

***The Impact of Scientific Progress on the
Assessment
of the Translations of the Scientific
Verses in the Glorious Quran***
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This paper sets out to investigate the translations of the Quranic scientific verses in the light of modern science. It tries to provide evidence for the hypothesis that the translations of Quranic scientific verses are assailable from a modern scientific point of view. It is found that the translations are incompatible with the Quranic verses as far as modern science is concerned. The errors committed by the translators may be explained by the fact that modern translations often resume, rather uncritically, the interpretations given by older commentators. Hence, the revision of translations and commentaries in the light of modern science is recommended.

1. Introduction

The word “science” here refers to all branches of knowledge without specifying any of them. It is knowledge about the material universe. Scientific research is the attempt to obtain such knowledge, and a scientific truth or a scientific fact is the result of this research. Science as knowledge about things is also seen as a branch of truth, but the important aspect of this is that scientific truths are not always stable but change continuously. Von Denffer (1994:153) states that the continuousness of scientific research and discovery indicates that the scientific truth of today will be seen in a different light tomorrow, as new elements of knowledge become available. Scientific facts constitute a human perspective with all its

variety and limitations since they are the result of human endeavours with all its faculties and limitations.

The development of science and its immediate effect upon the lives and societies of Muslims, especially during the last and in the present century have led many Muslims to look at science against the background of the Quran, and they have made numerous suggestions about the correct description of certain scientific facts in the Quran.

The problem to be tackled in this paper is that the translations of Quranic scientific verses suffer from mistakes and inadequacy because the translators are not specialists in the discipline in question. Hence, the translations they have produced are not in agreement with modern science. This being the case, we shall provide evidence for the hypothesis that the translations of Quranic scientific verses are assailable from a modern scientific point of view.

2. The Quran and Science

One feature which is strictly specific to the Quran is the existence of a host of reflections on all kinds of natural phenomena: from astrology, human reproduction, the earth, to the animal and vegetable kingdoms – not to mention what the Quran has to say on the subject of creation.

The unique nature of the Quran has been tackled by the classical scholars who also indicated that the Quran contains information about the nature of things, the material environment, etc. and that this information is in line with man's perspective and experience (Von Deffer, 1994:153).

The Middle Ages have witnessed a period of severe strife waged by the advocates of religion and the advocates of science. The same problems continue to trouble the minds of many of us. But Islam is not concerned with such a struggle as it has already encouraged having insight in the search of the universe and the continuation of efforts to bring hidden facts to light (Bucaille, 1982: 127). Since those days, knowledge and sciences have made progresses to reach perfection and to gradually prove their uniformity with religion (Ibid.)

The attitude towards science is clear from the famous hadith of the prophet: "Seek for science, even in China", or the

other hadith which says that the search for knowledge is a strict duty for every Muslim man and woman.

3. Translation of Scientific Verses in the Quran:

Hatim and Mason (1990) distinguish between a translator reader and an ordinary reader. To them, a translator is a privileged reader whose reading of a source text has to be thorough and more deliberate than that of an ordinary reader. They point out that (ibid: 224):

Translators are privilege readers of the SL [source language] text. Unlike the ordinary ST [source text] or TT [target text] reader, the translator reads in order to produce, decodes in order to re-encode. In other words, the translator uses as input to the translation process information which would normally be the output, and therefore, the end of, the reading process. Consequently, processing is likely to be more thorough, more deliberate than that of the ordinary reader, and interpretation of one portion of text will benefit from evidence forthcoming from the processing of later sections of text.

At another level of the relationship between reading and translation, Dejean Le Feal (1989) implies that reading is a prerequisite to translation when she states:

Translation means comprehending the author's meaning and restating that meaning in the Target Language as the author most probably would have expressed it, had s/he been a native speaker of the target language.

In another attempt to characterize the relationship between reading and translating, Seguiont (1989) explicitly states that reading a source text may not be translation-specific but translation includes reading the source text. Seguiont (1989) seems to be more inclined to the view that translation includes not only translation-specific operations but also others such as reading a source text. She writes:

The first problem is to define what is or what is not part of a translation process. It is everything that a person does while translating, including reading the source text and verifying the meaning of terms, or only the mental processes involved in the transfer of messages in another

language? A model of the translation process cannot be limited to translation-specific apparatus if it is to reflect the variables that determine the actual output of the translation process.

As a corollary, the translator is both a text receiver and a text producer who should first read and comprehend the SL text, then convey it equivalently into the TL text. In what follows we shall see whether the translations of the Quranic scientific verses have conveyed the ideas of the SLT into the TLT adequately in the light of modern science. Put differently, we shall see whether the translators have comprehended the Quranic scientific verses and communicated them in a way that is compatible with modern science.

