the Qur'ân, the system is qualified to render free services to man on earth :

“And He (Allâh) has subjected to you freely all that is in the heavens and that is in the earth....”

(Al-Jâthiyah :13)

﴿وَسَخَّرَ لَكُم مَّا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ جَمِيعًا﴾
الجاثية (١٣)

As a result of the outstanding services rendered freely to man by both the sun and the moon, it happened that man, in some ancient civilizations, used to worship them. However, Allâh says that means :

“Prostrate not to the sun and the moon, but prostrate to Allâh Who created them...”

(Fussilat : 37)

﴿لَا تَسْجُدُوا لِلشَّمْسِ وَلَا لِلْقَمَرِ وَاسْجُدُوا لِلَّهِ الَّذِي خَلَقَهُنَّ﴾
فصلت (٣٧)

As mentioned in Book 5, p. 213, Ibrâhîm — the Father of the Prophets — was directed by Allâh to observe carefully an occasion of total solar eclipse which happened to pass over Ore (Ibrâhîm's town) at that time. It was only natural for Ibrâhîm to realise, on solid basis of actual observation, that the sun, the moon and the planets were mere heavenly bodies created by their Lord (Allâh). Allâh says in this respect :

“So also did We show Ibrâhîm the (nature and wonders) of the heavens and the earth that he might have certitude.”

(Al-An‘âm : 75)

﴿وَكَذَلِكَ نُرَىٰ إِبْرَاهِيمَ مَلَكُوتَ السَّمَوَاتِ وَالْأَرْضِ وَلِيَكُونَ مِنَ الْمُوقِنِينَ﴾

(الأنعام (٧٥)

Miraculously enough, the Qur’ân also mentions that the time will come when man becomes able to travel within the space occupied by the Solar System, from the earth to the other planets and the moon. However, this has now been practically achieved after sufficient progress in science and technology. The Qur’ân says :

- a) **“O company of jinn and men, if you can penetrate through the diameters of the heavens and the earth do penetrate; you will not penetrate save with (power and authority).”**

(Ar-Rah_mân : 33)

(أ) ﴿يَا مَعْشَرَ الْجِنِّ وَالْإِنسِ إِنِ اسْتَطَعْتُمْ أَنْ تَنْفُذُوا مِنْ أَقْطَارِ السَّمَوَاتِ وَالْأَرْضِ

(الرحمن (٣٣)

فَانْفُذُوا لَا تَنْفُذُونَ إِلَّا بِسُلْطَانٍ﴾

- b) **“And if We opened out for them a gate from heaven and they continued therein ya‘rujûn (ascending curvilinearly) , they would say : “But our sights have been intoxicated! Nay, we have been men bewitched by sorcery.**

(Al-Hijr : 14-15)

(ب) ﴿وَلَوْ فَتَحْنَا عَلَيْهِم بَابًا مِّنَ السَّمَاءِ فَظَلُّوا فِيهِ يَعْرُجُونَ ﴿١٤﴾ لَقَالُوا إِنَّمَا سَكَّرَتْ أَبْصَارُنَا بَلْ نَحْنُ قَوْمٌ مَّسْحُورُونَ﴾
الحجر (١٤-١٥)

c) “By the moon in its fullness. For sure, you shall ride a saucer (vessel) after a saucer.”

(Al-Inshiqâq : 18-19)

(ج) ﴿وَالْقَمَرَ إِذَا اتَّسَقَ ﴿١٨﴾ لَّتَرْكِبَنَّ طَبَقًا عَن طَبَقٍ﴾

الانشقاق (١٨-١٩)

Actually, the first verse is an adjuration. The two verses together form a hint (or prediction) concerning man's trips to the moon in the Age of Space. Notice that the substantive statement concerning the adjuration follows directly : And the moon in its fullness.

6 - The Sun :

Our sun is the only self-luminous body in the entire Solar System. Moonlight results from the reflection of sunlight back to space by the surface of the moon :

a) “He is The One Who made the sun a shining glory and the moon a light....”

(Yûnus : 5)

(أ) ﴿هُوَ الَّذِي جَعَلَ الشَّمْسُ ضِيَاءً وَالْقَمَرَ نُورًا﴾
يونس (٥)

b) “And We made a blazing lamp.”

(An-Naba' : 13)

(ب) ﴿وَجَعَلْنَا سِرَاجًا وَهَّاجًا﴾
النبأ (١٣)

c) **“And He made the moon therein a light and made the sun a luminary.”**

(Nûh : 16).

(ج) ﴿وَجَعَلَ الْقَمَرَ فِيهِنَّ نُورًا وَجَعَلَ الشَّمْسَ سِرَاجًا﴾ نوح (١٦)

d) **“Blessed is He Who placed the constellations in heaven and placed therein a luminary and a moon giving light.”**

(Al-Furqân : 61).

(د) ﴿تَبَارَكَ الَّذِي جَعَلَ فِي السَّمَاءِ بُرُوجًا وَجَعَلَ فِيهَا سِرَاجًا وَقَمَرًا مُنِيرًا﴾

الفرقان (٦١)

The sun has double importance astronomically as follows :

1. It is the central body in the Solar System and contains

$$\frac{999}{1,000}$$

of its total mass, and therefore controls the motion of all the bodies in the system.

2. It is the nearest star to us and shows a disc which enables us to study the details of its surface.

People believe that the sun is like a sphere in shape. This is only apparent and is not true. Its true shape is observable only on occasions of total eclipse of the sun. It then looks like an irregular cloud with wavy boundaries.

It will become a sphere on the Last Day, after it suddenly bursts or expands to reach the moon, and then shrinks to become a white dwarf!

Miraculously enough, the Qur'ân postulates such events. There is no doubt that for life to survive on earth, the sun must

not catch the moon, or in other words the sun should not approach the earth.

Climatologically speaking, we say that life to survive on earth the temperatures of its atmosphere and its surface must remain not far from their normal values, which is the prevailing condition now. When the sun catches the moon, the earth's temperatures will exceed 100°C! However, such a drastic event will take place on the Last Day. Refer also to Book 3, pp. 123-124. In this respect the Qur'ân miraculously says :

- a) **“It is not permitted for the sun to overtake the moon, nor can the night outstrip the day, and each should swin along in an orbit.”**

(Yâsîn : 40)

(أ) ﴿ لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ ﴾
يس (٤٠)

- b) **“ He questions : When is the Day of Resurrection?”**

(Al-Qiyâmah : 6)

(ب) ﴿ يَسْأَلُ أَيَّانَ يَوْمُ الْقِيَامَةِ ﴾
القيامة (٦)

- c) **“But when the sight is dazed.”**

(Al-Qiyâmah : 7)

(ج) ﴿ فَإِذَا بَرَقَ الْبَصَرُ ﴾
القيامة (٧)

- d) **“ And the moon is eclipsed”.**

(Al-Qiyâmah : 8)

(د) ﴿ وَخَسَفَ الْقَمَرُ ﴾
القيامة (٨)

e) “And the sun and the moon are gathered together.”

(Al-Qiyâmah : 9)

(٩) القيامة

(هـ) ﴿وَجَمَعَ الشَّمْسُ وَالْقَمَرُ﴾

f) “Man on that Day utters : Where could fleeing be!?”

(Al-Qiyâmah : 10)

(١٠) القيامة

(و) ﴿يَقُولُ الْإِنْسَانُ يَوْمَئِذٍ أَيْنَ الْمَفْرُ﴾

The present volume of the sun is more than one million times that of the earth. Its outer radiating surface has temperature of 6000 degrees absolute. Inside the sun temperature exceeds 20 million degrees.

For the sun to become eclipsed it should be in line with both the moon and the earth. The moon will act like an obscuring screen which prevents sun-light from reaching limited areas on earth. In such areas, one of three types of eclipses may occur, namely : total eclipse, annular eclipse, and partial eclipse. Ibrâhîm observed an occasion of total eclipse in which the shadow cone of the moon just touched the earth's surface at small zone as usual.

The sun is the source of energy on earth, while we are consumers of energy. The distribution of energy in the solar spectrum is such that : 9 per cent ultraviolet, 45 per cent light and 46 per cent heat. The earth's atmosphere is almost transparent to the light and to the heat received from the sun. The question arises : How can man feed on this energy in order to fulfil the demands of his body?

This is achieved by an indirect process designed by Allâh. During the day, green plants absorb carbon-dioxide gas from the atmosphere, and in the presence of sunlight the green matter (the chlorophyl) reaction photosynthesis takes place between water and carbon dioxide gas to form food for the animal kingdom - Book 3, pp 117-118.

Concerning this fact, one reads in the Eternal Miracle :

“And it is He Who sends down water from the sky; with it We produce vegetation of all kinds, from which We produce green matter (khadiran = chlorophyl) out of which We produce needed grain....”

(Al-An‘âm : 99)

﴿وَهُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا
نُخْرِجُ مِنْهُ حَبًّا مُتَرَاكِبًا﴾
(الأنعام (٩٩)

7 - The Moon :

The moon is near enough to the earth (less than 400,000 kilometer). It is the fifth in diameter among other planetary satellites and its mass is only $\frac{1}{81}$ that of the earth. The full moon is next to the sun in brightness. The surface of the moon is very rough and brownish, mainly because the moon has no atmosphere. Its mountains are sometimes as high as Mount Everest. Craters are scattered everywhere.

The moon - like all planets and all other moons - shines by the sunlight which it reflects :

“It is He (Allâh) Who made the sun a shining illumination and the moon a light....”

(Yûnus : 5)

﴿هُوَ الَّذِي جَعَلَ الشَّمْسُ ضِيَاءً وَالْقَمَرَ نُورًا﴾
(يونس (٥)

It is now agreed that the average lunar month is the mean time which the moon requires to perform one complete cycle round the earth. It is equal to :

29.550329 days.

The average solar year is the mean time which lapses in order that the earth might complete one cycle round the sun, and is equal to :

365.2422 days.

It is really amazing that the Qur'ân transforms 300 solar years to be exactly equal to 309 lunar years. - Refer to Book 2, p. 77 - Allâh says :

- a) **“And they remained in their cave three hundred years, a number which has to be increased by nine years.”**

(Al-Kahf : 25).

(أ) ﴿ وَلَبِثُوا فِي كَهْفِهِمْ ثَلَاثَ مِائَةٍ سِنِينَ وَازْدَادُوا تِسْعًا ﴾ الكهف (٢٥)

- b) **“For sure, the number of months (per year) as regarded by Allâh, is twelve months in the Book of Allâh on the day He created the Heavens and the Earth.”**

(At-Taubah : 36).

(ب) ﴿ إِنَّ عِدَّةَ الشُّهُورِ عِنْدَ اللَّهِ اثْنَا عَشَرَ شَهْرًا فِي كِتَابِ اللَّهِ يَوْمَ خَلَقَ السَّمَوَاتِ وَالْأَرْضَ ﴾ التوبة (٣٦)

Now, it is evident that :

309 lunar years are equal to :

$12 \times 309 \times 29.550329 = 109572.66$ days, and 300 solar years are equal to :

$300 \times 365.2422 = 109572.66$ days.

Amongst the most glorious signs to The Qur'ân is its prediction that the moon will crack (or cleave) in the future. From the scientific point of view, such cleavage is expected in the far future. The tidal forces between the earth and the moon play an important role in the earth - moon system. If the moon approaches

the earth, under certain expected conditions, then the difference in gravitation on both sides of the moon can be sufficient to cleave or to crack it. The Qur'ân says :

“The Hour (the Last Day) is nigh and the moon is cleft (or cracked) .”

(Al-Qamar : 1)

﴿ اقْتَرَبَتِ السَّاعَةُ وَانْشَقَّ الْقَمَرُ ﴾ القمر (١)

8 - The Planets :

Nine planets are known up to now. Two other planets are expected to be discovered. At the time of Revelation five planets only were known apart from the earth. Those planets were : Mercury, Venus, Mars, Jupiter and Saturn. Uranus, Neptune and Pluto have been discovered only recently. However, the Qur'ân says :

a) **“We have indeed adorned the lowest heaven with an ornament, the planets.”**

(As-Şaffât : 6)

﴿ إِنَّا زَيْنَّا السَّمَاءَ الدُّنْيَا بِزِينَةِ الْكَوَاكِبِ ﴾ الصافات (٦)

b) **“Once Joseph said to his father : I have seen eleven planets and the sun and the moon I have seen them prostrating for me.”**

(Yûsuf : 4)

﴿ إِذْ قَالَ يُوسُفُ لِأَبِيهِ يَا أَبَتِ إِنِّي رَأَيْتُ أَحَدَ عَشَرَ كَوْكَبًا وَالشَّمْسَ وَالْقَمَرَ رَايَهُمْ لِي سَاجِدِينَ ﴾ يوسف (٤)

The second verse provides hint that there exist eleven planets. However, the tenth planet has already been subject to observation.

9 - The Asteroids :

Most of the asteroids travel in the space between the orbits of Mars and Jupiter, and form the belt of asteroids. It seems as though the asteroids have something to do with the source of meteorites.

Most asteroids are too small to form visible discs. A great number have diameters between 10 and 15 kilometer.

The following Qur'ânic verse affords an amazing hint that at the beginning there were no asteroids within the Solar System. The verse says :

“And indeed we (the Jinn) used to sit there (in the lowest heaven) in selected stations in order to listen; but any one who listens now will find a meteorite facing him in ambush.”
(Al-Jinn : 9)

﴿وَأَنَّا كُنَّا نَقْعُدُ مِنْهَا مَقَاعِدَ لِلسَّمْعِ فَمَنْ يَسْتَمِعِ الْآنَ يَجِدْ لَهُ شِهَابًا رَصَدًا﴾

الجن (٩)

The same hint is available from the Qur'ânic verse which means :

“And we (the Jinn) pried into the secrets of the heaven, but we found it filled with stern guards (meteorites) and meteors.”
(Al-Jinn : 8)

﴿وَأَنَّا لَمَسْنَا السَّمَاءَ فَوَجَدْنَاهَا مُلْتِ حَرَسًا شَدِيدًا وَشُهَبًا﴾

الجن (٨)

The fact that meteorites rarely reach the earth's surface is amazing. Most of them, on entering the earth's atmosphere split asunder into fine dust within the upper layers of the earth's atmosphere. Allâh says :

a) **“..... And He withholds the (lowest) heaven lest it should fall on the earth except with His permission. Indeed Allâh, regarding peoples, is Ever-Compassionate, Ever-Merciful.”**

(Al-Hajj : 65)

١ - ﴿وَيَمْسِكُ السَّمَاءُ أَنْ تَقَعَ عَلَى الْأَرْضِ إِلَّا بِإِذْنِهِ إِنَّ اللَّهَ بِالنَّاسِ لَرَّءُوفٌ رَحِيمٌ﴾

الحج (٦٥)

b) “And if they see dark lumps of the heaven falling they utter : Cumulative clouds !”

(At-Tûr : 44)

٢ - ﴿وَإِنْ يَرَوْا كِسْفًا مِّنَ السَّمَاءِ سَاقِطًا يَقُولُوا سَحَابٌ مَّرْكُومٌ﴾ الطور (٤٤)

Comets are members of the Solar System. The Qu'rân refers to them and calls them by their most outstanding characteristics namely that : (1) They disappear for long periods - tens of years - before they re-appear again. (2) Most of them have long tails and travel swiftly as though they sweep the sky! Refer also to Book 2, pp. 75-77.

10 - We Are Not Alone In The Universe :

Are we alone in the universe? This important question remains to be answered by scientists in their own way. However, no satisfactory answer has yet been reached, but the Qur'ân declares in more than 35 verses that the heavens — away from the Solar System — are inhabited by wise beings. Most likely, they resemble human beings on earth in many aspects. For examples, they should talk :

- a) “He said : My Lord (Allâh) knows what is said in the heaven and the earth”

(Al-Anbiyâ' : 4)

﴿ قَالَ رَبِّي يَعْلَمُ الْقَوْلَ فِي السَّمَاءِ وَالْأَرْضِ ﴾ الأنبياء (٤)

- b) “Seek they then other than Allâh’s religion, and to Him surrenders whoever is in the heavens and the earth....?”

(Âl-‘Imrân : 83)

﴿ أَفَغَيْرَ دِينِ اللَّهِ يَبْغُونَ وَلَهُ أَسْلَمَ مَنْ فِي السَّمَوَاتِ وَالْأَرْضِ ﴾ آل عمران (٨٣)

- c) “And your Lord best knows those who are in the heavens and the earth....”

(Al-Isrâ' : 55)

﴿ وَرَبُّكَ أَعْلَمُ بِمَنْ فِي السَّمَوَاتِ وَالْأَرْضِ ﴾ الإسراء (٥٥)

- d) “There is none in the heavens and the earth but comes to Ar-Rahmân (The All-Merciful) as a servant.”

(Maryam : 93)

﴿ إِنَّ كُلُّ مَنْ فِي السَّمَوَاتِ وَالْأَرْضِ إِلَّا آتَى الرَّحْمَنِ عَبْدًا ﴾ مريم (٩٣)

- e) “Seest thou not that Allâh is He Whom do extol all those who are in the heavens and the earth.”

(An-Nûr : 41)

﴿ أَلَمْ تَرَ أَنَّ اللَّهَ يَسْجُدُ لَهُ مَنْ فِي السَّمَوَاتِ وَالْأَرْضِ ﴾ النور (٤١)

- f) “Say : No one in the heavens and the earth knows the unseen but Allâh”

(An-Naml : 65).

(و) ﴿ قُلْ لَا يَعْلَمُ مَنْ فِي السَّمَوَاتِ وَالْأَرْضِ الْغَيْبَ إِلَّا اللَّهُ ﴾ النمل (٦٥)

- g) “And the day when the trumpet is blown then those in the heaven and those in the earth will be struck with alarm.”

(An-Naml : 87)

(ز) ﴿ وَيَوْمَ يَنْفَخُ فِي الصُّورِ فَفَزِعَ مَنْ فِي السَّمَوَاتِ وَمَنْ فِي الْأَرْضِ ﴾

النمل (٨٧)

- h) “And of His signs is the creation of the heavens and the earth and what He has spread forth in both of them of living beings; and He is Ever-Determiner to gather them together when He wills.”

