

Part 3: Philosophy of Science, a Qur'anic Approach

In the Name of God, the Merciful, the Beneficent

The Aim of Understanding Nature

Nature means the physical world, which is, the world with which we come into contact through our senses. In the Holy Qur'an, there are more than 750 verses in reference to the natural phenomena. In most of these verses, the study of the book of creation and the meditation upon its contents has been recommended.

As confirmed by many outstanding Islamic scholars, the Qur'an is not a book of natural science, but rather, one of guidance and enlightenment.

The Qur'anic reference to the natural phenomena is meant to call man's attention to the mighty and glory of the Wise Creator of the universe through quest and meditation upon the natural beings and to encourage him to strive to be in close proximity to Him.

From the viewpoint of the Qur'an, natural phenomena are signs of the Almighty, and any understanding of nature is analogous with understanding the signs through which we attain cognition of the Lord of signs:

وَمِنْ آيَاتِهِ أَنْ خَلَقَ لَكُمْ مِنْ أَنْفُسِكُمْ أَزْوَاجًا لِتَسْكُنُوا إِلَيْهَا وَجَعَلَ بَيْنَكُمْ مَوَدَّةً وَرَحْمَةً ۗ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ
يَتَفَكَّرُونَ

“And one of the signs is He created mates for you from yourselves in which you may find rest in them, and He put between you love and compassion, most surely there are signs in this for a people who reflect.” (30:21)

وَمِنْ آيَاتِهِ يُرِيكُمُ الْبَرْقَ خَوْفًا وَطَمَعًا وَيُنزِلُ مِنَ السَّمَاءِ مَاءً فَيُحْيِي بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا ۗ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ
يَعْقِلُونَ

“And one of His signs is He shows you the lightning for fear and for hope and sends down water from the clouds, then gives life therewith to the earth after its death; most surely there are signs in this for a people who understand.” (30:24)

وَمِنْ آيَاتِهِ خُلُقُ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافُ أَلْسِنَتِكُمْ وَأَلْوَانِكُمْ ۗ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِلْعَالِمِينَ

“And one of His signs is the creation of the heavens and the earth and the diversity of your tongues and colours; most surely there are signs in this for the learned.” (30:22)

From the Qur’anic viewpoint, understanding nature is not a fruitful undertaking except when it helps us to understand the Wise Creator of this world and to attain close proximity to Him. Understanding nature can promote man’s insight towards the cognition of Allah and enables him to better utilize the gifts of Allah for his own eternal felicity and well-being.

The Possibility of Understanding Nature

In the Qur’an, there are many verses inviting man to study nature:

...قُلْ انظُرُوا مَاذَا فِي السَّمَاوَاتِ وَالْأَرْضِ

“Say, ‘Consider what is it which is in the heavens and the earth...’” (10: 101)

وَفِي الْأَرْضِ آيَاتٌ لِلْمُوقِنِينَ وَفِي أَنْفُسِكُمْ أَفَلَا تُبْصِرُونَ

“And in the earth there are signs for those who are sure, and in your own souls (too); will you not then see.” (51:20 – 21)

...قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخُلُقَ

“Say, ‘Travel on the earth and see how He made the first creation....’” (29:20)

فَلْيَنْظُرِ الْإِنْسَانُ مِمَّ خُلِقَ

“So let man consider of what he is created.” (86:5)

These verses show this understand nature is possible; otherwise, He would not have recommended its study.

From the following verses, too, we realize man has been endowed with the talent of cognition and he has to exploit this faculty to the best of his ability:

...وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا

“And He taught Adam all the names...” (2:31)

عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ

“Taught man what (he) knew not.” (96:5)

وَاللَّهُ أَخْرَجَكُمْ مِنْ بُطُونِ أُمَّهَاتِكُمْ لَا تَعْلَمُونَ شَيْئًا وَجَعَلَ لَكُمُ السَّمْعَ وَالْأَبْصَارَ وَالْأَفْئِدَةَ لَعَلَّكُمْ تَشْكُرُونَ

“And Allah has brought you forth from the wombs of your mothers – you did not know anything – and He gave you hearing and sight and hearts to give thanks.” (16:78)

Moreover, the Qur’an promises:

سَنُرِيهِمْ آيَاتِنَا فِي الْأَفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ

“We will soon show them Our signs in the universe and in their own souls, so it will become clear unto them He is indeed the truth.” (41:53)

وَقُلِ الْحَمْدُ لِلَّهِ سِيرِكُمْ آيَاتِهِ فَتَعْرِفُونَهُ وَمَا رَبُّكَ بِغَافِلٍ عَمَّا تَعْمَلُونَ

“And say, ‘Praise be to Allah, He will show you His signs so you shall recognize them, nor is your Lord heedless of what you do.’ (27:93)

These verses indicate human beings will eventually come to have a better understanding of the truth about the universe.

The Main Issues in Understanding Nature

Although from the viewpoint of the Qur'an, the ultimate goal in understanding nature is to comprehend and approach God, yet there are certain subsidiary goals, the apprehension of which may be considered as preliminary steps towards this ultimate goal.

These are the issues in connection with natural phenomena, and are pointed out in the Holy Qur'an. We are going to classify them into three groups:

1. Origin and Evolution of Beings and Phenomena

أَوَلَمْ يَرَ الَّذِينَ كَفَرُوا أَنَّ السَّمَاوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ

“Do those who disbelieve not see the heavens and the earth were closed up, but We have opened them, and have made of water everything living...” (21:30)

أَلَمْ تَرَوْا كَيْفَ خَلَقَ اللَّهُ سَبْعَ سَمَاوَاتٍ طِبَاقًا وَجَعَلَ الْقَمَرَ فِيهِنَّ نُورًا وَجَعَلَ الشَّمْسَ سِرَاجًا

“Do you not see how God has created the seven heavens one above another, and made the moon therein a light, and made the sun a lamp?” (71:15 – 16)

الَّذِي أَحْسَنَ كُلَّ شَيْءٍ خَلَقَهُ وَبَدَأَ خَلْقَ الْإِنْسَانِ مِنْ طِينٍ ثُمَّ جَعَلَ نَسْلَهُ مِنْ سُلَالَةٍ مِنْ مَاءٍ مَهِينٍ ثُمَّ سَوَّاهُ وَنَفَخَ فِيهِ مِنْ رُوحِهِ وَجَعَلَ لَكُمُ السَّمْعَ وَالْأَبْصَارَ وَالْأَفْئِدَةَ قَلِيلًا مَّا تَشْكُرُونَ

“Who made good everything in which He has created, and He began the creation of man from dust. Then he made His progeny of an extract of water held in light estimation. Then he made him complete and breathed into him of His spirit and made for you the earth, and the air and the hearts. Little is it you have thanks.” (32:7 – 9)

أَفَلَا يَنْظُرُونَ إِلَى الْإِبِلِ كَيْفَ خُلِقَتْ وَإِلَى السَّمَاءِ كَيْفَ رُفِعَتْ وَإِلَى الْجِبَالِ كَيْفَ نُصِبَتْ وَإِلَى الْأَرْضِ كَيْفَ سُطِحَتْ

“Will they not then consider the camel, how they are created and the heaven, how it is reared aloft, and the mountains, how they are firmly fixed, and the earth, how it is made a vast expanse?” (88:17 – 20)

All these verses indicate we should attempt to discover the origin and evolution of beings, as this will help in enhancing man's faith and expediting his proximity to Allah.

In some verses of the Qur'an, certain natural phenomena are mentioned as indications of the Resurrection:

أَوَلَيْسَ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ بِقَادِرٍ عَلَىٰ أَنْ يَخْلُقَ مِثْلَهُمْ بَلَىٰ وَهُوَ الْخَلَّاقُ الْعَلِيمُ

“Is not He who created the heavens and the earth, able to create the like of them? Yea! And He is the Creator (of all), the Knower.” (36:81)

وَاللَّهُ الَّذِي أَرْسَلَ الرِّيحَ فَتُثِيرُ سَحَابًا فَسُقْنَاهُ إِلَىٰ بَلَدٍ مَيِّتٍ فَأَحْيَيْنَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا كَذَلِكَ النُّشُورُ

“And God is He who sends the winds so they raise a cloud, then we drive it on to a dead country, and therewith We give life to the earth after its death, even so are the uprising.” (35:9)

يَا أَيُّهَا النَّاسُ إِن كُنْتُمْ فِي رَيْبٍ مِّنَ الْبُعْثِ فَإِنَّا خَلَقْنَاكُمْ مِّن تُرَابٍ ثُمَّ مِّن نُّطْفَةٍ ثُمَّ مِّن عَلَقَةٍ ثُمَّ مِّن مُّضْغَةٍ مُّخَلَّقَةٍ وَغَيْرِ مُخَلَّقَةٍ لِّنُبَيِّنَ لَكُمْ ۗ وَنُقِرُّ فِي الْأَرْحَامِ مَا نَشَاءُ إِلَىٰ أَجَلٍ مُّسَمًّى ثُمَّ نُخْرِجُكُمْ طِفْلًا ثُمَّ لِتَبْلُغُوا أَشُدَّكُمْ ۗ وَمِنكُمْ مَّن يَتَوَفَّىٰ وَمِنكُمْ مَّن يَرُدُّ إِلَىٰ أَرْدَلِ الْعُمُرِ لِكَيْلَا يَعْلَمَ مِن بَعْدِ عِلْمٍ شَيْئًا ۗ وَتَرَى الْأَرْضَ هَامِدَةً فَإِذَا أَنزَلْنَا عَلَيْهَا الْمَاءَ اهْتَزَّتْ وَرَبَتْ وَأَنْبَتَتْ مِن كُلِّ زَوْجٍ بَهِيجٍ

“Oh people, if you are in doubt about the Resurrection, then surely We created you from dust, then from a small life-germ, then from a clot, then from a lump of flesh, complete in make and incomplete...and you see the earth's sterile land, but when We send down on it the water, it stirs and swells and brings forth of every kind of beautiful herbage.” (22:5)

2. The Discovery of Order, Coordination and Purpose in Nature

Many of the verses in the Qur'an mention the existence of order, co-ordination, and purpose in nature as evidences confirming the existence of the Wise, Omniscient Creator. These verses can be classified into several groups:

a) Some verses specify the creation of the heavens and the earth was not in vain, but had indeed some purpose behind it. For example:

..وَهُوَ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ بِالْحَقِّ

“And He it is Who has created the heavens and the earth in truth...” (6:73)

وَمَا خَلَقْنَا السَّمَاءَ وَالْأَرْضَ وَمَا بَيْنَهُمَا لَاعِبِينَ

“And We did not create the heavens and the earth and what is between them for sport.” (21: 16)

أَفَحَسِبْتُمْ أَنَّمَا خَلَقْنَاكُمْ عَبَثًا وَأَنَّكُمْ إِلَيْنَا لَا تُرْجَعُونَ

**“What! Did you then think We had created you in vain and you shall not be returned to Us?”
(23: 115)**

b) It is mentioned in some verses in which events follow a natural course for a certain pre-determined period:

أَوَلَمْ يَتَفَكَّرُوا فِي أَنفُسِهِمْ مَا خَلَقَ اللَّهُ السَّمَاوَاتِ وَالْأَرْضَ وَمَا بَيْنَهُمَا إِلَّا بِالْحَقِّ وَأَجَلٍ مُّسَمًّى وَإِنَّ كَثِيرًا مِّنَ النَّاسِ بِلِقَاءِ رَبِّهِمْ لَكَافِرُونَ

“Do they not reflect within themselves: Allah did not create the heavens and the earth and what is between them but in truth, and (for) an appointed term? And most surely most of the people are deniers of the meeting of their Lord.” (30:8)

اللَّهُ الَّذِي رَفَعَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا ۗ ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ ۗ وَسَخَّرَ الشَّمْسَ وَالْقَمَرَ ۗ كُلٌّ يَجْرِي لِأَجَلٍ مُّسَمًّى ۗ يُدَبِّرُ الْأَمْرَ يُفَصِّلُ الْآيَاتِ لَعَلَّكُمْ بِلِقَاءِ رَبِّكُمْ تُوقِنُونَ

“Allah is He who raised the heavens without any pillars which you see, and He is firm in power, and He made the sun and the moon subservient (to you), each one pursues its course to an appointed time, and He regulates the affair, making clear the signs which you may be certain of meeting your Lord.” (13:2)

c) Some verses tell us in which the whole process of creation and the course of events in nature follow a proper reckoning and measure (for instance, everything there is a definite size and measure):

الشَّمْسُ وَالْقَمَرُ بِحُسْبَانٍ

“The sun and moon follow a reckoning.” (55:5)

وَإِنْ مِنْ شَيْءٍ إِلَّا عِنْدَنَا خَزَائِنُهُ وَمَا نُنزِّلُهُ إِلَّا بِقَدَرٍ مَّعْلُومٍ

“And there is not a thing but with Us are the treasures of it, and We do not send it down but in a known measure.” (15:21)

وَكُلُّ شَيْءٍ عِنْدَهُ بِمِقْدَارٍ

“And there is a measure with Him of everything.” (13:8)

وَخَلَقَ كُلَّ شَيْءٍ فَقَدَرَهُ تَقْدِيرًا

“...He created everything then ordained for it a measure.” (25:2)

وَالسَّمَاءَ رَفَعَهَا وَوَضَعَ الْمِيزَانَ

“And the heaven, He raised it high and he made the balance.” (55:7)

وَأَنْبَتْنَا فِيهَا مِنْ كُلِّ شَيْءٍ مَوْزُونٍ

“...And caused to grow in it of every suitable thing.” (15: 19)

It is precisely for the very existence of this order which laws of nature become significant. The scholars of natural science would not have so ardently pursued the discovery of these laws had they not been subconsciously aware of this very natural order.

Form the above-mentioned verses and those ensuing, one can conclude the discovery of order and co-ordination in nature (i.e. the laws of nature) and the certitude of God's handiwork is of great significance in understanding nature:

هُوَ الَّذِي جَعَلَ الشَّمْسَ ضِيَاءً وَالْقَمَرَ نُورًا وَقَدَرَهُ مَنَازِلَ لِتَعْلَمُوا عَدَدَ السِّنِينَ وَالْحِسَابَ ۗ مَا خَلَقَ اللَّهُ ذَلِكَ إِلَّا بِالْحَقِّ ۗ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ

“He it is who made the sun a shining brightness and the moon a light, and ordained for it mansions which you might know the computation of years and reckoning. God did not create it but in truth; He makes the signs manifest for people who know.” (10:5)

مَا تَرَى فِي خَلْقِ الرَّحْمَنِ مِنْ تَفَؤُتٍ ۗ فَارْجِعِ الْبَصَرَ هَلْ تَرَى مِنْ فُتُورٍ

“...You see no congruity in the creation of the Beneficent God; then look again, can you see any disorder?” (67:3)

3. Making a Legitimate Use of Natural Means Prepared by God (for Man)

In a good number of verses God mentions the gifts He has granted man:

وَسَخَّرَ لَكُمْ مَا فِي السَّمَاوَاتِ وَمَا فِي الْأَرْضِ جَمِيعًا

“And He has made subservient to you whatsoever is in the heavens and whatsoever is in the earth.” (45: 13)

وَلَقَدْ مَكَّنَّاكُمْ فِي الْأَرْضِ وَجَعَلْنَا لَكُمْ فِيهَا مَعَايِشَ ۗ قَلِيلًا مَّا تَشْكُرُونَ

“And certainly We have established you in the earth and made in it means of livelihood for you, little it is in which you give thanks.” (7: 10)

وَمِنْ رَحْمَتِهِ جَعَلَ لَكُمْ اللَّيْلَ وَالنَّهَارَ لِتَسْكُنُوا فِيهِ وَلِتَبْتَغُوا مِنْ فَضْلِهِ وَلِعَلَّكُمْ تَشْكُرُونَ

“And out of His mercy He has made for you the night and day, which you may rest therein, and which you seek of His grace and which you give thanks.” (28:73)

وَمِنْ آيَاتِهِ أَنْ يُرْسِلَ الرِّيحَ مَبْشِرَاتٍ وَلِيُذِيقَكُمْ مِنْ رَحْمَتِهِ وَلِتَجْرِيَ الْفُلُكُ بِأَمْرِهِ وَلِتَبْتَغُوا مِنْ فَضْلِهِ وَلِعَلَّكُمْ تَشْكُرُونَ

“And one of His signs is which He sends forth the winds bearing good news and which He may make you taste His mercy, and which the ships may run by His command and which you may seek of His grace, and which you may be grateful.” (30:46)

وَهُوَ الَّذِي جَعَلَ لَكُمْ النُّجُومَ لِتَهْتَدُوا بِهَا فِي ظُلُمَاتِ الْبَرِّ وَالْبَحْرِ ۗ قَدْ فَصَّلْنَا الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ

“And He it is who has made the stars for you, which you might follow the right way thereby in the darkness of the land and the sea, truly We have made plain the communication for a people who know.” (6:97)

In these verses, the reason for reminding man of Allah’s blessings is to make him familiar with them, to urge him to use them, and, to offer his thanks to Allah. Thanksgiving means to use God’s blessings in the appropriate way for which they have been bestowed by the Almighty. It is thus important for the believer to make a conscientious use of Allah’s bounties, leading society towards eternal felicity. Hence, technology, which is the practical use of natural means, will be instrumental in realizing Divine goals.

Ways of Understanding Nature

Some Qur'anic verses tell us about the ways of understanding nature. We begin our discussion with a glorious verse:

وَاللَّهُ أَخْرَجَكُم مِّن بُطُونِ أُمَّهَاتِكُمْ لَا تَعْلَمُونَ شَيْئًا وَجَعَلَ لَكُمُ السَّمْعَ وَالْأَبْصَارَ وَالْأَفْئِدَةَ ۗ لَعَلَّكُمْ تَشْكُرُونَ

“And God has brought you forth from the wombs of your mothers; you did not know anything, and He gave you hearing and sight and hearts.” (16:78)

It says understanding is attained through eyes, ears, and intellect. Here, from amongst external senses, only sight and hearing have been mentioned, because they are the main tools with the help of which one acquires knowledge of the physical world. However, one can deduct from the Holy Qur'an in which the senses of taste, smell, and touch are also useful in giving us valuable information about the external world. Here we quote three verses:

فَلَمَّا ذَاقَا الشَّجَرَةَ بَدَتْ لَهُمَا سَوْآتُهُمَا وَطَفِقَا يَخْصِفَانِ عَلَيْهِمَا مِنْ وَرَقِ الْجَنَّةِ

“...So when the tasted of the tree, their shameful parts became manifest to them, and they both began to cover themselves with the leave of the garden...” (7:22)

وَلَمَّا فَصَلَتِ الْعِيرُ قَالَ أَبُوهُمْ إِنِّي لَأَجِدُ رِيحَ يُوسُفَ ۗ لَوْلَا أَن تَفْنَدُونَ

“And when the caravan had departed, their father said, ‘Most surely I smell the scent of Yusuf, unless you pronounce me to be weak in judgment.’” (12:94)

وَلَوْ نَزَّلْنَا عَلَيْكَ كِتَابًا فِي قِرْطَاسٍ فَلَمَسُوهُ بِأَيْدِيهِمْ لَقَالَ الَّذِينَ كَفَرُوا إِنَّ هَذَا إِلَّا سِحْرٌ مُّبِينٌ

“And if we had sent to you a writing on a paper, then they had touched it with their hands, certainly those who disbelieve would have said, ‘This is nothing by clear enchantment.’” (6:7)

The word “Fuw'ad” has been interpreted as a means of perception and reasoning. Heart has also been mentioned as a means of understanding and perception.

أَفَلَمْ يَسِيرُوا فِي الْأَرْضِ فَتَكُون لَهُمْ قُلُوبٌ يَعْقِلُونَ بِهَا أَوْ آذَانٌ يَسْمَعُونَ بِهَا

“Have they not travelled in the land so they should have hearts with which to understand?”