Twelve Quranic translations of the scientific verses will be analysed and assessed in the light of modern science. The Quranic translations assessed in this paper belong to the following translators:

- Arberry, A. J. (1955/1964)
- Dawood, N. J. (1956/1974)
- AL-Hilali, M.T. & Khan, M.M. (1996)
- Maulana Muhammad Ali (1917/1951)
- Palmer, E. H. (1880/1956)
- Pickthall, M. (1930/1956)
- Khalifa, Rashad (1978/1981)
- Sale, George (1734/n.d.)
- Sarwar, Sheikh Muhammad (1981)
- Shakir, M. M. (1982)
- Ali, Maulawi Sher (1955)
- Ali, Abdullah Yusuf (1934/1968)

﴿ أَأَنْتُمْ أَشَدُّ خَلْقًا أَمْ السَّمَاءُ بَنَاهَا * رَفَعَ سَمَكَهَا فَسَوَّاهَا * وَأَعْطَشَ لَيْلَهَا وَأَخْرَجَ ضُحَاهَا * وَالْأَرْضَ بَعْدَ ذَلِكَ دَحَاهَا * أَخْرَجَ مِنْهَا مَاءَهَا وَمَرْعَاهَا ﴾ (27/79)

(33)

Khan Are you more difficult to create, or is the heaven that He constructed? He raised its height, and He has equally ordered it, Its night He covers with darkness, and its forenoon He brings out (with light). And after that He spread the earth; And brought forth therefrom its water and its pasture.

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Maulana	Are you the stronger in creation or the heaven? He made it. He raised high its height, and made it perfect, And He made dark its night and brought out its light. And the earth, He cast it after that. He brought forth from it its water and its pasture.
Pickthall	Are ye the harder to create, or is the heaven that He built? He raised the height thereof and ordered it; And He made dark the night thereof, and He brought forth the morn thereof. And after that He spread the earth, And produced therefrom the water thereof and the pasture thereof,
Rashad	Are you more difficult to create than the heaven? He constructed it. He raised its masses, and perfected it. He made its night dark, and brightened its morn. He made the earth egg-shaped. From it, He produced its own water and pasture.
Sarwar	(People), is your creation harder for God than that of the heavens, which He created, raised and established high above? He has made its nights dark and its days bright. After this, He spread out the earth, produced water and grass therefrom,
Shakir	Are you the harder to create or the heaven? He made it. He raised high its height, then put it into a right good state. And He made dark its night and brought out its light. And the earth, He expanded it after that. He brought forth from it its water and its pasturage.
Sher Ali	Are you the harder to create or the heaven that Allah has made? He has raised the high thereof and has made it perfect. And He has made its night dark; and has brought forth the morn thereof; And the earth, along with it, HE has spread forth. HE has produced therefrom its water and its pasture,
Yusuf Ali	What! Are ye the more difficult to create or the heaven (above)? (Allah) hath constructed it: On high hath He raised its canopy, and He hath given

it order and perfection. Its night doth He endow with darkness, and its splendour doth He bring out (with light). And the earth, moreover, hath He extended (to a wide expanse); He draweth out therefrom its moisture and its pasture.

Arberry What are stronger in constitution or the heaven He built? He lifted up its vault and leveled it. And darkened its night and brought forth its forenoon; and the earth – after that – He spread it out. Therefrom brought forth its waters and its pastures, and the mountain He set firm, an enjoyment for you and your folks.

Dawood Are you harder to create than the heaven which He has built? He raised it high and fashioned it; giving darkness to its night and brightness to its day. After that He spread the earth, and, drawing water from its depth, brought forth its pasture.

Palmer Are ye harder to create or the heaven that He has built? He raised its height and fashioned it; and made its night to cover it, and brought forth its noody light; and the earth after that He did stretch out. He brings forth from it its water and its pasture.

Sale Are ye more difficult to create, or the heaven which God hath buit? He hath raised the height thereof, and hath perfectly formed the same: and he hath made the night thereof dark, and hath produced the light thereof. After this, he stretched out the earth, whence he caused to spring forth the water thereof, and the pasture thereof;

Discussion

In this verse there are two scientific facts. First, there was no sequence in the formation of the celestial elements such as the Sun nor in the formation of an earthy element (Bucaille, 1982:151). Second, the earth was created in the form of an egg (not completely circular) (EL-Fandy, 1961:74). In the light of these two scientific facts we shall examine the translations of the verses in question.