(Ash-Shûrâ : 29)

(ل) ﴿ وَمِنْ آيَاتِهِ خَلْقُ السَّمَوَاتِ وَالْأَرْضِ وَمَا بَثَّ فِيهِمَا مِنْ دَابَّةٍ ۚ وَهُوَ عَلَىٰ جَمْعِهِمْ إِذَا يَشَاءُ قَدِيرٌ ﴾ الشورى (٢٩)

- i) “And to Allâh, every living creature that is in the heavens and that is in the earth prostrate themselves, and the angels (too) and they are not proud.”

(An-Nahl : 49)

(م) ﴿ وَلِلَّهِ يَسْجُدُ مَا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ مِنْ دَابَّةٍ وَالْمَلَائِكَةُ وَهُمْ لَا يَسْتَكْبِرُونَ ﴾ النحل (٤٩)

A great number of verses in the Qur'ân express the same meaning : That we are not alone in the universe. However, logically speaking, one can argue that wherever suitable environments prevail on other planets in the universe, life can flourish with time. Naturally, such planets may be found only in Solar Systems other than ours.

In this field of space research the Qur'ân stands unique. Amazingly enough it says :

“... And He is Ever-Determiner to gather them together when He wills.”

(Ash-Shûrâ : 29)

الشورى (٢٩)

﴿وَهُوَ عَلَىٰ جَمْعِهِمْ إِذَا يَشَاءُ قَدِيرٌ﴾

Does this not mean that beings similar to man exist on some other planets and should be able to communicate with each other by any means when Allâh permits?!

Of course the verses quoted above need further discussion and explanation, which is beyond the scope of the present article. In fact, however, a whole chapter may be written by a scientist on each verse. The Qur'ân does not deal with details of science in the manner available in our text-books.

11 - Time :

It is the eastward turning of the earth that causes all celestial bodies to appear to travel westwards. For example, when we look at the stars, it seems as though we are situated at the centre of a large sphere - the celestial sphere - and with the passage of time, the sphere appears to turn slowly about us, carrying the stars along with it. The time the earth takes to make one complete rotation round (as based on observing) the sun is the solar day, which is divided into 24 hours. There are 60 minutes in one hour, and 60 seconds in a single minute.

Evidently the duration of one day, and hence measurement of time should differ from one planet to another and that means that time is relative. Taking the earth's common year as a unit, the following table gives the duration of one year on the different planets of our Solar System expressed in solar days or in years.

Planet	Duration of one year expressed in solar days or years
Mercury	88 days
Venus	225 days
Earth	1 year
Mars	1.88 years
Jupiter	11.9 years
Saturn	29.5 years
Uranos	84 years
Neptune	164.8 years
Pluto	250 years

In fact time is not an absolute entity. This (fact) has also been deduced from the Theory of Relativity. The Qur'ân refers to this (fact) in various verses, such as :

- a) “... and a day with your Lord is like a thousand years of your reckoning.”

(Al-Hajj : 47)

(أ) ﴿ وَإِنْ يَوْمًا عِنْدَ رَبِّكَ كَأَلْفِ سَنَةٍ مِّمَّا تَعُدُّونَ ﴾ الحج (٤٧)

- b) “The angels and the spirit ascend (curvilinearly) unto Him in a day the measure whereof is like fifty thousand years.”

(Al-Ma‘ârij : 4)

(ب) ﴿ تَعْرُجُ الْمَلَائِكَةُ وَالرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ ﴾ المعارج (٤)

It is worth mentioning here, that in Islâm the lunar calender is followed. The birth of a new moon every new lunar month is a universal sign in the sky which can never be mistaken. It is born in the sky at one and single moment with respect to the earth's surface as a whole. This moment can be calculated carefully with great precision every month, but the possibility of observing the born crescent depends on the locality of the observer. Arafat's site is fixed for performing pilgrimage each year. Allah says what means :

“They (the Arabs) ask you concerning the new moons. Say: They are but signs to mark reliable of time for men (anywhere) and for pilgrimage...”

(Al-Baqarah :189).

﴿ يَسْأَلُونَكَ عَنِ الْأَهِلَّةِ ۖ قُلْ هِيَ مَوَاقِيتُ لِلنَّاسِ وَالْحَجِّ ﴾ البقرة (١٨٩)

12 - The Arctic Circle :

In book 1, P. 12 of the present series a short account has been given concerning the Qur'ânic verse which says :

“Until when he reached the land of sun-rise he found it rising on a people for whom We had provided no covering shelter against the sun.”

(Al-Kahf : 90)

﴿ حَتَّىٰ إِذَا بَلَغَ مَطْلِعَ الشَّمْسِ وَجْدهَا تَطْلُعُ عَلَىٰ قَوْمٍ لَّمْ نَجْعَلْ لَهُم مِّن دُونِهَا سِتْرًا ﴾
الكهف (٩٠)

The amazing significance of this verse becomes clear the moment one realizes the fact that it throws light on the Arctic Circle, notably because, at least up to the time of revelation, the Arabs knew nothing about the Arctic Circle and never mentioned it in their traditions.

The areas which surround the earth's geographical poles are known as the polar regions. They are limited respectively by the Arctic and Antarctic Circles.

At the spring equinox (March) the N. Pole begins its (day) which lasts for half a year until the autumnal equinox begins in September. On midsummer (day) in June, there is no sunset visible anywhere within the Arctic Circle. Between this Arcle and the N. Pole are periods without a single sunset lasting 24 hours to six months. The nearer the pole the larger the period.

The king who reached the land of sunrise was, according to the Qur'ân called Dhul-Qarnayn, or the man with the two horns. The expression refers to a natural phenomenon observable in the Arctic Circle. However, this seems to be beyond our present horizon.

13 - Mountains :

Mountains generally, refer to elevated portions of the earth's crust which is forever undergoing changes by warping, fracture and weathering. This complex of activities, shown in process but cumulative in effect, produces the variations in elevation to which mountains are generally due.

In the simplest cases, mountains are also due to actual building, such as volcanic cones and volcanic outbursts.

Since geological times, the earth has decreased in volume, and its crust has adjusted itself to the changing conditions and has thus produced crinkles, the result of tangential wrapping strains produced continuously during the adjustment. The most recent crinkles are the great mountain ranges. Here the strata of the crust are contorted simply as great up and down folds, or complexity with folds, fractures and the overthrust of one mass of rock over another.

The above scientific brief account concerning mountains and their functions regarding the stability of the earth's crust amazingly matches the outstanding hints which the Qur'ân mentions as follows :

a) Stability Of The Earth's Crust

Allâh says :

1. **“And He (Allâh) has cast into earth mountains standing firm lest it (the earth) should shake with you and rivers and roads that you may guide yourselves.”**

(An-Nahl : 15)

(أ) ﴿ وَالْقَنَىٰ فِي الْأَرْضِ رَوَاسِيَ أَن تَمِيدَ بِكُمْ وَأَنْهَارًا وَسُبُلًا لَّعَلَّكُمْ تَهْتَدُونَ ﴾

النحل (١٥)

b) “And We made in the earth mountains standing firm lest it should shake with them ...”

(Al-Anbiyâ' : 31)

(ب) ﴿ وَجَعَلْنَا فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ بِهِمْ ﴾ الأنبياء (٣١)

c) “And We made in it (the earth) high mountains standing firm and provided for you wholesome fresh water.”

(Al-Mursalât : 27)

(ج) ﴿ وَجَعَلْنَا فِيهَا رَوَاسِيَ شَامِخَاتٍ وَأَسْقَيْنَاكُمْ مَاءً فُرَاتًا ﴾ المرسلات (٢٧)

b) OVER - THRUST OF ONE MASS OF ROCK OVER ONE ANOTHER :

The Qur'ân, regarding the role played by mountains in controlling this effect, says for example :

a) “And the mountains He (Allâh) has layed them firmly (to the earth) .”

(An-Nâzi'ât : 32)

(أ) ﴿ وَالْجِبَالُ أَرْسَاهَا ﴾ النازعات (٣٢)

b) “And the mountains (have We not made them) like pegs?”

(An-Naba' : 7)

(ب) ﴿ وَالْجِبَالُ أَوْتَادًا ﴾ النبأ (٧)

14 - Clouds And Precipitation :

The study of the global winds, or the so-called air in its ways, forms an important branch of meteorology. Again, as mentioned in Book 1, pp. 23-27, Allâh says :

- a) “.. and in the turning about of winds and the clouds compelled between the sky and the earth surely there are signs for a people who understand.”

(Al-Baqarah :164)

(أ) ﴿ وَتَصْرِيفِ الرِّيَّاحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لآيَاتٍ لِّقَوْمٍ يَعْقِلُونَ ﴾
البقرة (١٦٤)

- b) “.. and in the turning about of winds there are signs for a people who understand.”

(Al-Jâthiyah : 5)

(ب) ﴿ وَتَصْرِيفِ الرِّيَّاحِ آيَاتٍ لِّقَوْمٍ يَعْقِلُونَ ﴾
الحجاثية (٥)

See also book 3, pp. 108-112.

Miraculously enough, the Qur’ân announced, for the first time on earth, the scientific fact that clouds are formed by winds, which of course include rising air :

- a) “And Allâh is He Who sent forth the winds so that they raised up the clouds, and He drove them to a dead land....”

(Fâtîr : 9)

(أ) ﴿ وَاللَّهُ الَّذِي أَرْسَلَ الرِّيَّاحَ فَتُثِيرُ سَحَابًا فَيُقْسِنَاهُ إِلَى بَلَدٍ مَيِّتٍ ﴾ فاطر (٩)

b) “Allâh is He Who sends forth the winds that they raise clouds then does He spread them”

(Ar-Rûm : 48)

(ب) ﴿ اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتَنِيْرُ سَحَابًا فَيَبْسُطُهُ ﴾ الروم (٤٨)

Amazingly enough, the Qur’ân distinguishes between two types of clouds as they actually exist in nature, and gives them the names which are exactly the same as the two names used now in meteorology! These two types are : (a) The stratus clouds which grow horizontally in single layers or strata and (b) The cumulus clouds which grow vertically up. Rainy clouds are generally, called in the Qur’ân (muzn) which means nimbus, and we have nimbo-stratus and cumulo - nimbus rainy clouds. In such respects, the Qur’ân says :

a) Stratus Type :

“Allâh is He Who sends forth the winds so that they raise clouds then He spreads them in the sky as He decides.”

(Ar-Rûm : 48)

(أ) ﴿ اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتَنِيْرُ سَحَابًا فَيَبْسُطُهُ فِي السَّمَاءِ كَيْفَ يَشَاءُ ﴾ الروم (٤٨)

b) Cumulus Type :

“Do you not see that Allâh drives along some clouds then He joins them together, then He makes them into heaps of cumulus.”

(An-Nûr : 43)

(ب) ﴿ أَلَمْ تَرَ أَنَّ اللَّهَ يَزْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَّامًا ﴾ النور (٤٣)

c) **Nimbus Clouds :**

“Do you see the water which you drink? Do you bring it down (as rain) from the nimbus clouds or do We?”

(Al-Wâqi‘ah : 68-69)

(ج) ﴿ أَفَرَأَيْتُمُ الْمَاءَ الَّذِي تَشْرَبُونَ ﴿٦٨﴾ أَأَنْتُمْ أَنْزَلْتُمُوهُ مِنَ الْمُزْنِ أَمْ نَحْنُ الْمُنْزِلُونَ ﴾
الواقعة (٦٨-٦٩)

The process involving the formation of the cumulo-nimbus clouds has already been described in Book 1, P. 25.

Hail precipitates from cumulo-nimbus clouds only. It differs from snow in many aspects, notably in the process of formation.

Allâh says :

a) **“Do you not see that Allâh drives along some clouds, then joins them together, then makes them into heaps of cumulus, then you do see rain issuing from their inside; and the sends down from the sky mountain masses of cumulus wherein is hail...”**

(An-Nûr : 43)

﴿ أَلَمْ تَرَ أَنَّ اللَّهَ يَرْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خَلَالِهِ وَيَنْزِلُ مِنَ السَّمَاءِ مَنَاجِبَ فِيهَا مِنْ بَرَدٍ ﴾
النور (٤٣)

15. The Earth's Total Water : Seas and Oceans

The total amount of water (in the form of Vapour, liquid water or ice) which our earth gathered in the very beginning of its formation was relatively large as compared with the other planets in the Solar System. At present, almost four fifths of the earth's surface is covered with water. This large amount of water is not accidental or in vain, but is according to precise measure in order that the earth holds it and thus affords an environment suitable for life to nourish and flourish on it. This large amount of water, however :

a) Prevents the occurrence of large differences in air temperature between winter and summer. (b) Provides the atmosphere with water vapour sufficient for the fresh water cycle. Allâh says :

a) **“And We sent down water from heavens according to a precise measure and thereby caused the earth to hold it....”**

(Al-Mu'minûn : 18)

(أ) ﴿ وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ ﴾ المؤمنون (١٨)

b) **“He (Allâh) draws therefrom (from the earth) its (fresh) water and its pasture.”**

(An-Nâzi'ât : 31)

(ب) ﴿ أَخْرَجَ مِنْهَا مَاءَهَا وَمَرْعَاهَا ﴾ النازعات (٣١)

c) **“And He (Allâh) is the One Who has let free the two seas : One is agreeable and sweet and the other is salty and bitter. He made a barrier (an isthmus) between them, a partition that it is forbidden to pass.”**

(Al-Furqân : 53)

(ج) ﴿ وَهُوَ الَّذِي مَرَجَ الْبَحْرَيْنِ هَذَا عَذْبٌ فَرَاتٌ وَهَذَا مِلْحٌ أُجَاجٌ وَجَعَلَ بَيْنَهُمَا بَرْزَخًا وَحِجْرًا مَحْجُورًا ﴾ الفرقان (٥٣)

The above verse reveals an outstanding natural phenomenon observed when great rivers flow out into the sea or the ocean. Immediate mixing of fresh water with salt water does not take place! In spite of the fact that the two bodies of water, sweet and salt, are free to intermingle, yet, they remain distinct for a long distance as though there exists impassable barrier!

The following two verses almost give the same meaning, but add some favours granted by Allâh to man :

- d) “He (Allâh) has let free the two bodies of water meeting together. Between them is a barrier (an isthmus) which they do not transgress. Then which of the favours of your Lord will you deny? Out of them come pearls and coral stones. Then which of the favours of your Lord will you deny?”

(Ar-Rah_mân : 19-23)

(د) ﴿ مَرَجَ الْبَحْرَيْنِ يَلْتَقِيَانِ (١٩) بَيْنَهُمَا بَرْزَخٌ لَا يَبْغِيَانِ (٢٠) فَبِأَيِّ آلَاءِ رَبِّكُمَا تُكَذِّبَانِ (٢١) يَخْرُجُ مِنْهُمَا اللُّؤْلُؤُ وَالْمَرْجَانُ (٢٢) فَبِأَيِّ آلَاءِ رَبِّكُمَا تُكَذِّبَانِ ﴾
الرحمن (١٩-٢٣)

- e) “The two seas are not alike. The water of one is agreeable, sweet, pleasant to drink. The other salty and bitter. You eat easy meat from both and extract ornaments which you wear.....”
(Fâtîr : 12)

(هـ) ﴿ وَمَا يَسْتَوِي الْبَحْرَانِ هَذَا عَذْبٌ فُرَاتٌ سَائِغٌ شَرَابُهُ وَهَذَا مِلْحٌ أُجَاجٌ وَمِنْ كُلٍّ تَأْكُلُونَ لَحْمًا طَرِيًّا وَتَسْتَخْرِجُونَ حِلْيَةً تَلْبَسُونَهَا ﴾
فاطر (١٢)

In conclusion, Most Gracious is Allâh, Who reveals Himself in the Qur’ân and in the universe. He says :

- f) “Or He (Allâh) Who has made the earth firm to live in and made rivers therein and set thereon mountains and made a separating barrier between the two bodies of water? Can there exist another god besides Allâh? Nay, but most of them (the infidels) do not know.”

(An-Naml : 61)

(و) ﴿ أَمَّنْ جَعَلَ الْأَرْضَ قَرَارًا وَجَعَلَ خَالَهَا أَنْهَارًا وَجَعَلَ لَهَا رَوَاسِي وَجَعَلَ بَيْنَ الْبَحْرَيْنِ حَاجِزًا أَلَمْ يَعْزِزْهُمَ اللَّهُجَ بَلْ أَكْثَرُهُمْ لَا يَعْلَمُونَ ﴾
النمل (٦١)

16 - Stars :

If one turns his attention to the sky and its splendours, notably by night, he is bound to gain a unique lesson, the author of which is Allâh. In fact, one's outstanding reaction to the staggering beauty of cloudless, dark and unpolluted sky is one of awe!!

Amongst the countless billions of stars, some of which being remote galaxies or quasi-stars in the universe, we see only about six thousand. Early astronomers (in ancient civilizations like those of Egypt) were familiar with the constellations which the sun apparently passed by each year (the zodiac). The Arab astronomers gave names to a large number of stars.

Some stars (as Polaris, Sirius and Procyon) were used by the Arabs as guides in their long distance travels. Sirius was a guide from Makkah to Yemen. In this respect, the Qur'ân says :

a) **“And indeed He (Allâh) is the Master of Sirius.”**

(An-Najm : 49)

(أ) ﴿ وَأَنَّهُ هُوَ رَبُّ الشُّعْرَىٰ ﴾ النجم (٤٩)

b) **“And it is He (Allâh) Who made the stars (as beacons) for you that you may guide yourselves with their help through the dark spaces of land and sea. We expound our signs for people who know.”**

(Al-An‘âm : 97)

(ب) ﴿ وَهُوَ الَّذِي جَعَلَ لَكُمُ النُّجُومَ لِتَهْتَدُوا بِهَا فِي ظُلُمَاتِ الْبَرِّ وَالْبَحْرِ قَدْ فَصَّلْنَا الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ ﴾ الأنعام (٩٧)

- c) **“And marks (sign posts), and by the stars they (men) guide themselves.”**

(An-Nahl :16).