(22:46)

لَهُمْ قُلُوبٌ لَا يَفْقَهُونَ بِهَا

“...They have hearts with which they do not understand...” (7:179)

وَطُبِعَ عَلَى قُلُوبِهِمْ فَهُمْ لَا يَفْقَهُونَ

“And a seal is set on their hearts so they do not understand.” (9:87)

إِنَّ فِي ذَٰلِكَ لَذِكْرٍ لِمَنْ كَانَ لَهُ قَلْبٌ

“Most surely there is a reminder in this for him who has a heart.” (50:37)

أُولَٰئِكَ الَّذِينَ طَبَعَ اللَّهُ عَلَى قُلُوبِهِمْ وَسَمِعِهِمْ وَأَبْصَارِهِمْ ۗ وَأُولَٰئِكَ هُمُ الْغَافِلُونَ

“These are they on whose hearts and hearing and eyes. God has set a seal and these are the heedless ones.” (16:108)

In many Islamic works, too, “heart” has been said to be a tool of reasoning. It has been cited by Imam al-Sadiq (a.s):

فمنها قلبه الذي به يعقل ويفقه ويفهم

“Among his organs is his heart which is the means of reasoning, perception and comprehension.”¹

It is also quoted from Imam ‘Ali ibn Mohammad Baqir:

دل القرآن واخبار الرسول (ص) أن القلب مالك لجمع الحواس يسحح أفعالها ولا يبطل ما القلب سئ

“The Qur’an and the Traditions of the Prophet (S) indicate the heart is the lord of all senses and coordinates their deeds, and whatever the heart sets right, nothing can spoil.”²

Through the verses of the Qur’an, we intend to deduce the channels through which we understand nature are:

1. External senses (by means of which observation and experimentation takes place).

2. Intellect, unpolluted of vices (dominant over desires and fancies, and free from blind imitation).

3. Revelation and inspiration.

The Role of Observation and Reasoning in Understanding Nature

There are a number of verses in the Holy Qur'an which encourage man to use his senses in search of truth. Here are some examples of those verses:

قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ

“Say, ‘Travel on the earth and see how He made the first creation.’” (29:20)

قُلِ انظُرُوا مَاذَا فِي السَّمَاوَاتِ وَالْأَرْضِ

“Say, ‘Consider what is in the heavens and the earth.’” (10: 101)

هَلْ أَتَاكَ حَدِيثُ الْغَاشِيَةِ

“Will they not then consider the camels, how they were created.” (88: 1)

أَوَلَمْ يَرَوْا إِلَى الْأَرْضِ كَيْفَ أَخْبَتْنَا فِيهَا مِنْ كُلِّ زَوْجٍ كَرِيمٍ

“Do they not see the earth, how many of every noble kind have caused to grow in it?” (26: 7)

In these verses, observation and seeing (vision) imply “seeing with the help of right reasoning.”³ In a number of cases certain practical experiments are mentioned as means for acquiring knowledge. We are going to cite three examples of them:

a) Through a crow, Allah teaches Cain how to bury a dead body:

فَبَعَثَ اللَّهُ غُرَابًا يَبْحَثُ فِي الْأَرْضِ لِيُرِيَهُ كَيْفَ يُوَارِي سَوْءَةَ أَخِيهِ ۚ قَالَ يَا وَيْلَتَا أَعَجَزْتُ أَنْ أَكُونَ مِثْلَ هَذَا الْغُرَابِ فَأُوَارِيَ سَوْءَةَ أَخِي ۚ فَاصْبِرْ مِنَ النَّادِمِينَ

“Then God sent a crow, digging up the earth, so He might show him (Cain) how he should cover the dead body of his brother. He said, ‘Woe me, do I lack the strength in which I should be like this crow and cover the dead body of my brother? So he became of those who regret.’” (5:31)

b) God teaches the rightful man the possibility of giving new life to the dead:

﴿ أَوْ كَالَّذِي مَرَّ عَلَى قَرْبَةٍ وَهِيَ خَاوِيَةٌ عَلَى عُرُوشِهَا قَالَ أَنَّى يُحْيِي هَذِهِ اللَّهُ بَعْدَ مَوْتِهَا ﴾ فَأَمَاتَهُ اللَّهُ مِائَةَ عَامٍ ثُمَّ بَعَثَهُ
﴿ قَالَ لَبِثْتُ يَوْمًا أَوْ بَعْضَ يَوْمٍ ﴾ قَالَ بَلْ لَبِثْتُ مِائَةَ عَامٍ فَانظُرْ إِلَى طَعَامِكَ وَشَرَابِكَ لَمْ يَتَسَنَّهْ ﴿ وَانظُرْ
إِلَى جِمَارِكَ وَلِنَجْعَلَ آيَةً لِلنَّاسِ ﴿ وَانظُرْ إِلَى الْعِظَامِ كَيْفَ نُنشِزُهَا ثُمَّ نَكْسُوهَا لَحْمًا ﴿ فَلَمَّا تَبَيَّنَ لَهُ قَالَ أَعْلَمُ أَنَّ اللَّهَ
عَلَى كُلِّ شَيْءٍ قَدِيرٌ

“Or the like of him who passed by a town, and it had fallen down upon its roofs, he said, ‘When will Allah give it life after its death?’ So Allah caused him to die for a hundred years, then raised him to life. He said, ‘How long have tarried?’ ‘He said (in reply), ‘I have tarried a day, or a part of a day.’ Said He, ‘Nay, you have tarried a hundred years, look at your food and drink, years have not passed over it, and look at your ass and so We may make you a sign to men, and look at the bones, how we set the together then clothed them with flesh, so when it became clear to him, he said, ‘I know Allah has power over all things.’” (2:259)

c) God shows Abraham how He gives life to the dead:

﴿ وَإِذْ قَالَ إِبْرَاهِيمُ رَبِّ أَرِنِي كَيْفَ تُحْيِي الْمَوْتَى ﴾ قَالَ أَوْلَمْ تُؤْمِنُ ﴿ قَالَ بَلَىٰ وَلَكِن لِّبَطْمَنٍ قَلْبِي ﴿ قَالَ فَخُذْ أَرْبَعَةً
مِنَ الطَّيْرِ فَصُرْهُنَّ إِنَّكَ تَمُنَّ بِمَا تَعْلَمُ فَلَا تُحِيطُ بِشَيْءٍ مِّنْهُنَّ إِلَّا بِجِزْءٍ مِّنْهُنَّ ثُمَّ ادْعُهُنَّ يَأْتِينَكَ سَعْيًا ﴿ وَاعْلَمْ أَنَّ اللَّهَ عَزِيزٌ حَكِيمٌ

“And when Abraham said, ‘My Lord, show me how You give life to the dead.’ He said, ‘What, do you not believe?’ He said, ‘Yes, which my heart may be at ease.’ He said, ‘Then take four birds, then train them to follow you, then place on every mountain a part of them, then call them, they will come to you fling, and know Allah is Mighty, Wise.’” (2:260)

Besides, there many tangible parables in the Qur’an which are meant to teach one something perceptible:

﴿ مَثَلُ الَّذِينَ يُنْفِقُونَ أَمْوَالَهُمْ فِي سَبِيلِ اللَّهِ كَمَثَلِ حَبَّةٍ أَنبَتَتْ سَبْعَ سَنَابِلَ فِي كُلِّ سُنبُلَةٍ مِائَةُ حَبَّةٍ

“The parable of those who spend their property in the way of God is as the parable of a grain growing seven ears (with) a hundred grains in every ear.” (2:261)

﴿ وَمَثَلُ كَلِمَةٍ خَبِيثَةٍ كَشَجَرَةٍ خَبِيثَةٍ اجْتُثَّتْ مِنْ فَوْقِ الْأَرْضِ مَا لَهَا مِنْ قَرَارٍ

“And the parable of an evil word is an evil tree pulled from the earth’s surface, it has no stability.”

(14:26)

اللَّهُ نُورُ السَّمَاوَاتِ وَالْأَرْضِ ۚ مَثَلُ نُورِهِ كَمِشْكَاةٍ فِيهَا مِصْبَاحٌ ۚ الْمِصْبَاحُ فِي زُجَاجَةٍ ۚ الزُّجَاجَةُ كَأَنَّهَا كَوْكَبٌ
دُرِّيٌّ يُوقَدُ مِنْ شَجَرَةٍ مُبَارَكَةٍ زَيْتُونَةٍ لَا شَرْقِيَّةٍ وَلَا غَرْبِيَّةٍ يَكَادُ زَيْتُهَا يُضِيءُ وَلَوْ لَمْ تَمْسَسْهُ نَارٌ ۚ نُورٌ عَلَى نُورٍ ۚ يَهْدِي
اللَّهُ لِنُورِهِ مَنْ يَشَاءُ ۚ وَيَضْرِبُ اللَّهُ الْأَمْثَالَ لِلنَّاسِ ۚ وَاللَّهُ بِكُلِّ شَيْءٍ عَلِيمٌ

“Allah is the light of the heavens and the earth, a likeness of his light is as a niche in which is a lamp, the lamp is in a glass, (and) the glass is as it were a brightly shining star, lit from a blessed olive tree, neither eastern nor western, the oil whereof almost gives light though fire touch it not; light upon light, Allah guides to his light whom He pleases.” (24:35)

وَاللَّهُ الَّذِي أَرْسَلَ الرِّيحَ فَتُثِيرُ سَحَابًا فَسُقْنَاهُ إِلَى بَلَدٍ مَيِّتٍ فَأَحْيَيْنَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا ۚ كَذَلِكَ النُّشُورُ

“And God is He Who sent the winds so they raise a cloud, then We drive it on to a dead country and therewith We give life to the earth after its death, even so are the quickening.” (35:9)

Therefore, there is no doubt the Qur’an considers external senses the primary tools in getting a part of our knowledge, but both in the above verses, and in many others to come, sensory stimuli have not been suggested as the sole source of nature’s cognition. In order to substantiate this claim we can advance the following arguments:

1. In most of the Qur’anic verses, wherever natural phenomena are mentioned, it is explicitly pointed out the perception of Divine signs in nature and their relation to the Lord of signs is within the reach of men to intellect, capable of reflection. Here are a few examples such verses:

هُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً ۚ لَكُمْ مِنْهُ شَرَابٌ وَمِنْهُ شَجَرٌ فِيهِ تُسِيمُونَ

يُنْبِتُ لَكُمْ بِهِ الزَّرْعَ وَالزَّيْتُونَ وَالنَّخِيلَ وَالْأَعْنَابَ وَمِنْ كُلِّ الثَّمَرَاتِ ۚ إِنَّ فِي ذَلِكَ لَآيَةً لِقَوْمٍ يَتَفَكَّرُونَ

“He it is who sends down water from the heaven for you, it gives drink, and by it (grow) the trees upon which you pasture. He causes to grow for you thereby herbage, and the olives and the palm trees, and the grapes and of all the fruits, must surely there is a sign in this for a people who reflect.” (16: 10 – 11)

يُنْبِتُ لَكُمْ بِهِ الزَّرْعَ وَالزَّيْتُونَ وَالنَّخِيلَ وَالْأَعْنَابَ وَمِنْ كُلِّ الثَّمَرَاتِ ۚ إِنَّ فِي ذَلِكَ لَآيَةً لِقَوْمٍ يَتَفَكَّرُونَ

“And He is it Who made the stars for you in which you might follow the right way thereby in the darkness of the land and the sea. Truly, We have made plain the communications for a people who know.” (6:97)

وَسَخَّرَ لَكُمُ اللَّيْلَ وَالنَّهَارَ وَالشَّمْسَ وَالْقَمَرَ ۚ وَالنُّجُومَ مُسَخَّرَاتٌ بِأَمْرِهِ ۚ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِّقَوْمٍ يَعْقِلُونَ

“And He has made subservient for you the night and the day and the sun and the moon and the stars are subservient by His commandment, most surely there are signs in these for a people who ponder.” (16: 12)

وَمِنْ كُلِّ شَيْءٍ خَلَقْنَا زَوْجَيْنِ لَعَلَّكُمْ تَذَكَّرُونَ

“And of everything We have created pairs which you may be mindful.” (51:49)

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

“Do you not see God sends down water from the cloud, then makes it go along in the earth in springs, then brings forth therewith herbage of various colours, when it withers so you see it becoming yellow, the He makes it a thing crushed and broken into pieces? Most surely there is a reminder in these for men of understanding.” (39:21)

وَهُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا نُخْرِجُ مِنْهُ حَبًّا مُتَرَاكِبًا وَمِنَ النَّخْلِ مِنْ طَلْعِهَا قِنْوَانٌ دَانِيَةٌ وَجَنَّاتٍ مِنْ أَعْنَابٍ وَالزَّيْتُونَ وَالرُّمَّانَ مُشْتَبِهًا وَغَيْرَ مُتَشَابِهٍ ۚ انظُرُوا إِلَى ثَمَرِهِ إِذَا أَثْمَرَ وَيَنْعِهِ ۚ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِّقَوْمٍ يُؤْمِنُونَ

“And He it is Who has brought you into being from a single soul, then there is (for you) a resting place and a depository indeed. We have made plain the communications for a people who understand.” (6:99)

The use of such words as **“Tafakkur, Ta‘aqqul and Tafaqquh...”** in the above verses indicate (with different shades of emphasis) in which to understand nature, one should make use of one’s intellect.

The word “**tafakkur**” (meditation) in many of the verses means reflection on existing information and moving towards fresh awareness.⁴

(a) The words **“Ta‘aqqul and Tafaqquh”** show the intellectual advancement. Therefore, the cognition which originates through the senses should be backed by reflection and reasoning in order to enhance

our knowledge. The following quotations from Imam al-Sadiq (a.s.) confirm this point:

إن أول الأمور ومبدأها وقوتها وعمارتها التي لا ينافع بشئ إلا به ، العقل الذي جعله الله زينة لخلقه ونورا لهم ،
فبالعقل عرف العباد خالقهم وإنهم مخلوقون ، إنه المدبر لهم وإنهم المدبرون...واستدلوا بعقولهم على ما رأوا من
خلقه ، ومن سمائه وأرضه ، وشمسه وقمره ، وليله ونهاره ، وبان له ولهم خالقا ومدبرا لم يزل ولا يزول ، وعرفوا
به الحسن من القبيح ، وإن الظلمة في الجهل ، وإن النور في العلم ، فهذا ما دلهم عليه العقل

“The origin and commencement of everything and the cause of their flourishing is the intellect, without which nothing can be achieved. God has endowed His servants with the light and ornament of intellect.

By means of intellect the servants know their Creator and get to understand He is the Ruler and they are under His rule, He is immortal and they are mortal. Their intellect directs them to infer through the observation of the handiwork of God p– such as the heavens, the earth, the sun, the moon, the day and night... – There is a Creator and controller of all these beings, and He has always been and will exist forever. It is through the intellect which man recognizes grace from disgrace, and realizes light is associated with knowledge and ignorance bears darkness. This inference can be made only through the intellect.”⁵

b) Sheikh Mufid in his book **al-Irshad** narrates in which Abu Shakir Daysani said to Imam al-Sadiq (a.s.), “You know we do not accept anything unless we see, hear, taste, smell, or feel it with our senses.”⁶

Imam al-Sadiq (a.s.) answered,

ذكرت الحواس الخمس وهي لا تنفع في الإستنباط إلا بدليل ، كما لا تقطع الظلمة بغير مصباح

“You mentioned the five senses, but they never find the truth unless their finding are steered through the channel of intellect, in the same manner as darkness cannot be removed except with a lamp.”

c) There is another quotation from Imam al-Sadiq which says,⁷

فإنك لو رأيت حجرا يرتفع في الهواء ، علمت أن راميا رمى به فليس هذا العلم من قبل البصر ، بل من قبل العقل ،
لأن العقل هو الذي يبرمه ، فيعلم أن الحجر لا يذهب علوا تلقاء نفسه

*“When you see a stone moving upwards in the air, you know **some person has thrown it**. This knowledge has not come to you through your eyes, but through the channel of intellect, because it is intellect which infers **a stone go up in the air by itself**.”*

Therefore, it can be concluded through observation and experimentation are indispensable for obtaining

information from the external world, they are not sufficient means. Should we rely solely on our external senses, we won't be able to interpret the physical world, and find the relation between natural events.

In fact, people are no different from other animals as far as external senses are concerned, and some of the animals in this respect, are even better equipped than human beings. What distinguish people from animals are their talents for profound observation of the world and the interpretation of events. And this is due to a faculty called rational faculty, which is capable of relating the signs and symbols, attained through the senses, and interpreting the universe. Senses give us a series of isolated signs and symbols, and intellect discovers their inter-relationship.

2. In the Qur'an, there are many verses denoting in some people eyes, ears, and hearts do not perform their roles, and while seeing the Almighty's signs in nature, they do not meditate on them, nor do they benefit from those (blessings):

وَكَايِبٌ مِّنْ آيَةٍ فِي السَّمَاوَاتِ وَالْأَرْضِ يَمُرُّونَ عَلَيْهَا وَهُمْ عَنْهَا مُعْرِضُونَ

“And how many a sign in the heavens and the earth they pass by, yet they turn aside from it.”
(12: 105)

لَهُمْ قُلُوبٌ لَا يَفْقَهُونَ بِهَا وَلَهُمْ أَعْيُنٌ لَا يُبْصِرُونَ بِهَا وَلَهُمْ آذَانٌ لَا يَسْمَعُونَ بِهَا

“...They have hearts with which they do not understand, and they have eyes with which they do not see, and they have ears with which they do not hear.” (7: 179)

أَمْ لَهُمْ آعْيُنٌ يُبْصِرُونَ بِهَا ۗ أَمْ لَهُمْ آذَانٌ يَسْمَعُونَ بِهَا

“...Or have they eyes with which they see, or have the ears with which they hear...?” (7: 195)

وَلَا تَكُونُوا كَالَّذِينَ قَالُوا سَمِعْنَا وَهُمْ لَا يَسْمَعُونَ

“And be not like those who said, ‘We hear,’ and they did not hear.” (8:21)

وَإِنْ تَدْعُهُمْ إِلَى الْهُدَىٰ لَا يَسْمَعُوا ۗ وَتَرَاهُمْ يَنْظُرُونَ إِلَيْكَ وَهُمْ لَا يُبْصِرُونَ

“And if you invite them to guidance, they do not hear, and you see them looking towards you, yet they do not see.” (7: 198)

أَفَلَمْ يَسِيرُوا فِي الْأَرْضِ فَتَكُونَ لَهُمْ قُلُوبٌ يَعْقِلُونَ بِهَا أَوْ آذَانٌ يَسْمَعُونَ بِهَا ۗ فَإِنَّهَا لَا تَعْمَى الْأَبْصَارُ وَلَكِنْ تَعْمَى الْقُلُوبُ الَّتِي فِي الصُّدُورِ

“Have they not travelled in the land so they should have hearts with which to understand or ears with which to hear? For surely it is not eyes which are blind, but blind are the hearts which are in the breasts.” (22:46)

It is quoted from our great Prophet (S) in which:[8](#)

ليس الأعمى من يعمى بصره ، إنما الأعمى من تعمى بصيرته

“Blind is not a person who lacks eyes, but one who lack insight.”

Some people, interpreting the above verses, rightly say we have two kinds of sight and hearing – the physical or external and spiritual or internal ones. The external organs of sight and hearing are tools for perception, and the internal ones serve for the appropriate use of those tools.

Imam Fakhr al-Din Razi refers to the following verse:

مَثَلُ الْفَرِيقَيْنِ كَالْأَعْمَى وَالْأَصْمِ وَالْبَصِيرِ

“The likeness of the two parties is as of the blind and the deaf.” (11:24)

And says, “There is a similarity in the creation of body and spirit, in which both have eyes and ears. In the same way a deaf and blind person, in absolute silence and darkness, finds himself at a loss, an astray, irreligious and ignorant person’s heart too, lacks the power of sight and hearing and he is lost in the wilderness.”[9](#)

We would rather interpret the above verses in this way: Eyes, ears and other external senses are a means for the intellect, and their acquisitions could only be complete and meaningful if they go through the channel of the intellect. Eyes see, but the intellect interprets the result of sight and issues the verdict.[10](#) The function of sight can be considered complete when it goes with insight, i.e. when sensory is supplemented with (supra-sensory) intellect. Here a few verses confirming this interpretation:[11](#)

أَفَأَنْتَ تَسْمَعُ الصَّمَّ وَلَوْ كَانُوا لَا يَعْقِلُونَ

“...But can you make the deaf to hear though they will not understand.” (10:42)

وَلَا تَكُونُوا كَالَّذِينَ قَالُوا سَمِعْنَا وَهُمْ لَا يَسْمَعُونَ
وَلَا تَكُونُوا كَالَّذِينَ قَالُوا سَمِعْنَا وَهُمْ لَا يَسْمَعُونَ وَلَا يَسْمَعُونَ وَلَا تَكُونُوا كَالَّذِينَ قَالُوا سَمِعْنَا وَهُمْ لَا يَسْمَعُونَ

“And be not like those who said, ‘we hear,’ and they did not hear. Surely the vilest of animals in Allah’s sight are the deaf, the dumb, who do not understand.” (8:21 – 22)

It has been quoted from Imam ‘Ali (a.s.) in Nahj al-Balagha: [12](#)

فإننا البصير من سمع فتفكر ونظر فأبصر ، وانتفع بالعبر ثم سلك جددا واضحا وتجنب الصرعة في المهاوي والضلال في المغاوي

“The observer is one who reflects on what he has heard and reflects upon what he has seen, and makes use of his instructive experience in choosing to tread on clear paths wherein he can avoid falling into hallows and straying into pitfalls.”

There is a statement narrated from Imam al-Sadiq (a.s.): [13](#)

زعمت أن الأشياء لا تدرك إلا بالحواس فإنني أخبرك أنه ليس للحواس دلالة على الأشياء ولا فيها معرفة إلا بالقلب فإنه دليلها ومعرفها الأشياء التي يدعي أن القلب لا يعرفها إلا بها... إن القلب يفكر بالعقل الذي فيه

إن الله تعالى جعل القلب مدبرا للجسد ، به يسمع وبه يبصر وهو القاضي والأمير عليه ، وبه ينزل الفرح والحزن ، وبه ينزل الألم ، إن فسد شيء من الحواس بقى على حاله ، وإن فسد القلب ذهب جميعا – لا يسمع ولا يبصر

“... You thought things could not be felt except through senses. Let me advise you, senses do not directly lead you to objects, and we know objects only through the channel of heart, therefore, it is heart which directs the senses and present objects to the senses, the objects you (mistakenly) claim or not known to the heart but through senses...Heart reflects by the intellect which it possesses.

The Almighty God made heart the administrator of the body and it hears and sees through the heart. Heart is the judge and ruler of the body. Should the heart delay, the body cannot proceed, should it proceed the body cannot tarry.

Senses see and hear through the heart, should it order the sense, they obey, should it hinder them, and they stop. Happiness and sorrow, too, befall man through the heart and make him endure them. If senses fail and decay, the heart goes on functioning, but with the decay of the heart all the senses disappear – man neither sees nor hears.”

3. The Qur’anic verses indicate in addition to sense-rooted cognitions, there are non-sensory cognitions, too. These verses fall into two groups:

(a) In one group of the verses Allah refutes the arguments of the people who consider their external senses as the only reliable source for their knowledge:

وَإِذْ قُلْتُمْ يَا مُوسَىٰ لَنْ نُؤْمِنَ بِكَ حَتَّىٰ نَرَى اللَّهَ جَهْرَةً فَأَخَذَتْكُمُ الصَّاعِقَةُ وَأَنْتُمْ تَنْظُرُونَ

“And when you said, ‘Oh Musa, we shall not believe in you until we see Allah manifestly, so the punishment over-took you while you looked on.’ (2:55)

وَقَالُوا لَنْ نُؤْمِنَ بِكَ حَتَّىٰ تَفْجُرَ لَنَا مِنَ الْأَرْضِ يَنْبُوعًا أَوْ تَكُونَ لَكَ جَنَّةٌ مِنْ نَخِيلٍ وَعِنَبٍ فَتُفَجِّرَ الْأَنْهَارَ خِلَالَهَا تَفْجِيرًا أَوْ تُسْقِطَ السَّمَاءَ كَمَا زَعَمْتَ عَلَيْنَا كِسْفًا أَوْ تَأْتِيَنَا بِاللَّهِ وَالْمَلَائِكَةِ قَبِيلًا أَوْ يَكُونَ لَكَ بَيْتٌ مِنْ زُخْرَفٍ أَوْ تَرْقَىٰ فِي السَّمَاءِ وَلَنْ نُؤْمِنَ لِرُقِيِّكَ حَتَّىٰ تُنَزِّلَ عَلَيْنَا كِتَابًا نَقْرُوهُ ۗ قُلْ سُبْحَانَ رَبِّيَ هَلْ كُنْتُ إِلَّا بَشَرًا رَسُولًا

“And they said, ‘We will by no means believe you until you cause a fountain to gush forth from the earth for us. Or you should have a garden of palms and grapes in the midst of which you should cause rivers to flow forth gushing out. Or you should cause the heaven to come down upon us in pieces as you think, or bring Allah and the angels face to face (with us). Or you should have a house of gold, or you should ascend into heaven, and we will not believe in your ascending until you bring to us a book which we may read.’ Say, ‘Glory be to my Lord. Am I aught but a mortal apostle?’” (17:90 – 93)

يَعْلَمُونَ ظَاهِرًا مِنَ الْحَيَاةِ الدُّنْيَا وَهُمْ عَنِ الْآخِرَةِ هُمْ غَافِلُونَ

“They know the outward of this world’s life, but of the hereafter they are absolutely heedless.” (30:7)

(b) The Qur’an repeatedly reminds us in which we do not perceive many of the realities of the physical world through external senses:

اللَّهُ الَّذِي رَفَعَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا

“Allah is He who raised the heavens without any pillars...” (13:2)

فَلَا أُقْسِمُ بِمَا تُبْصِرُونَ وَمَا لَا تُبْصِرُونَ

“But nay, I swear by which you see, and which you see not.” (69:38 – 39)

سُبْحَانَ الَّذِي خَلَقَ الْأَزْوَاجَ كُلَّهَا مِمَّا تُنْبِتُ الْأَرْضُ وَمِنْ أَنْفُسِهِمْ وَمِمَّا لَا يَعْلَمُونَ

“Glory be to Him who created pairs of all things of what the earth grows, and of their kind and of what they do not know.” (36:36)

And we also learn from the Qur’an in which only Allah is aware of the mysteries in the heavens and the earth, and those to whom Allah has granted the bliss:

وَلِلَّهِ غَيْبُ السَّمَاوَاتِ وَالْأَرْضِ وَإِلَيْهِ يُرْجَعُ الْأَمْرُ كُلُّهُ

“And Allah is the unseen in the heavens and the earth and to Him is returned the whole of the affair.” (11:23)

قُلِ اللَّهُ أَعْلَمُ بِمَا لَبِثُوا ۚ لَهُ غَيْبُ السَّمَاوَاتِ وَالْأَرْضِ

“Say, ‘Allah knows best how long they remained. To Him are (known) the unseen things of the heavens and the earth. (18:26)

إِنَّ اللَّهَ يَعْلَمُ غَيْبَ السَّمَاوَاتِ وَالْأَرْضِ ۚ وَاللَّهُ بَصِيرٌ بِمَا تَعْمَلُونَ

“Surely Allah knows the unseen things of the heavens and the earth, and Allah sees what you do.” (49: 18)

عَالِمُ الْغَيْبِ فَلَا يُظْهِرُ عَلَىٰ غَيْبِهِ أَحَدًا إِلَّا مَنِ ارْتَضَىٰ مِنْ رَسُولٍ فَإِنَّهُ يَسْلُكُ مِنْ بَيْنِ يَدَيْهِ وَمِنْ خَلْفِهِ رَصَدًا

“The knower of the unseen. So he does not reveal His secrets to any except to him who He regards as an apostle.” (72:26 – 27)

Unfortunately, in recent centuries, some Muslim scholars have wrongly propounded the view which experiments are the only means to acquire knowledge, and the experimental study of the book of nature suffices to know God. [14](#)

We, too, agree in which experiment and observation are indispensable tools to understand nature. We even believe the Muslims’ work in this field has been quite inadequate. But we also believe our understanding of nature is not purely a matter of the senses. Besides, our observations and experiments cannot be the source of any knowledge unless they are channelized via the intellectual principles.