Reference was made in one of the verses to the creation

إِنَّ رَبَّكُمُ اللَّهُ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ

and elsewhere to the creation of the earth and (54/7) **فِي سِتَّةِ أَيَّامٍ**
the heavens

﴿ قُلْ أَنْتُمْ لَتَكْفُرُونَ بِالَّذِي خَلَقَ الْأَرْضَ فِي يَوْمَيْنِ وَتَجْعَلُونَ لَهُ أَندَادًا ذَلِكَ رَبُّ
الْعَالَمِينَ * وَجَعَلَ فِيهَا رَوَاسِيَ مِنْ فَوْقِهَا وَبَارَكَ فِيهَا وَقَدَّرَ فِيهَا أَفْوَاجَهَا فِي أَرْبَعَةِ
أَيَّامٍ سَوَاءٍ لِّلسَّائِلِينَ * ثُمَّ اسْتَوَى إِلَى السَّمَاءِ وَهِيَ دُخَانٌ فَقَالَ لَهَا وَلِلْأَرْضِ ائْتِيَا
طَوْعًا أَوْ كَرْهًا قَالَتَا أَتَيْنَا طَائِعِينَ * فَفَضَّاهُنَّ سَبْعَ سَمَاوَاتٍ فِي يَوْمَيْنِ وَأَوْحَى فِي
كُلِّ سَمَاءٍ أَمْرَهَا وَزَيْنًا السَّمَاءِ الدُّنْيَا بِمَصَابِيحَ وَحِفْظًا ذَلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ ۝
(12-9/41)

The Quran does not therefore appear to lay down a sequence
for the creation of the heavens and the earth.

The number of verses in which the earth is mentioned
first is quite small, e.g. sura 2, verse 29 and sura 20, verse 4

﴿ هُوَ الَّذِي خَلَقَ لَكُمْ مَا فِي الْأَرْضِ جَمِيعًا ثُمَّ اسْتَوَى إِلَى السَّمَاءِ فَسَوَّاهُنَّ سَبْعَ
سَمَاوَاتٍ وَهُوَ بِكُلِّ شَيْءٍ عَلِيمٌ ﴾ (29/2)

﴿ تَنْزِيلًا مِّمَّنْ خَلَقَ الْأَرْضَ وَالسَّمَاوَاتِ الْغُلَا ﴾ (4/20)

The number of verses in where the heavens are
mentioned before the earth is, on the other hand, much larger:
(sura 7, verse 54; sura 10, verse 3; sura 11, verse 7; sura 25,
verse 59; sura 32, verse 4; sura 50, verse 38; sura 57, verse 4;
sura 79, verses 27 to 31; sura 91, verses 5 to 10).

Apart from sura 79, no verse in the Quran lays down a
definite sequence; a simple coordinating conjunction (**و**)
meaning “and” links two terms, or the word (**ثُمَّ**) which, as
shown in sura 41, verses 9-12, can indicate either a simple
juxtaposition or a sequence.

The reference to the stage when Allah spreads out the
earth and renders it arable is very precisely situated in time
after the alternating of night and day has been achieved. The
reference to the celestial phenomena and the earthly
phenomena made here implies that the earth must necessarily
have existed before being spread out and that it consequently
existed when Allah created the heavens. Hence, one must not
look for any special significance in the reference in the Quran

of the creation of the earth before the heavens or the heavens before the earth (Bucaille, 1982:144-5).

As for the second scientific fact, that Allah has created the earth in the form of an egg was endorsed by science which proved again to that the earth is really of this shape. Man has come to know that the earth is spherical when he thought of going round the earth and discovering its seas and oceans. After the advancement of civilization and the increase of Man's knowledge of mathematics and astronomy, Man was able to measure and count the diametres of the earth, which led him to the conclusion that it is not completely circular, but elliptic. This gave another proof that the Quran was really revealed by a Knowing Creator, to Him falsehood cannot come. (EL-Fandy, 1961: 74)

With these scientific facts in mind, Rashad's rendition would be deemed to be the best since it is in agreement with modern science. He has translated the word (دحاها) into (egg-shaped). Moreover, he has not translated the conjunction contained in the verse **وَالْأَرْضُ بَعْدَ ذَلِكَ دَحَاهَا** as the Quran does not lay down a sequence for the creation of the earth and heavens. The sense of a "sequence" may be a simple reference to events juxtaposed without any intention of bringing in the notion of the one following the other. The other translators, on the other hand, have produced renditions which are incompatible with modern scientific data. First, no one has rendered دحاها appropriately. Second, they have used words which indicate sequence in one way or another, e.g., Arberry, Dawood, Khan, Mauana, Palmer, Pickthall and Shakir have employed the words "after that", whereas Sale and Sarwar have used "after this". The remaining translators either used "and", "moreover" or "both".