(ج) ﴿وَعَلَامَاتٍ وَبِالنَّجْمِ هُمْ يَهْتَدُونَ﴾ النحل (١٦)

Quasi - stars are remote galaxies situated beyond the scope of vision. The so-called radio-telescopes are used to detect them. Their distances afar exceed ten billion light years. It is really miraculous that the Qur’ân refers to the sites of the stars by saying :

- d) **“And indeed I could swear by the sites of the star. And it is a great oath if you are aware of them.”**

(Al-Wâqi‘ah : 75-76).

(د) ﴿فَلَا أُقْسِمُ بِمَوَاقِعِ النُّجُومِ (٧٥) وَإِنَّهُ لَقَسَمٌ لَّو تَعْلَمُونَ عَظِيمٌ﴾ الواقعة (٧٥-٧٦)

Following to the above two verses, the Qur’ân continues to say :

That is indeed a Qur’ân most honourable.

In a book well guarded.

None shall touch it but those who are purified.

A revelation from the Lord of the worlds.

Is it such a message that you would hold in light esteem?

And have you made it livelihood what you should declare it false?

(Al-Wâqi‘ah : 77-82)

﴿إِنَّهُ لَقُرْآنٌ كَرِيمٌ (٧٧) فِي كِتَابٍ مَكْنُونٍ (٧٨) لَا يَمَسُّهُ إِلَّا الْمُطَهَّرُونَ (٧٩) تَنْزِيلٌ مِّن رَّبِّ الْعَالَمِينَ (٨٠) أَفَبِهَذَا الْحَدِيثِ أَنْتُمْ مُدْهِنُونَ (٨١) وَتَجْعَلُونَ رِزْقَكُمْ أَنَّكُمْ تُكَذِّبُونَ﴾
(الواقعة (٧٧-٨٢))

The Qur'ân also says :

e) **“Say : Behold all that is in the heavens and the earth. But neither signs nor warners profit those who believe not.”**

(Yûnus : 101)

(هـ) ﴿قُلْ انظُرُوا مَاذَا فِي السَّمَوَاتِ وَالْأَرْضِ وَمَا تُغْنِي الْآيَاتُ وَالنَّذِيرُ عَنْ قَوْمٍ لَا يُؤْمِنُونَ﴾
يونس (١٠١)

Finally, it is worth mentioning that Allâh swears by : The heavens, the sun, the moon, the earth, the sky or the earth's atmosphere, the sea, the day, the night, meteors, meteorites, comets ... and the stars, and their remote sites. All these objects, in fact, constitute the universe as know it :

“By the heaven and the night-glower. And what do you know about the night glower. It is the brilliant (piercing) star.”

(At-Târiq : 1-3)

(و) ﴿وَالسَّمَاءِ وَالطَّارِقِ (١) وَمَا أَدْرَاكَ مَا الطَّارِقُ (٢) النَّجْمُ الثَّاقِبُ﴾
الطارق (١-٣)

17. The Key To The Past History Of The Earth:

Near the end of the eighteenth century, James Hutton (the famous geologist) declared that the earth's history is written inside the layers of its crust.

It is the duty of the geologist to travel through the earth here and there in order to collect the so-called fossils - remainders of the creatures which lived on earth in the past - and then try to arrange them in the order which enables him to follow (or read) their history! Amazingly enough, the Qur'ân says :

“Say : Travel through the earth and see how He (Allâh) originated the creation...”

(Al-‘Ankabût : 20)

﴿قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ﴾ العنكبوت (٢٠)

18. Heavens Of The Last Day :

A) Foreword :

In this series of books, we have already dealt with the final fate of the sun.

At present, the following are fair estimates concerning the cosmos :

1. Mass of total matter = 10^{56} gram.
2. Density of matter (after expansion) = 10^{-29} gram/cm³.

On the Last Day, the density of the matter of the universe will approach again 10^{92} gram / cm^3 as it was just before the Big-Bang! However, this means that the cosmos will be compacted again within a volume of 10^{-36} cm^3 , which also means the end of the universe :

“Do not the disbelievers see that the heavens and the earth were joined together and We clove them asunder!”

(Al-Anbiyâ' : 30)

﴿أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا﴾ (الأنبياء (٣٠))

On that Day the seven heavens will be folded up and the physical world will be entirely destroyed :

“The Day that We roll up the heavens like a scroll rolled up for books. Just as We produced the first creation so shall We return it back (to its original state) : A promise We have undertaken (and) Truly shall We fulfil.”

(Al-Anbiyâ' : 104)

﴿يَوْمَ نَطْوِي السَّمَاءَ كَطَيِّ السِّجْلِ لِلْكِتَابِ كَمَا بَدَأْنَا أَوَّلَ خَلْقٍ نُعِيدُهُ وَعَدَّا عَلَيْنا إِنَّا كُنَّا فَاعِلِينَ﴾ (الأنبياء (١٠٤))

B) The Cosmic Revolution Of The Hereafter:

Probably the Qur'ân is the only source of information concerning the status in the Hereafter, when natural processes as we know them cease to function. The cosmic revolution of the Hereafter will be so great and beyond imagination. The physical world will vanish revealing the true and real facts. Allâh says :

- a) “It is Allâh Who sustains the heavens and the earth lest they annihilate, and if they should annihilate there is none - not one - who can sustain them after Him....”

(Fâtîr : 41)

﴿إِنَّ اللَّهَ يُمْسِكُ السَّمَوَاتِ وَالْأَرْضَ أَنْ تَزُولَا وَلَئِنْ زَالَتَا إِنْ أَمْسَكَهُمَا مِنْ أَحَدٍ مِنْ بَعْدِهِ﴾
 فاطر (٤١)

- b) “ I do swear by the Resurrection Day.”

(Al-Qiyâmah : 1)

﴿لَا أَقْسِمُ بِيَوْمِ الْقِيَامَةِ﴾
 القيامة (١)

- c) “One day the earth will be changed to a different earth and so will be the heavens, and men will be marshalled forth before Allâh, The One, The Superb Vanquisher.”

(Ibrâhîm : 48)

﴿يَوْمَ تَبْدُلُ الْأَرْضُ غَيْرَ الْأَرْضِ وَالسَّمَوَاتُ وَبَرَزُوا لِلَّهِ الْوَاحِدِ الْقَهَّارِ﴾
 إبراهيم (٤٨)

- d) “... it is He Who begins the (process of) creation and then He brings it back again.....”

(Yûnus : 4)

﴿إِنَّهُ يَبْدَأُ الْخَلْقَ ثُمَّ يُعِيدُهُ﴾
 يونس (٤)

It is a great pity that the majority of people are doubtful about, or even reject believing in, the Hour of Judgment. The Qur'ân tells us briefly :

- e) **“Those who disbelieve will not cease (stop) to be in doubt concerning the Qur'ân until the Hour comes suddenly upon them, or there comes to them the penalty of a Day of Disaster. On that day, the Dominion will be that of Allâh; He will judge between them : So those who believe and work righteous deeds will be in Gardens of Delight. And for those disbeliere and deny Our signs, there will be a humiliating punishment.”**

(Al-Hajj : 55-57)

﴿وَلَا يَزَالُ الَّذِينَ كَفَرُوا فِي مِرْيَةٍ مِّنْهُ حَتَّىٰ تَأْتِيَهُمُ السَّاعَةُ بَغْتَةً أَوْ يَأْتِيَهُمْ عَذَابٌ يَوْمٍ عَقِيمٍ (٥٥) الْمَلِكُ يَوْمَئِذٍ لِّلَّهِ يَحْكُمُ بَيْنَهُمْ فَالَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ فِي جَنَّاتِ النَّعِيمِ (٥٦) وَالَّذِينَ كَفَرُوا وَكَذَّبُوا بِآيَاتِنَا فَأُولَٰئِكَ لَهُمْ عَذَابٌ مُّهِينٌ﴾

(الحج (٥٥-٥٧))

Finally, the Qur'ân, however, reminds us regarding an outstanding event which will take place when the Hour becomes fairly nigh; the Qur'ân says :

“When the Hour becomes nigh the Moon will be cloven.”

(Al-Qamar : 1)

﴿اقْتَرَبَتِ السَّاعَةُ وَانْشَقَّ الْقَمَرُ﴾ القمر (١)

19. Cleavage Of The Moon :

The moon is the nearest heavenly body to the earth. Both bodies influence each other mutually, notably by universal gravitation.

Astronomically, the moon and the earth form together what is called (a closed system) regarded as being isolated from other systems. In this respect, the moon regulates the rate of the earth's rotation round its axis. Thus, when the rate of the earth's rotation increases, due to some reason or another, the moon approaches and vice versa. Changes in the rate of rotation of the earth actually mean corresponding changes in day - length.

At present, the most accurate method adopted in measuring day-length is to time carefully when stars pass overhead. Astronomers, equipped with atomic clocks, which afford very accurate time - keeping, have found that they reach the overhead point slightly later each day, and that this slow down is actually gradual during the course of a century : The length of the day thus increases by .001 of a second!!

However, it has been made clear that when the occasion comes in which the rate of rotation of the earth increases and the day - length decreases beyond a certain limit, the moon will approach towards the earth to the extent that its face nearest to us will cleave under the effect of the earth's gravitational pull! Here again the Qur'ân says miraculously :

“The Hour has drawn near and the moon will cleave.”

(Al-Qamar : 1)

القمر (١)

﴿ اقْتَرَبَتِ السَّاعَةُ وَانْشَقَّ الْقَمَرُ ﴾

FURTHER QUR'ÂNIC ISSUES

1 - The Concept Of Work :

Islâm is both a code of worship and way of life practicable for all times and applicable to all human issues. As has already been made clear in the present series of books (Islâm and Science) the evils of poverty, disease, ignorance, criminality and the like are rampant in the Muslim society, and Muslims in general should not attribute their miseries to the will of Allâh. In this respect the Qur'ân says for example :

“And whatever evil happened to you is because of (the things) you have wrought”

(Ash-Shûrâ : 30)

﴿وَمَا أَصَابَكُمْ مِّنْ مُّصِيبَةٍ فَبِمَا كَسَبَتْ أَيْدِيكُمْ﴾ الشورى (٣٠)

These evils are mostly related to work and depend to a great extent on the effort made by people in order that they may improve their status and environment in accordance with their needs.

It is a fact, however, that several wrong attitudes, capable for the degeneration of the Muslim World, have crept into the Muslim society. Now, in order to change their attitude, it is essential for them to follow the Qur'ânic guidance.

One of the characteristic marks of Islâm is the fact that it decidedly calls for work. The following examples are verses concerning this matter as interpreted from the Qur'ân :

- a) **“But when the prayer is accomplished, scatter in the land and seek the bounty of Allâh and remember Allâh**”

(Al-Jumu‘ah : 10)

(أ) ﴿ فَإِذَا قُضِيَتِ الصَّلَاةُ فَانْتَشِرُوا فِي الْأَرْضِ وَابْتَغُوا مِنْ فَضْلِ اللَّهِ وَاذْكُرُوا اللَّهَ ﴾

الجمعة (١٠)

The harmonious development of the human personality depends mainly upon acquiring a balance between the needs of the body (afforded by work) and those of the self (realized by worship). In other words, work and worship are both requirements for happiness in the earthly life and in the Hereafter :

- b) **“And there in the bestowals Allâh has given you (by work), seek the Hereafter, but forget not your portion in (this) world....”**

(Al-Qasas : 77)

(ب) ﴿ وَابْتَغِ فِيمَا آتَاكَ اللَّهُ الدَّارَ الْآخِرَةَ وَلَا تَنْسَ نَصِيبَكَ مِنَ الدُّنْيَا ﴾

القصص (٧٧)

There lies great honour and esteem in work according to various verses :

- c) **“And say : Work and indeed Allâh will see your work, as well as His Messenger and the believers”**

(At-Taubah : 105)

(ج) ﴿ وَقُلْ اْعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ ﴾ التوبة (١٠٥)

Besides the material gain in earthy life, work is observed by Allâh and has its reward :

- a) **“Whoever does a righteous deed, be him male or female and he is a believer, Verily, to him will We give a new life, a life that is good and pure and We Will bestow on them their reward according to the best of their deeds.”**

(An-Nahl : 97)

(أ) ﴿ مَنْ عَمِلَ صَالِحًا مِّنْ ذَكَرٍ أَوْ أَنَّثَىٰ وَهُوَ مُؤْمِنٌ فَلَنُحْيِيَنَّهٗ حَيَاةً طَيِّبَةً وَلَنَجْزِيَنَّهُمْ أَجْرَهُمْ بِأَحْسَنِ مَا كَانُوا يَعْمَلُونَ ﴾ النحل (٩٧)

This also means that : (1) No human action passes unnoticed. (2) True and faithful work has its reward.

- b) **“... The reward of Allâh (in the Hereafter) is better for those who believe and work righteousness, but this none shall attain save those who steadfastly persevere.”**

(Al-Qasas : 80)

(ب) ﴿ تَوَابُ اللَّهِ خَيْرٌ لِّمَن آمَنَ وَعَمِلَ صَالِحًا وَلَا يُلْقَاهَا إِلَّا الصَّابِرُونَ ﴾ القصص (٨٠)

Needless to say that the Qur’ân declares that the righteous deeds will be rewarded not only in the Hereafter, but also in this world as well :

“We did write in Az-Zabûr after Adh-Dhikr that the righteous shall inherit the earth.”

(Al-Anbiyâ’ : 105)

﴿ وَلَقَدْ كَتَبْنَا فِي الزَّبُورِ مِنْ بَعْدِ الذِّكْرِ أَنَّ الْأَرْضَ يَرِثُهَا عِبَادِيَ الصَّالِحُونَ ﴾ الأنبياء (١٠٥)

All this shows clearly that Islâm emphasises the importance of exerting effort to expect any gain. On these grounds. Islâm condemns usury :

“O you who have believed do not live on usury doubled and redoubled, but act piously towards Allâh that you would possibly prosper.”

(Âl-‘Imrân : 130)

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَأْكُلُوا الرِّبَا أَضْعَافًا مُضَاعَفَةً وَاتَّقُوا اللَّهَ لَعَلَّكُمْ تُفْلِحُونَ﴾
آل عمران (١٣٠)

II. The Relation Between Religion And Science

The relation between religion and science differs widely from place to place and with time. Practically, little or no writings concerning this relation was achieved before the Age of Science. However, history tells us that, during the Middle Ages, scientists faced great difficulties with the religious authorities in Europe. The accusation and trial of Galileo (1615) is well-known in this respect.

It is not strange therefore, that still the reaction of scientists, on taking vengeance, is that any one who mentions God in scientific circles in the West is belittled and is bound to be stopped.

As shown and made clear in the present series of books (Islâm and Science), this attitude is totally different in the case of Islâm. The Qur'ân, not only invites people to cultivate science, but also it includes numerous verses which refer to several natural phenomena, establish the principles of basic science and favour increase of knowledge. For example, one reads in the Qur'ân :

a) “Say : Behold all that is in the heavens and earth”

(Yûnus : 101)

(أ) ﴿ قُلْ اَنْظُرُوا مَاذَا فِي السَّمَوَاتِ وَالْأَرْضِ ﴾ يونس (١٠١)

- b) **“Behold! In the creation of the heavens and the earth and the alteration of night and day there are indeed signs for men of understanding.”**

(Âl-‘Imrân : 190)

(ب) ﴿ إِنَّ فِي خَلْقِ السَّمَوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِأُولِي الْأَلْبَابِ ﴾
آل عمران (١٩٠)

- c) **“... say are those equal, those who know and those who know not?”**

(Az-Zumar : 9)

(ج) ﴿ قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ ﴾ الزمر (٩)

- d) **“... Allâh will raise up to (suitable) ranks those of you who believe and who have been granted knowledge”**

(Al-Mujâdalâh : 11)

(د) ﴿ يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ ﴾ المجادلة (١١)

- e) **“But it (the Qur’ân) is clear signs in the hearts of those who have been granted knowledge”**

(Al-‘Anqabût : 49)

(هـ) ﴿ بَلْ هُوَ آيَاتٌ بَيِّنَاتٌ فِي صُدُورِ الَّذِينَ أُوتُوا الْعِلْمَ ﴾ العنكبوت (٤٩)

- f) **“.. say : Bring forth your proof, provided you are right.”**

(Al-Baqarah : 111)

(و) ﴿ قُلْ هَاتُوا بُرْهَانَكُمْ إِنْ كُنْتُمْ صَادِقِينَ ﴾ البقرة (١١١)

- g) **“.. and say : O my Lord grant me more knowledge.”**

(Tâhâ : 114)

(ر) ﴿ وَقُلْ رَبِّ زِدْنِي عِلْمًا ﴾ طه (١١٤)

III. Human Rights In Islâm

1- Equality :

In Islâm every individual has the same rights and is compelled to fulfil equal duties, without distinction of race, colour, relation, or wealth. The best of human beings in the sight to Allâh are those who show piety and are most useful of the human race. The law of Allâh is prescribed by the Qur'ân which says, for example :

- a) **“O mankind! Lo! We have created you of a male and a female, and have made you into nations and tribes that you may know one another. Lo! the noblest of you in the sight of 'Allâh is the most righteous of you. Indeed, Allâh is Ever-Knowing, Ever-Cognizant.”**

(Al-Hujrât : 13)

(أ) ﴿ يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا ۚ إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاكُمْ ۚ إِنَّ اللَّهَ عَلِيمٌ خَبِيرٌ ﴾ الحجرات (١٣)

- b) **“Allâh does not forbid you as regards those who did not fought you on account of religion and did not drive you from your houses, that you should show them kindness and deal justly with them. Lo! Allâh likes the just dealers.”**

(Al-Mumtah_ahah : 8)

(ب) ﴿ لَا يَنْهَاكُمُ اللَّهُ عَنِ الَّذِينَ لَمْ يُقَاتِلُوكُمْ فِي الدِّينِ وَلَمْ يُخْرِجُواكُمْ مِنْ دِيَارِكُمْ أَنْ تَبَرُّوهُمْ وَتُقْسِطُوا إِلَيْهِمْ ۚ إِنَّ اللَّهَ يُحِبُّ الْمُقْسِطِينَ ﴾ الممتحنة (٨)

2- Justice :

- a) “And of their wealth the beggar and the outcast have due share.”