In the matter of scientific cognition of God, we are of the same opinion which martyred Professor

Murtada Mutahhari expressed, “The boundary of experiment is only the cognition of the works of God, but the cognition of God through the works known by experiment is a kind of pure intellectual deduction.”¹⁵

“The ideal aim before the mind of the physicist is to understand the external world of reality. But the means which he uses to attain this end are what are known in physical science as “measurements,” and these give no direct information about external reality. They are only a register or representation of reactions to physical phenomena. As such they contain no explicit information and have to be interpreted. As Helmholtz said, measurements furnish the physicist with a sign which he must interpret, just as a language expert interprets the text of some pre-historic document which belongs to a culture utterly unknown.

The first thing which the language expert assumes – and must assume if his work is to have any practical meaning – is the document in question contains some reasonable message which has been stated according to some system of grammatical rules or symbols. In the same way the physicist must assume the physical universe is governed by some system of laws which can be understood, even though he cannot hold out himself the prospect of being able to understand them in a comprehensive way or to discover their character and manner of operation with anything like a full degree of certitude.

“Taking it, then, the external world of reality is governed by a system of laws, the physicist now constructs a synthesis of concepts and theorems, and this synthesis is called the scientific picture of the physical universe. It is a representation of the real world itself in so far as it corresponds as closely as possible to the information which the research measurements have supplied. Once he has accomplished this, the researcher can assert, without having to fear the contradiction of facts, he has discovered one side of the outer of reality, though, of course, he can never logically demonstrate the truth of the assertion.”

In a lecture, delivered by Einstein at Oxford University in 1933, under the title of “On Methods of Theoretical Physics,” he said,¹⁶ “Newton, the first creator of a comprehensive, a workable system of theoretical physics, still believed in which the basic concepts and laws of his system could be derived from experience. This is no doubt the meaning of his saying, ‘hypotheses non fingo.’

“Actually, the concepts of time and space appeared at this time to present no difficulties. The concepts of mass, inertia, and force, and the laws connecting them, seemed to be drawn directly from experience. Once this basis is accepted, the expression for the force of gravitation appears derivable from experience, and it was reasonable to expect the same in regard to other forces.

“We can indeed see from Newton’s formulation of it in which the concept of absolute space, which comprised of absolute rest, made him feel uncomfortable; he realized there seemed to be nothing in experience corresponding to this last concept. he was also not quite comfortable about the introduction of forces operating at a distance. but the tremendous partial success of his doctrines may well have

prevented him and the physicists of the 18th and 19th centuries from recognizing the fictitious character of the foundations of his system.

“The natural philosophers of those days were, on the contrary, most of them possessed with the idea in which the fundamental concepts and postulates of physics were not in the logical sense, free inventions of the human mind, but could be deduced from experience by ‘abstraction’ – which is to say, by logical means. A clear recognition of the erroneousness of this notion really only came with the general theory of relativity, which showed one could take account of wider range of empirical facts, and this, too, in a more satisfactory and complete manner, on a foundation quite different from the Newtonian.

“But quite apart from the question of the superiority of one or the other, the fictitious character of fundamental principles is perfectly evident from the fact which we can point to two essentially different principles, both of which correspond with experience to a large extent; this proves, at the same time, every attempt at a logical deduction of the basic concepts and postulates of mechanics from elementary experiences is doomed to failure.

“If, then, it is true in the axiomatic basis of theoretical physics cannot be extracted from experience but must be freely invented, can we ever hope to find the right way? Nay, more, has this right way any existence outside our illusions? Can we hope to be guided safely by experience at all when there exist theories (such as classical mechanics) which to large extent do justice to experience, without getting to the root of the matter? I answer without hesitation in which there is, in my opinion, a right way, and we are capable of finding it. Our experience hitherto justifies us in believing in which nature is the realization of the simplest conceivable mathematical ideas.

“I am convinced we can discover by means of purely mathematical constructions, the concepts and the laws connecting them with each other, which furnish the key to the understanding of natural phenomena. Experience may suggest the appropriate mathematical concepts, but they most certainly cannot be deduced from it. Experience remains, of course, the sole criterion of the physical utility of a mathematical construction. But the creative principle resides in mathematics. In a certain sense, therefore, I hold it true in which pure thought can grasp reality, as the ancients dreamed.”

In his book “**Physics and Beyond**,” Heisenberg writes¹⁷ in the year 1926 he was of the opinion Einstein still believed in the positivistic view of Mach, which is, he believed only observable quantities should be included in physical theories. Therefore, Einstein said, “but you do not seriously believe any but observable magnitudes must go into a physical theory?”. Heisenberg asked in some surprise, “Isn’t this precisely what you have done with relativity? ... After all, you did stress the fact in which it is impermissible to speak of absolute time, simply because absolute time cannot be observed, in which clock readings, be it in the moving reference system or the system at rest, and are relevant of the determination of time.”

Einstein then admitted, “Possibly I did use this kind of reasoning but it is non-sense all the same.

Perhaps I could put it more diplomatically by saying it may be heuristically useful to keep in mind what one has actually observed. But, in principle, it is quite wrong to try founding a theory on observable magnitudes alone. In reality the very opposite happens. It is the theory which decides what we can observe.”

Phillip Frank in his biography of Einstein says¹⁸ in which he once told Einstein in which he himself had introduced the positivistic views into physics. Einstein answered, “A good joke should not be repeated too often.”

Our purpose in citing these quotations is to point out in which many of the recent outstanding research scholars have been fully aware of the inadequacy of experiments for the interpretation of nature. Otherwise, we do not doubt the importance and indispensability of experiments and Muslim researchers should not forget the message carried in such verses:

قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ

Say, “Travel in the earth and see how He made the first creation...” (29:20)

قُلْ انظُرُوا مَاذَا فِي السَّمَاوَاتِ وَالْأَرْضِ

Say, “Consider what is it in which is in the heavens and the earth...” (10: 101)

We should also bear in mind while the Qur’an invites us to experimental study of nature, it also points out the importance of meditation and reasoning, and teaches us not to be satisfied with mere sensory experience, but by observing what is beyond the observable part of nature, we move closer to the Creator of nature.

The Role of Revelation and Inspiration in Understanding Nature

It is deduced from some verses in the Qur’an in which the true teacher of all sciences is the Omniscient:

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ عِلْمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ... الَّذِي عَلَّمَ بِالْقَلَمِ

Read in the Name of your Lord who created...who taught (to write) with pen. taught man what he knew not. (96: 1 – 5)

خَلَقَ الْإِنْسَانَ عَلَّمَهُ الْبَيَانَ

He created man and taught him to talk. (55:2 – 3)

وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا

And taught Adam all the Names... (2:31)

The least we can infer from these verses is God has endowed people with talent to acquire knowledge and has given him the necessary means. But some Muslim philosophers believe the role of observations in the perception of *a priori* knowledge and the role of preliminary matters in the perception of theoretical subjects is to prepare a person's soul to fully benefit from the spiritual world. [19](#)

In fact, the main source of the inspiration in the matter of knowledge for human beings is the Omniscient Donor of knowledge, Allah. But the degree of relation between human beings and this Source differs from person to person. Some think and get nowhere, whereas some others find some truth through meditation, and yet there are some others who become aware of many realities with only little speculation.

Some Qur'anic verses indicate besides ordinary channels of observation, meditation and intellection, there is a more direct way of attaining the knowledge of the realities of the world through the Donor of knowledge, but this way is not a general one and only the select believers pass through it. These verses may be divided into several categories:

1. It is stated in some verses in which God reveals special knowledge to certain select believers:

وَقَتَلَ دَاوُودُ جَالُوتَ وَآتَاهُ اللَّهُ الْمُلْكَ وَالْحِكْمَةَ وَعَلَّمَهُ مِمَّا يَشَاءُ

And Dawud slew Jalut, and God gave him kingdom and wisdom and taught him of what he pleased. (2:251)

رَبِّ قَدْ آتَيْتَنِي مِنَ الْمُلْكِ وَعَلَّمْتَنِي مِنْ تَأْوِيلِ الْأَحَادِيثِ

**“My Lord, You have given of the kingdom and taught me of the interpretation of sayings...”
(12: 101)**

فَوَجَدَا عَبْدًا مِنْ عِبَادِنَا آتَيْنَاهُ رَحْمَةً مِنْ عِنْدِنَا وَعَلَّمْنَاهُ مِنْ لَدُنَّا عِلْمًا

Then they found one from among Our servants whom We had granted mercy from Us and whom We had taught knowledge from ourselves. (18:65)

﴿ إِذْ قَالَ اللَّهُ يَا عِيسَى ابْنَ مَرْيَمَ اذْكُرْ نِعْمَتِي عَلَيْكَ وَعَلَىٰ وَالِدَتِكَ إِذْ أَيَّدتُّكَ بِرُوحِ الْقُدُسِ تُكَلِّمُ النَّاسَ فِي الْمَهْدِ وَكَهْلًا
وَإِذْ عَلَّمْتُكَ الْكِتَابَ وَالْحِكْمَةَ وَالتَّوْرَةَ وَالْإِنْجِيلَ

When God will say, “Oh Isa (Jesus Christ) son of Mariam (Mary). Remember My favour on you and on your mother, when I strengthened you with the Holy spirits, you spoke to the people in the cradle and when of old age, and when i taught you the Book and Wisdom and the Tawrah (Torah) and the Injil (Bible).” (5: 110)

وَإِنَّهُ لَدُوٌّ عَلِيمٌ لِمَا عَلَّمْنَاهُ وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ

“And surely he was possessed of knowledge because We had given him knowledge, but most people do not know.” (12:68)

وَدَاوُدَ وَسُلَيْمَانَ إِذْ يَحْكُمَانِ فِي الْحَرْثِ فَفَقَّهُمْنَاهَا سُلَيْمَانَ ﴿٥٠﴾ وَكُلًّا آتَيْنَا حُكْمًا وَعِلْمًا ﴿٥١﴾ وَسَخَّرْنَا مَعَ دَاوُدَ الْجِبَالَ
يُسَبِّحْنَ وَالطَّيْرَ ﴿٥٢﴾ وَكُنَّا فَاعِلِينَ وَعَلَّمْنَاهُ صَنْعَةَ لَبُوسٍ لَكُمْ لِتُحْصِنَكُمْ مِنْ بَأْسِكُمْ ﴿٥٣﴾ فَهَلْ أَنْتُمْ شَاكِرُونَ

“And Dawud (David) and Sulaiman (Solomon) when they gave judgement concerning the field when the people’s sheep pastured therein by night, and we were bearer of witness to their judgment. So we made Sulaiman to understand it, and to each one We gave wisdom and knowledge, and We made the mountains, and the birds celebrate Our praise with Dawood, and We were the doers. And We taught him the making of coats of mail for you, so they might protect your in your wars; will you then be grateful?” (21:78 – 80)

In some of the verses, the idea which this way of teaching can be accomplished through human teachers has been rejected:

إِنْ هُوَ إِلَّا وَحْيٌ يُوحَىٰ عَلَيْهِ شَدِيدُ الْقُوَىٰ

“It is naught but revelation which is revealed. The Lord of Mighty Power has taught him” (53:4 – 5)

وَلَقَدْ نَعْلَمُ أَنَّهُمْ يَقُولُونَ إِنَّمَا يُعَلِّمُهُ بَشَرٌ

“And certainly We know what they say, ‘Only a mortal teaches him.’” (16: 103)

وَأَنْزَلَ اللَّهُ عَلَيْكَ الْكِتَابَ وَالْحِكْمَةَ وَعَلَّمَكَ مَا لَمْ تَكُن تَعْلَمُ

“And God has revealed to you the Book and the wisdom, and He has taught you what you did not know.” (4:113)

ذَلِكَ مِمَّا أَوْحَىٰ إِلَيْكَ رَبُّكَ مِنَ الْحِكْمَةِ

“This is of what your Lord has revealed to you of wisdom.” (17:39)

فَأَوْحَىٰ إِلَىٰ عَبْدِهِ مَا أَوْحَمَا كَذَّبَ الْفُؤَادُ مَا رَأَىٰ

“And He revealed to His servant what He revealed. His heart lies not of what he saw.” (53:10 – 11)

إِنَّا أَوْحَيْنَا إِلَيْكَ كَمَا أَوْحَيْنَا إِلَىٰ نُوحٍ وَالنَّبِيِّينَ مِنْ بَعْدِهِ ۗ وَأَوْحَيْنَا إِلَىٰ إِبْرَاهِيمَ وَإِسْمَاعِيلَ وَإِسْحَاقَ وَيَعْقُوبَ وَالْأَسْبَاطِ
وَعِيسَىٰ وَيُوسُفَ وَأَيُّوبَ ۗ وَأَوْحَيْنَا إِلَىٰ هَارُونَ وَسُلَيْمَانَ ۗ وَآتَيْنَا دَاوُدَ زَبُورًا

“Surely We have revealed to you as We revealed to Nuh (Noah), and the prophets after him, and We revealed to Ibrahim (Abraham) and Ismai'il (Ismael) and Ishaq (Isaac) and Yaqub (Jacob) and the tribes of 'Isa (Jesus Christ) and Ayyub (Job) and Yunus (Jonah) and Harun (Aaron) and Sulayman (Solomon) and We give to Dawud (David) psalms.” (4:163)

وَأَوْحَيْنَا إِلَىٰ مُوسَىٰ أَنْ أَلْقِ عَصَاكَ ۗ فَإِذَا هِيَ تَلْقَفُ مَا يَأْفِكُونَ

“And We revealed to Musa (Moses) saying, ‘Cast your rod, then lo, it devoured the lies they told.’” (7:117)

أَكَانَ لِلنَّاسِ عَجَبًا أَنْ أَوْحَيْنَا إِلَىٰ رَجُلٍ مِنْهُمْ أَنْ أَنْذِرِ النَّاسَ

“What! Is it a wonder to the people in which We revealed to a man from among themselves, say, ‘Warn the people...?’” (10:2)

وَأَوْحَيْنَا إِلَىٰ مُوسَىٰ وَأَخِيهِ أَنْ تَبَوِّأْ لِقَوْمِكَ مِمَّا مِصْرَ بَيْوتًا

“And We revealed to Musa and his brother, saying, ‘Take for your people houses to abide in.’” (10:87)

فَأَوْحَيْنَا إِلَيْهِ أَنْ اصْنَعْ الْفُلْكَ

“So We revealed to him saying, ‘Make the Ark before...’” (23:27)

ذَلِكَ مِنْ أَنْبَاءِ الْغَيْبِ نُوحِيهِ إِلَيْكَ

“This is of the announcements relating to the unseen which We reveal to you.” (3:44)

وَمَا أَرْسَلْنَا مِنْ قَبْلِكَ إِلَّا رَجَالًا نُوحِي إِلَيْهِمْ

“And We did not send before you any but men to whom We sent revelation.” (16:43)

قُلْ إِنَّمَا أَنَا بَشَرٌ مِثْلُكُمْ يُوحَى إِلَيَّ

“Say, ‘I am only a mortal like you, it is revealed to me...’” (18:110)

3. Yet another group of verses indicates the possibility of revelation for people other than prophets:

وَإِذْ أُوحِيَتْ إِلَى الْحَوَارِيِّينَ أَنْ آمِنُوا بِي وَبِرَسُولِي قَالُوا آمَنَّا وَاشْهَدْ بِأَنَّا مُسْلِمُونَ

“And when I revealed to the disciples, saying, ‘Believe in Me and My apostle,’ they said, ‘We believe and bear witness in which we submit (ourselves).’” (5:111)

وَأَوْحَيْنَا إِلَى أُمِّ مُوسَى أَنْ أَرْضِعِيهِ

“And we revealed to Musa’s Mother, saying, ‘Give him suck.’” (28:7)

In this case, “revelation” is interpreted²⁰ as “inspiration.” Of course, the revelation has been used in other senses as well.²¹

What we may conclude from these verses is the possibility of learning from the Donor of knowledge through a channel different from the common channel of observation and thinking. This, too, has different levels: The highest level of revelation is reserved for prophets only, and according to the glorious verse:

وَمَا كَانَ لِبَشَرٍ أَنْ يُكَلِّمَهُ اللَّهُ إِلَّا وَحْيًا أَوْ مِنْ وَرَاءِ حِجَابٍ أَوْ يُرْسِلَ رَسُولًا فَيُوحِيَ بَأْذَنِهِ مَا يَشَاءُ

“And it is not for any mortal which God should speak to him except by revelation or from behind a veil, or by sending a messenger and revealing by His permission what He pleases...” (42:51)

It is done through a direct inducement of the meaning in the prophet's heart, or by the creation of words or by sending an angel messenger to him.²² On the lower levels this is done through inspiration, which is variously termed as **Kashf ilham**.

Muslim philosophers believe the people having talent for attaining such immediate knowledge are those who are endowed with a saintly faculty. To explain their reasoning we take a look back, and see one of the channels to cognition is (logical) thinking. In thinking, the mind undergoes a two-stage movement, and shuttles between the known and the unknown. In thinking one seeks a middle term which is common in both the given propositions with the help of which he hopes to understand the unknown. In general, finding the middle term requires certain premises.

Yet, in certain special cases some people may reach the middle minds.²³ This mental talent which takes one to the goal without following logical steps is called "intuition" and in its highest form has been called "the saintly faculty." A person having this gift can know many realities without the use of his sensory and rational faculties. Avicenna in his "**al-Isharat**" says²⁴ the following Qur'anic phrase refers to this special mental faculty:

يَكَادُ زَيْتُهَا يُضِيءُ وَلَوْ لَمْ تَمْسَسْهُ نَارٌ

"The oil where of almost gives light though fire touches it not..." (24:35)

And he confirms its existence in the following statements:²⁵

"You may wish to have more evidence to prove the existence of the saintly faculty gift. So hark! Do you not know in which "intuition" exists, and people possess different levels of reflection and intuition. Some are so dull and stupid they find no way to their goal, some others are moderately intelligent and can make use of their reasoning power and some others, more intelligent, can perceive intelligible through intuition. This intelligence differs from person to person, at the highest level, one does not need to learn (through regular course) or think through logical categories (for knowing the reality)

Now we are in a position to say in the same way in which revelation has various degrees, as stated by the following verse:

تِلْكَ الرُّسُلُ فَضَّلْنَا بَعْضَهُمْ عَلَى بَعْضٍ ۚ مِنْهُمْ مَنْ كَلَّمَ اللَّهُ ۚ وَرَفَعَ بَعْضَهُمْ دَرَجَاتٍ ۚ وَآتَيْنَا عِيسَى ابْنَ مَرْيَمَ الْبَيِّنَاتِ وَأَيَّدْنَاهُ بِرُوحِ الْقُدُسِ

"We have made some of these apostles to excel the others, among them are they to whom God spoke, and some of them He exalted by (many) degrees of rank, and We gave clear miracles to Isa (Jesus) son of Maryam (Mary), and strengthened him with the Holy Spirit." (2:253)

“Inspiration, too, is of different levels – though on the whole it is lower than revelation. Some people enjoy this gift at its highest level and others possess it in its weaker forms. For the former, realities are made manifest without effort of reflection, while the latter attain new knowledge through their own endeavours. Some of the contemporary scholars have accepted the existence of this power. Dr. Alexis Carrel in his book “**Man, the Unknown**” says:[26](#)

“Obviously, great discoveries are not the product of intelligence alone. Men of genius, in addition to their powers of observation and comprehension, possess other qualities, such as intuition and creative imagination. Through intuition they learn things ignored by other men; they perceive relations between seemingly isolated phenomena. They unconsciously feel the presence of the unknown treasure. All great men are endowed with intuition. They know, without analysis, without reasoning, what is important for them to know. A true leader of men does not need psychological tests, or reference cards, when choosing his sub-ordinates. A good judge, without going into the details of legal arguments, and even, according to Cardozo, starting from erroneous premises, is capable of rendering a just sentence. A great scientist instinctively takes the path leading to a discovery. This phenomenon, in former times, was called inspiration.