﴿وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ﴾ (47/51)

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| Khan | With power did We construct the heaven. Verily, We are able to extend the vastness of space thereof. |
| Maulana | And the heaven, We raised it high with power, and We are Makers of the vast extent. |

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Pickthall	We have built the heaven with might, and We it is who make the vast extent (thereof).
Rashad	We constructed the sky with our hands, and we will continue to expand it.
Sarwar	We have made the heavens with Our own hands and We expanded it.
Shakir	And the heaven, We raised it high with power, and most surely We are the makers of things ample.
Sher Ali	And We have built the heavens with Our own hands, and, verily, WE have vast powers.
Yusuf Ali	With power and skill did We construct the Firmanent: for it is We Who create the vastness of space.
Arberry	And heaven – We built it with might, and We extend it wide.
Dawood	We built the heaven with Our might, giving it a vast expanse, and stretched the earth beneath it.
Palmer	And the heaven – we have built it with might, and, verily, we do surely give it ample space!
Sale	We have built the heaven with might; and we have given it a large extent.

Discussion

The reference to heavens mentioned in this verse deals with, and makes clear, the borders of the seen universe and their expansion with the passage of time. Today it is a firmly established concept and the only debate centres around the way this is happening. (Bucaille, 1982:173)

Admittedly the big units of the universe, or galaxies, go far away from each other with high speed. As such, the universe increases in size or expands. The more galaxies go far away, the quicker their release in the vast space will be. It was noticed that galaxies near our own recede at a speed of so many millions of miles every one hour (EL-Fandy, 1961:52). Other galaxies of greater differences do the same but at a speed exceeding 200 million miles every one hour. The speed

of galaxies distant from our own galaxy by double of these distances approaches that of light, which means that they belong to the invisible universe. Today, such galaxies are estimated to be far from our own galaxy by four thousand millions of light years (Ibid: 53). This universe comprises more than one hundred thousand millions of galaxies, all of which are separated and isolate from each other. By the passage of time, and with the increasing speed at which they recede from our own galaxy, those galaxies could be seen no more beyond the visible universe gradually. But while galaxies going beyond visible limits disappear, new ones gradually appear, made of universal gas, which was responsible for the formation of old galaxies (Ibid.).

“Heaven” is the translation of the word **سَمَاء** and this is exactly the extra-terrestrial world that is meant.

“We are expanding it” is the most appropriate translation of the plural present participle **مُوسِعُونَ**, of the verb **أَوْسَعَ** “to make wider, more spacious, to extend, to expand.” (see Lisan al-Arab).

The translators who were unable to grasp the meaning of the latter, i.e. , **مُوسِعُونَ** provide translations that appear to be mistaken, e.g. Arberry has rendered it into (We extend it wide), Dawood into (giving it a vast expanse), Khan into (We are able to extend the vastness of space thereof), Maulana into (We are makers of the vast extent), Palmer into (we do surely give it ample space), Pickthall into (We it is Who make the vast extent (thereof)), Rashad into (we will continue to expand it), Sarwar into (We expanded it), Shakir into (We are the makers of things ample), Sale into (we have given it a large extent), Sher Ali into (WE have vast powers) and Yusuf Ali into (We Who create the vastness of space).

﴿ يَا مَعْشَرَ الْجِنَّ وَالْإِنْسِ إِنِ اسْتَطَعْتُمْ أَنْ تَنْفُذُوا مِنْ أَقْطَارِ السَّمَاوَاتِ وَالْأَرْضِ فَانْفُذُوا لَا تَنْفُذُونَ إِلَّا بِسُلْطَانٍ ﴾ (33/55)

Khan O assembly of jinns and men! If you have power to pass beyond the zones of the heavens and the

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	earth, then pass (them)! But you will never be able to pass them, except with authority (from Allah)!
Maulana	O assembly of jinn and men, if you are able to pass through the regions of the heavens and the earth, then pass through. You cannot pass through but with authority.
Pickthall	O company of jinn and men, if ye have power to penetrate (all) regions of the heavens and the earth; then penetrate (them)! Ye will never penetrate them save with (Our) sanction.
Rashad	O you jinns and humans, if you can penetrate the outer limits of the heavens and the earth, go ahead and penetrate. You cannot penetrate without authorization.
Sarwar	Jinn and mankind, if you can penetrate the diameters of the heavens and the earth, do so, but you cannot do so without power and authority.
Shakir	O assembly of jinn and men! If you are able to pass through the regions of the heavens and the earth, then pass through; you cannot pass through but with authority.
Sher Ali	O company of jinn and men! if you have power to break through the confines of the heavens and the earth, then break through them. But you cannot break through save with authority.
Yusuf Ali	O ye assembly of Jinns and men! If it be ye can pass beyond the zones of the heavens and the earth, pass ye! not without authority shall ye be able to pass!
Arberry	O tribe of jinn and men if you are able to pass through the confines of heaven and earth pass through them! You shall not pass through except with an authority.
Dawood	Mankind and jinn, if you have power to penetrate the confines of heaven and earth, then penetrate them! But this you shall not do except with Our own authority.