(Adh-Dhâriyât : 19)

(أ) ﴿ وَفِي أَمْوَالِهِمْ حَقٌّ لِّلسَّائِلِ وَالْمَحْرُومِ ﴾
الذاريات (١٩)

This verse declares the right of every person to lead honourable life by getting rid of need. Special funds are taken from those who are financially able to fulfill this right of the poor.

- b) “O you who believe! Be steadfast witnesses for Allâh in equity, and let not hatred of any people seduce you that you deal not justly: Deal justly, that is nearer to piety. And fear Allâh. Indeed, Allâh is Ever-Cognizant of what you do.”

(Al-Mâ'idah : 8)

(ب) ﴿ يَا أَيُّهَا الَّذِينَ آمَنُوا كُونُوا قَوَّامِينَ لِلَّهِ شُهَدَاءَ بِالْقِسْطِ وَلَا يَجْرِمَنَّكُمْ شَنَاٰنُ قَوْمٍ عَلَىٰ أَلَّا تَعْدِلُوا اعْدِلُوا هُوَ أَقْرَبُ لِلتَّقْوَىٰ وَاتَّقُوا اللَّهَ إِنَّ اللَّهَ خَبِيرٌ بِمَا تَعْمَلُونَ ﴾
المائدة (٨)

- c) “.... And let not the hatred of a folk, since they compelled you to keep away from Al-Masjid Al-Harâm, seduce you to transgression, and help one another unto righteousness and piety, and help not one another unto sin and transgression, but keep your duty to Allâh. Indeed, Allâh is severe in punishment.”

(Al-Mâ'idah : 2)

(ج) ﴿ وَلَا يَجْرِمَنَّكُمْ شَنَاٰنُ قَوْمٍ أَن صَدُّوكُمْ عَنِ الْمَسْجِدِ الْحَرَامِ أَن تَعْتَدُوا
وَتَعَاوَنُوا عَلَى الْبِرِّ وَالتَّقْوَىٰ وَلَا تَعَاوَنُوا عَلَى الْإِثْمِ وَالْعُدْوَانِ وَاتَّقُوا اللَّهَ إِنَّ
اللَّهَ شَدِيدُ الْعِقَابِ ﴾
المائدة (٢)

3- Liberty In Favour Of Man :

The Qur'ân says :

“Let there arise out of you a nation inviting to all that is good, enjoining what is right and forbidding what is wrong, and those are (themselves) who are the Most Prosperous to His guidance.”

(Al-‘Imrân : 104)

﴿ وَلَتَكُنْ مِنْكُمْ أُمَّةٌ يَدْعُونَ إِلَى الْخَيْرِ وَيَأْمُرُونَ بِالْمَعْرُوفِ وَيَنْهَوْنَ عَنِ الْمُنْكَرِ
أُولَٰئِكَ هُمُ الْمُفْلِحُونَ ﴾
آل عمران (١٠٤)

Evidently, Islâm gave serious concern to the basic human rights namely: Equality, Justice and Liberty; but, in fact, Islâm goes further than the rights quoted in the Drafting Body of the Declaration of 1948!!

ISLÂM AND SCIENCE

- 7 -

MAINLY INTRODUCTORY:

I. Value Of Islâm

The relationship between notably scientific progress and the teachings (true teachings) of Islâm has not yet been well studied and made a clear during the last few centuries. However, history tells us that Islâm has readily and rapidly spread from the boundaries of India and China westwards to The Atlantic Ocean and from Southern Europe and Spain southwards to the Sudan and Senegal. Over his vast land areas and for centuries the Muslim world has become the educator.

During that time Europe was almost entirely under (Christian Science) teachings. The Message of Islâm has mainly to innovate. The true Islamic teachings were followed. Firm relations between Islâm as taught by the Qur'ân and natural science was then established. As a matter of fact, science being the message of Islâm (book 1, pp 34-35), it is only natural that a great number of the Qur'ânic Verses describe with amazing precision matters pertaining to the universe.

II. Islam Promoted A New Mentality

The Qur'ân urged Muslims to ponder over the natural phenomena accessible to observation within the universe, which is the Book of Allâh.

– Refer also to book 3, pp 129-132.

This particular mentality was indeed accomplished for the first time on earth in man's history. For example, one reads The Qur'ân:

- 1- **“Assuredly, in the heavens and the earth are signs for the believers; and in the creation of yourselves and the living beings. He disperses on earth are signs to the firm in belief; and in the variation of night and day; and the sustenance which Allâh sends down from the sky, whereby He gives life to the earth after its death; and in sending winds in their ways are signs for a people of discernment. Those are the signs of Allâh; We rightfully recite them for you; but, say, with what sort of speech beyond that of Allâh and His signs do they believe!?”**

(Al-Jâthiyah : 3-6)

١- ﴿إِنَّ فِي السَّمَاوَاتِ وَالْأَرْضِ لَآيَاتٍ لِّلْمُؤْمِنِينَ ۝ (٣) وَفِي خَلْقِكُمْ وَمَا يَبُثُّ مِن دَابَّةٍ آيَاتٌ لِّقَوْمٍ يُوقِنُونَ ۝ (٤) وَاختِلَافِ اللَّيْلِ وَالنَّهَارِ وَمَا أَنزَلَ اللَّهُ مِنَ السَّمَاءِ مِن رِّزْقٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَتَصْرِيفِ الرِّيَّاحِ

آيَاتٍ لِّقَوْمٍ يَعْقِلُونَ ﴿٥﴾ تِلْكَ آيَاتُ اللَّهِ نَتْلُوهَا عَلَيْكَ بِالْحَقِّ فَبَأْيَ حَدِيثٍ بَعْدَ اللَّهِ
وَأَيَاتِهِ يُؤْمِنُونَ ﴿٦-٣﴾ الجاثية

2- “say go and wander through the earth and thus see how he began creation.....”

(Al -‘Ankabût : 20)

٢- ﴿قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ﴾ العنكبوت (٢٠)

It is well known in geology that the past history of the earth is written in its crest. “The language in which this history is written is known as (fossils).” In fact, fossils is the term applied for the remains or traces of plants and animals (which lived in the past) and are found in the earth’s crust.

It is now also realized that the earth’s strata could be identified by organized fossils. In other words, when a sequence of successive types of animal remains has been established by observation, it becomes possible to determine from the fossil contents the relative age of a deposit. Fossils are thus a direct clew to pre-historic times and the key to the beginning of creation or earth as the Qur’ân verse points out!! -

See also book 2, p. 46.

It is true, however, that still there are many natural phenomena which can be evaluated only by people possessing science, and on top of such natural phenomena are the phenomena with which modern science is concerned. However, The Qur’ân prescribes to man for the first time in the history of the human race to ponder over the phenomena in the universe accessible to human senses, Special regards are assured for

those whom the knowledge may reach. In this ense The Qur'ân says:

3- **“But it (The Qur'ân) is clear signs in the hearts of those whom the knowledge has reached”**

(Al -‘Ankabût : 49)

٣- ﴿بَلْ هُوَ آيَاتٌ بَيِّنَاتٌ فِي صُدُورِ الَّذِينَ أُوتُوا الْعِلْمَ﴾

العنكبوت (٤٩)

Amazingly enough, the very first verse of The Qur'ân gave incentive to gain science and to glorify it. It was the signal for the dawn of The Age of the Science and a forerunner of giving the study of the phisical world its due diginty. The verse says:

4- **“Read in the name of your Lord Who created.”**

(Al -‘Alaq : 1)

٤- ﴿اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ﴾

العلق (١)

Refers to book (5), PP. 228 - 231

ISLÂM-THE RELIGION OF SCIENCE

I. Preface

The present series of books concerning Islâm and science has been devoted to make it clear that, inspite of the present extraordinary unfavourable status of the Muslim World, yet, The Qur'an did invite Muslims to observe, ponder over and study Allâh's signs in the universe. Evidently, these three intems are respectively the proper way to, and the principal concern of, modern science. For example. Allâh says:

1-"Have you not seen that Allâh sends down water (rain) from the sky and leads it through springs in the earth, then He causes to grow therewith plantation , then it withers and you see it grows yellow, the He makes it dry and crumble away; for sure, thus us a message of remembrance to men understanding."

(Az-Zumar: 21)

١ - ﴿ أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَسَلَكَهُ يَنَابِيعَ فِي الْأَرْضِ ثُمَّ يُخْرِجُ بِهِ زَرْعًا مُخْتَلِفًا أَلْوَانُهُ ثُمَّ يَهِيَجُ فَتَرَاهُ مُصْفَرًّا ثُمَّ يَجْعَلُهُ حُطَامًا إِنَّ فِي ذَلِكَ لَذِكْرًا لِأُولِي الْأَلْبَابِ ﴿٢١﴾

الزمر (٢١)

- 2- **“Have you not seen that Allâh drives along (bits of) clouds, then joins them together, then into heaps of cumulus then you will see rain issuing from their inside He sends down from the sky mountain masses of (cumulo - nimbus) wherein is hail afflicting therewith whom He decides and turning it away from whom He decides, the vivid flash of its lighting almost takes away the sights.”**

(An - Nûr : 43)

٢ - ﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَرْجِي السَّحَابَ ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خِلَالِهِ وَيُنْزِلُ مِنَ السَّمَاءِ مِثَالِ جِبَالٍ فِيهَا مِنْ بَرَدٍ فَيُصِيبُ بِهِ مَنْ يَشَاءُ وَيَصْرِفُهُ عَنِ مَنْ يَشَاءُ يَكَادُ سَنَا بَرْقُهُ يَذْهَبُ بِالْأَبْصَارِ﴾

النور (٤٣)

Refers again to book 5, pp 260-261; also to book 1, pp 26-27 and book 2, pp 73-75.

Notice also that thunder-storms are produced by the rapid expansion of the air in which lighting flashes occur. Thunder-storms are rather common natural phenomena which accompany the passage or formation of the cumulo-nimbus clouds exactly as described in the above verse and justified by observation.

II. Further Qur'ânic Verses Inviting Man To Observe, Ponder Over And To Study Allâh's Signs

In The Qur'ân, the opening of such verses is usually by expressions such as: surely, assuredly, say, have you not seen....

Thus one reads in The Qur'ân:

- 1- “Surely, in the creation of the heavens and the earth and the variation of nights and day and in the boats that sail swiftly over the sea thus benefitting people and in the water which Allâh sends down from the sky whereby He gives life to the earth after its death and disposes various living creatures and in sending winds in their ways and the clouds compelled between the sky and the earth are signs for a people who are wise.”

(Al-Baqarah : 164)

١ - ﴿إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَالْفُلْكِ الَّتِي تَجْرِي فِي الْبَحْرِ بِمَا يَنْفَعُ النَّاسَ وَمَا أَنْزَلَ اللَّهُ مِنَ السَّمَاءِ مِنْ مَاءٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَبَثَّ فِيهَا مِنْ كُلِّ دَابَّةٍ وَتَصْرِيفِ الرِّيَّاحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ﴾
البقرة (١٦٤)

2- “.. Say bring forth your proof peovided you right.”

(Al - Baqarah : 111)

٢ - ﴿قُلْ هَاتُوا بُرْهَانَكُمْ إِن كُنتُمْ صَادِقِينَ﴾

البقرة (١١١)

3- “... and say (asking Allâh), O my Lord: I beg You to increase my knowledge.”

(Tâhâ: 114)

٣ - ﴿وَقُلْ رَبِّ زِدْنِي عِلْمًا﴾

طه (١١٤)

4- “Have you seen that Allâh sends down water from sky and then by it We cause the upgrowth of fruits of various types and colour and that mountains are tracks white and red of various grades and shades of colour and black intense masses; and people and beasts and cattle various likewise are the kinds, but of His servants who fear Allâh are only those possessing knowledge, Verily, Allâh is Ever-Mighty, Ever-Forgiving.”

(Fâtîr : 27-28)

٤ - ﴿أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ ثَمَرَاتٍ مُّخْتَلِفًا أَلْوَانُهَا وَمِنَ الْجِبَالِ جُدَدٌ بَيَضٌ وَحُمْرٌ مُّخْتَلِفٌ أَلْوَانُهَا وَغَرَابِيبُ سُودٍ (٢٧) وَمِنَ النَّاسِ وَالدَّوَابِّ الْأَنْعَامُ مُّخْتَلِفٌ أَلْوَانُهُ كَذَلِكَ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ إِنَّ اللَّهَ عَزِيزٌ غَفُورٌ﴾

فاطر (٢٧ - ٢٨)

Evidently, the last verse invites man to initiate by observation (which is the essential and correct procedure in modern science) the branches of science now known as botany, geology and zoology.

- 5- **“Have not you seen that Allâh drives along bits of the clouds then He joins them together then make into heaps of cumulus (Cb) then will thou see rain issuing from their inside and He sends down from the sky mountain masses of cumulus wherein is hail afflicting therewith whom He decides from whom He decides and turning it away, the vivid flash of its lightning (whose electric charge is due to hail) almost takes away the sights.”**

(An-Nûr : 43)

٥- ﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَرْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خَلَالِهِ وَيَنْزِلُ مِنَ السَّمَاءِ مِنْ جِبَالٍ فِيهَا مِنْ بَرَدٍ فَيُصِيبُ بِهِ مَنْ يَشَاءُ وَيَصْرِفُهُ عَنْ مَنْ يَشَاءُ يَكَادُ سَنَا بَرْقِهِ يَذْهَبَ بِالْأَبْصَارِ﴾
النور (٤٣)

The amazing brief statement in this verse inviting man to direct observation regarding the stages of formation of the so-called cumulo-nimbus (Cb) clouds, the corresponding formation of hail stones from growing ice crystals falling from the tops of the clouds and the recently discovered separation of opposite electric charges accompanying growth and evaporation of hail-stones, are certainly miraculous.

Refer to Book 2, pp 73-75

III. Further Cosmic Verses

- 1- “Have, yet, those who disbelieve become aware that the heaven and the earth had been (originally) one single entity which We then parted asunder and We made of water every living thing, do not they thus believe?!”

(Al-Anbiyâ': 30)

٥- ﴿أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَاوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ أَفَلَا يُؤْمِنُونَ﴾
الأنبياء (٣٠)

In the book 5, pp 64-66 of this series, a brief account concerning the origin of the universe is given. All galaxies, including our own (the Milky Way), were then condensed together in an extremely limited space to an unimaginable density. This high condensed mass suddenly exploded and formed an unlimited number of clouds and dust which with the passage of time developed into galaxies receding under the power of explosion.

Direct observation now, together with theory (Theory of Relativity), show that galaxies are receding and that the universe is expanding. Here again Allâh says that:

2- **“With power and will did We construct the heavens (the universe) and indeed We are expanding.”**

(Adh - Dhâriyât : 47)

الذاريات (٤٧) ﴿ وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ ﴾ ٢-

Again, the only planet in the Solar System in which surplus amounts of water exist in the form of liquid, solid or even vapour, is our earth. More than three quarters of the earth's surface is covered with liquid water (in oceans, seas, lakes, rivers...) and ice (solid water) in the polar caps, tops of high mountains and icebergs. Water-vapour exists in variable amounts in the earth's atmosphere. It is the source of fresh water on earth. R efers to book 5, pp - 55 - 59. As regards the amount of water in the earth, The Qur'ân amazingly says:

1- **“And We (Allâh) sent down water from the sky according to due measure and thus We caused it to be preserved in the earth ...”**

(Al - Mu'minûn : 18)

﴿ وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ ﴾ ٣-

المؤمنون (١٨)

It is a scientific (fact), however, that on the expense of the amount of water which our earth originally acquired according to

measure, that life on it could live and flourish.

4- “... and that whom His Will is to lead into error ge makes his chest close and constricted as if he has to rise up in the sky.....”

(Al-An’âm: 125)

﴿وَمَنْ يُرِدْ أَنْ يُضِلَّهُ يَجْعَلْ صَدْرَهُ ضَيِّقًا حَرَجًا كَأَنَّمَا يَصْعَدُ فِي السَّمَاءِ﴾ -٤

(الأنعام (١٢٥)

As said in book 2, p. 49

Atmospheric pressures and consequently, oxygen amounts in the air, decrease rapidly with increasing height above the earth’s surface. He who rises up in the air without external protection soon feels the need for wider chest and his chest becomes close and constricted.

However, one has to remember that the Prophet Muhammad (prayers and peace be upon him) was not a scientist and his people were illiterate, so he would not have been in a position to explain the scientific details behind natural phenomena.

Before Islâm, there was not a single Book that urged man to seek science. Referring in such a manner to signs in the physical world was certainly the new mentality introduced by Islâm which stimulated many branches of science (Briefly described in book 1, 3 and 6 of this series). Numerous Muslims scientists were specialised in the various branches of science. In astronomy, for example, the second scientifically correct method for measuring the earth’s radius was achieved in Baghdad during the time of Al-Ma’mûn, in the so-called Middle Ages, long before most Muslims rejected the fact that: “Science is the message of Islâm for the sake of man’s benefit on earth”. They argue that Islâm is merely a spiritual message concerning the Hereafter”!!

This second scientifically correct measurement was carried out by the Muslim Astronomer Thâbit Ibn Qurrah book (1) p.35. Some time after Thâbit, the famous Muslim astronomer Al-Bayrûny carried out the third measurement known in history. Al-Bayrûny introduced his famous principle, which is nowadays known as “Al-Bayrûny Principle”. However, the first correct measurements of the earth’s radius known in history was achieved by the Egyptian astronomer Eratosthenes in ancient “Alexandria Library”.

The first educational establishments in the Muslims world were attached to mosques. Universities then appeared long before similar establishment appeared in Europe. It was familiar and common practice among the Europeans to go and study in Muslim universities notably in Spain, where there was no hindrance to scientific research. However, in the interpretation of The Qur’ân, we must distinguish between mere theories and established scientific (facts) arrived at by continuous observation.

In the 15th century, the spirit of that time in Europe was essentially conservative, practically as the spirit of the majority of Muslims who in the age of (their) degeneration have little chance to grasp sound scientific interpretation of The Qur’ân. No doubt, as the Muslim writer Dr. Maurice Baucaille says, Muslims limited their attention to what was set up by their permanent thinkers of the past. Such was almost the culture in Europe when Islâm appeared. It was cultivated under Christian influence and the permanent reference to some misleading writings of old times.

