

The Scientific Dimension of the Qur'an

By Dr. Mahdi Golshani

In more than ten percent of the Qur'anic verses, we see references to natural phenomena. A subject of fundamental importance is to discover the kind of message that the so-called scientific verses have for us, and how we benefit from them. There are two views about this matter.

One view says that the Holy Qur'an includes all kinds of knowledge and therefore it contains the basic ingredients of all the sciences of nature. The second holds that the Qur'an is merely a book of guidance, and there is no room for the physical and natural sciences in it. We shall, first, explain these two views in some detail and then try to spell out our own views.

1. The Qur'an as a Source of Scientific Knowledge

In our times we see many people who try to interpret some of the Qur'anic verses in the light of our present scientific knowledge. The main aim of these people is to show the miracle of the Qur'an in the scientific domain to convince non-Muslims of the glory and uniqueness of the Qur'an, and to make fellow Muslims feel proud of having such a great scripture.

But the view of considering the Qur'an as a source of all knowledge is not a new one, and we see many great Muslim scholars of the past who are proponents of this view. One is Imam al-Ghazali. In his book *Ihya' 'Ulum al-Din* (The Revival of Religious Sciences), he quotes Ibn Mas'ud as saying: "If one desires to have the knowledge of the sciences of the ancients and the moderns, he should ponder over the Qur'an." He further adds:

In short, all sciences are included in the works and attributes of Allah, and the Qur'an is the explanation of His essence, attributes, and works. There is no limit to these sciences, and in the Qur'an there is an indication of their confluence.¹

And in his other book *Jawahir al-Qur'an* (The Jewels of the Qur'an), which was written after the *Ihya*, he has more to say about this matter. In the chapter on "The Stemming of the Sciences of the Ancients and

the Moderns from the Qur'an", he says:

The principle of these sciences, which we have enumerated and of those which we have not specified, are not outside the Qur'an, for all of these sciences are drawn from one of the seas of knowledge of God—may He be exalted—i.e., the sea of His works.

We have already mentioned that the Qur'an is [like] a sea which has no shore, and that "if the ocean became ink for [transcribing] the words of my Lord, surely the ocean would be exhausted before the words of my Lord came to an end." Among the works of God—may he be exalted—which [for their vastness can be called] the sea of His works are, for instance, recovery and disease, as He—may He be exalted—narrating the words of Abraham, said, "When I fall ill it is He who restores me to health"....

This single work can only be known by him who knows the science of medicine completely, for this science means nothing but the knowledge of all aspects of disease together with their symptoms, and knowledge of their cure and its means. Among the works of God are [also] the determination of [man's] knowledge of the sun and the moon and of their stages according to a fixed reckoning, as God—may He be exalted—said "The sun and the moon move according to a fixed reckoning."

"He ordained stages for the moon so that you might learn the method of calculating years and determining time...." The real meaning of the movements of the sun and the moon according to a fixed reckoning and of the eclipses of both, of the merging of the night into day and the manner of wrapping one of them around the other, can only be known by him who knows the manner of the composition of the heavens and the earth, and this itself is a science (i.e., astronomy)....Should we go on narrating the details of Divine works to which the verses of the Qur'an point, it would take a long time.

Only an indication of their confluence is possible [here], and we have done this where we have mentioned that knowledge of Divine works is among the sum total of knowledge of God—may He be exalted. That sum total includes these details. Likewise, every division we have briefly described, will, if further divided, branch off into many details.²

Reflect, then, on the Qur'an and seek its wonderful meanings, so that perchance you may encounter in it the confluence of the sciences of the ancients and the moderns and the sum total of their beginnings. Reflection on the Qur'an is intended only for reaching from the brief description of these sciences to their detailed knowledge and it is [like] an ocean that has no shore.