- Palmer O assembly of jinns and mankind! if you are able to pass through the confines of heaven and earth then pass through them! – ye cannot pass through save by authority!
- Sale O ye collective body of genni and men, if ye be able to pass out of the confines of heaven and earth, pass forth: ye shall not pass forth but by absolute power.

Discussion

By the linguistic expression of this verse it is clear that it is not easy for anybody to penetrate the heavens except after attaining sufficient power. Allah's words that men (cannot penetrate but with authority) have to be re-interpreted. Previously, they meant the impossibility of doing such a thing. But now, they have to be interpreted as directives and, then, incentives for attempt after the advancement and development of sciences which have led Man to achieve what we today call (rather improperly) "the conquest of space". There is no doubt that it was in the knowledge of Allah that one day Man will acquire a high level of learning and make progress in sciences (EL-Fandy, 1961:75).

The translations given here need some explanatory comments. The Arabic word **نَفَذَ** followed by the proposition **مِنْ** means to pass right through and come out on the other side of a body. As such, the English word "penetrate" is the most appropriate equivalent for **نَفَذَ** since it expresses the same idea. Hence, the translations of Dawood, Pickthall, Rashad and Sarwar seem to be the best in this respect. Apart from this, all the translations need to include the following note: The word "if" expresses in English a condition that is dependent upon a possibility and either an achievable or unachievable hypothesis. Arabic is a language which is able to introduce a nuance into the condition which is much more explicit. There is one word to express the possibility **إِذَا**, another for the achievable hypothesis **إِنْ** and a third for the unachievable hypothesis expressed by the word **لَوْ**. The verses in question

has it as an achievable hypothesis expressed by the word **إِنْ** .
The Quran therefore suggests the material possibility of a concrete realization.

This subtle linguistic distinction is lost in all the translations for it is peculiar to Arabic language. Without including such an important note in every translation we believe that the renderings will be incomplete from the modern scientific view.

﴿أَوَلَمْ يَرَوْا إِلَى الطَّيْرِ فَوْقَهُمْ صَافَّاتٍ وَيَقْبِضْنَ مَا يُمَسِّكُهُنَّ إِلَّا الرَّحْمَنُ إِنَّهُ بِكُلِّ شَيْءٍ بَصِيرٌ﴾ (19/67)

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| Khan | Do they not see the birds above them, spreading out their wings and folding them in? None upholds them except the Most Beneficent (Allah). Verily, He is the All-Seer of everything. |
| Maulana | Do they not see the birds above them spreading and contracting (their wings)? None upholds them save the Beneficent. Surely He is Seer of all things. |
| Pickthall | Have they not seen the birds above them spreading out their wings and closing them? Naught upholdeth them save the Beneficent. Lo! He is Seer of all things. |
| Rashad | Have they not seen the birds above them lined up in columns and spreading their wings? The Most Gracious is the One who holds them in the air. He is Seer of all things. |
| Sarwar | Did they not see the birds above them, stretching out, and flapping their wings? No one keeps them up in the sky except the Beneficent God. He certainly watches over all things. |
| Shakir | Have they not seen the birds above them expanding (their wings) and contracting (them)? What is it that withholds them save the Beneficent Allah? Surely He sees everything. |
| Sher Ali | Do they not see the birds above them, spreading out their wings in flight and then drawing them in to swoop down upon the prey? None withholds |

- them but the Gracious God, HE sees all things well.
- Yusuf Ali Do they not observe the birds above them, spreading their wings and folding them in? None can uphold them except (Allah) Most Gracious: Truly (Allah) Most Gracious: Truly it is He that watches over all things.
- Arberry Have they not regarded the birds above them spreading their wings and closing them? The unbelievers are only in delusion.
- Dawood Do they not see the birds above their heads, spreading their wings and closing them? None save the Merciful sustains them, He observes all things.
- Palmer Or have they not looked at the birds above them expanding their wings or closing them? – none holds them in except the Merciful one; for He on everything doth look.
- Sale Do they not behold the birds above them, extending and drawing back their wings? None sustaineth them, except the Merciful; for he regardeth all things.

Discussion

When specialists on the nervous system would like to give examples of the prodigious organization directing animal behaviour, the most referred-to animals are bees, spiders and birds (especially migratory birds).