IV. The Prophets' Miracles Breaking Down The Laws Of Nature Gave Place To The Qur'ân

After the revelation of The Qur'ân as an External Miracle, which invites man to observe and ponder over the phenomena of nature, it was only nature that the Prophet Muḥammad (prayers and peace be upon him) should not be supported by any of the type of miracles breaking the laws of nature.

When the people of Makkah become quite convinced that the Qur'ân was a new type of miracles, revealing unique message for the human race, they asked The Prophet Muḥammad to cast before them the type of miracles which break down the laws of nature...!! In this respect, The Qur'ân says:

1- They say: "We shall not believe you until you cause a spring to gush forth the land of (Makkah)."

Or (until) you have a garden of date-Palms and vines and cause rivers to gush forth for us from in their midst carrying abundant water

Or (until) you cause the sky fall in pieces, as you supposed, against us.

Or you bring Allâh and the angels before us face to face.

Or you have a house adorned with ornaments or you mount a ladder right into heaven. No, we shall even believe in your mounting until you send down to us a book that we could read. Say: "Glory to my Lord! Am I aught but a man, a Messenger?"

(Al-Isrâ' : 90 -93)

١ - ﴿وَقَالُوا لَنْ نُؤْمِنَ لَكَ حَتَّى تَفْجُرَ لَنَا مِنَ الْأَرْضِ يَنْبوعًا (٩٠) أَوْ تَكُونَ لَكَ جَنَّةٌ مِنْ نَخِيلٍ وَعِنَبٍ فَتُفَجِّرَ الْأَنْهَارَ خِلَالَهَا تَفْجِيرًا (٩١) أَوْ تُسْقِطَ السَّمَاءَ كَمَا زَعَمْتَ عَلَيْنَا كِسْفًا أَوْ تَأْتِيَ بِاللَّهِ وَالْمَلَائِكَةِ قَبِيلًا (٩٢) أَوْ يَكُونَ لَكَ بَيْتٌ مِنْ زُخْرَفٍ أَوْ تَرْقَى فِي السَّمَاءِ وَلَنْ نُؤْمِنَ لِرُقِيِّكَ حَتَّىٰ تَنْزِلَ عَلَيْنَا كِتَابًا نَقْرُوهُ قُلْ سُبْحَانَ رَبِّي هَلْ كُنْتُ إِلَّا بَشَرًا رَسُولًا (٩٣)﴾

الإسراء (٩٠-٩٣)

2-".....but no vhang will you find in Allâh's enactment
No turning off will you find in Allâh's enactment"

(Fâtîr: 43)

٢ - ﴿فَلَنْ تَجِدَ لِسُنَّتِ اللَّهِ تَبْدِيلًا وَلَنْ تَجِدَ لِسُنَّتِ اللَّهِ تَحْوِيلًا﴾

فاطر (٤٣)

The Qur'ân is thus Allâh's Message to man's mind and common sense. Observing Allâh's signs in the universe is the first step towards attaining scientific knowledge.

V. Science In The Service Of Islâm

In Islâm, unlike other religions known in human history, the performance of the various aspects of religious rituals has been rather associated by scientific procedures. In this respect, any one who studies Islâm can readily realise the following facts :

- (a) The outstanding organization of the lunar calendar.
- (b) The astronomically well defined times of prayer.
- (c) The correct determination (in any place on earth) of the sacred direction of the (Ka'bah) in Makkah and
- (d) The Creed of Oneness together with the Qur'ânic teachings lead to the fact that science is the message of Islâm.

ISLÂM-THE RELIGION OF LIFE

I. Introduction

Islâm, is purely a personal religion which avoids privileges of priestly leadership of any kind. This individuality of religion is supported by The Qur'ân which says:

“He who goes right it is only for the good of himself and he who is ever erring is erring only to himself and no laden seif should bear another’s load and We never punish until We have sent a Messenger.”

(Al-Isra’: 15)

﴿مَنْ اهْتَدَىٰ فَإِنَّمَا يَهْتَدِي لِنَفْسِهِ وَمَنْ ضَلَّ فَإِنَّمَا يَضِلُّ عَلَيْهَا وَلَا تَزِرُ وَازِرَةٌ وِزْرَ أُخْرَىٰ وَمَا كُنَّا مُعَذِّبِينَ حَتَّىٰ نَبْعَثَ رَسُولًا﴾

الإسراء (١٥)

The five pillars of faith are given in book (4) p. 169. These five pillars of Islâm are:

(1) Confession of faith, by declaring that there is no god save Allâh and that Muh _ammad is Allah’s Messenger.

(2) Regular performance of five prayers with face directed-towards the Inviolable Makkah Mosque at five appointed periods during the day : at daybreak, noon, mid- afternoon, after sunset and in the early part of the night. The prayers are announced by a (caller) from the mosque, instead of by ringing bells. The call to each prayer is :

Allâh is Most Great . Allâh is Most Great. I bear witness that there is no god save Allâh I bear witness that Muh _ammad is the Messengety of Allâh. Come to the prayer. Come - to success. Allâh is Most great. Allâh is Most great. There is no god save Allâh.

(3) The third discipline is the giving of alms (zakât), in the form of a regular percentage (usually one fortieth of the annual revenue) to help the poor and the needy in general.

(4) The fourth discipline is the annual fast (keeping Ramaḍân). It is obligatory for adults in general. This fast ends with a feast.

(5) Finally, the last duty of a Muslim (the fifth duty) is to make pilgrimage to Makkah once in a life- time, provided one is able to do so.

Freedom of will is guaranteed in Islâm. In this respect, for example, the Qur'ân says :

“And say : The truth is from your Lord : then whosoever wills let him believe and whosoever wills let him disbelieve...”

(Al- Kahf: 29)

﴿وَقُلِ الْحَقُّ مِنْ رَبِّكُمْ فَمَنْ شَاءَ فَلْيُؤْمِنْ وَمَنْ شَاءَ فَلْيُكْفِرْ﴾

الكهف (٢٩)

II. The Individual's Responsibilities

Man should not enjoy absolute freedom. In other words, man's freedom is limited, not only by conditions prevailing in his community, but also by his relation towards Islâm. However, Islâm approves of limited individual freedom provided one should watch over his own self and body as follows :

(A) Responsibility towards man himself : In this respect, Islâm a for example.

(1) **“Then in the long run, evil in the extreme will be the end of those who do evil...”**

(Ar-Rûm: 10)

١ - ﴿ثُمَّ كَانَ عَاقِبَةُ الَّذِينَ أَصَاؤُوا السُّوْءَ﴾

الروم (١٠)

(2) **“..... do not hand yourselves over to destruction....”**

(Al-Baqarah: 195)

٢ - ﴿وَلَا تَلْقُوا بِأَيْدِيكُمْ إِلَى التَّهْلُكَةِ﴾

البقرة (١٩٥)

(3) **“And as for him who has feared the greatness of his Lord and forbade the self its caprice, Verily, paradise will be his refuge.”**

(An-Nâzi‘ât : 40-41)

٣- ﴿وَأَمَّا مَنْ خَافَ مَقَامَ رَبِّهِ وَنَهَى النَّفْسَ عَنِ الْهَوَىٰ (٤٠) فَإِنَّ الْجَنَّةَ هِيَ الْمَأْوَىٰ﴾

النازعات (٤٠-٤١)

(4) “And by the self and Him Who shaped it. Then He inspired it of its away to lewdness and it way to its piety”.

(Ash-Shams : 7-8)

٤- ﴿وَنَفْسٍ وَمَا سَوَّاهَا (٧) فَأَلْهَمَهَا فُجُورَهَا وَتَقْوَاهَا﴾ الشمس (٧-٨)

(5) “... and he who is guided is only guided to his own gain and he whoever errs it is only to his own loss....”

(Yûnus: 108)

٥- ﴿فَمَنْ اهْتَدَىٰ فَإِنَّمَا يَهْتَدِي لِنَفْسِهِ وَمَنْ ضَلَّ فَإِنَّمَا يَضِلُّ عَلَيْهَا﴾

يونس (٨٠-٨١)

(B) Responsibility towards man's own family: the serious degeneration of the family bond in the west is clear. In Islâm, man's responsibility towards his family comes next to his responsibility to himself. Allâh says:

(1) “And your Lord has decreed you shall not worship any but Him and to be good to parents, whether one, or both of them attain old age with you, neither say to them “Fie”, nor chide them but (only) speak to them words respectful; and lower to them the wing of humbleness out of mercy and say: My Lord have mercy upon them as they raised me up when I was young.”

(Al - Isrâ' : 23-34)

١ - ﴿وَقَضَىٰ رَبُّكَ أَلَّا تَعْبُدُوا إِلَّا إِيَّاهُ وَبِالْوَالِدَيْنِ إِحْسَانًا إِمَّا يَبْلُغَنَّ عِنْدَكَ الْكِبَرَ أَحَدُهُمَا أَوْ كِلَاهُمَا فَلَا تَقُلْ لَهُمَا أَفٍّ وَلَا تَنْهَرُهُمَا وَقُلْ لَهُمَا قَوْلًا كَرِيمًا (٢٣) وَاخْفِضْ لَهُمَا جَنَاحَ الذُّلِّ مِنَ الرَّحْمَةِ وَقُلْ رَبِّ ارْحَمْهُمَا كَمَا رَبَّيَانِي صَغِيرًا (٢٤)﴾
 الإسراء (٢٣ - ٢٤)

(2) Another aspect of family responsibility in Islâm is represented by the law of inheritance of property which is expressed in many verses of The Qur'ân such as that given in book (3) pp. 101-102.

(C) The individual's responsibility to his society. According to the Islamic teachings, man's foremost duty is to do his work conscientiously because his work contributes to the welfare of his society. Refer also to book (5) pp. 225-227. Allâh says, for example:

(1) “And say : Work and Allâh will see your work, as will His Messenger and the believers....”

(At- Taubah : 105)

١ - ﴿وَقُلْ اْعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ﴾

التوبة (١٠٥)

(2) - “.... and help one another in benignancy and piety, but not help one another in crime and hostility....”

(Al- Mâ'idah : 2)

٢ - ﴿وَتَعَاوَنُوا عَلَى الْبِرِّ وَالتَّقْوَىٰ وَلَا تَعَاوَنُوا عَلَى الْإِثْمِ وَالْعُدْوَانِ﴾

المائدة (٢)

III. Characteristics Of The Islâmic Civilization

1- It Covered Vast Fields:

Islâmic civilization developed almost in the seventh century A.C., partially on a substratum composed of the civilizations which generally preceded Islâm and mostly on the Qur'âmic teachings which honoured man. Muslims soon became aware of the great heritage of the human race in art, philosophy, science, notably astronomy, literature, medicine, architecture and in governmental affairs. It is worth emphasizing, however, that this Islâmic Civilization was not merely a sort of bridge for the preceding civilizations to pass over to the Era of Science. Muslims did correct them and added to them much of their own.

2- Honouring Man:

Many Qur'ânic verses honour man in various ways. The following are some selected examples which say.

(1) “And Verily, We have honoured the children of Âdam and We have carried them by land and by sea and We have provided for them of good things and endowed them over many of whom We created.”

(Al-Isrâ' : 70)

﴿وَلَقَدْ كَرَّمْنَا بَنِي آدَمَ وَحَمَلْنَاهُمْ فِي الْبَرِّ وَالْبَحْرِ وَرَزَقْنَاهُمْ مِنَ الطَّيِّبَاتِ وَفَضَّلْنَاهُمْ
عَلَىٰ كَثِيرٍ مِّمَّنْ خَلَقْنَا تَفْضِيلًا﴾

الإسراء (٧٠)

(2) “And when your Lord said to the angels : “Surely, I am about to place on earth a successor; they said : “Will You place there one who will do ill therein and shed blood, while we celebrate Your praise and extoll Your holiness?”? Allâh said : Indeed, I Know what you know not.”

(Al-Baqarah: 30)

٢- ﴿وَإِذْ قَالَ رَبُّكَ لِلْمَلَائِكَةِ إِنِّي جَاعِلٌ فِي الْأَرْضِ خَلِيفَةً قَالُوا أَتَجْعَلُ فِيهَا مَن يُفْسِدُ فِيهَا وَيَسْفِكُ الدِّمَاءَ وَنَحْنُ نُسَبِّحُ بِحَمْدِكَ وَنُقَدِّسُ لَكَ قَالَ إِنِّي أَعْلَمُ مَا لَا تَعْلَمُونَ﴾

البقرة (٣٠)

Obviously, Allâh offered man the ability and means to think, to talk to study and to learn, and the ability to make use of all that is on earth.

(3) “O mankind! We created you from a single (pair) of a male and a female and made you into nations and tribes that you many know each other. Verily, the most hounored of you in the sight of Allâh is he who most pious to Him. Verily, Allâh is Ever- Knowing, Ever-Cognizant.”

(Al- Hujurât: 13)

٥- ﴿يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاكُمْ إِنَّ اللَّهَ عَلِيمٌ خَبِيرٌ﴾

الحجرات (١٣)

- Refer also to book (2), P. 58.

In Islâm, all people are equal. The only distinction is by piety and fear of Allâh, as well as by goodness which benefits one's society. Refer also to book 4 , pp. 171-176.

3- Islâm Guaranteed Freedom Of Creed

Islamic principles approve freedom of creed and request standing to reason in all respects and not to force. For example, Allâh says :

(1) “Summon you to the way of your Lord with wisdom and kindly warning and argue with them in the kindest manner; Verily, your Lord is best knower of those who err from His way and He is Best-Knower of those who have yielded to His guidance.”

(An - Nah1: 125)

١ - ﴿ادْعُ إِلَى سَبِيلِ رَبِّكَ بِالْحُكْمَةِ وَالْمَوْعِظَةِ الْحَسَنَةِ وَجَادِلْهُمْ بِالَّتِي هِيَ أَحْسَنُ إِنَّ رَبَّكَ هُوَ أَعْلَمُ بِمَنْ ضَلَّ عَنْ سَبِيلِهِ وَهُوَ أَعْلَمُ بِالْمُهْتَدِينَ﴾

النحل (١٢٥)

(2) “Let there be no complusion in religion; Verily, the right way has been made distinct from misguidance....”

(Al-Baqarah: 256)

٢ - ﴿لَا إِكْرَاهَ فِي الدِّينِ قَدْ تَبَيَّنَ الرُّشْدُ مِنَ الْغَىِّ﴾

البقرة (٢٥٦)

IV. Islâm Inspired Purposes Of Diplomacy

It is not fair to claim that diplomacy in Muslim history began with purely religious aims. This is mainly because the call for Islâm necessitated that the core of the Muslim countries (Arabia) had to be kept immune from the Roman, Greek and Persian influences.

It was natural to establish a unique regime in order to establish the relation of the newly born states with their neighbouring societies. Obviously, the exchange of envoys and the conclusions of the treaties in concern were almost equal to the recognition of the new Muslim states and their extensive boundaries.

Muslim rulers officially and privately worked for culture and enlightenment. This outstanding Muslim aspect was marked by translation into Arabic mainly from Greek and from Persian.

V. The Honoured Doctrines Of Islâm

(a) In the name of humanity man should be proud, haughty or arrogant. The Qur'ân says:

(1) **“and walk not in earth exalted. Lo! You can neither rend the arth nor can you stretch to the height of the mountains.”**

(Al-Isrâ' : 37)

١ - ﴿وَلَا تَمْشِ فِي الْأَرْضِ مَرَحًا إِنَّكَ لَن تَخْرِقَ الْأَرْضَ وَلَن تَبْلُغَ الْجِبَالَ طُولًا﴾

(الإسراء (٣٧)

(B) Islâm also lays great stress on justice. The Qur'ân says for example:

(1) **“... the antagonism of a community should not lead you to be unjust; be just for this is nearer to piety and fear Allâh; Verily, Allâh is Ever-Cognizant of what you do.”**

(Al - Mâ'idah : 8)

١ - ﴿وَلَا يَجْرِمَنَّكُمْ شَنَاٰنُ قَوْمٍ عَلَىٰ أَلَّا تَعْدِلُوا اعْدِلُوا هُوَ أَقْرَبُ لِلتَّقْوَىٰ وَاتَّقُوا اللَّهَ إِنَّ اللَّهَ خَبِيرٌ بِمَا تَعْمَلُونَ﴾

(المائدة (٨)

(2) **“O you who believe! stand out firmly for justice as witnesses to Allâh, even as against yourselves, or your parents, or your kin, and whether it be (against) rich or poor, for Allâh can best protect both, thus follow not the lusts (of yourselves) lest you swerve and if you distort justice or decline to do justice Verily, Allâh is Ever-Cognizant of what you do.”**

(An-Nisâ' :135)

٢- ﴿يَا أَيُّهَا الَّذِينَ آمَنُوا كُونُوا قَوَّامِينَ بِالْقِسْطِ شُهَدَاءَ لِلَّهِ وَلَوْ عَلَىٰ أَنفُسِكُمْ أَوِ
الْوَالِدَيْنِ وَالْأَقْرَبِينَ إِن يَكُنْ غَنِيًّا أَوْ فَقِيرًا فَاللَّهُ أَوْلَىٰ بِهِمَا فَلَا تَتَّبِعُوا الْهَوَىٰ أَن تَعْدِلُوا
وَإِن تَلَوْا أَوْ تَعْرَضُوا فَإِنَّ اللَّهَ كَانَ بِمَا تَعْمَلُونَ خَبِيرًا﴾ (١٣٥)

النساء (١٣٥)

INTERPRETATION OF THE QUR'ÂN IN THE LIGHT OF ACCURATE SCIENTIFIC CONCLUSIONS

I. Foreword

(Scientific miracle) is an expression which has been recently introduced in interpreting a great number of verses in the Qur'ân. The author of the present series of books introduced this expression about forty years ago when he first wrote about (Cosmic Verses in The Qur'ân) and the reconciliation between the meaning of a great number of the Qur'ânic verses and the astronomical and physical issues in the Era of Science.