“Men of science belong to two different types – the logical and the intuitive. Science owes its progress to both forms of mind. Mathematics, although a purely logical structure, nevertheless, makes use of intuition. Among the mathematicians there are intuitive and logicians, analysts and geometers. Hermitte and Weierstrass were intuitive, Riemann and Bertrand, logicians. The discoveries of intuition have always to be developed by logic. In ordinary life, as in science, intuition is a powerful but dangerous means of acquiring knowledge. Sometimes it can hardly be distinguished from illusion. Those who rely upon it entirely are liable to mistakes. It is far from being always trustworthy.

“But the great man, or the simple whose heart is pure, can be led by it to the summits of mental and spiritual life. It is a strange quality. To apprehend reality without the help of intelligence appears inexplicable. One of the aspects of intuition resembles a very rapid deduction from an instantaneous observation. The knowledge which great physicians sometimes possess concerning the present and the future state of their patients is of such a nature. A similar phenomenon occurs when one appraises in a flash a man’s value, or senses his virtues and his vices. But under another aspect, intuition takes place quite independently of observation and reasoning. We may be led by it to our goal when we do not know how to attain this goal and even where it is located. This mode of knowledge is closely analogous to clairvoyance, to the sixth sense of Charles Richet.”

Finally, I would like to mention though inspiration and enlightenment are means to attain knowledge, not everybody receives this gift of light:

ذَلِكَ فَضْلُ اللَّهِ يُؤْتِيهِ مَنْ يَشَاءُ

“This is God’s grace, He grants it to whom He pleases.” (62:4)

The only way which is open to everyone is the channel of observation and reflection while aiming at attaining the knowledge of reflection while aiming at attaining the knowledge of nature. The conditions leading to proper result shall be discussed in part of our discourse.

Stages in Understanding Nature

We have already seen from the viewpoint of the Qur’an man has the capacity to understand nature.

With the use of external senses and intellect, human beings should get closer to God through understanding Divine signs. Here we have to mention wherever there is a reference in the Qur’an to the Divine evidences in the physical world, Allah attributes the ability of understanding them to special groups of people. Here are a few examples:

On Mediators

هُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً ۖ لَكُمْ مِنْهُ شَرَابٌ وَمِنْهُ شَجَرٌ فِيهِ تُسِيمُونَ يُنْبِتُ لَكُمْ بِهِ الزَّرْعَ وَالزَّيْتُونَ وَالنَّخِيلَ
وَالْأَعْنَابَ وَمِنْ كُلِّ الثَّمَرَاتِ ۚ إِنَّ فِي ذَلِكَ لَآيَةً لِقَوْمٍ يَتَفَكَّرُونَ

“He it is who sends down water from the cloud for you, it gives drink and by it (grows) the trees upon which you pasture. He causes to grow for you thereby herbage, and the olive, and the palm tree, and the grapes, and of all the fruits, most surely there is a sign in this for a people who reflect.” (16: 10 – 11)

وَسَخَّرَ لَكُمْ مَا فِي السَّمَاوَاتِ وَمَا فِي الْأَرْضِ جَمِيعًا مِنْهُ ۚ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ يَتَفَكَّرُونَ

“And He has made sub-servient to you whatsoever is in the heavens and whatsoever is in the earth, all, from himself, most surely there are signs in this for a people who reflect.” (45: 13)

On the Wise

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

“Most surely, in the creation of the heavens and the earth, the alternation of the night and the day,, and the ships which run in the sea and which profits men, and the water which Allah sends down from the cloud, then gives life with it to the earth after its death and spreads in all (kinds

of) animals, and the changing of the winds and the clouds made sub-servient between the heaven and the earth, there are signs for a people who ponder.” (2:264)

وَسَخَّرَ لَكُمْ اللَّيْلَ وَالنَّهَارَ وَالشَّمْسَ وَالْقَمَرَ ۗ وَالنُّجُومَ مُسَخَّرَاتٌ بِأَمْرِهِ ۗ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ

“And He has made sub-servient for you the night and the day and the moon, and the stars are made sub-servient by His commandment, most surely, there are signs in this for a people who ponder.” (16:12)

On People who Understand

إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لآيَاتٍ لِأُولِي الْأَلْبَابِ

“Most surely in the creation of the heavens and the earth and the alternation of the night and the day there are signs for men who understand.” (3:189)

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

“Do you not see Allah sends down water from the cloud, then makes it go along in the earth in springs, then brings forth therewith herbage of various colours, then it withers so you see it becoming yellow, then makes it a thing crushed and broken into pieces? Most surely there is a reminder in this for the men of understanding.” (39:21)

On the Believers

إِنَّ فِي السَّمَاوَاتِ وَالْأَرْضِ لآيَاتٍ لِلْمُؤْمِنِينَ

“Most surely in the heavens and the earth there are some signs for the believers.” (45:3)

أَلَمْ يَرَوْا أَنَّا جَعَلْنَا اللَّيْلَ لِيَسْكُنُوا فِيهِ وَالنَّهَارَ مُبْصِرًا ۗ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ يُؤْمِنُونَ

“Do they not consider we have made the night in which they may rest therein, and the day to give light? Most surely there are signs for a people who believe.” (72:86)

On the Pious

إِنَّ فِي اخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَمَا خَلَقَ اللَّهُ فِي السَّمَاوَاتِ وَالْأَرْضِ لآيَاتٍ لِقَوْمٍ يَتَّقُونَ

“Most surely in the variation of the night and the day, and what Allah has created in the heavens and the earth, there are signs for a people who guard (against) evil.” (10:6)

وَإِذْ أَخَذْنَا مِيثَاقَكُمْ وَرَفَعْنَا فَوْقَكُمُ الطُّورَ خُذُوا مَا آتَيْنَاكُمْ بِقُوَّةٍ وَاذْكُرُوا مَا فِيهِ لَعَلَّكُمْ تَتَّقُونَ

“Take hold of the law We have given you with firmness and bear in mind what is in it, so you may guard (against) evil.” (2:63)

وَمِنْ آيَاتِهِ خَلْقُ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافُ أَلْوَانِكُمْ وَأَلْوَانِكُمْ ۗ إِنَّ فِي ذَلِكَ لآيَاتٍ لِّلْعَالَمِينَ

“And one of His signs is the creation of the heavens and the earth and the diversity of your thanks and colours; most surely, there are signs in this for the learned.” (30:22)

هُوَ الَّذِي جَعَلَ الشَّمْسَ ضِيَاءً وَالْقَمَرَ نُورًا وَقَدَرَهُ مَنَازِلَ لِتَعْلَمُوا عَدَدَ السِّنِينَ وَالْحِسَابَ ۗ مَا خَلَقَ اللَّهُ ذَلِكَ إِلَّا بِالْحَقِّ ۗ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ

“He it is who made the sun a shining brightness and the moon a light, and ordained for it mansions in which you might know the computation of years and the reckoning. Allah did not create it but in truth; He makes the signs manifest for a people who known.” (10:5)

On the Mindful

وَمَا ذَرَأَ لَكُمْ فِي الْأَرْضِ مُخْتَلِفًا أَلْوَانُهُ ۗ إِنَّ فِي ذَلِكَ لآيَةً لِقَوْمٍ يَذْكُرُونَ

“And what he has created in the earth of varied hues; most surely there is a sign in this for a people who are mindful.” (16: 13)

وَمِنْ كُلِّ شَيْءٍ خَلَقْنَا زَوْجَيْنِ لَعَلَّكُمْ تَذَكَّرُونَ

“And of everything We have created pairs in which you may be mindful.” (51:49)

On Those who Listen to Truth of God's Word

وَمِنْ آيَاتِهِ مَنَامُكُمْ بِاللَّيْلِ وَالنَّهَارِ وَابْتِغَاؤُكُمْ مِنْ فَضْلِهِ ﴿٤٠﴾ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ يُسْمِعُونَ

“And one of His signs is your sleeping and your seeking of His Grace by night and (by) day; most surely, there are signs in this for a people who would hear.” (30:23)

وَاللَّهُ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا ﴿٤١﴾ إِنَّ فِي ذَلِكَ لَآيَةً لِقَوْمٍ يَسْمَعُونَ

“And Allah has sent down water from the cloud and therewith given life to the earth after its death; most surely there is a sign in this for a people who would listen.” (16:65)

On the people who are sure

وَفِي خَلْقِكُمْ وَمَا يَبُثُّ مِنْ دَابَّةٍ آيَاتٌ لِقَوْمٍ يُوقِنُونَ

“And in your (own) creation and in what He spreads abroad of animals there of animals there are signs for a people which are sure.” 45:4)

وَفِي الْأَرْضِ آيَاتٌ لِلْمُوقِنِينَ ﴿٤٢﴾ أَنْفُسِكُمْ أَفَلَا تُبْصِرُونَ

“And in the earth there are signs for those who are sure, and in your souls (too), will you not then see?” (51:20 – 21)

On those who examine truth, have insight, and understand

وَهُوَ الَّذِي أَنْشَأَكُمْ مِنْ نَفْسٍ وَاحِدَةٍ فَمُسْتَقَرٌّ وَمُسْتَوْدَعٌ ﴿٤٣﴾ قَدْ فَصَّلْنَا الْآيَاتِ لِقَوْمٍ يَفْقَهُونَ

“And he it is who has brought you into being from a single soul, then there is (for you) a resting place and a depository; indeed We have made plain the communications for a people who understand.” (6:98)

فَأَخَذَتْهُمُ الصَّبْحَةُ مُشْرِقِينَ فَجَعَلْنَا عَالِيَهَا سَافِلَهَا وَأَمْطَرْنَا عَلَيْهِمْ حِجَارَةً مِنْ سِجِّيلٍ ﴿٤٤﴾ فِي ذَلِكَ لَآيَاتٍ لِّلْمُتَوَسِّمِينَ

“So the rumbling overtook them (while) entering upon the time of sunrise. Thus did we turn it upside down, ad rained down upon them stones of what has been decreed. Surely in this are

signs for those who examine.” (15:73 – 75)

كُلُوا وَارْعَوْا أَنْعَامَكُمْ ۗ إِنَّ فِي ذَٰلِكَ لَآيَاتٍ لِّأُولِي النُّهَىٰ

“Eat and pasture your cattle; most surely there are signs in this for those endowed with understanding.” (20:54)

What we understand from the words “Tafakkur, Taaqul, Tafaqquh, etc.” used in the Qur’an is they refer to different degrees of intellectual perception and some are indispensable for some others. For example, by comparing the following verses:

إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِّأُولِي الْأَلْبَابِ الَّذِينَ يَذْكُرُونَ اللَّهَ قِيَامًا وَقُعُودًا وَعَلَىٰ جُنُوبِهِمْ وَيَتَفَكَّرُونَ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ رَبَّنَا مَا خَلَقْتَ هَذَا بَاطِلًا

“Most surely in the creation of the heavens and the earth and the alternation of the night and the day there are signs for men who understand. Those who remember Allah standing and sitting and being on their sides and reflect on the creation of the heavens and the earth, “Our Lord, You have not created this in vain. Glory be to You, save us then from the chastisement of the fire.” (3: 190 – 191)

إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِّقَوْمٍ يَعْقِلُونَ

“Most surely in the creation of the heavens and the earth and the alternation of the night and the day...there are signs for a people who understand.” (2: 164)

إِنَّ فِي اخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَمَا خَلَقَ اللَّهُ فِي السَّمَاوَاتِ وَالْأَرْضِ لَآيَاتٍ لِّقَوْمٍ يَتَّقُونَ

“Most surely in the alternation of the night and the day, and what Allah has created in the heavens and the earth, there are signs for a people who guard (against evil).” (10:6)

وَتَزَوَّدُوا فَإِنَّ خَيْرَ الزَّادِ التَّقْوَىٰ ۗ وَاتَّقُونِ يَا أُولِي الْأَلْبَابِ

“...and make provision, for surely the provision is the guarding of oneself, and be careful (of your duty) to Me, oh men of understanding.” (2: 197)

وَتِلْكَ الْأَمْثَالُ نَضْرِبُهَا لِلنَّاسِ ۗ وَمَا يَعْقِلُهَا إِلَّا الْعَالِمُونَ

“And (as for) these examples, We set them forth for the people and none understand them but the learned.” (29:43)

It may be concluded in which “**Ulal-Albab**” possess “reasoning faculty,” mediation, piety and knowledge. Their other characteristics are: listening and hearing the right word, ability of avoiding fallacies of illusions, worshiping God, having wisdom, being mindful and taking an example of past experiences (of ancestors). These characteristics are deducible from the following verses.

الَّذِينَ يَسْتَمِعُونَ الْقَوْلَ فَيَتَّبِعُونَ أَحْسَنَهُ ۗ أُولَٰئِكَ الَّذِينَ هَدَاهُمُ اللَّهُ ۗ وَأُولَٰئِكَ هُمْ أُولُو الْأَلْبَابِ

“Those who listen to the word, then follow the best of it, those are they whom Allah has guided, and those it is whom are men of understanding.” (39: 18)

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 يَذَّكَّرُ إِلَّا أُولُو الْأَلْبَابِ

“He it is who has revealed the book to you, some of its verses are decisive, they are the basis of the Book, and others are allegorical, then as for those in whose hearts there is perversity, they follow the part of it which is all allegorical, seeking to mislead, and seeking to give it (their own) interpretation, but none knows its interpretation except Allah, and those who are firmly rooted in knowledge say, ‘We believe in it, it is all from our Lord, and none do mind except those having understanding.’ (3:7)

أَمَّنْ هُوَ قَانِتٌ آنَاءَ اللَّيْلِ سَاجِدًا وَقَائِمًا يَحْذَرُ الْآخِرَةَ وَيَرْجُو رَحْمَةَ رَبِّهِ ۗ قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ ۗ إِنَّمَا يَتَذَكَّرُ أُولُو الْأَلْبَابِ

“What! He who is obedient during hours of the night prostrating himself and standing,, takes care of the hereafter and hopes for the mercy of his Lord! Say, ‘Are those who know and those who do not know alike?’ Only the men of understanding are mindful.” (39:9)

يُؤْتِي الْحِكْمَةَ مَنْ يَشَاءُ ۗ وَمَنْ يُؤْتَ الْحِكْمَةَ فَقَدْ أُوتِيَ خَيْرًا كَثِيرًا ۗ وَمَا يَذَّكَّرُ إِلَّا أُولُو الْأَلْبَابِ

“He grants wisdom to whom He pleases, and whoever is granted wisdom, he indeed is given a great good, and none but men of understanding mind.” (2:269)

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

“Do you not see Allah sends down water from the cloud, then makes it go along in the earth in springs, then brings forth therewith herbage of various colours, then it withers so you see it becoming yellow, then He makes it a thing crushed and broken into pieces? Most surely there is a reminder in this for the men of understanding.” (39:21)

لَقَدْ كَانَ فِي قَصَصِهِمْ عِبْرَةٌ لِأُولِي الْأَلْبَابِ

“In their histories there is certainly a lesson for men of understanding.” (12:111)

One can see “Ulal–Albab” possess most of the characteristics mentioned in the Qur’an for understanding nature. They have purified intellects, and, therefore, have better capability for attaining a deeper knowledge of nature.

وَهُوَ الَّذِي جَعَلَ لَكُمُ النُّجُومَ لِتَهْتَدُوا بِهَا فِي ظُلُمَاتِ الْبَرِّ وَالْبَحْرِ ۝ قَدْ فَصَّلْنَا الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ

“And He it is who has made the stars for you in which you might follow the right way thereby in the darkness of the land and the sea; truly we have made plain the communications for a people who know.” (6:97)

وَهُوَ الَّذِي أَنْشَأَكُمْ مِنْ نَفْسٍ وَاحِدَةٍ فَمُسْتَقَرٌّ وَمُسْتَوْدَعٌ ۝ قَدْ فَصَّلْنَا الْآيَاتِ لِقَوْمٍ يَفْقَهُونَ

“And He it is who has brought you into being from a single soul, then there is (for you) a resting place and a depository; indeed, we have made plain the communications for a people who understand.” (6:98)

وَهُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا نُخْرَجُ مِنْهُ حَبًّا مُتَرَاكِبًا وَمِنَ النَّخْلِ مِنْ طَلْعِهَا قِنْوَانٌ دَانِيَةٌ وَجَنَّاتٍ مِنْ أَعْنَابٍ وَالزَّيْتُونَ وَالرُّمَّانَ مُشْتَبِهًا وَغَيْرَ مُتَشَابِهٍ ۝ انظُرُوا إِلَى ثَمَرِهِ إِذَا أَثْمَرَ وَيَنْعِهِ ۝ إِنَّ فِي ذَلِكَ لآيَاتٍ لِقَوْمٍ يُؤْمِنُونَ

“And He it is who sends down water from the cloud, then We bring forth with its buds of all (plants), then we bring forth from it green (foliage) from which we produce grain filled up (in the ear), and the palm tree, of the sheaths of it, come forth clusters (of dates) within reach...most surely there are signs in this for a people who believe.” (6:99)

We realize (as ‘Allamah Tabatabai has mentioned²⁷) while understanding certain things related to plants

is possible for unlearned believers, the understanding of astronomical problems requires scientific background, and the understanding of issues related to the human soul and its mysteries needs theoretical knowledge as well as profound understanding of human nature. The Qur'an refers to a sublime faculty of cognition which is the cognition of the "spiritual dimension" (Malakut) of the heavens and the earth:

وَكَذَلِكَ نُرِي إِبْرَاهِيمَ مَلَكُوتَ السَّمَاوَاتِ وَالْأَرْضِ وَلِيَكُونَ مِنَ الْمُوقِنِينَ

"And thus did We show Ibrahim the spiritual dimension of the heavens and the earth, and he might be of those who are sure." (6:75)

أَوَلَمْ يَنْظُرُوا فِي مَلَكُوتِ السَّمَاوَاتِ وَالْأَرْضِ وَمَا خَلَقَ اللَّهُ مِنْ شَيْءٍ

"Do they not consider the spiritual dimension of the heavens and the earth and whatever things Allah has created?" (7:185)

Moreover, the first verse indicates the vision of "spiritual dimension" results in sureness. There have been various interpretations of "**Malakut**." Some scholars, including "Allamah Tabataba'i,²⁸ believe it to be the innermost aspect of beings and the deepest attachment of their very existence to the Almighty God. Some meant by it wonders in the heavens and the earth,²⁹ and some others interpret it as the laws of nature.³⁰

In reference to the vision of "**Malakut**," various views have been expressed. A majority of the interpreters believe it to be a non-sensual vision or an intellectual one.³¹ Imam Fakhr al-Din Razi in his interpretation of the first verse (i.e. 6:75) says,

There are two views in connection with the "revealing": First statement indicates God revealed the spiritual dimension to Ibrahim's ordinary eyes... and the second indicates it was his inner and mental discernment which had this vision, not his physical eyes. These things prove the vision had been through mental discernment, not through the eyes."

It is quite certainly a profound cognition of nature, and as it ends in certitude and sureness, therefore, it is the highest level of cognition. And to attain this kind of cognition, one requires all the qualifications mentioned in the verses quoted in this section.

Thus, we conclude

1. There are different levels of understanding a phenomenon.
2. For understanding the different natural phenomena, there are different pre-requisite conditions.

3. To have a more profound understanding of nature, researches should try to acquire the above mentioned characteristics more and more. These characteristics can be briefly summarized in the following three categories: scientific aptitude, higher (analytical) intellect, and faith with piety.

One may question the role of faith and piety in the proper understanding of nature, or can say for what reason has God denied the proper cognition to unbelievers in the following verses:

قُلْ انظُرُوا مَاذَا فِي السَّمَاوَاتِ وَالْأَرْضِ ۚ وَمَا تُغْنِي الْآيَاتُ وَالنُّذُرُ عَنْ قَوْمٍ لَا يُؤْمِنُونَ

Say, “Consider what is it which is in the heavens and the earth and signs and warners do not avail a people who would not believe.” (10: 101)

أَوَلَمْ يَرَوْا إِلَى الْأَرْضِ كَمْ أَنْبَتْنَا فِيهَا مِنْ كُلِّ زَوْجٍ كَرِيمٍ ۗ فِي ذَلِكَ لَآيَةٌ ۚ وَمَا كَانَ أَكْثَرُهُمْ مُؤْمِنِينَ

“Do they not see the earth, how many of every noble kind We have caused to grow in it? Most surely there is a sign in this, but most of them will not believe.” (26:7 – 8)

إِنْ تُسْمِعُ إِلَّا مَنْ يُؤْمِنُ بِآيَاتِنَا فَهُمْ مُسْلِمُونَ

Nor can you lead away the blind out of their way. You cannot make to hear any but those who believe in your communications.” (30:53)

Why has God attributed the understanding of some of his signs in nature to the believers and the pious only?

إِنَّ فِي السَّمَاوَاتِ وَالْأَرْضِ لَآيَاتٍ لِلْمُؤْمِنِينَ

“Most surely in the heavens and the earth there are some signs for the believers.” (45:3)

إِنَّ فِي اخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَمَا خَلَقَ اللَّهُ فِي السَّمَاوَاتِ وَالْأَرْضِ لَآيَاتٍ لِقَوْمٍ يَتَّقُونَ

“Most surely in the alternation of the night and the day, and what Allah has created in the heavens and the earth, there are signs for a people who guard (against) evil.” (10:6)

Is it not true in which every person whether believer or non-believer may be capable of logical thinking? Is not the Qur’an Itself a logically arguing with unbelievers and polytheists? To answer this question we seek help from the Qur’an itself. In view of the inseparability of piety and faith:

وَاتَّقُوا اللَّهَ إِنَّ كُنْتُمْ مُؤْمِنِينَ

“And be careful of (your duty to) God if you are believers.” (5:57)

...إن تتقوا الله يجعل لكم فرقانا...

“...Allah will grant you a criterion (to judge between right and wrong)... (8:29)

One can point out in which the effect of faith people can differentiate between right and wrong, for their intellectual activity is free from the vices caused by devilish inducements and temptations.

As Mowlavi puts it

When the mirror of the heart is clean and stainless,
Therein you see images beyond earth and water,
You see both the Painter and the paintings,
Both the Divine carpet and the carpet spreader.

Or as Hafez puts it

The blurred eye cannot reach the face of the beloved,
Cast your look upon her when your mirror is clean,
I rinsed my eyes clean with my own tears, as the visionaries say,
First clean yourself and then look upon the clean.

In his exegesis of the Qur’an “al-Mizan,” ‘Allamah Tabataba’i says,³² “The reason why the Holy Qur’an emphasizes piety alongside reflection, intellection and remembrance, and has related knowledge with practice is it ensures the stability of thought, righteousness of knowledge and avoidance of vices of caprice and evil.”

A saying from our great Prophet (S) has been reported, which confirms it,³³

لولا أن الشياطين يحومون على قلوب بني آدم لنظروا إلى ملكون السماء

“Had the part of the devil not moved around the minds of the children of Adam, they would have seen the spiritual dimension of the sky.”

There is also a statement from Imam ‘Ali (a.s.) on the same line,³⁴

ومن لم يهذب نفسه لم ينفع بالعقل

“One who does not render his heart clean does not benefit from his intellect.”