Birds are frequently mentioned in the Quran. They appear in episodes in the life of Abraham, Joseph, David, Solomon and Jesus. The verse concerning the existence of animal communities on the ground and bird communities in the sky has been noted below:

﴿وَمَا مِنْ دَابَّةٍ فِي الْأَرْضِ وَلَا طَائِرٍ يَطِيرُ بِجَنَاحَيْهِ إِلَّا أُمَمٌ أَمْثَالُكُمْ مَا فَرَّطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ ثُمَّ إِلَىٰ رَبِّهِمْ يُحْشَرُونَ﴾ (38/6)

As for the verses in question, it highlights the bird's strict submission to Allah's power. The translation of one single word in the verse is a very delicate matter. The Arabic

verb in question is **أَمْسَكَ**, whose main meaning is “to put one’s hand on , seize, hold, hold someone back” (A Dictionary of Modern Written Arabic, 1980, S. V. Masaka).

Before examining the translations we can compare this verse and other similar verses, which stress the dependence of the birds’ behaviour on divine order, to modern data showing the degree of perfection which certain kinds of birds reach regarding the programming of their movements. Bucaille (1982:208) states “ It is indeed only the existence of migratory programme in the genetic code of birds that can account for the extremely long complicated journeys which very young birds, without any prior experience and without any guide, are able to accomplish in addition to a return to their departure point on a prescribed date.”

The translators have used different expressions to

مَا يُمْسِكُهُنَّ convey the intended meaning of this part of the verse

. Khan, Maulana, Pickthall and Yusuf Ali have used **إِلَّا الرَّحْمَن** the word (uphold) which means: “to lift up, to keep elevated” (Webster’s Ninth New Collegiate Dictionary, 1985, s. v. uphold). Shakir and Sher Ali have employed the word (withhold) which means: “to hold back from action, to keep in custody” (Ibid. , s. v. withhold). Palmer and Rashad have used (hold) and Dawood and Sale have used the items *sustain* and *sustaineth* respectfully. Finally Sarwar has employed (keep up). All these expressions do not convey the delicate meaning

. So we propose the following **أَمْسَكَ** of the Quranic word

rendering:

Do they not see the birds above them spreading their wings out and folding them? None can hold them up (in His Power) except al-Rahman (Allah).

The translation given here expresses the idea that Allah Almighty holds the birds up in His Power. The verb (uphold) means: “to continue in the same condition without failing or losing effectiveness or force (Ibid.,s.v. hold up).

﴿وَإِنَّ لَكُمْ فِي الْأَنْعَامِ لَعِبْرَةً نُّسْقِيكُم مِّمَّا فِي بُطُونِهِ مِنْ بَيْنِ فَرْثٍ وَدَمٍ لَبَنًا خَالِصًا سَائِغًا لِلشَّارِبِينَ﴾ (66/16)

- Khan And verily! In the cattle, there is a lesson for you. We give you to drink of that which is in their bellies, from between excretions and blood, pure milk; palatable to the drinkers.
- Maulana And surely there is a lesson for you in the cattle: We give you to drink of what is in their bellies -- from betwixt the faeces and the blood -- pure milk, agreeable to the drinkers.
- Pickthall And lo! in the cattle there is a lesson for you. We give you to drink of that which is in their bellies, from betwixt the refuse and the blood, pure milk palatable to the drinkers.
- Rashad And in the livestock there is a lesson for you: we provide you with a drink from their bellies. From the midst of digested food and blood, you get pure milk, delicious for the drinkers.
- Sarwar There is a lesson for you to learn concerning cattle. We provide pleasant milk for you to drink within the delicate system of their veins and arteries.
- Shakir And most surely there is a lesson for you in the cattle; We give you to drink of what is in their bellies-- from betwixt the feces and the blood-- pure milk, easy and agreeable to swallow for those who drink.
- Sher Ali And surely in the cattle too there is a lesson for you. WE provide for you drink out of that which is in their bellies – from betwixt the faeces and the blood – milk pure and pleasant for those who drink it.
- Yusuf Ali And verily in cattle (too) will ye find an instructive sign. From what is within their bodies between excretions and blood, We produce, for your drink, milk, pure and agreeable to those who drink it.

Arberry	And surely in the cattle there is a lesson for you; We give you to drink of what is in their bellies, between filth and blood, pure milk, sweet to drinkers.
Dawood	In cattle too you have a worthy lesson. We give you to drink of that which is in their bellies, between the bowels and the blood-streams: pure milk, a pleasant beverage for those who drink it.
Palmer	Verily, ye have in cattle a lesson; we give you to drink from that which is in their bellies, betwixt chyme and blood, - pure milk, - easy to swallow for those who drink.
Sale	Ye have also in cattle an example of instruction: we give you to drink of that which is in their bellies; a liquor between digested dregs, and blood; namely, pure milk, which is swallowed with pleasure by those who drink.