However, at present the number of contemporary authors who have sought for the reconciliation of the meaning of a great number of the Qur'ânic verses in the light of the scientific issues in the various branches of science is rapidly increasing.

One should expect that, The Qur'ân, being an eternal miracle, its various issues should not be limited to a particular era or by a specific culture or knowledge. There is no doubt, therefore, that the scientific interpretation of selected verses in the Qur'ân should be achieved and approved in the Era of Science, but has to be accomplished almost by scientists.

Most of the acceptable scientific interpretations of the Qur'ân appeared almost within the last fifty years.

Nevertheless, the scientific progress of Muslims during the Middle Ages no doubt was enhanced by the revelation of The Qur'ân. This progress was unfortunately hindered under the influence of various internal and external factors. Allâh says :

“But it is clear signs in the hearts of those who are granted knowledge.”

(Al-‘Ankabût: 49)

٢- ﴿بَلْ هُوَ آيَاتٍ بَيِّنَاتٍ فِيْ صُدُوْرِ الَّذِيْنَ أُوتُوْا الْعِلْمَ﴾

العنكبوت (٤٩)

II. The Qur'ân Invites Man To Preceive And Reason

(a) The Qur'ân refuses any wrong ideas or non- convincing argumentation. For example it says:

(1) “.... say bring forth your proof provided you are right.”

(Al - Baqarah : 111)

١ - ﴿قُلْ هَاتُوا بُرْهَانَكُمْ إِن كُنتُمْ صَادِقِينَ﴾

البقرة (١١١)

(2)" Verily, in the creation of the heavens and of the earth and in the variation of night and day are signs for those of understanding."

(Al - 'Imrân : 190)

١ - ﴿إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِأُولِي الْأَبْصَارِ﴾ (١٩٠)

آل عمران (١٩٠)

(B) The Qur'ân refers to the supremacy of the Qur'ânic teachings by resembling them to light by saying for example:

(3) “..... He (Allâh) will lead them (the disbelievers) forth from the depths of darkness into light...”

(Al-Baqarah : 257)

٣ - ﴿يُخْرِجُهُم مِّنَ الظُّلُمَاتِ إِلَى النُّورِ﴾

البقرة (٢٥٧)

(4) “And such are the parables We set for mankind but those who understand them are only those who are granted knowledge.”

(Al-‘Ankabût : 43)

٤ - ﴿وَتِلْكَ الْأَمْثَالُ نَضْرِبُهَا لِلنَّاسِ وَمَا يَعْقِلُهَا إِلَّا الْعَالَمُونَ (٤٣)﴾

العنكبوت (٤٣)

(5)".... say are those equal, those equal, those who know and those who do not know....?"

(Az - Zumar :9)

٢ - ﴿قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ﴾

الزمر (٩)

III. Why Have The Commentaries Differed?

Within certain limits, most of the different commentaries may be right. The Qur'ân leaves out the particular for the sake of generalization, so that every one can have his share according to his capability whatever the age on earth. This is evident because:

(a) The Qur'ân provides for all the classes of mankind until the last Day :

“And We have not sent you but for the entire mankind as bearer of good news and as warner...”

(Saba' : 28)

﴿ وَمَا أَرْسَلْنَاكَ إِلَّا كَافَّةً لِّلنَّاسِ بَشِيرًا وَنَذِيرًا ﴾ - ١

سبأ (٢٨)

(B) Every one can have his own share and lead the righteous way according to his faith, environment, era and capability :

“Allâh does not impose upon man more than his capability....”

(Al - Baqarah : 286)

﴿ لَا يُكَلِّفُ اللَّهُ نَفْسًا إِلَّا وُسْعَهَا ﴾ - ٢

البقرة (٢٨٦)

(c) The following are some verses selected to illustrate the fact that The Qur'ân leaves out the particular for the sake of generalization:

**1 - “With power and skill did We construct the heavens
and indeed We are expanding them.”**

(Adh - Dhâriyât : 47)

الذاريات (٤٧) ﴿٣﴾ وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ ﴿٤٧﴾

Refer to book 1, p 19.

The Arabic version of this verse can be interpreted in two various ways as follows:

“With power and skill did We construct the heavens and indeed, We possess more and more.”

“... and indeed, We are arugmenting your range of observation.”

This arugmentation acutally took place from 5 light hours (diameter of the Solar System), to 1000,000 light years (the diameter of our galaxy) to millions of light years (other galaxies, and finally to billions of light years (the quasi-stars).

“... and indeed, We are expanding it.”

The expansion of the universe has been proved by The Theory of Relativity and galaxies have been observed receding!

2- “And We send the winds impregnating (the nimbus-clouds) thus cause water to descend from the sky therewith providing you with water to drink and you are not the owner of its stores.”

(Al - Hijr: 22)

﴿٣﴾ وَأَرْسَلْنَا الرِّيَّاحَ لَوَاقِحَ فَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَسْقَيْنَاكُمُوهُ وَمَا أَنْتُمْ لَهُ بِخَازِنِينَ ﴿٢٢﴾ الحجر (٢٢)

This particular interpretation has been recently introduced by the present author - see book 1, p 27 - It is worth mentioning. however, the old common interpretation used the expression fertilizing (the plants) instead of seeding (the nimbus-clouds). This is because meterology is a new branch of science. In the past, people were not aware of the fact that winds do impregnate nimbusclouds to give rain. Impregnating here means supplying the clouds with the so-called nuclei of condensation and water - vapour by carrying them upward from the earth's surface into the clouds. The nuclei of condensation are small particles that of salt or of acids having affinity to water.

IV. The Need For Proper Scientific Interpretation

(1) In the Qur'ân, one word may have more than one meaning, as in the case of the word (expand) in the verse which means:

“With power and skill did We construct the heavens and indeed We are expanding them.”

(Adh-Dhâriyât : 47)

﴿وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ﴾ (٤٧)

الذاريات (٤٧)

The meaning of such non-obvious words could be reached mainly through deep thinking and scientific consideration.

(2) However, the Qur'ân was revealed in the language of the Arabs.

As regards interpretation, Allâh may reveal the meaning of The Qur'ân to those who are giving knowledge and that is why He praises the faithful by saying:

“.... and those who are firmly grounded in knowledge say: We have believed in The Book, the whole of it is from our Lord....”

(Âl-‘Imrân : 7)

﴿وَالرَّاسِخُونَ فِي الْعِلْمِ يَقُولُونَ آمَنَّا بِهِ كُلٌّ مِّنْ عِندِ رَبِّنَا﴾

آل عمران (٧)

(3) The Qur'ân sometimes ignores the conclusions of particular issues for one reason or another. In such cases, the interpreter has to consider factors such as: (a) the conditions and reasons of the revelation of the verses to be interpreted. (b) The overall meaning of the verse should not be changed in a manner that is different from that intended by it. (c) The same principles should be applied to the manner for which the verse was quoted. (d) the interpretation should be limited to what is being interpreted and must conform to what has been accepted in the Arabic language, science, history and guidance of The Prophet, prayers and peace be upon him.

In fact, we lack a good deal of wisdom which is absecure to us and which is known to Allâh Who says:

“He is Who has sent down to you The Book, some (verses) of it are verses fundamental (of well - established meaning); they are the foundation of The Book. Others are allegorical. But as regards those whose hearts are preserved, they follow the part thereof that is allegorical, seeking discord and searching for some hidden meaning. Yet, no one knows its hidden meaning except Allâh and those who are granted firm knowledge. They say: We believe in The Book, the whole of it is from our Lord and none will grasp the message except those (men) of understanding.”

(Âl-‘Imrân: 7)

﴿هُوَ الَّذِي أَنْزَلَ عَلَيْكَ الْكِتَابَ مِنْهُ آيَاتٌ مُحْكَمَاتٌ هُنَّ أُمُّ الْكِتَابِ وَأُخَرُ
مُتَشَابِهَاتٌ فَأَمَّا الَّذِينَ فِي قُلُوبِهِمْ زَيْغٌ فَيَتَّبِعُونَ مَا تَشَابَهَ مِنْهُ ابْتِغَاءَ الْفِتْنَةِ وَابْتِغَاءَ
تَأْوِيلِهِ وَمَا يَعْلَمُ تَأْوِيلَهُ إِلَّا اللَّهُ وَالرَّاسِخُونَ فِي الْعِلْمِ يَقُولُونَ آمَنَّا بِهِ كُلٌّ مِنْ عِنْدِ رَبِّنَا
وَمَا يَذْكُرُ إِلَّا أُولَ الْأَلْبَابِ ﴾ (٧)

آل عمران (٧)

V. More Scientific Knowledge is Muslim's Principal Requisite

1. The Qur'ân sets before science the clues and favours attaining wider and wider scopes. Allâh says:

“And say: O my Lord grant me more knowledge.”

(Tâhâ: 114)

﴿وَقُلْ رَبِّ زِدْنِي عِلْمًا (١١٤)﴾

طه (١١٤)

Science should concentrate only on the study of nature and utilisation of inherent energy and potentialities of matter in the universe, in order to uncover Allâh's signs and for the sake of benefitting man. See book 2, pp 67-68.

2. Mental reasoning of the Qur'ânic verses when read or heard, is the Muslim's primary requisite. For example, Allâh says:

(a) “And those who, they are reminded of the verses (signs) of their Lord, drop not at them, as if they were deaf and blind”.

(Al-Furqân: 73)

﴿وَالَّذِينَ إِذَا ذُكِّرُوا بِآيَاتِ رَبِّهِمْ لَمْ يَخْرُوا عَلَيْهَا صُمًّا وَعُمْيَانًا (٧٣)﴾

الفرقان (٧٣)

(b) “....(those) who believe not there is a deafness in their ears and blindness in their (eyes)....”

(Fussilat: 44)

﴿وَالَّذِينَ لَا يُؤْمِنُونَ فِي آذَانِهِمْ وَقُرْهُو عَلَيْهِمْ عَمًى﴾

فصلت (٤٤)

As we know, children are born deaf and blind. With the passage of time, the senses of the child begin to develop, but the sense of hearing precedes that of vision, which in turn is followed by the development of the heart senses.

The reason of this regular order of the development of senses is rather difficult to explain, and it is really amazing that The Qur'ân follows the same sequence is almost all the verses. For example, one reads:

(1) “.... assuredly, the hearing, the sight and the intellect, for all these man is set up responsible.”

(Al-Isrâ': 36)

﴿إِنَّ السَّمْعَ وَالْبَصَرَ وَالْفُؤَادَ كُلُّ أُولَٰئِكَ كَانَ عَنْهُ مَسْئُولًا﴾ (٣٦)

الإسراء (٣٦)

(2) “.... and We have endowed them with hearing, beholdings and intellect yet of no profit at all unto them were these hearing, seeing and intellect....”

(Al-Ahqâf: 26)

﴿وَجَعَلْنَا لَهُمْ سَمْعًا وَأَبْصَارًا وَأَفْئِدَةً فَمَا أَغْنَىٰ عَنْهُمْ سَمْعُهُمْ وَلَا أَبْصَارُهُمْ وَلَا أَفْئِدَتُهُمْ مِنْ شَيْءٍ﴾

الأحقاف (٢٦)

- (3) “Say it He Who has brought you into being and made for you the faculty of hearing, beholdings and intellects. Little thanks you give”

(Al-Mulk: 23)

﴿قُلْ هُوَ الَّذِي أَنْشَأَكُمْ وَجَعَلَ لَكُمُ السَّمْعَ وَالْأَبْصَارَ وَالْأَفْئِدَةَ قَلِيلًا مَّا تَشْكُرُونَ (٢٣)﴾

الملك (٢٣)

WITH THE QUR'ÂN IN THE UNIVERSE

I. Woman's Pregnancy Stages

A long time ago use to believe that fully careated human being had to be present right from the beginning of conception.

More than 1400 years ago, however, The Qur'ân miraculously declared that prenatal human development takes place through various stages.

Those stages were discovered mainly during the middle of nineteenth century, and after the discovery of the ovum. Before that time, scientists used to ignore completely the contribution of the woman in the creation of the embryo.

After thorough study, scientists finally became aware of the fact that embroyonic development accured in stages which required accurate descriptions.

Miraculously enough, the terms which describe clearly the internal and the external characteristics of the embryonic development are those used by a Qur'ânic testaments. One can say that the Qur'ân, in describing the stages of the embryonic development, is the most suitable referance!

The Qur'ân says:

“And We did create man from an evolutionary quintessence of clay. We then made him fertilized drop attached firmly to a place of settlement. Then We made of the fertilized drop leech-like structure , and then We made of the leech-like structure a chewed-like piece of flesh, then We turned the chewed-like flesh into bones (skeleton), then We clothed the bones with flesh (muscles), and then We caused him to develop and come into being (human)......”

(Al-Mu'minûn: 12 - 14)

﴿وَلَقَدْ خَلَقْنَا الْإِنْسَانَ مِنْ سُلَالَةٍ مِنْ طِينٍ (١٢) ثُمَّ جَعَلْنَاهُ نُطْفَةً فِي قَرَارٍ مَكِينٍ (١٣)
ثُمَّ خَلَقْنَا النُّطْفَةَ عَلَقَةً فَخَلَقْنَا الْعَلَقَةَ مُضْغَةً فَخَلَقْنَا الْمُضْغَةَ عِظَامًا فَكَسَوْنَا الْعِظَامَ لَحْمًا
ثُمَّ أَنْشَأْنَاهُ خَلْقًا آخَرَ﴾

المؤمنون (١٢ - ١٤)

The above verses include the Qur'ânic terms used in describing the various stages of the development of human beings. These terms are:

- (1) Evolutionary quintessence. سُلَالَةٌ
- (2) Fertilized drop. نُطْفَةٌ
- (3) Place of settlement. قَرَارٍ مَكِينٍ
- (4) Leech - like structure. عَلَقَةٌ
- (5) Chewed - like piece of flesh. مُضْغَةٌ

II. Is Our Universe Liable To Vanish?

Our universe is a universe of galaxies. Each galaxy is built up of matter and radiation. Matter, as a term used in physics, is simply any collection of atoms.

An atom consists of electrons and a nucleus. Nuclei consists of protons and neutrons. Obviously, therefore, the first step in dealing with matter is that of describing the electrons and the protons and their arrangement in the atom. Next to this step, come the growing of atoms into molecules of various forms of matter and the properties of bulk matter.

Electrons may be defined as material particles which are extremely small and light with negative electric charge. They revolve in orbits around their nuclei. Nuclei bear positive charges. Protons and neutrons are each 1850 as massive as electrons. The nucleus is therefore, much heavier than the electrons which may surround it. A proton has an electric charge of the same magnitude as that of the electron but is positive instead of negative.

It has been recently discovered, that the universe is built up of matter and the so-called anti-matter, which form galaxies well separated from each other. When matter and anti-matter are gathered together both of them vanish as matter, while amazing amounts of energy are liberated.

Anti-matter was first discovered in the cosmic rays coming from space. The abnormal amount of energy radiated by the so-called quasi-stars at remote distance in space is quite possibly the result of the meeting of matter with anti-matter galaxies over there in heavens!- Refers to book 4, p 200. However, The Qur'ân says in this respect:

“Surely, Allâh upholds the heavens and the earth lest they vanish, and if they vanish no one can uphold them after Him.”

(Fâtîr: 41)

﴿إِنَّ اللَّهَ يُمْسِكُ السَّمَاوَاتِ وَالْأَرْضَ أَنْ تَزُولَا وَلَئِنْ زَالَتَا إِنْ أَمْسَكَهُمَا مِنْ أَحَدٍ مِنْ
بَعْدِهِ﴾

فاطر (٤١)

III. Priroity Of Water

Water is a chemical compound composed of oxygen and hydrogen. It consists by volume of one part of oxygen to two parts of hydrogen. In small quantities, pure water is colourless and tasteless liquid. In large quantities, it has somewhat a bluish tinge.

Its boiling point is 100°C and it freezes into ice at 0°C . Generally, it attains its maximum density (1 gram per c.c.) at 4°C . This means that ice is lighter than water and floats partially over its surface. This unique property of ice and water differs entirely from the normal rule, namely that all material bodies attain their maximum densities (and thus are relatively heavier) when they are in their solid states.

In nature, for example, icebergs are masses of floating ice broken away from a glacier or ice - sheet. One-tenth of the iceberg is usually above the ocean - surface. Arctic bergs have been seen about 100 m. high, which means that about 1000 m. exists below the water surface.

Amazingly enough, although this abnormal behavior of ice in water has not yet been explicitly explained, yet this behavior plays the greatest role in favouring life of flourish on earth. This fact can be readily explained as follows:

As icebergs float over the surface of the ocean, they become directly exposed to sun-rays and thus gradually turn into liquid water. On the other hand, if icebergs sink to the bottom, they will remain there as ice and build up such that, sooner or later, ocean currents no longer exist. But ocean currents carry the greater part of the solar energy gained in the tropics and transfer it to the

middle latitudes and polar regions, and thus produce heat-balance in the earth's atmosphere. This heat balance stops the occurrence of fatal temperature maxima and minima on earth. However, as regards such beneficial unique property of ice in water, one should refer to a Qur'ân wisdom which says **“But His (Allah's) command when He decides something is to say concerning it: Be, and at once it exists.”**

(Yâsîn : 82)

٤- ﴿إِنَّمَا أَمْرُهُ إِذَا أَرَادَ شَيْئًا أَنْ يَقُولَ لَهُ كُنْ فَيَكُونُ﴾

يس (٨٢)

IV. Life

Life is the particular kind of activity which distinguishes man and living things like animals and plants ... from non-living things like machines, but in fact no rigorous definition can be given to life.