Therefore, the important role of piety and cleanness of heart (sanctification) is to harness the slips of intellect. However, we deduct from certain Qur’anic verses and Islamic works which effect of piety is not limited to the repulsion of the impediments of cognition, but through piety and sanctification one can attain cognition above and beyond the cognition attained through experience and reasoning. In this connection, we are going to cite some relevant verses from the Qur’an:

وَاتَّقُوا اللَّهَ وَيَعْلَمَ اللَّهُ

“...and be careful of (your duty to) Allah. Allah teaches you, and Allah knows all things.” (2:282)

وَالَّذِينَ جَاهَدُوا فِينَا لَنَهْدِيَنَّهُمْ سُبُلَنَا

“And (as for) those who strive hard for Us, We will most certainly guide them in Our ways, and Allah is most surely with the doers of good.” (29:69)

وَكَذَلِكَ نُرِي إِبْرَاهِيمَ مَلَكُوتَ السَّمَاوَاتِ وَالْأَرْضِ وَلِيَكُونَ مِنَ الْمُوقِنِينَ

“And thus did We show Ibrahim the spiritual dimension (Malakut) of the heavens and the earth and he might be of those who are sure.” (6:75)

A Tradition of the Prophet (S), which is universally accepted and respected by all Muslims, says,[35](#)

قال رسول الله (ص): قال الله عز وجل...وما تقرب إليّ عبد بشيء أحب إليّ مما افترضت عليه وأنه ليتقرب إليّ بالنافلة حتى أحبه فإذا أحببته كنت سمعه الذي يسمع به وبصره الذي يبصر به ولسانه الذي ينطق به ويده التي يبطش بها ، إن دعاني أجبته وإن سألتني أعطيتته

“No servant has sought My proximity through what is more favourite to Me than performing his duties, but through praise-worthy acts a servant gets so close to me I love him. It is then I become an ear for him by means of which he hears, an eye from him by means of which he sees, a tongue for him by means of which he speaks and a hand with which he grasps. Should he call Me, I respond to him, and should he request something, I bestow upon him.”

It has also been reported in which our great Prophet (S) had said,[36](#)

وما أخلص عبد الله عز وجل أربعين صباحا إلا جرت ينابيع الحكمة من قلبه على لسانه

“No servant devotes his full forty mornings to (the service of) God except when the springs of wisdom flow from his heart to his tongue.

And it is reported from Imam ‘Ali (a.s.) in **Nahj al-Balaghah**,[37](#)

قد أيا عقله وأمات نفسه حتى دق حليله ولطف غليظه وبرق له لا مع كثير البرق فأبان له الطريق وسلك به السبيل ، وتدافعت الأبواب إلى باب السلامة ودار الإقامة نينت رجلاه بطمانينة بدنه في قرار الأمن والراحة ، بما استعمل قلبه ، وأرضى ربه

“He (the believer) kept his mind alive and killed (the desires of) his heart until his body became thin, his bulk turned light and effulgence of extreme brightness shone for him. It lighted the way from him and took him on the (right) path. Different doors led him to the door of safety and the place of (his permanent) stay. His feet, balancing his body, were fixed in the position of safety and comfort because he kept his heart busy (in good acts) and pleased his Allah.”

Also in **Nahj al-Balaghah** we find,[38](#)

هجم بهم العلم على حقيقة البصيرة وباشروا روح اليقين واستلنا ما استعوره المترفون وانسوا بما استوحش منه الجاهلون

“Knowledge has led them to real understanding and so they have associated themselves with the spirit of conviction. They take easy what the easy going regard as hard. They love what they ignorant took as strong.”

In any case, it is certain in which illumination and inspiration, as a source of knowledge is not open at all, and only those with proper background can benefit from it. The channel which is open to all is the employment of sensory experience and intellect, and, of course, in order to arrive at truth one should avoid the impediments in the way of cognition.

Impediments of Cognition

Sometimes, certain internal factors over-rule the intellect, and prevent it from functioning properly. Then, while the judgments are said to have been made wisely, in fact they are the product of an unhealthy intellect polluted with impurities. As Allameh Tabataba’i puts it,[39](#) “The role of intellect in such cases resembles a judge who passes an unjust verdict relying on (forged) documents or false witnesses, though he may not have intended to do so.” Therefore, a research should shake his mind of unfounded pre-judgments and suppositions, and cleanse it of immoralities in order to attain a correct understanding.

Ghazali in his “**Ihya al-‘Ulum al-Din**” uses an interesting simile,⁴⁰ which, in some respects casts light on this subject. He says the human heart resembles a mirror which reflects good, clear pictures when it is shined and polished. The human heart, too, gets more sheen through noble qualities and better reflects the truth and realities, but when it is affected by vicious qualities, like a dust covered mirror, it cannot depict realities. For the same reason “not hearing” has the connection with “the sealing of the heart” on account of faulty deeds as shown in the following verses of the Holy Qur’an:

لَوْ نَشَاءُ أَصَبْنَاهُمْ بِذُنُوبِهِمْ ۚ وَنَطْبَعُ عَلَىٰ قُلُوبِهِمْ فَهُمْ لَا يَسْمَعُونَ

“If We please, We would afflict them on account of their faults, and set a seal on their hearts so they would not hear.” (7: 100)

وَاتَّقُوا اللَّهَ وَاسْمَعُوا

“...And be careful of (your duty to) God and hear...” (5: 108)

Thus, listening to, and hearing the right word is connected with piety, and not hearing it, or sealing the heart, is connected with committing sins.

Gazzali goes on with his simile and says, “For everything known there is a truth, a picture of which falls on the mirror of heart, which is the home of knowledge.”

Now, in the same way in which an ordinary mirror cannot reflect an image because of any one of the following defects:

1. imperfect components
2. opacity of the face of the mirror
3. not facing the bright side of the mirror
4. the existence of a barrier between the mirror and the objects
5. the object not being placed in front of the mirror

A human heart, which is capable of cognizing realities, may lose this capacity if affected by one of the following five causes:

1. intrinsic deficiency, as in the case of children
2. obscurity (darkness) caused by sins and lust, therefore, turning one’s face towards the Creator and turning away from passion purifies the heart and makes it glitter:

“Nor can you lead away the blind out of their error. You cannot make to hear any but those who believe in Our communications so they shall submit.” (30:53)

كَذَلِكَ يَجْعَلُ اللَّهُ الرَّجْسَ عَلَى الَّذِينَ لَا يُؤْمِنُونَ

“...Thus does God lay uncleanness on those who do not believe.” (6: 125)

إِنَّا جَعَلْنَا الشَّيَاطِينَ أَوْلِيَاءَ لِلَّذِينَ لَا يُؤْمِنُونَ

“Surely we have made the Shaitans to be guardians of those do not believe.” (7:27)

إِنَّ الَّذِينَ لَا يُؤْمِنُونَ بِآيَاتِ اللَّهِ لَا يَهْدِيهِمُ اللَّهُ

“(As for) those who do not believe in God’s communications, surely God will not guide them.” (16: 104)

وَالَّذِينَ لَا يُؤْمِنُونَ فِي آذَانِهِمْ وَقْرٌ وَهُوَ عَلَيْهِمْ عَمًى

“...and (as for) those who do not believe, there is a heaviness in their ears and it is obscure to them.” ((41:44)

Some verses in the Qur’an indicate the sole reliance on knowledge, without faith, can never take one to the correct understanding of nature:

قُلْ انظُرُوا مَاذَا فِي السَّمَاوَاتِ وَالْأَرْضِ ۚ وَمَا تُغْنِي الْآيَاتُ وَالنُّذُرُ عَنْ قَوْمٍ لَا يُؤْمِنُونَ

“Say, ‘Consider what is it in which is in the heavens and the earth, and signs and warners do not avail a people who would not believe.’ (10: 101)

فَأَعْرَضَ عَنْ مَنْ تَوَلَّى عَنْ ذِكْرِنَا وَلَمْ يُرِدْ إِلَّا الْحَيَاةَ الدُّنْيَا ۚ كَذَلِكَ مَبْلُغُهُمْ مِنَ الْعِلْمِ ۚ إِنَّ رَبَّكَ هُوَ أَعْلَمُ بِمَنْ ضَلَّ عَنْ سَبِيلِهِ وَهُوَ أَعْلَمُ بِمَنْ اهْتَدَى

“Therefore, turn aside from him who turns his back upon Our reminder and does not desire anything but this world’s life. This is their goal of knowledge, and He knows best him who follows the right direction.” (53:29 – 30)

As previously mentioned, the principal role of faith in understanding is to restore man's faculty of intellect to its original state.

2. The existence of the factors causing intellect's deviation

A. Following one's desires, fancy and wishes

It is repeatedly mentioned in the Qur'an in which the following one's desires and wishes lead one astray:

فَإِنْ لَمْ يَسْتَجِيبُوا لَكَ فَاعْلَمْ أَنَّمَا يَتَّبِعُونَ أَهْوَاءَهُمْ ۚ وَمَنْ أَضَلُّ مِمَّنِ اتَّبَعَ هَوَاهُ بِغَيْرِ هُدًى مِنَ اللَّهِ

“But if they do now answer you, know they only follow their low desires, and who is more erring than he who follows his low desires without any guidance from God.” (28:50)

أَفَرَأَيْتَ مَنْ اتَّخَذَ إِلَهَهُ هَوَاهُ وَأَضَلَّهُ اللَّهُ عَلَىٰ عِلْمٍ وَخَتَمَ عَلَىٰ سَمْعِهِ وَقَلْبِهِ وَجَعَلَ عَلَىٰ بَصَرِهِ غِشَاوَةً فَمَنْ يَهْدِيهِ مِنْ بَعْدِ اللَّهِ ۚ أَفَلَا تَذَكَّرُونَ

“Have you then considered him who takes his low desire for his god, and Allah has made him err, having knowledge, and has set a seal upon his ears and his heart and put a covering upon his eye. Who can then guide him after Allah? Will you not then be mindful?” (45:23)

وَلَيْنِ اتَّبَعْتَ أَهْوَاءَهُمْ بَعْدَ الَّذِي جَاءَكَ مِنَ الْعِلْمِ ۚ مَا لَكَ مِنَ اللَّهِ مِنْ وَلِيٍّ وَلَا نَصِيرٍ

“And if you follow their desires after the knowledge has come to you, you shall have no guardian from Allah, nor any helper.” (2: 120)

فَاحْكُم بَيْنَ النَّاسِ بِالْحَقِّ وَلَا تَتَّبِعِ الْهَوَىٰ فَيُضِلَّكَ عَنْ سَبِيلِ اللَّهِ

“...so judge between men with justice, and do not follow desires, lest it should lead you astray from the path of God.” (38:26)

وَإِنَّ كَثِيرًا لَيُضِلُّونَ بِأَهْوَائِهِمْ بِغَيْرِ عِلْمٍ

“...and most surely many would lead (people) astray by their low desires out of ignorance...” (6: 119)

أُولَٰئِكَ الَّذِينَ طَبَعَ اللَّهُ عَلَىٰ قُلُوبِهِمْ وَاتَّبَعُوا أَهْوَاءَهُمْ

“And these are they upon whose hearts God has set a seal and they follow their low desires.”

(47: 16)

Our Great Prophet (S) has been quoted as saying,[41](#)

إن أخوف ما أخاف فيك الهوى وصل الأمر ، أما الهوى فإنه يصد عن الحق. وأما طول الأمل فبني الأخرة

“In your case, I would fear two characteristics: obedience to desires and indulgence. Obedience to desires and fancies keeps you away from finding truth, and indulgence causes to forget the Resurrection.”

And it has been reported from Imam Ali (a.s.) as saying,

الهوى عدو العقل

“Desire is the enemy of reason.”[42](#)

And,

الأمانى تعمي أعين البصائر

“Ambition blinds man’s insight.”[43](#)

B. Blind love or hatred and unjustifiable prejudice

These, too, are the factors which prevent the intellect from impartiality and seeking truth. An Arab poet said,

وعين الرضا عن كل عيب كليلة ولكن عين السخط ندى المساويا

“A look through satisfied eyes covers all the faults, but a look of discontent uncovers all the faults.”

Or as Mowlavi puts it, “When bias comes, art is covered.”

The Holy Qur’an has repeatedly warned man against the diseases which inflict the heart:

وَأَمَّا ثَمُودُ فَهَدَيْنَاهُمْ فَاسْتَحَبُّوا الْعَمَىٰ عَلَى الْهُدَىٰ فَأَخَذَتْهُمُ صَاعِقَةُ الْعَذَابِ الْهُونِ بِمَا كَانُوا يَكْسِبُونَ

“And as to Thamud, We showed them the right way, but they chose error above guidance, so

there overtook them the scourge of an abasing chastisement for what they earned.” (41:17)

وَعَادًا وَثَمُودَ وَقَدْ تَبَيَّنَ لَكُمْ مِنْ مَسَاكِينِهِمْ ۚ وَزَيَّنَ لَهُمُ الشَّيْطَانُ أَعْمَالَهُمْ فَصَدَّهُمْ عَنِ السَّبِيلِ وَكَانُوا مُسْتَبْصِرِينَ

“And (We destroyed) ‘Ad and Thamud and from their dwellings (this) is apparent to you indeed, and the Shaytan made their deeds fair seeming to them, so he kept them back from their path, though they were endowed with intelligence and skill.” (29:38)

وَقَالَ يَا قَوْمِ لَقَدْ أَبْلَغْتُكُمْ رَسُولَهُ رَبِّي وَنَصَحْتُ لَكُمْ وَلَكِنْ لَا تُحِبُّونَ النَّاصِحِينَ

Then said, “Oh my people, I did certainly deliver to you the message of my Lord and I gave you good advice, but you do not love those who give good advice.” (7:79)

ذَلِكَ بِأَنَّهُمْ اسْتَحَبُّوا الْحَيَاةَ الدُّنْيَا عَلَى الْآخِرَةِ وَأَنَّ اللَّهَ لَا يَهْدِي الْقَوْمَ الْكَافِرِينَ وَالَّذِينَ طَبَعَ اللَّهُ عَلَى قُلُوبِهِمْ وَسَمِعِهِمْ وَأَبْصَارِهِمْ ۚ وَأُولَئِكَ هُمُ الْغَافِلُونَ

“This is because they have this world’s life more than the hereafter, and because Allah does not guide the unbelieving people. These are they on whose hearts and their hearing and their eyes Allah has set a seal and these are the heedless ones.” (16:101 – 108)

لَقَدْ جِئْنَاكُمْ بِالْحَقِّ وَلَكِنْ أَكْثَرَكُمْ لِلْحَقِّ كَارِهُونَ

“Certainly we have brought you the truth but most of you are adverse to the truth.” (43:78)

ذَلِكَ بِأَنَّهُمْ كَرِهُوا مَا أَنْزَلَ اللَّهُ فَأَحْبَطَ أَعْمَالَهُمْ

“This is because they hated what God revealed. So He rendered their deed null.” (47:9)

وَزَيَّنَ ذَلِكَ فِي قُلُوبِكُمْ وَظَنَّتُمْ ظَنَّ السَّوْءِ وَكُنْتُمْ قَوْمًا بُورًا

“...and this was made fair seeming to your hearts and you thought an evil thought and you were a people doomed to perish.” (48:12)

وَقَالَ نِسْوَةٌ فِي الْمَدِينَةِ امْرَأَتُ الْعَزِيزِ تُرَاوِدُ فَتَاهَا عَنْ نَفْسِهِ ۚ قَدْ شَغَفَهَا حُبًّا ۚ إِنَّا لَنَرَاهَا فِي ضَلَالٍ مُبِينٍ

“And the women in the city said, ‘The chief’s wife seeks her slave to yield himself (to her), surely he has affected her deeply with (his) love, most surely we see her in manifest error.’” (12:30)

وَكَذَلِكَ زَيْنَ لِفِرْعَوْنَ سُوءَ عَمَلِهِ وَصَدَّ عَنِ السَّبِيلِ

“And thus the evil of his deed was made fair seeming to Pharaoh, and he was turned away from the way...” (40:37)

It has been quoted from the great Prophet (S),[44](#)

حبك للشئ يعمي ويصم

“Loving something makes you blind and deaf (in relation to it).”

And it has been quoted from ‘Ali (a.s.),

ومن عشق شيئاً اغشى بصره وأمرض قلبه فهو ينظر بعين غير صحيحة ويسمع بأذن غير سمیعة

“A lover is blind and sick at heart, so he faces the truth with unhealthy sight and a deaf ear.”[45](#) And, “Heart turns blind to what it dislikes.”[46](#)

C. Pomposity

It happens so often in which a person (though aware of the fact) does not accept truth. The Qur’an warns this group of people of God’s severe punishment:

يَسْمَعُ آيَاتِ اللَّهِ تُتْلَىٰ عَلَيْهِ ثُمَّ يُصِرُّ مُسْتَكْبِرًا كَأَن لَّمْ يَسْمَعْهَا ۚ فَبَشِّرْهُ بِعَذَابٍ أَلِيمٍ ۗ إِذَا عَلِمَ مِنْ آيَاتِنَا شَيْئًا اتَّخَذَهَا هُزُوًا ۚ أُولَٰئِكَ لَهُمْ عَذَابٌ مُّهِينٌ

“Who hears the communications of Allah recited to him, then persists proudly as though he has not heard them? So announce to him a painful punishment. And when he comes to know of any of Our communications, he takes it for a jest, these it is which shall have abasing chastisement.” (45:8 – 9)

إِنَّ الَّذِينَ يُجَادِلُونَ فِي آيَاتِ اللَّهِ بِغَيْرِ سُلْطَانٍ أَتَاهُمْ ۚ إِنَّ فِي صُدُورِهِمْ إِلَّا كِبْرًا مَا هُمْ بِبَالِغِيهِ ۚ فَاسْتَعِذْ بِاللَّهِ

“Surely (as for) those who dispute about the communications of God without any authority which

has come to them, there is naught in their breasts but (a desire) to become great which they shall never attain to...” (40:56)

فَلَمَّا جَاءَتْهُمْ آيَاتُنَا مُبْصِرَةً قَالُوا هَذَا سِحْرٌ مُّبِينٌ

“So when Our clear signs came to them, they said, ‘This is clear enchantment, and they denied them unjustly and proudly while their soul had been convinced of them; consider, then how was the end of the mischief makers.’” (23: 13 – 14)

فَمَا أَغْنَىٰ عَنْهُمْ سَمْعُهُمْ وَلَا أَبْصَارُهُمْ وَلَا أَفْئِدَتُهُمْ مِنْ شَيْءٍ إِذْ كَانُوا يَجْحَدُونَ بِآيَاتِ اللَّهِ وَحَاقَ بِهِمْ مَا كَانُوا بِهِ يَسْتَهْزِئُونَ

“But neither their ears nor their eyes nor their hearts availed them aught since they denied the communications of God, and in which they mocked encompassed them.” (46:26)

إِنَّ الَّذِينَ كَذَّبُوا بِآيَاتِنَا وَاسْتَكْبَرُوا عَنْهَا لَا تُفْتُحُ لَهُمُ أَبْوَابُ السَّمَاءِ

“Surely (as for) those who reject Our communications and turn away from them haughtily, the doors of heaven shall not be opened for them.” (7:40)

وَإِنِّي كُلَّمَا دَعَوْتُهُمْ لِتَغْفِرَ لَهُمْ جَعَلُوا أَصَابِعَهُمْ فِي آذَانِهِمْ وَاسْتَغْشَوْا ثِيَابَهُمْ وَأَصْرُوا وَاسْتَكْبَرُوا اسْتِكْبَارًا

“And whenever I have called them in which You may forgive them, they put their fingers in their ears, cover themselves with their garments, and persist and are puffed up with pride.” (71:7)

ثُمَّ أَدْبَرَ وَاسْتَكْبَرَ فَقَالَ إِنَّ هَذَا إِلَّا سِحْرٌ يُؤْتَرُ

“Then he turned back and was big with pride. Then he said, ‘This is naught but enchantment narrated.’” (74:23 – 24)

It is quoted from our Prophet (S) who said,[47](#)

يا علي ثلاث درجات وثلاث كفارات وثلاث منجيات...وأما المهلكات فشح مطاع وهي منبع واعجاب المرء بنفسه

“Oh ‘Ali, people perish because of three characteristics: jealousy, (carnal) desire, and egoism.”