Discussion

From a scientific point of view, physiological notions must be invited to comprehend the meaning of this verse. Bucaille (1982:210) states:

The substances that ensure the general nutrition of the body come from chemical transformations which occur along the length of the digestive tract. These substances come from the contents of the intestine. When they arrive in the intestine at the appropriate stage of chemical transformation, they pass through its wall and towards the systemic circulation. This passage is effected in two ways: either directly, by what is called the “lymphatic vessels”, or indirectly, by the portal circulation. This conducts them first to the liver, where they undergo alterations, and from here they then emerge to join the systemic circulation. In this way everything passes through the bloodstream.

The constituents of milk are secreted by the mammary glands. These are nourished, as it were, by the product of food digestion brought to them via the bloodstream. Blood therefore plays the role of collector and conductor of what has been extracted from food, and it brings nutrition to the mammary glands, the producers of milk, as it does to any other organ.

Here the initial process which sets everything else in motion is the bringing together of the contents of the intestine and blood at the level of the intestinal wall itself. This very precise concept is the

result of the discoveries made in the chemistry and physiology of the digestive system.

With Bucaille's explanation in mind, most of the translations above, if not all, appear to be inadequate and sometimes mistaken as regards the scientific statements. The Arabic word **بطن** means: middle, interior of something as well as belly (See Lisan al- Arab). The word does not here have a meaning that is anatomically precise. "Inside their bodies" seems to concur perfectly with the context. Thus, the translations of Arberry, Dawood, Khan, Maulana, Palmer, Pickthall, Sale, Rashad, Shakir and Sher Ali are not adequate since they have used the word (belly) as an equivalent for the Arabic word **بطن**. Sarwar, on the other hand, has used the prepositional phrase (the delicate system of their veins and arteries), which is inadequate if not mistaken in the light of modern science. Finally, Yusuf Ali seems to employ the right expression (within their bodies) that is in agreement with modern scientific data. However, he has used the (excretions) which hardly appears in agreement with modern science.

Taking modern scientific data into consideration, we suggest the following translation:

And verily, in cattle there is a lesson for you. We give you to drink of what is inside their bodies, coming from a conjunction between the contents of the intestine and the blood, milk pure and palatable to the drinkers.

﴿خَلَقَ الْإِنْسَانَ مِنْ نُطْفَةٍ فَإِذَا هُوَ خَصِيمٌ مُبِينٌ﴾ (4/16)

Khan	He has created man from Nutfah (mixed drops of male and female sexual discharge), then behold, this same (man) becomes an open opponent.
Maulana	He created man from a small life-germ, and lo! he is an open contender.
Pickthal	He hath created man from a drop of fluid, yet behold! he is an open opponent.
Rashad	He created the human from a tiny drop, then he turns into an ardent opponent.
Sarwar	He created the human being from a drop of fluid but the human being openly disputes His Word.

Shakir	He created man from a small seed and lo! he is an open contender.
Sher Ali	HE has created man from a mere drop of fluid, but lo! he is an open disputer.
Yusuf Ali	He has created man from a sperm-drop; and behold this same (man) becomes an open disputer!
Arberry	He created man of a sperm- drop;
Dawood	Created man from a little germ:
Palmer	He created man from a clot, and yet, behold, he is an open opponent!
Sale	He hath created man of seed; and yet behold, he is a professed disputer against the resurrection.

Discussion

The Arabic word **نطفة** comes from a verb signifying (to dribble, to trickle) (See Lisan al-Arab). It is used to describe what remains at the bottom of a bucket that has been emptied out. It therefore indicates a very small quantity of liquid, here it is sperm because the word is associated in an other verse with the word sperm:

﴿ اَلَمْ يَكُنْ نُطْفَةً مِّنْ مَّنِيِّ يُمْنَىٰ ﴾ (37/75)

This being the case, the most appropriate equivalent for the Arabic word **نطفة** is (small quantity (of sperm)). Hence, no translation seems to be satisfactory as far as adequacy is concerned save that of Arberry and Yusuf Ali who have used the expression (a sperm-drop). Other renderings are not adequate, e.g. , Pickthall, Sarwar and Sher Ali have used (a drop of fluid). Shakir has employed (a small seed), Khan (mixed drops of male and female sexual discharge), Maulana (a small life-germ), Dawood (a little germ), Palmer (a clot) and Sale (seed).