Allâh, The Creator , alone knows the difference between an alive man and his body a minute afterwards when death has been practically instantaneous! The Qur'ân says:

(1) **“And they ask you about the Spirit. Say: The Spirit is my Lord's concern, it is only a little that is communicated to you (O men).”**

(Al-Isrâ': 85)

﴿وَيَسْأَلُونَكَ عَنِ الرُّوحِ قُلِ الرُّوحُ مِنْ أَمْرِ رَبِّي وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلَّا قَلِيلًا﴾ (٨٥)

الإسراء (٨٥)

(2) **“It is Who (Allâh) created death and life in order to try you who of you have the best deeds...”**

(Al-Mulk: 2)

١ - ﴿الَّذِي خَلَقَ الْمَوْتَ وَالْحَيَاةَ لِيَبْلُوَكُمْ أَيُّكُمْ أَحْسَنُ عَمَلًا﴾

(٢) الملك

(3) **“....and you see the land torpid but when We descend water on it, it vibrates and flourishes....”**

(Al-Hajj: 5)

﴿وَتَرَى الْأَرْضَ هَامِدَةً فَإِذَا أَنْزَلْنَا عَلَيْهَا الْمَاءَ اهْتَزَّتْ وَرَبَتْ﴾

(٥) الحج

It is true that in organic chemistry, the carbon atom is regarded to be the principal atom, but water is essential for life. In the Solar System our earth is practically the only planet on which sufficient water exists in its three states: the vapour, the liquid and the solid.

Living is not merely a kind of activity consisting of action and reaction between the organism and its environment and directed towards securing either self-maintenance or the continuance of race. At least as regards man, living is generally a type of life limited by death. According to Islâm, for example, during this life man is offered full freedom to do evil or otherwise to follow Allâh's righteous way.

The tissues of the bodies of living beings (either animals or plants) are made up to a number of very small units called cells. These are the ultimate biological units of structure and functions. The detailed study of the various processes taking place in body resolved itself into the study of the minute changes taking place in its cells. Water is found to be essential

for both animal life and plant life. 90 per cent of the plant cells in water and about seven upon eight of the animal cells is water. However, one reads in The Qur'ân a verse which says:

“Do not the disbelievers see that the heavens and that earth were (a mass) joined together as one unit before We split them apart and that We made of water every living thing....?!”

(Al-Anbiyâ' : 30)

﴿أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَاوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ﴾

الأنبياء (٣٠)

(see book 1, p. 29 and book 4, pp. 194-195)

About 75 per cent of the earth's surface is covered by water in order that life on earth can live and flourish. In this concern, The Qur'ân says:

“And We sent down water from heaven according to a precise measure and thereby caused the earth to hold it....”

(Al-Mu'minûn: 18)

﴿وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ﴾

المؤمنون (١٨)

- See book 1, p. 19 and 3, p. 114

V. The Qur'ân: The Book Of The Cosmos

When referring to the cosmos and creation for example, The Qur'ân selects words and expressions which in the era of science proved to uncover scientific details in an amazing manner:

(1) For example, referring to the creation of man in the earth, The Qur'ân says:

“.... Verily, (Allâh said to the angels) I intend to adopt succeeding beings (who worship Me) in the earth....”

(Al-Baqarah : 30)

﴿إِنِّي جَاعِلٌ فِي الْأَرْضِ خَلِيفَةً﴾

البقرة (٣٠)

The expression (in the earth) is actually a literal translation word by word and uncovers the fact that a part of the earth rises above our heads to about 1000 kilometers. This part is its atmosphere. Reference in this respect should also be made to book 3, PP. 87- 88 and book 4, P. 189. Any differences in interpreting the verse are due to differences in culture and specialization of the interpreters.

(2) Regarding the immensity of the earth's water, The Qur'ân says:

“And We (Allâh) sent down water from the heaven according to a precise measure thereby We caused it to dwell in earth.”

(Al-Mu'minûn: 18)

﴿وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَاهُ فِي الْأَرْضِ﴾

المؤمنون (١٨)

Refers also to book 2, pp 49 - 50 and book 3, p. 114.

Here, again, any differences in interpreting the verse are due to difference in culture and specialization of the various interpreters.

(3) A third example is readily provided by the verse which means:

“Have you not seen that Allâh drives along bits of cloud, then He joins them together then He makes them into cumulus....”

(An- Nûr: 43)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَزْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَّامًا﴾

النور (٤٣)

The stages of development of cumulus cloud have been photogrtaphed. The development begins by the appearance of bits of small clouds in the sky. Two or more of these small clouds then combine together to form the growing cumulus.

The Qur'ân is no doubt the first Book which gave this precise scientific description! The word (cumulus) indicates accumulation of cloud layers. The same meaning is given by the Qur'ânic word (rukâman)! Reference should also be made to: Book 1, pp. 24-25, book 2, pp. 73-75 and book 5, pp. 261-262.

(4) The reader can readily realize that The Qur'ân adopts

words and expressions which bear close relation to the nature or behaviour of things. In this respect, reference should be made for example to book 2, PP. 75-77. The verses in concern are Allâh's saying:

“Nay, indeed I could swear by (the heavenly bodies) which remain out of sight for long periods of time (al-khunnas) and reappear running sweeping (the sky) - Al - jawâri al - kunnas -.”

(At-Takwîr : 15 - 16)

﴿ فَلَا أُقْسِمُ بِالْخُنَّسِ (١٥) الْجَوَارِ الْكُنَّسِ (١٦) ﴾

التكوير (١٥ - ١٦)

Comets, as we know now, are members of the Solar System. They have very long orbits which carry them far from the sun for long periods during which they become invisible, as though they are hiding. The Qur'ân uses the word (khunnas) which means hiding!

Halley's comet for example, appeared in 1910 and in 1986 in the twentieth century. In this respect, reference should be made to book 2, pp. 75-77. On approaching the sun, comets usually acquire very long tail which appears as though they are sweeping the sky (Kunnas) while moving with high velocities (jâwari).

(5) Allâh says:

“It is He (Allâh) Who sends down water (rain) from the sky thereby We produce vegetation of all kinds (plants) from which We produce khadira (green material of the coves or chlorophyl) out of which We produce heaped grains....”

(Al-An'âm : 99)

﴿وَهُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا
نُخْرِجُ مِنْهُ حَبًّا مُتَرَاكِبًا﴾

الأنعام (٩٩)

Obviously, the word khadira refers to the green colouring matter in almost all plants - refer to book 3, pp. 117-118.

Scientifically, this green colouring matter is called chlorophyl. With the aid of sun - light chlorophyl reacts to produce grains, sugar, oil.... Clearly, therefore, the verse miraculously lays out the principal steps in botany.

VI. Are The Universe's Limits Beyond Human Reach?

As mentioned in book 3, PP. 129-134, the universe is, in fact, one of the two books of Allâh namely (1) the Book which we read and recite its verses (The Qur'ân) and (2) the Book in which we live and observe its wonders (the universe).

Science is actually the result of observation and exact measurement and description of the different phenomena and things in the universe. Due to the vast extension of the universe, it was natural that the question should arise: Is there real harmony in the structure of the universe, being originally created by one and same God?

In the respect, The Qur'ân says:

(1) “.... no want of proportion will there be in the creation of **Ar-Rahmân** (The-All Merciful).”

(Al-Mulk : 3)

١ - ﴿ مَا تَرَىٰ فِي خَلْقِ الرَّحْمَنِ مِن تَفَوتٍ ﴾

الملك (٣)

(2) “..... Seest thou any flaw?”

(Al-Mulk : 3)

٢ - ﴿ هَلْ تَرَىٰ مِن فُطُورٍ ﴾ (٣)

الملك (٣)

However, scientists nowadays agree that there is clear harmony in the physical and dynamical laws governing the universe. This is readily obvious from Allâh's saying.

(1) **“(Allâh) is He Who created seven successive heavens; no want of proportion would there be in the creation of Ar-Rahmân (the All-Merciful), so turn your vision (anywhere), do you observe any flaw?”**

(Al-Mulk: 3)

١ - ﴿الَّذِي خَلَقَ سَبْعَ سَمَاوَاتٍ طِبَاقًا مَا تَرَى فِي خَلْقِ الرَّحْمَنِ مِنْ تَفَافُوتٍ فَارْجِعِ
الْبَصَرَ هَلْ تَرَى مِنْ فُطُورٍ﴾ (٣)

الملك (٣)

VII. Two Bounds Limit Our Observations

Amazingly enough, The Qu'rân continues to say in verse
(4) Al-Mulk

“Then turn your vision twice : Your vision will come back to you dull and discomfited in a state worn- out.”

(Al-Mulk: 4)

﴿ثُمَّ ارْجِعِ الْبَصَرَ كَرَّتَيْنِ يَنْقَلِبْ إِلَيْكَ الْبَصَرُ خَاسِئًا وَهُوَ حَسِيرٌ﴾ (٤)

الملك (٤)

The interpretation of this verse again depends principally on how one understands it. The writer, however, refers the word twice to the upper and lower limits of the universe, so that the verse declares that by naked eyes man is neither able to observe the finest details of matter or the atoms (the lower limit), nor is able to see details of the remote outer galaxies (upper limit)

VIII. The Atom

The atom is the smallest particle of matter which can exist alone or enter into chemical reactions. Atoms are supposed to have diameters of about 10^{-8} cm. A small drop of liquid water may contain ten thousand billion billions of atoms, so that atoms are invisible by the naked eye.

Usually, two or more atoms form a molecule. The earliest idea that matter consists of the so-called atoms originated among the early Greek philosophers more than 3,000 years ago. It was only in the Era of Science that the known (facts) of chemistry could be explained regarding the atom to be the lower limit of matter. In the twentieth century, however, it became clear that: atoms consist of nuclei surrounded by electrons revolving round their nuclei, in a manner almost similar to the rotation of the planets round the sun in the Solar System.

The Qur'ân refers to such rotations by saying, for example:
“It is not permitted to the sun to overtake the moon, nor can the night outstrip the day and each swims along in an orbit.”

(Yâsîn: 40)

﴿لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ﴾

يس (٤٠)

Refer also to book 3, p. 123.

The aggregate of all the atoms created constitute the entire universe whose outer limits are beyond man's vision! It is generally accepted, however, that the same construction and physical laws apply everywhere in the universe as mentioned before.

Man began to consider the possibility of dividing the atom into smaller constituents only in the twentieth century. For thousands of years before that, it was believed that the atom could not be divided. The idea was originally postulated by the greek philosophers.

However, amazingly enough, The Qur'ân, in referring to the atom by the term (Dharrah), declared that the (Dharrah) is divisible! Scientifically speaking, the word (Dharrah) nowadays specifically means the atom in Arabic.

One reads in the Qur'ân:

(1) **“..... from Whom (Allâh) is not hidden the least weight of an atom neither in the heaven nor in the earth and neither is there anything less than that nor greater, but is in a Record Perspicuous.”**

(Saba': 3)

١ - ﴿لَا يَعْزُبُ عَنْهُ مِثْقَالُ ذَرَّةٍ فِي السَّمَاوَاتِ وَلَا فِي الْأَرْضِ وَلَا أَصْغَرُ مِنْ ذَلِكَ وَلَا أَكْبَرُ إِلَّا فِي كِتَابٍ مُبِينٍ﴾ (٣)

سبأ (٣)

(2) **“..... and not is hidden from your Lord so much as the weight of an atom neither in the earth nor in heaven and neither less than that nor greater but are recorded in a Record Perspicuous.”**

(Yûnus: 61)

٢ - ﴿وَمَا يَعْزُبُ عَنْ رَبِّكَ مِنْ مِثْقَالِ ذَرَّةٍ فِي الْأَرْضِ وَلَا فِي السَّمَاءِ وَلَا أَصْغَرُ مِنْ ذَلِكَ وَلَا أَكْبَرُ إِلَّا فِي كِتَابٍ مُبِينٍ﴾ (٦١)

يونس (٦١)

WE (ALLÂH) HAVE NOT MISSED OUT IN THE BOOK ANYTHING (OF VALUE)

(Al-AN'ÂM: 38)

﴿ مَا فَرَطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ ﴾

الأنعام (٣٨)

I. Foreword

It is generally known that in almost all religions, scientists faced great difficulties with the religious authorities of some creeds. Such difficulties rarely, or almost never, occurred in the Muslim world.

The famous trial of the famous astronomer Galileo (1615) is an outstanding example. He was accused as a result of accepting the scientific "facts" declared by Copernicus regarding the earth's rotation, which were regarded by the church as wrong and unacceptable interpretation of The Holy Script (The Bible)!

It was only natural that in the long run, this attitude urged scientists in Europe to keep away from referring to any religion, and nowadays young scientists, who happen to mention God (Allâh) in their work, have to desist at once!!

Nothing of the above mentioned sort of accusation occurred in the Muslim countries. The Qur'ân invites people to acquire science and knowledge anywhere and thus to observe Allâh's signs in the universe.

Unfortunately, the present scientific stagnation in Muslim world is the result of degeneration of the Muslim civilization nowadays due to several external and internal factors including the non-scientific interpretations of most of the Qur'anic verses dealing with creation. These verses are about 900 in number.

In addition to the above mentioned verses, there are also other verses which could not be otherwise interpreted up till now. With the advance of science, such verses will, however, be more properly interpreted. Allâh says:

“We shall show them Our portents in the horizons and within themselves until it will be evident unto them that it (The Qur’ân) is the truth.”

(Fuṣṣilat: 53)

﴿سَنُرِيهِمْ آيَاتِنَا فِي الْآفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ﴾

فصلت (۵۳)

II. About The Services Which Mountains Render

The following serviced are among the several examples which The Qur'ân mentions in order that man may realise the scientific attitude of Islâm.

It is known in geology that the earth's crust is forever undergoing changes by factors such as: (a) slipping, (b) isostasy and (c) weathering. This complex of activities is slow in process but cumulative in effect. The factors (c) - weathering - is achieved by running water and by winds which act to transport masses of material of the mountians of downward into lower levels (valleys and oceans) and thus produce instability in the solid crust.

1- Mountains As Pegs

Allâh says:

“Have We not made the earth (like) a vast expanse. And the mountains as pegs.”

(An-Naba': 6 - 7)

﴿ أَلَمْ نَجْعَلِ الْأَرْضَ مِهَادًا (٦) وَالْجِبَالَ أَوْتَادًا (٧) ﴾

النَّبَأُ (٦ - ٧)

From the geological point of view, it has been concluded that the earth's crust has an average thickness of more than 60 kilometers. The actual thickness beneath high mountain bents is generally double its value benaeth the vast continental areas. This is because high mountains have its extending to about 60 - 70 kilometers below the earth's surface across the various layers of the solid crust. Oviously, therefore, these roots check the sppiling of the different layers forming the solid crust one over the other, thus acting like pegs!!

A peg is no more than a long piece of timber (or metal) driven into the ground in order to hold the ropes used for keeping a tent upright and stable against wrapping and spilling by wind and the like.

2- Isostasy

Allâh says:

1- **“And He (Allâh) has cast into the ground (high) mountains standing firm lest it (the earth's crust) should reel with you.....”**

(An-Nah1: 15)

١ - ﴿وَأَلْقَىٰ فِي الْأَرْضِ رَوَاسِيَ أَن تَمِيدَ بِكُمْ﴾

النحل (١٥)

(2) **“And We have set in the earth high mountains standing firm lest it should reel with them.....”**

(Al-Anbiyâ': 31)

٢ - ﴿وَجَعَلْنَا فِي الْأَرْضِ رَوَاسِيَ أَن تَمِيدَ بِهِمْ﴾

الأنبياء (٣١)

Isostasy is the concept that large lighter masses of the rocks of the crust float over denser material below, so that pressure could be evenly distributed. In this sense, Allâh also says:

(3) **“And the mountains, (Allâh) has fixed them firmly (‘arsâhâ) like anchored ships!!”**

(An-Nâzi‘ât: 32)

﴿ وَالْجِبَالِ أَرْسَاهَا ﴾ (٣٢) - ٣

النازعات (٣٢)

3- Mountains As Water Resources

Climatologically, mountains and table - lands are known to receive the greater part of precipitation on earth. Moreover , in winter, high mountain tops become covered with ice which melts in summer: for such reasons, mountains and table- lands form the main sources of the water supplied by the rivers and tributaries.

Allâh says:

“And He (Allâh) has cast into the ground high mountains standing firm lest it (the earth’s crust) should shake with you and rivers and ways that you may be guided.”

(An-Nahl: 15)

﴿ وَأَلْقَى فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ بِكُمْ وَأَنْهَارًا وَسُبُلًا لَعَلَّكُمْ تَهْتَدُونَ ﴾ (١٥)

النحل (١٥)

III. The Two Natural Types Of Clouds And Their Formation

In meteorology, clouds are divided into two principal types, namely stratus clouds and cumulus clouds.

According to cloud physics- or even by direct photography- it has been made clear that the mode of formation and development of one type differs from that of the other type. Thus, the first type- the stratus clouds- forms by a moist air current which ascends gradually into a single layer or stratum in the atmosphere to form a single sheet- or separate sheets- within the stratum and hence the name stratus clouds. Miraculously enough The Qur'ân says:

“Allâh is He Who sends forth the winds so they raise clouds then does He spread them in strata in the sky as He decides.”

(Ar-Rûm: 48)

١- ﴿اللَّهُ الَّذِي يُرْسِلُ الرِّيَّاحَ فَتَنِيثُ سَحَابًا فَيَبْسُطُهُ فِي السَّمَاءِ كَيْفَ يَشَاءُ﴾

الروم (٤٨)

See book 5, PP. 261-262.

The second type is called cumulus clouds. A cumulus cloud is formed by the appearance in the sky of several small cells off clouds. Sooner or later, every two or more cells combine together to form the growing cumulus, which develops and accumulates vertically to great heights (10 - 15) kilometers. hence the name cumulus clouds. Again, amazingly enough, The Qur'ân says regarding the formation of cumulus clouds:

“Have you not see that Allâh drives along bits of clouds then joins them together, then makes them into heaps of cumulus....”

(An-Nûr: 43)

٢- ﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَزْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا﴾

النور (٤٣)

See Book 5, p. 262.

The ultimate growth of a cloud yield the rainy clouds. Rainy clouds, in general, are called nimbus clouds. Thus, we have either nimbo-stratus (Ns) clouds, or cumulonimbus clouds (Cb). However, The Qur’ân says:

(3) “Have you seen the water which you drink? Have you made it fall from the nimbus clouds, or is it We Who send it down?”