And it has been reported from ‘Ali (a.s.) who said,

العجب يفسد العقل

“Egoism corrupts intellect.”⁴⁸

D. Blind Imitation of the Ancestors’ Opinions, Men of Authority, and the Sediments of One’s Own Thoughts

These, too, are characteristics which put barriers in the way of seeking the truth, and are repeatedly condemned in the Qur’an:

وَقَالُوا رَبَّنَا إِنَّا أَطَعْنَا سَادَتَنَا وَكُبْرَاءَنَا فَأَضَلُّونَا السَّبِيلَا

“And they shall say, ‘Oh our Lord, surely we obeyed our leaders and our great men, sot they led us astray from the path.’ (33:67)

بَلْ نَتَّبِعُ مَا أَلْفَيْنَا عَلَيْهِ آبَاءَنَا ۖ أَوْلُو كَانَ آبَاؤُهُمْ لَا يَعْلَمُونَ شَيْئًا وَلَا يَهْتَدُونَ

“Nay, we follow what we found our fathers upon. What, and though their fathers had no sense at all, nor did they follow the right way.” (2: 170)

فَلَمَّا جَاءَتْهُمْ رُسُلُهُم بِالْبَيِّنَاتِ فَرِحُوا بِمَا عِنْدَهُمْ مِنَ الْعِلْمِ وَحَاقَ بِهِمْ مَا كَانُوا بِهِ يَسْتَهْزِئُونَ

“Then when their apostles came to them with clear arguments, they exulted in what they had with them of knowledge, and there beset them which they used to mock.” (40:83)

وَإِذَا قِيلَ لَهُمْ تَعَالَوْا إِلَىٰ مَا أَنْزَلَ اللَّهُ وَإِلَىٰ الرَّسُولِ قَالُوا حَسْبُنَا مَا وَجَدْنَا عَلَيْهِ آبَاءَنَا ۖ أَوْلُو كَانَ آبَاؤُهُمْ لَا يَعْلَمُونَ شَيْئًا وَلَا يَهْتَدُونَ

“And when it is said to them, ‘Follow what Allah has revealed and this messenger.’ They say, ‘Nay, we follow what we find our fathers upon.’ What! Even though their fathers had no sense at all, nor did they follow the right way.” (5: 104)

وَكَذَلِكَ مَا أَرْسَلْنَا مِنْ قَبْلِكَ فِي قَرْيَةٍ مِنْ نَذِيرٍ إِلَّا قَالَ مُتْرَفُوهَا إِنَّا وَجَدْنَا آبَاءَنَا عَلَىٰ أُمَّةٍ وَإِنَّا عَلَىٰ آثَارِهِمْ مُقْتَدُونَ قَالَ أَوْلُو جِئْتُكُمْ بِأَهْدَىٰ مِمَّا وَجَدْتُمْ عَلَيْهِ آبَاءَكُمْ ۖ قَالُوا إِنَّا بِمَا أُرْسِلْتُمْ بِهِ كَافِرُونَ فَانْتَقَمْنَا مِنْهُمْ ۖ فَانظُرْ كَيْفَ كَانَ عَاقِبَةُ

الْمُكَذِّبِينَ إِذْ قَالَ إِبْرَاهِيمُ لِأَبِيهِ وَقَوْمِهِ إِنَّنِي بَرَاءٌ مِمَّا تَعْبُدُونَ إِلَّا الَّذِي فَطَرَنِي فَإِنَّهُ سَيَهْدِينُ وَجَعَلَهَا كَلِمَةً بَاقِيَةً فِي عَقْبِهِ
لَعَلَّهُمْ يَرْجِعُونَ بَلْ مَتَّعْتُ هَؤُلَاءِ وَأَبَاءَهُمْ حَتَّىٰ جَاءَهُمُ الْحَقُّ وَرَسُولٌ مُّبِينٌ لَمَّا جَاءَهُمُ الْحَقُّ قَالُوا هَذَا سِحْرٌ وَإِنَّا بِهِ
كَافِرُونَ وَقَالُوا لَوْلَا نَزَلَ هَذَا الْقُرْآنُ عَلَىٰ رَجُلٍ مِنَ الْفَرِيقَيْنِ عَظِيمًا هُمْ يَقْسِمُونَ رَحْمَتَ رَبِّكَ ۗ نَحْنُ قَسَمْنَا بَيْنَهُمْ
مَعِيشَتَهُمْ فِي الْحَيَاةِ الدُّنْيَا ۗ وَرَفَعْنَا بَعْضَهُمْ فَوْقَ بَعْضٍ دَرَجَاتٍ لِيَتَّخِذَ بَعْضُهُمْ لِبَعْضٍ سَخِرِيًّا ۗ وَرَحِمْنَا رِبَّكَ خَيْرٍ
مِمَّا يَجْمَعُونَ وَلَوْلَا أَنْ يَكُونَ النَّاسُ أُمَّةً وَاحِدَةً لَجَعَلْنَا لِمَنْ يَكْفُرُ بِالرَّحْمَنِ لِبُيُوتِهِمْ سُقْفًا مِنْ فِضَّةٍ وَمَعَارِجَ عَلَيْهَا
يَظْهَرُونَ وَلِبُيُوتِهِمْ أَبْوَابًا وَسُرُورًا عَلَيْهَا يُتَّكِنُونَ

“And thus, We did not send before you any warner in a town, but those who had easy lives in it said, ‘Surely we find our fathers on a course, and surely we are followers of their footsteps.’ (The warner) said, ‘What! Even if I bring to you a better guide than which you find you find your fathers?’ They said, ‘Surely we are unbelievers with whom you are sent.’” (43:23 – 34)

وَتِلْكَ عَادٌ ۗ جَحَدُوا بِآيَاتِ رَبِّهِمْ وَعَصَوْا رُسُلَهُ وَاتَّبَعُوا أَمْرَ كُلِّ جَبَّارٍ عَنِيدٍ

“And this was ‘Ad, they denied the communications of their Lord, and disobeyed His apostles and followed the bidding of every insolent oppose (of truth).” (11:59)

فَاتَّبَعُوا أَمْرَ فِرْعَوْنَ ۗ وَمَا أَمْرُ فِرْعَوْنَ بِرَشِيدٍ

“...but they followed the bidding of Pharaoh, and Pharaoh’s bidding was not right directing.” (11:97)

E. Haste and Judgments

Haste often is the cause of carelessness and error in understanding the truth. This is why the Qur’an has warned us against it:

خُلِقَ الْإِنْسَانُ مِنْ عَجَلٍ ۗ سَأُرِيكُمْ آيَاتِي فَلَا تَسْتَعْجِلُونِ

“Man is created of haste, now will I show to you my signs; therefore, do not ask Me to hasten (them) on.” (21:37)

وَلَا تَعْجَلْ بِالْقُرْآنِ مِنْ قَبْلِ أَنْ يُقْضَىٰ إِلَيْكَ وَحْيُهُ ۗ وَقُلْ رَبِّ زِدْنِي عِلْمًا

“...and do not make haste with the Qur’an before its revelation is made complete to you.” (20: 114)

يَا أَيُّهَا الَّذِينَ آمَنُوا إِن جَاءَكُمْ بِنَبِيٍّ فَتَّبِعُونَا أُن تُصِيبُوا قَوْمًا بِجَهَالَةٍ فَتُصْحَبُوا عَلَىٰ مَا فَعَلْتُمْ نَادِمِينَ

Oh you who believe, if an evil-doer comes to you with a report, look carefully into it, lest you harm a people in ignorance, they be sorry for what you have done.” (49:6)

It has been quoted from our Prophet (S) who said,[49](#)

الإطمئنان من الله والعجلة من الشيطان إنما أهلك الناس العجلة ، ولو أن الناس تثبتوا لم يهلك أحد

“Haste is the deed of Shaytan, and tranquility is from Allah. Indeed, human beings face death when they act hastily; had men had stability they would not have perished.”

And Imam ‘Ali has been quoted as saying,[50](#)

العجلة تمنع الإصابة

“Haste hinders one from reaching righteousness and rectitude.”

3. Ignorance

Most of the errors in judgments (whether scientific or non-scientific) originate from ignorance of the subject and lack of enough knowledge about it.

In the Qur’an, there are a goon number of verses in which ignorance has been condemned:

قَالَ رَبِّ إِنِّي أَعُوذُ بِكَ أَنْ أَسْأَلَكَ مَا لَيْسَ لِي بِهِ عِلْمٌ

He said, “My Lord, I seek refuge in You from asking You of which I have no knowledge.” (11:47)

عِلْمٌ فَلِمَ تَحَاجُّونَ فِيمَا لَيْسَ لَكُمْ بِهِ عِلْمٌ

“...why then do you dispute about which you have no knowledge?” (3:66)

وَإِنَّ كَثِيرًا لَيُضِلُّونَ بِأَهْوَاءِهِمْ بِغَيْرِ عِلْمٍ

“And most surely many would lead (people) astray to their low desires out of ignorance...” (6: 119)

وَمِنَ النَّاسِ مَنْ يُجَادِلُ فِي اللَّهِ بِغَيْرِ عِلْمٍ وَلَا هُدًى وَلَا كِتَابٍ مُنِيرٍ

“And among men there is he who disputes about Allah without knowledge and without guidance and without an illuminating book.” (22:8)

وَأُبَلِّغُكُمْ مَا أُرْسِلْتُ بِهِ وَلَكِنِّي أَرَأَيْتُمْ قَوْمًا تَجْهَلُونَ

“...and I deliver to you the message with which I am sent but I see you are a people who are ignorant.” (46:23)

Our great Prophet (S) is reported to have said,[51](#)

من أفتى الناس بغير علم لعنته ملائكة السموات والأرض

“The angels in the heavens and the earth curse the person who passes judgment without knowledge.”

Among the evident examples of ignorant judgments, one may include subjection to conjecture, unfounded confirmations or rejections, and superficial consideration of events and phenomena.

A. Subjection to Conjecture

In the Qur'an we have been repeatedly warned against subjection to conjecture and sacrificing knowledge to supposition:

وَقَالُوا مَا هِيَ إِلَّا حَيَاتُنَا الدُّنْيَا نَمُوتُ وَنَحْيَا وَمَا يُهْلِكُنَا إِلَّا الدَّهْرُ ۗ وَمَا لَهُم بِذَلِكَ مِنْ عِلْمٍ ۗ إِنْ هُمْ إِلَّا يَظُنُّونَ

They say, “There is nothing but our life in this world, we live and die and nothing destroys us but time, and they have no knowledge of this, they only conjecture.” (45:24)

وَمَا لَهُمْ بِهِ مِنْ عِلْمٍ ۗ إِنْ يَتَّبِعُونَ إِلَّا الظَّنَّ ۗ وَإِنَّ الظَّنَّ لَا يُغْنِي مِنَ الْحَقِّ شَيْئًا

“And they have no knowledge of it, they do not follow anything but conjecture and surely conjecture does not avail against the truth at all.” (53:28)

يَظُنُّونَ بِاللَّهِ غَيْرَ الْحَقِّ ظَنَّ الْجَاهِلِيَّةِ

“They entertained about God thoughts of ignorance quite unjustly.” (3: 154)

B. Unfounded Confirmations and Rejections

The Glorious Qur'an encourages us to follow reason and avoid unfounded confirmations:

قُلْ هَلْ عِنْدَكُمْ مِنْ عِلْمٍ فَتُخْرِجُوهُ لَنَا ۖ إِنْ تَتَّبِعُونَ إِلَّا الظَّنَّ وَإِنْ أَنْتُمْ إِلَّا تَخْرُصُونَ

Say, "Have you any knowledge with you so you should bring it forth to us? You only follow a conjecture and you only tell lies." (6: 148)

وَقَالُوا لَنْ يَدْخُلَ الْجَنَّةَ إِلَّا مَنْ كَانَ هُودًا أَوْ نَصَارَى ۖ تِلْكَ أَمَانِيُّهُمْ ۖ قُلْ هَاتُوا بُرْهَانَكُمْ إِنْ كُنْتُمْ صَادِقِينَ

And they said, "None shall enter the garden (of paradise) except he who is a Jew or a Christian. These are their vain desires." Say, "Bring your proof if you are truthful." (2: 111)

قُلْ أَرَأَيْتُمْ مَا تَدْعُونَ مِنْ دُونِ اللَّهِ أَرُونِي مَاذَا خَلَقُوا مِنَ الْأَرْضِ أَمْ لَهُمْ شِرْكٌ فِي السَّمَاوَاتِ ۖ ائْتُونِي بِكِتَابٍ مِنْ قَبْلِ هَذَا أَوْ أَثَارَةٍ مِنْ عِلْمٍ إِنْ كُنْتُمْ صَادِقِينَ

Say, "Have you considered what you call upon besides Allah? Show me what they have created of the earth, or have they a share in the heavens? Bring me a book before this or traces of knowledge, if you are truthful." (46:4)

إِنَّ الَّذِينَ يُجَادِلُونَ فِي آيَاتِ اللَّهِ بِغَيْرِ سُلْطَانٍ أَتَاهُمْ ۖ إِنْ فِي صُدُورِهِمْ إِلَّا كِبْرٌ مَا هُمْ بِبَالِغِيهِ ۖ فَاسْتَعِذْ بِاللَّهِ ۖ إِنَّهُ هُوَ السَّمِيعُ الْبَصِيرُ

"Surely (as for) those who dispute about the communications of Allah without any authority which has come to them, there is naught in their breast but (a desire) to become great which they never attain to. Therefore, seek refuge in Allah; surely He is the Hearing and the Seeing." (40:56)

وَلَا تَقْفُ مَا لَيْسَ لَكَ بِهِ عِلْمٌ ۖ إِنَّ السَّمْعَ وَالْبَصَرَ وَالْفُؤَادَ كُلُّ أُولَئِكَ كَانَ عَنْهُ مَسْئُولًا

"And follow not those of which you have not the knowledge. Surely the hearing and the sight and the heart, all of this shall be questioned about this." (17:36)

It is important in any research neither to confirm nor refute (reject) any view without taking into consideration all the relevant information available and even then reserve judgment until one arrives at a certain result. It is quoted from Imam al-Sadiq as having said,[52](#)

إن الله تبارك وتعالى خص عباده بأيتين من كتابه أن لا يقولوا حتى يعلموا ولا يردوا ما لم يعلموا. قال الله عز وجل: ألم يؤخذ عليهم ميثاق الكتاب أن يقولوا على الله إلا الحق – الأعراف 169

“Allah has earmarked two verses from His Book (Qur’an) for his creatures not to speak on any subject until they know about it, nor reject what they do not know. Allah has said,

وقال: بل كذبوا بما لم يحيطوا بعلمه ولما يأتهم تأويله – يونس 39

‘Did they not pledge not to utter but the truth about God.’ And Allah has said, ‘They rejected what they did not know while they had no access to its interpretation.’”

Unfortunately, overlooking this important principle has led some research scholars in natural sciences to come unfounded generalizations or rejections, thus causing irreparable material and spiritual loss to **human societies**. Atheism and materialism, pre-dominant in certain academic circles, are striking examples of this wrong attitude. Those who base their judgments on perceptible only have no right to deny supra-perceptible realities. The most they are entitled to do is to keep silent in such matter.

Researches should always bear in mind the advice given by ibn Sina in his **al-Isharat, waal-Tanbhat**, which in fact, beautifully elaborates the spirit of the afore-mentioned Qur’anic verses. It goes as follows,⁵³ “Lest you believe in which rejecting is (a sign of) imbecility and weakness. Rejection of what is not clear to you is no less foolish than confirming what is not proved to you. Should you hear something which sounds odd to you, you should hang onto it unless you have no proof for its improbability. It is advisable you consider such issues just probable as long as they have not been rejected by firm proofs...”

C. Superficiality

The Qur’an strongly condemns those who look at the natural phenomena superficially and pass comments without trying to find reasons behind the natural events:

وَقَالُوا لَوْ كُنَّا نَسْمَعُ أَوْ نَعْقِلُ مَا كُنَّا فِي أَصْحَابِ السَّعِيرِ

And they shall say, “Had we but listened or pondered, we should not have been among the inmates of the burning fire.” (67: 10)

وَيَجْعَلُ الرَّجْسَ عَلَى الَّذِينَ لَا يَعْقِلُونَ

“...and He casts uncleanness on those who will not understand.” (10: 100)

وَإِذَا نَادَيْتُمْ إِلَى الصَّلَاةِ اتَّخَذُوهَا هُزُوءًا وَلَعِبًا ۖ ذَٰلِكَ بِأَنَّهُمْ قَوْمٌ لَا يَعْقِلُونَ

And when you call to prayer they make mockery and a joke; this is because they are a people who do not understand. (5:58)

وَمِنْهُمْ مَنْ يَسْتَمِعُونَ إِلَيْكَ ۖ أَفَأَنْتَ تُسْمِعُ الصُّمَّ وَلَوْ كَانُوا لَا يَعْقِلُونَ

And there are those of them who hear you, but can you make the deaf to hear though they will not understand?” (10:42)

أَفَلَمْ يَسِيرُوا فِي الْأَرْضِ فَتَكُونَ لَهُمْ قُلُوبٌ يَعْقِلُونَ بِهَا

And have they not travelled in the land so they could have hearts with which to understand, or ears with which to hear...” (22:46)

يَعْلَمُونَ ظَاهِرًا مِنَ الْحَيَاةِ الدُّنْيَا وَهُمْ عَنِ الْآخِرَةِ هُمْ غَافِلُونَ

They know the outward of this world’s life, but of the hereafter they are absolutely heedless.” (30:7)

وَكَأَيِّنْ مِنْ آيَةٍ فِي السَّمَاوَاتِ وَالْأَرْضِ يَمُرُّونَ عَلَيْهَا وَهُمْ عَنْهَا مُعْرِضُونَ

And how many a sign in the heavens and the earth which they pass by, yet they turn aside from it.” (12:105)

On the basis of the following two verses we can conclude in which the fundamental difference between man and beasts of burden lies in rationality; therefore, a person not utilizing their reason is even less conscious of the right way than animals:

إِنَّ شَرَّ الدَّوَابِّ عِنْدَ اللَّهِ الصُّمُّ الْبُكْمُ الَّذِينَ لَا يَعْقِلُونَ

Surely the vilest animals, in Allah’s sight are the deaf and the dumb who do not understand.” (8:22)

أَمْ تَحْسَبُ أَنَّ أَكْثَرَهُمْ يَسْمَعُونَ أَوْ يَعْقِلُونَ ۖ إِنْ هُمْ إِلَّا كَالْأَنْعَامِ ۖ بَلْ هُمْ أَضَلُّ سَبِيلًا

Or do you think most of them do hear or understand? They are nothing but as cattle, nay, they are further astray from the path.” (25:44)

Indifference towards Craving for or Acceptance of Truth

One of the important factors which leads a researcher, in any field of research, to success is the researcher should solely look for the truth. The Glorious Qur'an calls on a person to seek and follow the truth:

فَيَتَّبِعُونَ أَحْسَنَهُ ۚ أُولَٰئِكَ الَّذِينَ هَدَاهُمُ اللَّهُ ۚ وَأُولَٰئِكَ هُمْ أُولُو الْأَلْبَابِ

Therefore, give good news to My servants who listen to the word, then follow the best of it. These are whom Allah has guided and who are the men of understanding. (39: 18)

أَمَّنْ لَا يَهْدِي إِلَّا أَنْ يَهْدَىٰ

...certainly the truth has come from your Lord. Therefore, you should not be of the disputers.” (10:49)

فَمَاذَا بَعْدَ الْحَقِّ إِلَّا الضَّلَالُ ۚ فَأَنَّى تُصْرَفُونَ

...what is there after the truth but error, how are you then turned back? (10:32)

Furthermore, the Qur'an condemns those who have no craving for truth or do not accept it when it is told to them:

فَقَدْ كَذَّبُوا بِالْحَقِّ لَمَّا جَاءَهُمْ

So they have indeed rejected the truth when it came to them. (6:5)

لَقَدْ جِئْنَاكُمْ بِالْحَقِّ وَلَكِنَّ أَكْثَرَكُمْ لِلْحَقِّ كَارِهُونَ

Certainly we have brought you the truth but most of you are adverse to the truth. (43:78)

وَمَنْ أَظْلَمُ مِمَّنِ افْتَرَىٰ عَلَى اللَّهِ كَذِبًا أَوْ كَذَّبَ بِالْحَقِّ لَمَّا جَاءَهُ

And who is more unjust than one who forges a lie against Allah or gives the lie to the truth when it has come to him. (29:68)

سَأَصْرِفُ عَنْ آيَاتِيَ الَّذِينَ يَتَكَبَّرُونَ فِي الْأَرْضِ بِغَيْرِ الْحَقِّ وَإِنْ يَرَوْا كُلَّ آيَةٍ لَا يُؤْمِنُوا بِهَا وَإِنْ يَرَوْا سَبِيلَ الرُّشْدِ لَا يَتَّخِذُوهُ سَبِيلًا وَإِنْ يَرَوْا سَبِيلَ الْغَيِّ يَتَّخِذُوهُ سَبِيلًا ﴿٦٨﴾ ذَلِكَ بِأَنَّهُمْ كَذَّبُوا بِآيَاتِنَا وَكَانُوا عَنْهَا غَافِلِينَ

I will turn away from My communications those who are unjustly proud on the earth and if they see every sign they will not believe in it, and if they see the way of rectitude they do not take it for say and if they see the way of error, they take it for a way. This is because they rejected our communications and were heedless of them.” (7:146)

In the light of the glorious verses which follow, one comes to realize the Divine Verses are instructive for people who eagerly listen to and think about what they hear, and finally accept what is right:

وَمِنْ آيَاتِهِ مَنَامُكُمْ بِاللَّيْلِ وَالنَّهَارِ وَابْتِغَاؤُكُمْ مِنْ فَضْلِهِ ﴿٢٣﴾ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ يَسْمَعُونَ

And one of His signs is your sleeping and your seeking of His grace by night and (by) day, most surely there are signs in this for people would hear.” (30:23)

وَاللَّهُ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا ﴿٦٥﴾ إِنَّ فِي ذَلِكَ لَآيَةً لِقَوْمٍ يَسْمَعُونَ

And Allah has sent down water from the heaven (clouds) and therewith given life to the earth after its death; most surely there is a sign in this for a people would listen.” (16:65)

Guiding Principles in Understanding Nature

We have already said the Qur'an is not a book of natural science but a book of guidance and enlightenment, and wherever there is reference to the natural phenomena, it is meant to guide humans through them. We also explained God has gifted man with mental faculties so through their own endeavours and God's help they can gradually come to understand the universe as well as their own selves and in this way get nearer to the Creator of the universe.

According to the following glorious verses:

وَنَزَّلْنَا عَلَيْكَ الْكِتَابَ تَبْيَانًا لِكُلِّ شَيْءٍ وَهُدًى وَرَحْمَةً وَبُشْرَى لِلْمُسْلِمِينَ

“...and we have revealed the book to you explaining clearly everything and as a guidance and mercy and good news for those who submit.” (16:89)

مَا فَرَّطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ

“...we have not neglected anything in the Book...” (6:38)

The Qur’an undertakes the guidance of human beings in all stages of life. One, therefore, can expect to derive the guiding principles for researches done in natural sciences from the Qur’an. By inference from the Qur’an we believe, in addition to the principles of logic, such as the principle of “non-contradiction,” the following principles should be also used as the guidelines for scientific research.

1. Faith in the Principle of Divine Unity (al-Tawhid)

According to the Qur’anic verses, God is the only Creator and Ruler of the whole universe. Everything originates from Him and ends in Him. All creatures praise Allah, as the purpose behind the creation of man was to approach Allah through worshipping Him:

وَمَا خَلَقْتُ الْجِنَّ وَالْإِنْسَ إِلَّا لِيَعْبُدُونِ

“And I have not created the jinn and the human except in whom they would serve Me.” (51:56)

Hence, every step one takes should be aimed at gaining His consent and approaching oneself to the Almighty. The search for the discovery of nature is no exception to this rule. Observance of the grandeur in the Divine deeds, and making use of the possibilities therein for humans to attain the eternal happiness should be given priority.

The Qur’an does not approve of such cognitions which aim at nothing except satisfying one’s own curiosity. On the way to understanding of nature, one should not busy oneself with the means and forget the ultimate End. If the researcher realizes God is Infinite in all respects, his attention to this infinite source keeps him moving on without hindrance, and he will be able to find more and more about the magnificence of creation. This is the surest way of attaining proximity to the Creator of the universe.

The understanding of nature should lead us along the road covered by Prophet Ibrahim, i.e. to commence from the beginning of the string of causes and reach the end – the Lord of the universe.