Al-Suyuti (d. 911/1505) too, has the same view.³ In his book *al-Itqan fi 'ulum al-Qur'an*, he tries to argue that the Qur'an contains all sciences. Using verses like:

"... We have not neglected anything in this Book..." (6:38)

"... And We have revealed the Book to you explaining clearly everything." (16:89)

and also prophetic traditions such as:

The Prophet said, "There shall be evils". He was asked, "What can save us from them?" He answered, "Allah's Book; there is in it the news of what happened before you and the news of what shall happen after you...."

he argues that the Qur'an contains the sciences of the ancients and of the moderns. Furthermore he says:

Allah's Book contains everything. There is no basic section or problem of any science for which there is no indication in the Qur'an. In the Qur'an, one finds the wondrous aspects of the creatures, the spiritual dimension of the heavens and the earth, what is in the horizon's loftiest part and what is beneath the sod, the beginning of creation...⁴

We find this kind of outlook in Muslim scholars of recent times too. For example, 'Abd al-Rahman al-Kawabiki (d. 1902), in his book, *Tab 'al-'Istibad* (the Nature of Despotism) says:

In recent centuries, science has revealed many facts and these are attributed to their discoverers who are European or American. But those who examine the Qur'an carefully, find that most of those facts were stated, explicitly or implicitly, in the Qur'an thirteen centuries ago; and these were not left hidden but to show, upon their discovery a miracle of the Qur'an, and to indicate that it is the word of the Lord who only is aware of the hidden.⁵

And among the recent proponents of this view is Mustafa Sadiq al-Rafi'i. In the Qur'an, he said, one finds many hints for the scientific facts; and modern science helps us to interpret the meanings of some of the Qur'anic verses and to discover their facts.⁶ Also Shaykh Muhammad Bakit says:

Those who think that the Qur'an is a book for the statement of the (Islamic) laws and for legislation are avoiding the truth. The Qur'an is the source of all sciences and the human civilization.... The Qur'an, with its statements and hints, has evidence for the essence and attributes of all things and their quantitative and qualitative changes and contains all sciences dealing with the external realities, whether they are heavenly or earthly.⁷

At this point, it is necessary to mention that the early 'ulama's motive in considering the Qur'an as the source of all sciences arose out of their conviction in the comprehensiveness of the Qur'an, but the recent scholars, while believing in this, have more emphasis on proving the miraculous state of the Qur'an in the scientific domain. Therefore, they try to adapt the Qur'an to the findings of contemporary science.

Some of them believe that there is nothing in the new findings of science which was not predicted by the Qur'an. For example, al-Tantawi, in his commentary on the Qur'an, tries to extract the results of the physical and natural sciences from the Qur'an, and is afraid that he might not live long enough to locate all of the findings of science and technology in the Qur'an. Yet, he is happy that the discoveries of science up to now are indicative of the prophetic power of the Qur'an.⁸

He even tries to reconcile unestablished theories of science with the Qur'an. In our time we find a tremendous increase in this kind of activity, and some Muslim scholars want to extract all the findings of contemporary science from the Qur'an, and thereby prove the miraculous nature of the Qur'an and its fitness for survival. For instance, 'Abd al-Razzaq Nawfal in his book *The Qur'an and Modern Science*, says:

Thus, when we prove to non-Arabs that the Qur'an contains the principles of modern science and it has already spoken of every new scientific phenomenon, in this kind of miracle of the Qur'an not enough to attract their attention to the Qur'an.... Isn't the scientific miracle of the Qur'an the way to attract non-Arabs to Islam...? The day that we accomplish the translation, into various languages, of what the Qur'an has predicted and the development of various sciences has confirmed, our mission would be over and our call would be communicated, and the miraculous nature of the Qur'an would be clear for non-Arabs.⁹

And Maurice Bucaille says:

The Qur'an follows on from the two revelations that preceded it and is not only free from contradictions in its narrations, the sign of various human manipulations to be found in the Gospels, but provide a quality all of its own for those who examine it objectively and in the light of science, i.e., its complete agreement with modern scientific data. What is more, statements are to be found in it (as has been shown) that are connected with science: and yet it is unthinkable that a man of Muhammad's time could have been the author of them. Modern scientific knowledge therefore allows us to understand certain verses of the Qur'an which, until now, it has been impossible to interpret.¹⁰