(Al-Wâqi‘ah: 68 - 69)

٣- ﴿فَرَأَيْتُمُ الْمَاءَ الَّذِي تَشْرَبُونَ (٦٨) أَأَنْتُمْ أَنْزَلْتُمُوهُ مِنَ الْمُزْنِ أَمْ نَحْنُ الْمُنْزِلُونَ (٦٩)﴾

الواقعة (٦٨ - ٦٩)

It has been only lately established in meteorology that nimbus clouds are the results of the growth of clouds vertically upwards under favourable atmospheric conditions. Nevertheless, long before the development of meteorology as science during the last century or so, The Qur’ân says:

(1) "Allâh is He Who sends forth the winds so they raise clouds, then does He spread them in strata in the sky as He decides and He makes them partially thick so that you see the rain coming from inside them....."

(Ar-Rûm: 48)

٣- ﴿اللَّهُ الَّذِي يَرْسِلُ الرِّيَّاحَ فَتُثِيرُ سَحَابًا فَيَبْسُطُهُ فِي السَّمَاءِ كَيْفَ يَشَاءُ وَيَجْعَلُهُ كَسَفًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خَلَالِهِ﴾

الروم (٤٨)

(2) "Have you not seen that Allâh drives along bits of clouds, then joins them together, then makes them into heaps of cumulus, then you will see rain issuing from their inside....."

(An-Nûr: 43)

٤- ﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَزْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خَلَالِهِ﴾

النور (٤٣)

IV. The Honey Bee And Its Activity

Honey bees form colonies in which highly developed organizations exist for the purpose of building the home, collecting and storing food and rearing the next generation. The hive bees are a good example. The innate of the hive consists of three classes:

- (a) The queen bee. This is the only fertile female and is responsible for the continued existence of the community. It can be distinguished by its greater size short wings and the absence of the wax pockets and pollen baskets of the workers.
- (b) The males. These are the drones. Their function is only to fertilize the queen. They live upon the honey provided by the workers.
- (c) The workers. These constitute the bulk of the community. Upon them devolve all the work in the hive.

Generally, while the queen survive for three seasons, the workers have an average age of six weeks only.

The nectar from the flowers is collected by means of tube - like prolongation of the lower lip and is passed into the honey bag, where it undergoes a process of partial digestion and is thus converted into honey, ready to be thrown up and stored in the cells of the honey comb.

When a colony of bees placed in a new hive wax is secreted in little white discs in the wax pockets and is then spread in a layer on the roof to form the foundation of the comb which is built downwards.

Bees play an important role in the fertilization of flowers and are thus of value to farmers and gardeners.

In the past, bees used to dwell in colonies in mountain caves, on trees and in people's habitations. Man, however, then kept them in dome - shaped straw. Nowadays, standard wooden hives are made. These hives are covered with perforated pieces of zinc in which are placed square sections to contain combs that serve for storage of honey only.

Briefly, honey is semi-fluid substance produced by the honey bee which obtains as raw material the nectar of flowers, carrying it in the honey crops, where it is acted upon by a ferment which modifies its character. When the crop is full, the bee returns back to its hive and regurgitates the contents. The honey is stored in the waxen cells of the comb prepared for this purpose.

Honey consists chiefly of levulose and dextrose, the former being the fluid portion. Its flavour and colour depend greatly upon the flowers that we have been visited.

Honey is highly nutritive food. Four-fifths of its content are carbohydrates; the rest includes protein - valuable antiseptic and mineral salt. It is the only form of sugar that does not have to be refined. Amazingly enough, The Qur'ân says about honey bees and honey:

1- "And your Lord revealed to the bees to acquire dwellings in the mountains and in the trees and in people's habitations; then to eat of all the produce (to plants), then follow the paths of their Lord as rendered ready for them. There issues from within their bellies (of the honey bags) syrup of varying colours wherein is healing for people: Verily, in this is a sign for men who give thought."

(An-Naẖl: 68 - 69)

١ - ﴿ وَأَوْحَىٰ رَبُّكَ إِلَى النَّحْلِ أَنِ اتَّخِذِي مِنَ الْجِبَالِ بُيُوتًا وَمِنَ الشَّجَرِ وَمِمَّا
يَعْرِشُونَ (٦٨) ثُمَّ كُلِي مِنْ كُلِّ الثَّمَرَاتِ فَاسْلُكِي سَبِيلَ رَبِّكَ ذَلَّا يَخْرُجُ مِنْ بُطُونِهَا
شَرَابٌ مُخْتَلَفٌ أَلْوَانُهُ فِيهِ شِفَاءٌ لِلنَّاسِ إِنَّ فِي ذَلِكَ لَآيَةً لِّقَوْمٍ يَتَفَكَّرُونَ ﴾

النحل (٦٨ - ٦٩)

PEOPLE OF THE BOOK

1- Like the Muslims, the Jewish and the Christian people had their own Holy Scripts, The revelation of the Qur'ân in the seventh century of the Christian era was readily acceptable to followers of the original Books and they became absorbed by Islâm. Here, The Qur'ân says:

(1) **“And likewise We have sent down to you the Book (The Qur'ân); so the people to whom We offered the Book (the Jews and Christians) believe therein and of these (The Arabs) some believe therein; and none but the disbelievers repudiate Our signs.”**

(Al-'Ankabût: 47)

١- ﴿وَكَذَلِكَ أَنزَلْنَا إِلَيْكَ الْكِتَابَ فَالَّذِينَ آتَيْنَاهُمُ الْكِتَابَ يُؤْمِنُونَ بِهِ وَمِنْ هَؤُلَاءِ مَنْ يُؤْمِنُ بِهِ وَمَا يَجْحَدُ بِآيَاتِنَا إِلَّا الْكَافِرُونَ﴾ (٤٧)

العنكبوت (٤٧)

In fact, Islâm is the Truth that all the original inspired Books teach. It meets with humanity demands, scientific conclusions and faithful happiness, away from tales, fairy-tales and fallacies. As quoted in book 4, pp 139-140, The Qur'ân has no doubt retained its purity without the least change up to now. However, Allâh says:

“Say we believe in Allâh and in what has been revealed to us and what was revealed to Abraham, Ishmael, Isaac, Jacob and the Tribes and in what was given to Moses, Jesus and the Prophets (the Books) from their Lord. We make no distinction between one another amongst them and to Him (Allâh) we bow our will in Islâm. If any one follows a religion other than Islâm (submission to Allâh) never will it be accpeted of him and in the Hereafter he will be in the ranks of the losers.”

(Âl-‘Imrân: 84 - 85)

٢- ﴿قُلْ آمَنَّا بِاللَّهِ وَمَا أُنْزِلَ عَلَيْنَا وَمَا أُنْزِلَ عَلَىٰ إِبْرَاهِيمَ وَإِسْمَاعِيلَ وَإِسْحَاقَ وَيَعْقُوبَ وَالْأَسْبَاطِ وَمَا أُوتِيَ مُوسَىٰ وَعِيسَىٰ وَالنَّبِيُّونَ مِنْ رَبِّهِمْ لَا نُفَرِّقُ بَيْنَ أَحَدٍ مِنْهُمْ وَنَحْنُ لَهُ مُسْلِمُونَ (٨٤) وَمَنْ يَتَّبِعْ غَيْرَ الْإِسْلَامِ دِينًا فَلَنْ يُقْبَلَ مِنْهُ وَهُوَ فِي الْآخِرَةِ مِنَ الْخَاسِرِينَ (٨٥)﴾

آل عمران (٨٤ - ٨٥)

(2) Concerning the deviations introduced, for one reason or another, into the original (true) revelations, The Qur’ân says:

(1) **“Verily, this Qur’ân narrates to the Children of Israel most of the matters in which they differ.”**

(An-Naml: 76)

﴿إِنَّ هَذَا الْقُرْآنَ يَقُصُّ عَلَى بَنِي إِسْرَآئِيلَ أَكْثَرَ الَّذِي هُمْ فِيهِ يَخْتَلِفُونَ﴾ (٧٦)

النمل (٧٦)

(2) “And to you We have sent down the Book (the Qur’ân) in truth confirming the Scriptures already between your hands and Supremely Hegemonic over it, so judge amongst them by what Allâh has revealed and follow not their vain desires diverging from the Truth that has come to you.”

(Al-Mâ'idah: 48)

﴿وَأَنْزَلْنَا إِلَيْكَ الْكِتَابَ بِالْحَقِّ مُصَدِّقًا لِمَا بَيْنَ يَدَيْهِ مِنَ الْكِتَابِ وَمُهَيْمِنًا عَلَيْهِ فَاحْكُم بَيْنَهُم بِمَا أَنْزَلَ اللَّهُ وَلَا تَتَّبِعْ أَهْوَاءَهُمْ عَمَّا جَاءَكَ مِنَ الْحَقِّ لِكُلِّ جَعَلْنَا مِنْكُمْ شِرْعَةً وَمِنْهَاجًا وَلَوْ شَاءَ اللَّهُ لَجَعَلَكُمْ أُمَّةً وَاحِدَةً وَلَكِنْ لِيَبْلُوَكُمْ فِي مَا آتَاكُمْ فَاسْتَبِقُوا الْخَيْرَاتِ إِلَى اللَّهِ مَرْجِعُكُمْ جَمِيعًا فَيُنَبِّئُكُمْ بِمَا كُنْتُمْ فِيهِ تَخْتَلِفُونَ﴾ (٤٨)

المائدة (٤٨)

(3) “And assuredly, there is amongst them (the people of the Book) a group who distort the Book with their tongues that you would think it is a part of the Book, but it is not a part of the Book, and they say:”That is from Allâh” but it is not from Allâh; they tell lies against Allâh, and they well know it.”

(Âl-‘Imrân: 78)

﴿وَإِنَّ مِنْهُمْ لَفَرِيقًا يَلْوُونَ أَلْسِنَتَهُم بِالْكِتَابِ لِتَحْسَبُوهُ مِنَ الْكِتَابِ وَمَا هُوَ مِنَ الْكِتَابِ وَيَقُولُونَ هُوَ مِنْ عِنْدِ اللَّهِ وَمَا هُوَ مِنْ عِنْدِ اللَّهِ وَيَقُولُونَ عَلَى اللَّهِ الْكَذِبَ وَهُمْ يَعْلَمُونَ ﴿٧٨﴾﴾

آل عمران (٧٨)

However, contrary to the majority of Muslims who follow and respect the teachings of The Qur'ân, the majority of Christians in the West regarded many accounts of the Bible, which may be very elementary, not agreeable with their advanced knowledge.

Dr. Maurice Bucaille wrote:

In the Old Testament and in the Gospels, there are many contradictions, improbabilities and incompatibilities!!

One can readily see, in the present series of Books, the amazing agreement between The Qur'ân and Science. Those who see Muhammad (prayers and peace be upon him) as mere author of The Qur'ân are quite in error.

3- From the first moment, anyone who embraces Islâm (the noble message of universeal fraternization), the concepts of races, colours and nationality sink into insignificance before the vast conception of humanity and equality for which Islâm opens his mind. Thus, one reads in The Qur'ân what means:

a) **“O mankind: We created you from a single (pair) of male and female and made you into nations and tribes that you may know each other, indeed the most honored of you in the sight of Allâh are the most righteous; for sure, Allâh is Ever-Knowing Ever-Reckoning.”**

(Al-Hujurât: 13)

﴿يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَتْقَاكُمْ إِنَّ اللَّهَ عَلِيمٌ خَبِيرٌ﴾ (١٣)

الحجرات (١٣)

Refer to book 4, p. 143.

As mentioned in Book 4, PP 147-148, contrary to what appears to be thought by some fanatics in their effort to advocate Islâm, Muslims advocates used to act in complete compliance with Allâh's words:

b- "Summon you to the way of your Lord with wisdom and with proper advice and argue them in the kindest manner; indeed your Lord best knows those who err from His way and He best knows those who have yielded to His guidance."

(An-Nah1: 125)

﴿ادْعُ إِلَى سَبِيلِ رَبِّكَ بِالْحُكْمَةِ وَالْمَوْعِظَةِ الْحَسَنَةِ وَجَادِلْهُمْ بِالَّتِي هِيَ أَحْسَنُ إِنَّ رَبَّكَ هُوَ أَعْلَمُ بِمَنْ ضَلَّ عَنْ سَبِيلِهِ وَهُوَ أَعْلَمُ بِالْمُهْتَدِينَ﴾ (١٢٥)

النحل (١٢٥)

Islâm, as a religion, is distinguished from other religions by an outstanding characteristic quality established by The Qur'ânic verse which says:

(c) **"Verily, the worst of beast in Allâh's sight are the he deaf, the dumb who have no sense."**

(Al-Anfâl: 22)

﴿إِنَّ شَرَّ الدَّوَابِّ عِنْدَ اللَّهِ الصُّمُّ الْبُكْمُ الَّذِينَ لَا يَعْقِلُونَ (٢٢)﴾

(الأنفال (٢٢)

4- In conclusion, Islâm is a logical and natural development of all Allâh's revelations given in earlier ages. There existed amongst the Arabs, as histroy tells us, Christians and even Jews who, not only did welcome Islâm, but also they did become devout Muslims:

Allâh says:

"Verily, among men you find that those of utmost enmity to the believers are the Jews and the pagans; and verily, you find the most friendly to the believers are those who say: "We are Christians." This is because among them there are men devoted to learning (by the Monastic Order) and men who have renounced the world and they are not arrogant. And when they listen to (The Qur'ân) that has been sent down to the Messenger, you see their eyes overflowing with tears as they recognize the truth; they say: "Our Lord, we have believed, so write us down among the witnesses (Muslims). What reason we have not to believe in Allâh and the Truth which has come to us (The Qur'ân) seeing that we long for our Lord to admit us to the company of the righteous."

(Al-Mâ'idah: 82 - 84)

﴿لَتَجِدَنَّ أَشَدَّ النَّاسِ عَدَاوَةً لِّلَّذِينَ آمَنُوا الْيَهُودَ وَالَّذِينَ أَشْرَكُوا

وَلَتَجِدَنَّ أَقْرَبَهُمْ مَوَدَّةً لِلَّذِينَ آمَنُوا الَّذِينَ قَالُوا إِنَّا نَصَارَىٰ ذَٰلِكَ بِأَنَّ مِنْهُمْ قِسِيَسِينَ
 وَرَهَبَانًا وَأَنَّهُمْ لَا يَسْتَكْبِرُونَ (٨٢) وَإِذَا سَمِعُوا مَا أُنْزِلَ إِلَى الرَّسُولِ تَرَىٰ أَعْيُنُهُمْ
 تَفِضُ مِنَ الدَّمْعِ مِمَّا عَرَفُوا مِنَ الْحَقِّ يَقُولُونَ رَبَّنَا آمَنَّا فَاكْتَبْنَا مَعَ الشَّاهِدِينَ (٨٣) وَمَا
 لَنَا لَا نُؤْمِنُ بِاللَّهِ وَمَا جَاءَنَا مِنَ الْحَقِّ وَنَطْمَعُ أَنْ يُدْخِلَنَا رَبَّنَا مَعَ الْقَوْمِ الصَّالِحِينَ (٨٤) ﴿

المائدة (٨٢ - ٨٤)

5- As mentioed in book 4, PP. 139-140, the oringinal text of The Qur'ân is still preserved entirely in every respect of its original language word by word. Records and order of the revelation of The Qur'ân were so faithfully made that as time marches on, one can say and report with precision the actual place and time of revelation of each verse. For such reasons, it is known everywhere that the Qur'ân has retained its purity without the least change up till now.

The language of the Book is the living Arabic. This is generally not the case with regard to old and extinct languages. Further more, there is no fear of mixing The Qur'ân (Allâh's words) with any human interpretation, or even the Prophet's own words (Traditions).

In this sense, Allâh says:

“Lo! We, even We, sent down Adh-Dhikr (The Qur'ân) and verily, We are Gaurdians of it.”

(Al-Hijr: 9)

﴿ إِنَّا نَحْنُ نَزَّلْنَا الذِّكْرَ وَإِنَّا لَهُ حَافِظُونَ ﴾ (٩)

الحجر (٩)

No translation, however, into English or any other language, can do justice to the magnificent Arabic style of The Qur'ân, and Allâh says:

“And so, We have revealed to you an Arabic Qur'ân.....”

(Ash-Shûrâ: 7)

﴿ وَكَذَلِكَ أَوْحَيْنَا إِلَيْكَ قُرْآنًا عَرَبِيًّا ﴾ (٧)

الشورى (٧)

Transcription of Arabic Sounds

The transcription symbols used in this study follow the IPA conventions. Following is a list of these symbols.

Symbol	Description	
[ʔ]	Voiceless glottal stop	ء
[b]	Voiced bilabial stop	ب
[t]	Voiceless alveolar stop	ت
[θ] = th	Voiceless interdental fricative	ث
[dz] = j	Voiced palatal affricate	ج
[ħ] = ḥ	Voiceless pharyngeal fricative	ح
[x] = kh	Voiceless velar fricative	خ
[d]	Voiced alveolar stop	د
[ð] = dh	Voiced interdental fricative	ذ
[r]	Voiced alveolar trill	ر
[z]	Voiced alveolar fricative	ز
[s]	Voiceless alveolar fricative	س
[ʃ] = sh	Voiceless palato-alveolar fricative	ش
[ʂ] = ṣ	Voiceless alveolar emphatic fricative	ص
[ɖ] = ḍ	Voiced alveolar emphatic stop	ض
[ɗ] = ṭ	Voiced alveolar emphatic stop	ط
[ð̤] = ṭ ḥ	Voiced interdental emphatic fricative	ظ
[ʕ]	Voiced pharyngeal fricative	ع
[ʁ] gh	Voiced uvular fricative	غ
[f]	Voiceless labiodental fricative	ف
[q]	Voiceless uvular stop	ق
[k]	Voiceless velar stop	ك
[l]	Voiced lateral fricative	ل
[m]	Voiced bilabial masal	م
[n]	Voiced alveolar masal	ن
[h]	Voiceless glottal fricative	ه
[w]	Voiced bilabial semi-vowel	و
[y]	Voiced palatal semi-vowel	ي
[i]	Short high front unrounded vowel	ي
[i] :	Long high front unrounded vowel	ي
[a]	Short low central unrounded vowel	ا
[a] :	Long low central unrounded vowel	
[u]	Short high back rounded vowel	و
[u] :	Long high back rounded vowel	و

الإسلام والعلم

باللغة الإنجليزية