فَلَمَّا جَنَّ عَلَيْهِ اللَّيْلُ رَأَى كَوْكَبًا ۖ قَالَ هَذَا رَبِّي ۖ فَلَمَّا أَفَلَ قَالَ لَا أُحِبُّ الْآفِلِينَ فَلَمَّا رَأَى الْقَمَرَ بَازِعًا قَالَ هَذَا رَبِّي ۖ فَلَمَّا أَفَلَ قَالَ لَيْسَ لِي بِهِدْيِي رَبِّي لَأَكُونَنَّ مِنَ الْقَوْمِ الضَّالِّينَ فَلَمَّا رَأَى الشَّمْسَ بَازِعَةً قَالَ هَذَا رَبِّي هَذَا أَكْبَرُ ۖ فَلَمَّا أَفَلَتْ قَالَ يَا قَوْمِ إِنِّي بَرِيءٌ مِمَّا تُشْرِكُونَ إِنِّي وَجَّهْتُ وَجْهِيَ لِلَّذِي فَطَرَ السَّمَاوَاتِ وَالْأَرْضَ حَنِيفًا ۖ وَمَا أَنَا مِنَ الْمُشْرِكِينَ

“So when the night over-shadowed him, he saw a star, said he, ‘Is this my Lord?’ So when it set, he said, ‘I do not love the setting ones.’ Then when he saw the moon rising, he said, ‘Is this my Lord?’ So when it set, he said, ‘If my Lord had not guided me I should certainly be of the erring

people.’ Then when he saw the sun rising, he said, ‘Is this my Lord? Is this the greatest?’ So when it set he said, ‘Oh my people, surely I am clear of what you set up (with Allah). Surely I have turned myself, being upright, wholly to Him who originated the heavens and the earth, and I am not of the polytheists.’” (6:76 – 79)

As a result, Ibrahim (a.s.) was led to see the spiritual dimension of the heavens and the earth:

وَكَذَلِكَ نُرِي إِبْرَاهِيمَ مَلَكُوتَ السَّمَاوَاتِ وَالْأَرْضِ وَلِيَكُونَ مِنَ الْمُوقِنِينَ

And thus did We show Ibrahim the spiritual dimension of the heavens and the earth and so he might of those who are sure. (6:75)

And this is the way which all researches have been invited to follow:

أَوَلَمْ يَنْظُرُوا فِي مَلَكُوتِ السَّمَاوَاتِ وَالْأَرْضِ وَمَا خَلَقَ اللَّهُ مِنْ شَيْءٍ

“Do they not consider the spiritual dimension of the heavens and the earth and whatever things Allah has created?” (7: 185)

A firm belief in monotheism arms the researcher with a comprehensive view of nature, and they no more see it as a bundle of isolated pieces; rather, they observe their inter-relations and their common origin. He sees a unity behind this multiplicity. Experiences of past generations show scholars in the past always endeavoured to find a model according to which they could describe the whole nature. The Greeks had their designs for the explanation of the whole universe. In the Islamic world, too, different schools tried in different ways to discover a pattern for relating together various components of nature.

After the Renaissance, Newton tried to explain the celestial and terrestrial movements by the help of a series of laws. Then Einstein tried to take a step further than Newton in relation to natural issues. In recent years, too, the main effort of theoretical physicists has been to derive all the natural forces from one source. In all these stages it is quite apparent in which scientists have been trying to find suitable patterns by the help of which they could interpret the natural phenomena. They have been trying to generalize the result of an experiment carried out on the earth and apply it to the whole physical world.

This character of seeking for unification has been noticed among all scientists (whether materialists or non-materialist), and seems to be intrinsic. The difference between the two groups is the former come to stop as soon as they reach the appearance, while the latter seek for the Co-ordinator of this harmonious system. Here we cite two glorious verses from the Qur’an. The first refers to the first group, while the second reveals the opinion of the second:

وَقَالُوا مَا هِيَ إِلَّا حَيَاتُنَا الدُّنْيَا نَمُوتُ وَنَحْيَا وَمَا يُهْلِكُنَا إِلَّا الدَّهْرُ ۚ وَمَا لَهُم بِذَلِكَ مِنْ عِلْمٍ ۚ إِنْ هُمْ إِلَّا يَظُنُّونَ

And they say, "There is nothing but our life in this world, we live and die and nothing destroys us but time, and they have no knowledge of this, they only conjecture. (45:24)

خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ بِالْحَقِّ ۚ تَعَالَىٰ عَمَّا يُشْرِكُونَ

He created the heavens and the earth in truth, highly exalted be He above what they associate (with Him). (16:3)

An important point, which is greatly emphasized in the Qur'an, is the existence of order in natural phenomena, harmony among the various elements of nature, and a purpose in nature:

وَكُلُّ شَيْءٍ عِنْدَهُ بِمِقْدَارٍ

And there is a measure with Him of everything. (13:8)

وَخَلَقَ كُلَّ شَيْءٍ فَقَدَرَهُ تَقْدِيرًا

And who created everything then ordained for it a measure. (25:2)

مَا تَرَىٰ فِي خَلْقِ الرَّحْمَنِ مِنْ تَفَؤُتٍ ۚ فَارْجِعِ الْبَصَرَ هَلْ تَرَىٰ مِنْ فُتُورٍ

You see no incongruity in the creation of the Beneficent Allah, then look again, can you see any disorder? (67:3)

هُوَ الَّذِي جَعَلَ الشَّمْسَ ضِيَاءً وَالْقَمَرَ نُورًا وَقَدَرَهُ مَنَازِلَ لِتَعْلَمُوا عَدَدَ السِّنِينَ وَالْحِسَابَ ۚ مَا خَلَقَ اللَّهُ ذَلِكَ إِلَّا بِالْحَقِّ ۚ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ

He it is Who made the sun a shining brightness and the moon a light, and ordained for it mansions which you might know the computation of years and the reckoning. Allah did not create it but with truth, He makes the signs manifest for a people who know. (10:5)

The existence of this order and design has been pointed out as a sign of monotheism, the unity of the Almighty:

لَوْ كَانَ فِيهِمَا آلِهَةٌ إِلَّا اللَّهُ لَفَسَدَتَا

If there had been in them any gods except Allah, they would both have certainly been in a state of disorder. (21:22)

وَمَا كَانَ مَعَهُ مِنْ إِلَهٍ إِذًا لَذَهَبَ كُلُّ إِلَهٍ بِمَا خَلَقَ وَلَعَلَّ بَعْضُهُمْ عَلَى بَعْضٍ

...and never was there with Him any (other) god; in which case each god would have certainly taken away what he created, and some of them would certainly have over-powered others. Glory be to Allah above what they describe. (23:91)

صُنِعَ اللَّهُ الَّذِي أَتَقَنَ كُلَّ شَيْءٍ

...the handiwork of Allah who has made everything thoroughly... (27:88)

Belief in this principle is an important factor in encouraging scholars in their discovery of the laws of nature. In principle, any attempt to discover inter-relations in various aspects of nature without admitting order would look futile, as it would not acquire a universal validity but would remain a local and temporary one.

A belief in this principle makes us realise in whatever we failed to find the order in a natural phenomenon during our study, it would be due to the insufficiency of our knowledge rather than the disorder or rule of chance in nature. During the early years of the second quarter of the 20th century, when quantum mechanics was appearing, some of the pioneers of the theoretical physics rejected the idea of the existence of order in the atomic domain. Einstein, though unable to present a successful theory against it, was able to reject it through relying on the principle of order in nature. In his letter (b. December 1926) he wrote:[54](#)

“Quantum mechanics is certainly imposing. But an inner voice tells me it is not yet the real thing. The theory says a lot, but does not really bring us any closer to the secret of the ‘old one.’ I, at any rate, am convinced he is not playing the dice.”

In another letter (b. September 1944) he wrote, “We have become Antipodean in our scientific expectations. You believe in God who plays dice, and I, in complete law and order in a world which objectively exists, and which i, in a wildly speculative way, am trying to capture. I firmly believe, but I hope someone will discover a more realistic way; or rather a more tangible basis than it has been my lot to find. Even the great initial success of the quantum theory does not make me believe in the fundamental dice game, although I am well aware our younger colleagues interpret this as a consequence of senility. No doubt the day will come when we will see whose instinctive attitude was the

correct one.”

Despite their disbelief in monotheism, some philosophers believe in the existence of order in nature. But from our point of view, order, unity, and co-ordination in nature can only be accounted for through the principle of monotheism (God’s Oneness).

Another conclusion drawn from the principle of monotheism in the researcher, by observing the relation between the various aspects of nature, finds a unity among different branches of science and considers everyone of them as a description of one dimension of the whole reality, and, therefore, does not reject any of them on the ground of his own unfamiliarity with it.

2. Belief in the Reality of the External World

From the Qur’anic viewpoint, there is a real external world, independent of our mind:

وَفِي الْأَرْضِ آيَاتٌ لِّلْمُوقِنِينَ ۖ فِي الْأَرْضِ آيَاتٌ لِّلْمُوقِنِينَ

And in the earth there are signs for those who are sure, and in your own souls (too). Will you then not see? (51:20 – 21)

لَخُلُقُ السَّمَاوَاتِ وَالْأَرْضِ أَكْبَرُ مِنْ خُلُقِ النَّاسِ وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ

Certainly the creation of the heavens and the earth is greater than the creation of the men, but most people do not know. (40:57)

سُبْحَانَ الَّذِي خَلَقَ الْأَزْوَاجَ كُلَّهَا مِمَّا تُنْبِتُ الْأَرْضُ وَمِنْ أَنْفُسِهِمْ وَمِمَّا لَا يَعْلَمُونَ

Glory be to Him Who created pairs of all things, of what the earth grows, and of their kind and of what they do not know. (36:36)

الَّذِي جَعَلَ لَكُمُ الْأَرْضَ مَهْدًا وَجَعَلَ لَكُمْ فِيهَا سُبُلًا لَعَلَّكُمْ تَهْتَدُونَ ۗ وَالَّذِي نَزَّلَ مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَنْشَرْنَا بِهِ بَلْدَةً مَيِّتًا ۗ كَذَلِكَ تُخْرَجُونَ ۗ وَالَّذِي خَلَقَ الْأَزْوَاجَ كُلَّهَا وَجَعَلَ لَكُمْ مِنَ الْفُلْكِ وَالْأَنْعَامِ مَا تَرْكَبُونَ

Glory be to Him Who created pairs of all things of what the earth grows and of their kind and of what they do not known (36:36)

وَالَّذِي خَلَقَ الْأَزْوَاجَ كُلَّهَا وَجَعَلَ لَكُمْ مِنَ الْفُلْكِ وَالْأَنْعَامِ مَا تَرْكَبُونَ ۗ وَالَّذِي خَلَقَ الْأَزْوَاجَ كُلَّهَا وَجَعَلَ لَكُمْ مِنَ الْفُلْكِ وَالْأَنْعَامِ مَا تَرْكَبُونَ

He Who made the earth a resting place for you and made in it ways for you so you may go aright. And He Who created pairs of all things, and made for you of the ships and the cattle what you ride on. (43: 10, 12)

وَاللَّهُ أَخْرَجَكُمْ مِنْ بُطُونِ أُمَّهَاتِكُمْ لَا تَعْلَمُونَ شَيْئًا وَجَعَلَ لَكُمُ السَّمْعَ وَالْأَبْصَارَ وَالْأَفْئِدَةَ

And Allah has brought you forth from the wombs of your mothers – you did not know anything – and He gave you hearing and sight and hearts... (16:78)

The verses like:

وَتَحْسَبُهُمْ آيْقَاطًا وَهُمْ رُقُودٌ ۚ وَنُقَلِّبُهُمْ ذَاتَ الْيَمِينِ وَذَاتَ الشِّمَالِ ۚ وَكَلْبُهُمْ بَاسِطٌ ذِرَاعَيْهِ بِالْوَصِيدِ ۚ لَوِ اطَّلَعْتَ عَلَيْهِمْ لَوَلَّيْتَ مِنْهُمْ فِرَارًا وَلَمُلِئْتَ مِنْهُمْ رُعبًا

And you might think awake while they are asleep, and We turned them about to the right and to the left, while their dog (lay) outstretching his paws at the entrance; if you looked at them you would certainly turn back from them in flight, and you would certainly be filled with awe because of them. (18: 18)

وَتَرَى الْجِبَالَ تَحْسَبُهَا جَامِدَةً وَهِيَ تَمُرُّ مَرَّ السَّحَابِ

And you see the mountains, you think them to be sailing and they shall pass away as the passing away of the cloud. (27:88)

وَمَا يَتَّبِعُ أَكْثَرُهُمْ إِلَّا ظَنًّا ۚ إِنَّ الظَّنَّ لَا يُغْنِي مِنَ الْحَقِّ شَيْئًا

And most of them do not follow (anything) but conjecture; surely conjecture will not avail against the truth. (10:36)

These verses indicate there exists other realities other than an independent of our minds. If our mental image of a certain object does not correspond with the external reality, our mental image is not more than a fancy or imagination, which cannot lead us to reality.

Moreover, had there not been an external world, the Qur'an would not have so emphatically recommended the study of nature:

قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ

Say, "Travel on the earth and see how He makes the first creation..." (29:20)

أَوَلَمْ يَنْظُرُوا فِي مَلَكُوتِ السَّمَاوَاتِ وَالْأَرْضِ وَمَا خَلَقَ اللَّهُ مِنْ شَيْءٍ

Do they not consider the spiritual dimension of the heavens and the earth and whatever things Allah has created?(7: 185)

Belief in the reality of the external world is the basis of all researches in empirical sciences and without it any scientific research would be only a mental exercise. As Einstein puts it in his commemorative paper (1431) on Maxwell,⁵⁵ "The belief in an external world independent of the perceiving subject is the basis of all natural sciences."

3. Faith in Supra-physical reality and Limitation of Human Knowledge

We learn from the Qur'an certain principles in this regard, which are discussed below:

A. Human Knowledge is Limited

وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلَّا قَلِيلًا

...And you were not given aught of knowledge but a little. (17:85)

سُبْحَانَ الَّذِي خَلَقَ الْأَزْوَاجَ كُلَّهَا مِمَّا تُنْبِتُ الْأَرْضُ وَمِنْ أَنْفُسِهِمْ وَمِمَّا لَا يَعْلَمُونَ

Glory be to Him who created pairs of all things of what the earth grows, and of their kind and of what they do not know. (36:36)

وَالْخَيْلَ وَالْبِغَالَ وَالْحَمِيرَ لِتَرْكَبُوهَا وَزِينَةً ۗ وَيَخْلُقُ مَا لَا تَعْلَمُونَ

And (He made) horses and mules and asses in which you might ride upon them and as an ornament, and He creates what you do not know. (16:8)

B. There are many things we cannot get through our senses

اللَّهُ الَّذِي رَفَعَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا

Allah is He Who roused the heavens without any pillars in which you see, and He is firm in power... (13:2)

C. We should believe in the occult, for example, in the super-natural realities

C. We should believe in the occult, for example, in the super-natural realities⁵⁶

ذَلِكَ الْكِتَابُ لَا رَيْبَ فِيهِ ۚ هُدًى لِّلْمُتَّقِينَ الَّذِينَ يُؤْمِنُونَ بِالْغَيْبِ وَيُقِيمُونَ الصَّلَاةَ وَمِمَّا رَزَقْنَاهُمْ يُنْفِقُونَ

This book, there is no doubt in it, is a guide to those who guard (against evil). Those who believe in the occult and keep up prayer and spend out of what We have given them. (2:2 – 3)

The faith in the limitation of human knowledge and the metaphysical realities lead us to the following corollaries:

1. Not limit our mental activity to the sensory stage.
2. Never to think we have discovered everything. Of course, this by no means a human will not be able to discover any of the truths in the world, but we should not claim to have a full understanding of a natural phenomenon at a certain time. Sayyid Qutb in his interpretation of the verse 3 in chapter al-Baqarah says,⁵⁷

“Faith in the supra-physical is a stage by attaining which a person rises above the level of animality – at which perception is confined to the domain of external senses – and reaches the stage of humanity, a much larger and more spacious domain beyond the limited domain of external senses opens up before them. The transference to this new stage brings a radical change in a person’s view of the reality of the existence in general, and their own self in particular, and they perceive hidden powers in the universe; how, they are greatly affected by a new feeling and can perceive in the creation the Power and Wisdom at work behind it.

“This transference affects the realities between a person whose life is entrenched in the limited span of sensory perception and the one whose soul and insight take them to the vast kingdom (of higher realities) where he can hear and feel the mysterious music and inspiration gushes out of the depths of their heart. They feel the extent of the universe is too great for them to comprehend during their short span of life. They realize beyond the seen and unseen universe of existence, there exists a truth much greater than existence and He is the Creator and the Preserver of it. This truth is not visible to human eyes and is not discerned by human wisdom alone.

“This feeling (knowledge of the immensity of the unknown) safeguards the limited human faculty of thinking and does not let it go astray and waste itself in the areas which it has been created.”

4. Believe in the Principle of General Causality

The principle of causality says every event requires a cause. This principle has two important corollaries:

a) **The Principle of Determinism:** Any cause requires an effect, and without a cause it is impossible to have an effect.

b) **The Principle of Uniformity of Nature:** Similar causes entail similar effects.

These two corollaries are inseparable from the principle of general causality, and any violation in them will be the violation of the principle of general causality:[58](#)

A. In the Qur'an we have many verses which talk of unchangeable patterns (sunan) of Allah in the Universe:

سُنَّةَ مَنْ قَدْ أَرْسَلْنَا قَبْلَكَ مِنْ رُسُلِنَا ۚ وَلَا تَجِدُ لِسُنَّتِنَا تَحْوِيلًا

(This is Our) course with regard to those of Our apostles who We sent before you, and you shall not find a change in our course. (17:77)

سُنَّةَ اللَّهِ فِي الَّذِينَ خَلَوْا مِنْ قَبْلُ ۚ وَلَنْ تَجِدَ لِسُنَّةِ اللَّهِ تَبْدِيلًا

(Such has been) the course of Allah with respect to those who have gone before, and you shall not find any change in the course of Allah. (33:62)

مَا كَانَ عَلَى النَّبِيِّ مِنْ حَرَجٍ فِيمَا فَرَضَ اللَّهُ لَهُ ۚ سُنَّةَ اللَّهِ فِي الَّذِينَ خَلَوْا مِنْ قَبْلُ ۚ وَكَانَ أَمْرُ اللَّهِ قَدَرًا مَقْدُورًا

There is no harm in the prophet doing which Allah has ordained for him, such has been the course of Allah with respect to those who have gone before, and the command of Allah is a decree which is made absolute. (33:38)

يُرِيدُ اللَّهُ لِيُبَيِّنَ لَكُمْ وَيَهْدِيَكُمْ سُنْنَ الَّذِينَ مِنْ قَبْلِكُمْ

Allah desires to explain to you and to guide you into the ways of those before you and to turn to you (mercifully) and Allah is all knowing. (4:26)

We find many examples of these patterns in the Qur'an itself:

إِنَّ اللَّهَ لَا يُغَيِّرُ مَا بِقَوْمٍ حَتَّىٰ يُغَيِّرُوا مَا بِأَنْفُسِهِمْ

Most surely Allah does not change the condition of people until they change their own condition.

(13:11)

وَإِذَا أَرَدْنَا أَنْ نُهْلِكَ قَرْيَةً أَمَرْنَا مُتْرَفِيهَا فَفَسَقُوا فِيهَا

“And when We wish to destroy a town, We send Our commandment to the people of it who lead easy lives, but they transgress...” So We destroy it with utter destruction. (17:16)

وَعَدَ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَعَمِلُوا الصَّالِحَاتِ لَيَسْتَخْلِفَنَّهُمْ فِي الْأَرْضِ

Allah has promised to those of you who believe and do good in which We most certainly make them rulers in the earth. (24:55)

وَلَا تَهِنُوا وَلَا تَحْزَنُوا وَأَنْتُمْ الْأَعْلَوْنَ إِنْ كُنْتُمْ مُؤْمِنِينَ

And be not infirm and be not grieving and you shall have the upper hand if you are believers. (3:139)

وَمَا كَانَ رَبُّكَ لِيُهْلِكَ الْقُرَىٰ بِظُلْمٍ وَأَهْلِهَا مُصْلِحُونَ

And it did not beseem your Lord to have destroyed the towns tyrannously, while their people acted well. (11:117)

فَأَمَّا الزُّبْدُ فَيَنْهَبُ جُفَاءً ۗ وَأَمَّا مَا يَنْفَعُ النَّاسَ فَيَمْكُثُ فِي الْأَرْضِ

“...then as for the scum, it passes away as a worthless thing and as for which profits the people, it tarries in the earth...” (13:17)

وَلَا يَحِيقُ الْمَكْرُ السَّيِّئُ إِلَّا بِأَهْلِهِ ۚ فَهَلْ يَنْظُرُونَ إِلَّا سُنَّتَ الْأَوَّلِينَ ۗ فَلَنْ تَجِدَ لِسُنَّتِ اللَّهِ تَبْدِيلًا ۚ وَلَنْ تَجِدَ لِسُنَّتِ اللَّهِ تَحْوِيلًا

“...and the evil plans shall not beset any save the authors of it. Then should they wait for aught except the way of the former people? For you shall not find any alteration in the course of Allah and you shall not find any change in the course of Allah.” (35:43)

B. Some of the Qur’anic verses indicate both the creation and the course of events in nature follow a certain measure, and every natural being has a definite and precise life span:

الشَّمْسُ وَالْقَمَرُ بِحُسْبَانٍ

“The sun and the moon follow a reckoning.” (55:5)

وَإِنْ مِنْ شَيْءٍ إِلَّا عِنْدَنَا خَزَائِنُهُ وَمَا نُنزِلُهُ إِلَّا بِقَدَرٍ مَعْلُومٍ

And there is not a thing but with Us are the treasures of it, and We do not send it down but in a knowing manner. (15:21)

وَكُلُّ شَيْءٍ عِنْدَهُ بِمِقْدَارٍ

“...and there is a measure with Him of everything.” (13:8)

أَوَلَمْ يَتَفَكَّرُوا فِي أَنفُسِهِمْ ۚ مَا خَلَقَ اللَّهُ السَّمَاوَاتِ وَالْأَرْضَ وَمَا بَيْنَهُمَا إِلَّا بِالْحَقِّ وَأَجَلٍ مُّسَمًّى ۚ وَإِنَّ كَثِيرًا مِّنَ النَّاسِ بِلِقَاءِ رَبِّهِمْ لَكَافِرُونَ

Do they not reflect within themselves, ‘Allah did not create the heavens and the earth and what is between them but with truth and (for) an appointed term?’ And most surely most of the people are deniers of the meeting of their Lord.” (30:8)

C. Some verses mention the mechanism and special course of certain events in nature:

وَلَقَدْ خَلَقْنَا الْإِنْسَانَ مِن سُلَالَةٍ مِّن طِينٍ وَلَقَدْ خَلَقْنَا الْإِنْسَانَ مِن سُلَالَةٍ مِّن طِينٍ لَقَدْ خَلَقْنَا الْإِنْسَانَ مِن سُلَالَةٍ مِّن طِينٍ

“And certainly We created man of an extract of clay, then we made a small life germ in a firm resting place.” (23: 12 – 13)

وَأَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجَ بِهِ مِنَ الثَّمَرَاتِ رِزْقًا لَّكُمْ

And (Who) sends down rain from the cloud, then brings forth with it subsistence for you. (2:22)