Some of the authors have tried very hard to extract every important idea of contemporary science from the Qur'an, and in this effort have outstretched the normal usage of the Arabic language. For example, some people claim that the idea of atom and sub-atomic particles is mentioned in the Qur'an: To prove this, they resort to the following verses:¹¹

...There does not lie concealed from your Lord the weight of a small particle in the earth or in the heaven, nor anything less than that nor greater, but it is in a clear Book. (10:61)

...Not the weight of a (small) particle is absent from Him in the heavens or in the earth, and neither less than that nor greater, but (all) is in a clear Book. (34:3)

Here, they identify the Arabic word "*dharrah*" with atom, whereas the customary meaning of it was "small ant" or "a small dust particle",¹² and there is no convincing reasons to believe that Allah has used a terminology that our prophet's contemporaries could not understand.

The efforts to reconcile a sacred scripture with contemporary science are not restricted to Muslims. Christians, too, try to extract modern science from the Bible, and Jews have done the same thing with the Old Testament. They, too, consider this to be a sign of validity of their book.

2. The Qur'an as a Book of Guidance

The aforementioned outlook towards the scientific dimension of the Qur'an has been under fire even from the old times. Abu Ishaq al-Shatibi (d. 790/1388), one of the early opponents of this view, argues that our virtuous predecessors were more knowledgeable about the Qur'an than we are, and they did not talk about these kind of sciences, and this is an indication that they did not consider the Qur'an to contain such matters.¹³ Al-Shatibi relates the Qur'anic verse:

...We have not neglected anything in the Book...(6:38)

to the accountable duties and acts of worship, and identifies the word "Book" in this verse with the "Guarded Tablet" (mentioned in the verse 85:22).

The aforementioned view has been criticized by some well-known scholars of recent times, too. Their argument can be summarized as follows:

1. It is not right to interpret the Qur'anic words in a way that was not known to the Arabs of the Prophet's era.
2. The Qur'an was not revealed to teach us science and technology; rather, it is a book of guidance. Therefore it is beyond its aim to talk about natural and physical sciences. The meaning of the aforementioned verses (i.e., 6:35 and 16:82) is that the Qur'an contains whatever is needed for our guidance and felicity (in this world and in the Hereafter).
3. Science has not reached its ultimate stage of progress. Therefore, it is not right to interpret the Qur'an in accordance with changeable theories. A certain theory becomes very popular during a period, and then it is replaced by another one. The Ptolemaic system was popular for a long time and then it was discarded. It is wrong to assume that the Holy Qur'an supports contradictory theories. Prominent Muslim scientists of the past, like Ibn Sina, al-Biruni, al-Tusi, Ibn al-Haytham,...too, did not seek scientific formulas in the Qur'an, though they had a true conviction in it and were very knowledgeable about it. Besides, if we could find the trace of all scientific theories and formulas in the Qur'an, what we would have is no more than a scientific encyclopedia like other available encyclopedias. The adaptation of the Holy Qur'an to unstable theories of science has this danger, too, that it threatens the stability of the Qur'anic facts and opens the door for unacceptable interpretations.
4. It is Allah's will that human beings discover the secrets of nature through the use of their senses and intellect. If the Holy Qur'an contained all of the sciences of nature, human intellect would remain idle and human freedom would be meaningless. As Shaykh Muhammad 'Abduh has said:

If it were upon the Prophet to explain the natural and astronomical sciences, that would be the end of the activity of human senses and intellect, and that would spoil human freedom.... Yes, the Prophet advised people briefly to use their senses and intellect on whatever improves the welfare, broadens their

knowledge, and in the end advances their souls.... Therefore, the doors for these sciences are intellect and experimentation not tradition and religious sciences. 14

3. Our View

We believe that the Holy Qur'an is a book of guidance for human development, and it contains whatever human beings need in the domains of faith and action. We do not consider it a scientific encyclopedia, neither we believe that it is right to adapt the Holy Qur'an to changeable scientific theories. On the other hand, one cannot deny that the Qur'an contains references to some natural phenomena. But these are not for the sake of teaching science; rather, they are used as an aid in attracting people's attention to Allah's glory and, thereby, bring them closer to Him.