قَالَ إِبْرَاهِيمُ فَإِنَّ اللَّهَ يَأْتِي بِالشَّمْسِ مِنَ الْمَشْرِقِ فَأْتِ بِهَا مِنَ الْمَغْرِبِ فَبُهِتَ الَّذِي كَفَرَ

...Ibrahim said, “So surely Allah causes the sun to rise from the east. Then make it rise from the west.” Thus he who disbelieved was confounded. (2:58)

وَالشَّمْسُ تَجْرِي لِمُسْتَقَرٍّ لَهَا ۚ ذَٰلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ وَالْقَمَرَ قَدَرْنَا مَنَازِلَ حَتَّىٰ عَادَ كَالْعُرْجُونِ الْقَدِيمِ الشَّمْسُ
يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ ۚ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ

And the sun runs on to a term appointed for it, which is the ordinance of the mighty, the knowing. And (as for) the moon, We have ordained for it stages until it becomes again as an old dry palm branch. Neither is it allowable to the sun it should overtake the moon, nor can the night outstrip the day, and all of them float through space.” (36:35 – 40)

وَاللَّهُ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا

And Allah has sent down water from the cloud and therewith given life to the earth after its death. (16:65)

وَمِنْ ثَمَرَاتِ النَّخِيلِ وَالْأَعْنَابِ تَتَّخِذُونَ مِنْهُ سَكَرًا وَرِزْقًا حَسَنًا

“And of the fruits of the palms and the grapes, you obtain from them intoxication and goodly provision.” (16:67)

وَأَرْسَلْنَا الرِّيَّاحَ لَوَاقِحَ

“And We send the winds fertilizing...” (15:22)

قَاتِلُوهُمْ يُعَذِّبُهُمُ اللَّهُ بِأَيْدِيكُمْ وَيُخْزِهِمْ وَيَنْصُرْكُمْ عَلَيْهِمْ وَيَشْفِ صُدُورَ قَوْمٍ مُؤْمِنِينَ

Fight them, Allah will punish them by your hands and bring them to disgrace and assist you against them and heal the hearts of a believing people. (9: 14)

These verses show certain definite laws rule over the universe. This, however, is meaningful only if the principle of general causality is valid. In this case, every event stands in its definite place, i.e. every event appears under definite conditions and at a definite time and place. This does not imply events are independent of the Almighty's Will and Order, but it means in this system, everything is realized by God's Will, but through a special channel. Verses of the following type confirm this view:

وَالْبَلَدُ الطَّيِّبُ يَخْرُجُ نَبَاتُهُ بِإِذْنِ رَبِّهِ ۚ وَالَّذِي خَبثَ لَا يَخْرُجُ إِلَّا نَكِدًا

And as for the good land, its vegetation springs forth (abundantly) by the permission of its Lord,

and (as for) this which is inferior (its herbage) comes forth but scantily.” (7:58)

قَدْ جَاءَكُمْ رَسُولُنَا يُبَيِّنُ لَكُمْ كَثِيرًا مِمَّا كُنْتُمْ تُخْفُونَ مِنَ الْكِتَابِ وَيَعْفُو عَنْ كَثِيرٍ ۗ قَدْ جَاءَكُمْ مِنَ اللَّهِ نُورٌ وَكِتَابٌ مُبِينٌ يَهْدِي بِهِ اللَّهُ مَنِ اتَّبَعَ رِضْوَانَهُ سُبُلَ السَّلَامِ وَيُخْرِجُهُم مِنَ الظُّلُمَاتِ إِلَى النُّورِ بِإِذْنِهِ

...Indeed, there has come to you light and a clear book from Allah. With it Allah guides him who will follow His pleasure into the ways of safety and brings them out of utter darkness and into light by His will. (5: 15 – 16)

The first verse indicates although God’s Will is necessary for the growth of plants, yet the suitability of the land is also a condition. Not every sort of plant can be raised in every piece of land. With the suitability of the land God makes it possible for the plant to grow.

It can be also deduced from verses 15 – 16 of the chapter of Ma’idah (food) only those seeking God’s consent would enjoy His guidance in the Qur’an.

Some well known Muslim theologians, particularly Asharite school, on the basis of verses like:

قُلِ اللَّهُ خَالِقُ كُلِّ شَيْءٍ وَهُوَ الْوَاحِدُ الْقَهَّارُ

Say, “Allah is the Creator of all things, and He is the One, the Supreme.” (13: 16)

وَاللَّهُ خَلَقَكُمْ وَمَا تَعْمَلُونَ

And Allah has created you and what you make. (37:96)

أَلَا لَهُ الْخَلْقُ وَالْأَمْرُ

Surely His is the creation and command. (7:54)

بَلِ لِلَّهِ الْأَمْرُ جَمِيعًا

The commandment is wholly Allah’s (13:31)

أَفَرَأَيْتُمْ مَا تَحْرُثُونَ أَفَرَأَيْتُمْ مَا تَحْرُثُونَ أَفَرَأَيْتُمْ مَا تَحْرُثُونَ

Have you considered what you saw? Is it you which causes it to grow or are We the causes of

growth? (53:63 – 64)

which attributes creation and governance of the universe to Allah, and verses like:

قُلْنَا يَا نَارُ كُونِي بَرْدًا وَسَلَامًا عَلَىٰ إِبْرَاهِيمَ

We said, “Oh fire, be a comfort and peace to Ibrahim.” (21:69)

which are indicative of the possibility of miracles, have rejected the law of causation in the physical world and say physical means have no role in the realization of a phenomenon. The cause of any occurrence is God’s Will, except it is God’s way to create what we call “effect” after what we call “cause,” without any relation between them which necessitates the effect to follow the cause. They say, “It is not fire which causes the cotton to burn, rather, it is Allah who makes the cotton burn and turns it into ashes, and of course, if God does not want, the fire will not burn the cotton.” Al-Ghazali, a chief representative of Ash‘arism, in al-Ghazali, a chief representative of Ash‘arism, in “**Tahafut al-Falasifah**” says,⁵⁹

“According to us, the connection between what is usually believed to be a cause and what is believed to be an effect is not a necessary connection. In the case of two things which are not identical and the affirmation or negation of one is not implied in the affirmation or negation of the other, neither the existence, not the non-existence of the one necessitates the existence or the non-existence of the other. For example, the satisfaction of thirst does not imply drinking, nor satiety, eating, nor burning, contact with fire, nor light, sunrise, nor decapitation, death, nor recovery, taking of medicine, nor evacuation, the taking of a purgative, and so on for all the empirical connections existing in medicine, astronomy, the sciences and the crafts.

For the connections in these things are based on a prior power of God to create them in a successive order, though not because this connection is necessary in itself and cannot be disjoined; on the contrary, it is in God’s power to create satiety without eating, and death without decapitation, and to let life persist notwithstanding the decapitation, and son with respect to all connections. The philosophers, however, deny this possibility and claim it is impossible to investigate all these innumerable connections would take too long, and so we shall chose one single example, namely the burning of cotton and through contact with fire, for we regard it as possible in which the contact might occur without burning taking place, and also the cotton might be changed into ashes without any contact with fire, although the philosophers deny this possibility.

It is God who made the cotton burn and made it ashes either through intermediation of angels or without intermediation. For fire is a dead body which has no action and what is the proof in which it is the agent? Indeed, the philosophers have no other proof than the observation of the occurrence of the burning, when there is contact with fire, but observation proves only simultaneity, not causation, and, in reality, there is no other cause but God.

This theory is rooted in the idea in accepting a decisive order in the world and require the denial of God's power. Muslim philosophers reject the Ash'arite view and say,

a) The co-incidence of two causes operating on a single object is impossible only when the two causes operate transversally, whereas the longitudinal operation of two causes on the same object is quite possible.⁶⁰ If we believe in the longitudinal system of causes, we could relate every occurrence to God, because He gives existence. This emanation, however, takes place through special channels. This is the reason why God attributes the regulating of affairs sometimes to Himself and sometimes to the angels:

يُدَبِّرُ الْأَمْرَ مِنَ السَّمَاءِ إِلَى الْأَرْضِ

...He regulates the affairs from the heaven to the earth... (32:5)

فَالْمُدَبِّرَاتِ أَمْرًا

...By those who regulate an affair... (79:5)

He also attributes taking of souls to Himself or to angels:

اللَّهُ يَتَوَفَّى الْأَنفُسَ حِينَ مَوْتِهَا

Allah takes the souls at the time of their death... (39:42)

قُلْ يَتَوَفَّاكُمْ مَلَكُ الْمَوْتِ الَّذِي وُكِّلَ بِكُمْ

Say, "The angel of death who is given charge of you shall cause you to die." (32: 11)

b) In the case of material bodies, what is commonly called "cause" is not the efficient cause but it is an intermediary or preparing cause which prepares the ground for God's bounty. These causes are materialistic and preparatory requirements for an event to occur, and are sometimes interpreted as the transversal system of causes. So, one can say God is the cause for everything, but He makes everything under certain terms and through certain means, and of course, all these means and ways are the objects made by the Almighty Himself. Sadr al-Din Shirazi explains Muslim philosophers' view in the following way:⁶¹

"Another group of philosophers and some elite among our Imamiah scholars say objects vary in their acceptance of existence from the Origin. Some do not yield to existence unless another being precedes them, in the same way accident should follow substance. Thus, the Creator, whose power is unlimited,

grants the existence according to the possibilities through a particular order and in consideration of its various capabilities. Some other directly from Him, some through an intermediary or intermediaries. In the last form, nothing can come into existence unless its means and pre-requisites come into reality. God Himself is the Cause without a cause.

“Requirements for existence are not the result of deficiency in the Almighty’s power, but due to weakness in the receiver of emanation. How can one imagine any need or deficiency in the Creator, while means and ways are all originated from Him? Therefore, the Glorious God does not need any help in the creation of anything.”

Thus, verses of the following type:

أَفَرَأَيْتُمْ مَا تَحْرُثُونَ أَأَنْتُمْ تَزْرَعُونَهُ أَمْ نَحْنُ الزَّارِعُونَ لَوْ نَشَاءُ لَجَعَلْنَاهُ حُطَامًا فَظَلْتُمْ تَفَكَّهُونَ إِنَّا لَمُعْرِمُونَ لَوْ نَشَاءُ لَجَعَلْنَاهُ مَاءً سُكْرًا يُشْرَبُونَ أَمْ نَحْنُ الْمُنزِلُونَ لَوْ نَشَاءُ لَجَعَلْنَاهُ أَمْحًا فَلَوْلَا تَشْكُرُونَ

Have you considered what you saw? Is it you which causes it to grow, or are We the cause of growth? If We pleased, We should have certainly make it broken down into pieces, then would you begin to lament. Surely We are burdened with debt. Nay, We are deprived. Have you considered the water which you drink? Is it you which sends it down from the clouds, or are We the senders? If We pleased, We would have made it salty; why do you not then give thanks?”
(56:63 – 70)

which have been used as the basis of reasoning by Imam Fakhr al-Din Razi⁶² in the rejection of the system of cause and effect do not indicate the negation of intermediary means in the occurrence of natural phenomena, but they indicate we should not stop at the channels of emanation and should not remain unaware of the main cause who is the Commander (Ruler) of the whole universe, life giver to all, and He who is at the head of the longitudinal system of all causes, nor should we think these are self-activating. As martyred Dr. Behshti puts it,⁶³

“The fact is the Holy Qur’an wants to guide humans from this end of the cord, i.e. sensible, to the other end of the cord which is Allah. It wants humans not to stop at intermediary causes and fail in reaching the Origin. In all of the verses there is a voice which says, ‘Be alert,’ while you are studying this world, don’t slip into a ditch, take care not to leave the cord, do not drown yourself in the world of matter or contingents... It is true for agriculture you make preparations, which you should, but do not imagine the cord is fully in your hand. Do you not see at times you find a green sapling suddenly dies and fades despite the utmost care and with all the modern and old means which you employ to make it grow?

“Thus you, with all the means which you have at your disposal, are too insignificant to have the end of the cord. It is true you are drinking water which comes down from the clouds, but do not let your keen eye linger on the cloud saying the water in the cloud is pure. The Qur’an says, “It may rain, but the rain

might be so badly contaminated or bitter and distasteful one could not drink a drop of it. So, the end of the cord of your drinking water is not in the hand of the cloud, but in the hand of the WISE Omnipotent, Who has created clouds and hundreds of other agents which work under his command and furnish people with fresh, tasty water.”

In the case of miracles, too, considering the invariability of Divine patterns in nature, we do not find it necessary to look for the exceptions in the laws of nature, because if we find a deviation from a natural law, this does not necessarily mean the law is not correct or the law of Causality is violated, because it is possible to make one law ineffective by the help of another in the universe. If a body falls because of the gravity, this force may be neutralized by the use of another force. Therefore, on the observance of a suspended body in the air, we should not immediately suppose there is no such law as gravitation; rather, we can assume there is another force besides the force of gravity. Martyred Mutahhari puts it,[64](#)

“Neither do the laws of creation yield themselves to exceptions, nor are miracles exceptional deeds in the laws of creation. If we observe certain changes in the patterns of the universe, it is because of the interference of other patterns or laws, which, too, have general validity under their own special conditions. That is, one law does not change without the effect of another law. In the universe, all the laws, courses and patterns are invariable. If a dead (person) comes back to life, it follows a law of its own, if a son is born without having a father (as in the case of ‘Isa bin Mariam), this, too, is not against Allah’s course or the law of the universe; the problem is people do not know all the patterns and laws of the universe, and what they know as a law, in many cases has the appearance of a law and is not a real one.”

After the appearance of the quantum theory in physics, and the presentation of the principle of uncertainty by W. Heisenberg in the early years of the second quarter of the present century, some of the founders of this theory denied the existence of causal system in the world of particles and permitted the rejection of the principle of determinism, and gave a statistical status of the laws of micro-physics. Most of the physicists, with the exception of some prominent ones like Planck and Einstein, raised their voices in favour of the new theory and more or less accepted its orthodox interpretation, a situation which is still going on, although the lapse of time has increased the number of opponents.

Einstein and his colleagues rejected the theory because they could not accept the probabilities were ruling over the universe. From the viewpoint, the objective of physics should be to explain all natural phenomena according to absolute laws. The reason why we stick to statistical laws, or dealing with innumerable particles make us stick to statistical mathematics for the sake of simplification. As Einstein put it in his lecture in 1933,[65](#)

“I cannot but confess I attach only a transitory importance to this interpretation. I will believe in the possibility of a model of reality – which is to say, of a theory which represents things themselves and not merely the probability of their occurrence.”

In a letter addressed to Born in April 1924 Einstein wrote, "...I should not want to be forced into abandoning strict causality without defending it more strongly than I have so far. I find the idea quite intolerable in which an electron exposed to radiation should choose of its own free will, not only its moment to jump off, but also its direction. In this case, I would rather be a cobbler, or even an employee in a gaming-house, than a physicist. Certainly my attempts to give tangible form to the quanta have foundered again and again, but I am far from giving up hope. And even if it never works there is always this consolation which lack of success is entirely mine."

In recent years we come across some Muslim scholars⁶⁶ who have revived the forsaken theory of the Muslim theologians, citing the quantum theory as a proof for their claims. To answer them, we are going to quote Dirak, who was one of the founders of quantum physics. In a recent paper (1979) he said,⁶⁷

"It seems clear the present quantum mechanics is not in its final form. Some further changes will be needed, just about as drastic as the changes which one made in passing from Bohr's orbits to quantum mechanics. Someday, a new relativistic quantum mechanics will be discovered in which we do not have these infinities occurring at all. It might very well be the new quantum mechanics will have determinism in the way which Einstein wanted.

This determinism will be introduced only at the expense of abandoning some other pre-conception which physicists now hold, and which it is not sensible to try to get at now.

"So under these conditions I think it is very likely, or at any rate quite possible, in the long run, Einstein will turn out to be correct, even though for the time being, physicists have to accept the Bohr probability interpretation – especially if they have examinations in front of them."

Finally, in confuting those who deny the validity of the principle of causality in the atomic and sub-atomic domain, we say:

a) If we deny the validity of the principle of causality in the atomic and sub-atomic world, this would mean defacing this principle in relation to the whole world, because causality brings the whole world together. As Sheikh Shabistar'i puts it, "If you remove a single particle out of its place, the whole world tumbles down."

b) The generalization of the results of a limited number of experiments in the form of general laws and scientific theories become meaningful only in the light of the principle of causality, because in accepting something as a law we also accept:

1. every effect has a cause
2. the relation between cause and effect is indispensable
3. similar causes entail similar effects

In practice, no one can be sure of considering all the relevant factors and parameters. Therefore,

generalization cannot be of absolute validity. This limitation, however, arises from the deficiency in our information. In any case, we believe faith in the existence of absolute laws can be meaningful only if the principle of uniformity of nature is valid. As Planck puts it,[68](#)

“Of course it may be said the law of causality is only after all a hypothesis. If it be a hypothesis, it is not a hypothesis like most of the others, but it is a fundamental hypothesis because it is the postulate which is necessary to give sense and meaning to the application of all hypotheses in scientific research. This is because any hypothesis which indicates a definite rule pre-supposes the validity of the principle of causation.”

c) Should the principle of causality turn out to be invalid, nothing would be the result of proof, because the proof is the cause of our knowledge of the desired result, and if the tie between proof and result be non-essential, the proof may not end in the result. In such a case nothing would be the result of proof, and any proof might lead to any result, and there would be no difference between producing a proof and not producing it. This is why even those who reject the principle of causality accept it implicitly, because they admit their proof will undermine our faith in the principle of causality.[69](#)

d) As Martyred Professor Murtada Murtafahari and Martyred Ayatullah Mohammad Baqir Sadr have pointed out,[70](#) the impossibility of prediction in atomic domain arises from our ignorance about the deterministic laws governing atomic phenomena rather than ineffectiveness of the principle of causality and its corollaries in the atomic world. This in itself is due either to the deficiency in the means of experimentation or due to the immeasurability of the effects of the experimentalist on the experiments. In any case, we should note our failure in the discovery of a cause does not mean its non-existence, and we have no proof to say modern science has discovered all the factors therein. As Einstein puts it,[71](#)

“Therefore, the fact in science we have to be content with an incomplete picture of the physical universe is not due to the nature of the universe itself but rather to us.”

In short, the denial of the principle of causality is the denial of scientific laws as well as the negation of reasoning. Science has to accept the principle of causality with all its inseparable corollaries, so its existence could be meaningful.

[1.](#) Kulayni, al-Kafi, vol. 2, p. 34.

[2.](#) Harrani, Tuhaf al-Uqul, p. 354.

[3.](#) al-Raghib al-Isfahani, Mufradat Alfaz al-Qur'an.

[4.](#) Sadr al-Din Shirazi, Asfar, vol. 3, p. 516.

[5.](#) Kulayni, al-Kafi, vol. 1, p. 29.

[6.](#) Mufid al-Irshad, p. 281.

[7.](#) M. Bagir Majlisi, Bihar al-Anwar, vol 3. pp. 146 – 147.

[8.](#) ALi Muttaqi, Kanz al-'Ummal, no. 1220.

[9.](#) Fakhr al-Din Razi, al-Tafsir al-Kabir, vol. 17, p., 209.

[10.](#) Of course, if somebody wants to refer to the analysis of what has been seen (or heard) as the eyes (or ears) of the heart, we will not argue with him against his terminology.

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16. Einstein, A Centenary Volume, Edited by A. P. French, pp. 312 – 313.
17. Werner Heisenberg, Physics and Beyond, Harper-Torchbooks, p. 63.
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20. M. H. Tabataba'i, al-Mizan, vol. 3, p. 384.
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23. Ibn Sina, al-Isharat Waal-Tanbihat, vol. 2, p. 358.
24. Ibid, vol. 2, p. 353.
25. Ibid, p.359.
26. Alexis Carrel, Man, the Unknown, p. 85.
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29. M. J. Mughniyah, al-Tafsir al-Kashif, vol. 3, p. 213.
30. Din Arkan Tabiah, p. 251.
31. Abu Hamid al-Ghazali, Ihya 'Ulum al-Din vol. 3. p. 15.
32. M. H. Tabataba'i, al-Mizan, vol. 5, p. 270.
33. Abu Hamid al-Ghazali, Ihya 'Ulum al-Din, vol. 3, p. 9; Mullah Muhsin Fayd Kashani, Mahajjah al-Baida, vol. 2, p. 125.
34. 'Amidi, Ghurar al-Hikam wa Durar al-Kalim vol. 5, p. 411.
35. Kulayni, al-Kafi, vol. 2, p. 263. For other versions of the same tradition, see also al-Bukhari, al-Sahih, vol. 8, p. 105, and Fayd Kashani, Kalimat-e-Maknunah, p. 113.
36. Saduq, 'Uyun Akhbar al-Rida, vol. 2, p. 69. For other versions of this tradition see, e.g. Suyuti, al-Jami al-Saghir (Damascus) vol. 2, p. 483, and Fayd Kashani, Kalimat-e-Maknunah, p. 247.
37. Nahj al-Balaghah (S. al-Salah Ed.) p. 337.
38. Ibid, p. 497.
39. M. H. Tabataba'i, al-Mizan, vol. 2, p. 250.
40. Abu Hamid al-Ghu7zzali, Ihya 'Ulum al-Din, vol. 3, pp. 12 – 14.
41. Saduq, al-Khisal, vol. 1, p. 151.
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43. Nahj al-Balaghah (S. al-Saleh Ed.) p. 524.
44. Ibn Abi Jumhur, Ghawali al-La'ali, vol. 1, p. 240. In Suyuti's al-Jami' al-Saghir, (vol. 1, p. 500), this tradition is reported in the following form:
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46. Ibid. p. 503.
47. Saduq, al-Khisal, vol. 1, p. 85. See also Suyuti, al-Jami' al-Sahir, vol. 1, p. 469.
48. Amidi, Ghurar al-Hikam wa Durar al-Kalim, vol. 1, p. 189.
49. Barqi, al-Mahasin, vol. 1, p. 215.
50. Amidi, Ghurar al-Hikam wa Durar al-Kalim, vol. 1, p. 231.
51. Saduq, Uyun Akhbar al-Rida, vol. 2, p. 46.
52. Kulayni, al-Kafi, vol. 1, p. 43.
53. Ibn Sina, al-Isharat waal-Tanbihat, vol. 13, p. 246.
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- [56.](#) M.H. Tabataba'i, al-Mizan, vol. 1, pp. 45 – 46.
- [57.](#) Sayyid Qutb, Fi Zilal al-Qur'an, vol. 1, p. 40.
- [58.](#) M.H. Tabataba'i, Usul e-Falsafah, vol. 3, p. 183.
- [59.](#) Abu Hamid Ghazali, Tabafut al-Falasifah, pp. 234 – 240.
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- [64.](#) Murtada Mutahhari, 'Adal e-Ilahi, p. 62.
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