We also believe that the advancement of science makes it easier to understand certain Qur'anic passages. For example, the verse:

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

refers to the revolution of the solar system and the role of water in life, and the verse:

And of every We have created pairs that you might be mindful. (51:49)

informs us of the polarity evident in all creation. Modern science makes it much easier to understand this kind of verses. In short, our view about the scientific interpretation of the Qur'an is the same as that of Shaykh Mustafa al-Maraghe'i, the late rector of al-Azhar University, as expressed in the introduction to Isma'il Pasha's *Islam and Modern Medicine*.

It is not my intention to say that this Holy Book contains, in detail or summary all of the sciences in the style of textbooks; rather I want to say that it contains general principles by the help of which one can derive all that is needed to know for the physical and spiritual development of human beings.

It is in fact the duty of the scientists involved with various sciences to explain for people details that are known up to their time....

It is essential not to extend [the meaning of] a verse to such an extent that it would enable us to interpret it in the light of science. Neither one should stretch [the interpretation of] scientific facts so that one could adapt it to a Qur'anic verse. However, if the apparent meaning of a verse is consistent with an established fact, we interpret this verse with the help of that fact. 15

If we adapt the Qur'an to philosophical schools or sciences of a period, we reach the point where, in a period of the dominance of positivism, we find a Muslim scholar trying to extract this philosophy from the Qur'an, considering it to be the basis of Qur'anic wisdom, 16 and disregarding the fact that this outlook

leaves no room for metaphysics or any transcendent being.

Yet we would say that although the Qur'an is not a scientific encyclopedia, there is an important message in the verses involving natural phenomena, and Muslim scientists should focus their attention on that message rather than contenting themselves with the miraculous aspects of the Qur'an in the scientific domain or its consistency with contemporary science.

4. Qur'anic Message for Muslim Scientists

As it is well-known, there are more than 750 Qur'anic verses dealing with natural phenomena. We think that these verses involve an important message for Muslim scientists. In our view, the following are the essential points of that message:

a) In these verses, the study of all aspects of nature and the discovery of the mysteries of creation is recommended.

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

Say, consider what is it that is in the heavens and the earth. (10:101)

Say, travel on the earth and see how He made the first creation. (29:20)

According to the Holy Qur'an, we have to use our senses and intellect for the understanding of nature, and this shall lead us to appreciate the glory and majesty of Allah. As Allamah Tabataba'i puts:

The Qur'an invites reflection about heavenly signs, the brilliant stars and the differences in their conditions and the systematic order that governs them. It encourages meditation concerning the creation of the earth, seas, mountains, the creation of plants and animals, human beings and their inner world. Thus it invites to a study of natural and mathematical sciences and all other fields, the learning of which is in the interest of humanity and brings felicity to human society.

The Qur'an invites to these branches of knowledge on condition that people are guided by this knowledge of truth. Otherwise a knowledge that serves as an amusement and hinders one from knowing God and truth is equivalent to ignorance in the vocabulary of the Qur'an.¹⁷¹⁷

When the Holy Qur'an recommends that we look around the earth to find out the origin of creation, this means that we have to obtain scientific facts through our efforts. It is against the spirit of the Qur'an that Muslims should remain idle while others get access to some of the mysteries of nature, and then we use their results and depend on them.

According to the Holy Qur'an, we can get access to cognition of nature if we use our senses and intellect. In fact the main reason our great scholars, in the glorious period of Islamic civilization, paid

attention to foreign (e.g., Greek) sciences was due to the Qur'an's emphasis on the study of nature.

They studied nature to discover the mysteries of creation and to become aware of Allah's wisdom and power. Al-Biruni has explicitly stated that the motive behind his research in scientific fields is Allah's words in the Qur'an:

...And reflect on the creation of the heavens and the earth: our Lord! You have not created this in vain.... (3: 191)

which persuades human beings to ponder about the creation of the heaven and the earth, a creation which is purposeful and not vain.

The study of the so-called scientific verses in the Qur'an should motivate Muslims to go after natural and physical sciences, and not remain content with the hints given there.

b) The aforementioned verses state that everything in this world is orderly and purposeful and there is no fault in the works of Allah:

...And He created everything, then He ordained it very exactly. (25:2)

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

... You see no imperfection in the creation of the beneficent God. Then look again, can you see any disorder? Then return back the eye again and again, your look shall come back to you dazzled, weary. (67:3-4)

c) The Qur'an invites us to recognize the laws of nature (i.e., Allah's patterns in the universe) and to exploit them for the welfare of human beings and without transgressing the limits of the Shari'ah:

The sun and the moon follow reckoning.... And the heaven, He raised it high and set the balance. Transgress not the balance. (55:5-8)

Of course, the exploitation of material means should lead to the spiritual development of human beings and not to their decay.

d) In the Qur'anic outlook, all sciences are different manifestations of a world which is created and governed by one God. Therefore their combination should lead to a single picture of the world.

e) Lastly, one of the most important things that we learn from the Qur'an, in relation to science, is its unique world-view and epistemology. Most of the evil resulting from the growth of science has its origin in the materialistic outlook accompanying modern science. The Qur'an warns us against these pitfalls and informs us of the impediments to correct cognition of nature. It teaches us what tools to use for the cognition of nature and what prevents us from using those tools properly. 18

In short, we believe that the most important lessons we learn from the so-called scientific verses of the Qur'an are:

1. Priority should be given to the discovery of nature using human senses and intellect.
2. The Holy Qur'an can give us the correct world-view.

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 2. Abu Hamid al-Ghazali, *The Jewels of the Qur'an*, trans. by Muhammad Abu al-Qasim (Routledge & Kegan Paul, 1983), pp. 45-48
 3. M.H. al-Dhahabi, *al-Tafsir wal mufasssirun* (Dar al-Kutub al-Hadith), vol. 2 p. 420.
 4. M.H. al-Dhahabi, *al-Tafsir wal mufasssirun* vol. 2 477-484.
 5. Abd al-Rahman al-Kawakibi, *Tab' al-'istibdad* (Dar al-Qur'an al-Karim, 1373), p. 42.
 6. Mustafa Sadiq al-Rafi'l, *I'jaz al-Qur'an wa al-balaghat al-Nabawiyyah* (Dar al-Kitab al-'Arabi), pp. 127-129
 7. Shaykh Muhammad Bakhit, *Tanbih al-Uqul al-Insani...* (Maktabat A. Rabi'), pp. 9-10.
 8. 'Ref. 3, pp. 505
 9. Abd al-Razzaq Nawfal, *al-Qur'an wal 'ilm al-hadith* (Dar al-Kitab al-'Arabi), p. 26. Maurice Bucaille, *The Bible, the Qur'an, and Science*, Crescent Publishing Co. (1978), p. 251.
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 12. Maghniyyah, *al-Tafsir al-kashif* (Dar al-'ilm lil-Malayin), vol. 4, p. 173.
 13. Ref. 3, p. 485-489. Muhammad 'Ammarah, *al-Islam wa qadaya al-'asr* (Dar al-Wahdah), p. 75.
 14. Muhammad 'Ammarah, *al-Islam wa qadaya al-'asr* (Dar al-Wahdah), p. 75.
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 17. M.H. Tabataba'i, *The Qur'an in Islam* (Islamic Propagation Organization), p. 96.
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