﴿ إِنَّا خَلَقْنَا الْإِنْسَانَ مِنْ نُّطْفَةٍ أَمْشَاجٍ نَّبْتَلِيهِ ﴾ (2/76)

Khan	Verily, We have created man from Nutfah drops of mixed semen (discharge of man and woman), in order to try him,
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Maulana	Surely We have created man from sperm mixed (with ovum), to try him.
Pickthall	Lo! We create man from a drop of thickened fluid to test him.
Rashad	We created the human from a liquid mixture, from two parents, in order to test him.
Sarwar	We created the human being from the union of sperm and egg to test him.
Shakir	Surely We have created man from a small life-germ uniting (itself): We mean to try him.
Sher Ali	WE have created man from a mingled sperm-drop that WE might try him.
Yusuf Ali	Verily We created Man from a drop of mingled sperm, in order to try him.
Arberry	We created man of sperm-drop, a mingling, trying him;
Dawood	We have created man from the union of the two sexes.
Palmer	Verily, we created man from a mingled clot,
Sale	Verily we have created man of the mingled seed of both sexes.

Discussion

The Arabic word أمشاج is not the male and female agents. This view has been corrected and the (small quantity of sperm) has been seen to be made up of various (component parts). On the component parts of sperm Bucaille (1982:215) writes:

Spermatic liquid is formed by various secretions which come from the following glands:

a) the testicles: the secretion of the male genital gland contains spermatozoons, which are elongated cells with a long flagellum; they are bathed in a sero-fluid liquid.

b) the seminal vesicles: these organs are reservoirs of spermatozoons and are placed near the prostate gland; they also secrete their own liquid but it does not contain any fertilizing agents.

c) the prostate gland: this secretes a liquid which gives the sperm its creamy texture and characteristic erdour.

d) the glands annexed to the urinary tract: Cooper's or Méry's glands secrete a stringy liquid and Littré's glands give off mucous.

These are the component parts of sperm which the Quranic verse would appear to refer to. Bearing all these scientific facts in mind, we propose the following rendition for the Quranic phrase نُطْفَةٌ أَمْشَاج : a small quantity of mingled (spermatic) liquids.

Some of the translations are either mistaken or inadequate. For instance, Arberry has translated it into (sperm-drop, a mingling), Dawood into (the union of the two sexes), Khan into (drops of mixed semen (discharge of man and woman)), Maulana into (sperm mixed (with ovum)), Palmer into (a mingled clot), Pickthall into (a drop of thickened fluid), Rashad into (a liquid mixture, from two parents), Sale into (mingled seed of both sexes), Sarwar into (the union of sperm and egg) and Shakir into (a small life-germ uniting (itself)). All these translations are considered mistaken from a scientific point of view. The translations of Sher Ali and Yusuf Ali, on the other hand, are inadequate: Sher Ali has rendered it into (a mingled sperm-drop) and Yusuf Ali into (a drop of mingled sperm).

﴿ خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ ﴾ (2/96)

Khan Has created man from a clot (a piece of thick coagulated blood)

Maulana Created man from a clot.

Pickthall Createth man from a clot.

Rashad He created man from an embryo.

Sarwar He created man from a clot of blood.

Shakir He created man from a clot.

Sher Ali Created man from a clot of blood.

Yusuf Ali Created man, out of a (mere) clot of congealed blood.

Arberry Created man of a blood-clot.

Dawood Created man from clots of blood.

Palmer Who created man from congealed blood.

Sale who hath created man of congealed blood.

Discussion

The discussion of the translations centres on the Quranic word **علق**. Before we assess the renderings forwarded for the verse, let's quote what Bucaille (1982:216) writes on the implantation of the egg in the female genital organs:

Once the egg has been fertilized in the Fallopian tube, it descends to lodge inside the uterus; this is called "implantation of the egg". The implantation of the egg in the uterus (womb) is the result of the development of villousities, veritable elongations of the eggs which, like roots in the soil, draw nourishment from the thickness of the uterus necessary to the egg's growth. These formations make the egg literally cling to the uterus.

Literally, the Arabic word **علق** "Alaq" has three meanings: (1) leech, (2) suspended thing, and (3) blood clot (See Lisaan al-Arab).

In comparing a leech to an embryo in the alaqah stage, we find similarity between the two (Moore and Persaud: 1993:8). Also, the embryo at this stage obtains nourishment from the blood of the mother, similar to the leech, which feeds on the blood of others (Moore et al., 1992:36).

The second meaning of the word **علق** is "suspended thing". The suspension of the embryo, during the alaqah stage, in the womb of the mother is confirmed by Moore and Persaud (1993:66).

The third meaning of the word **علق** is "blood clot". We find that the external appearance of the embryo and its sacs during the alaqah stage is similar to that of a blood clot. This is due to the presence of relatively large amounts of blood present in the embryo during this stage (Moore et al., 1992:37-38). Also during this stage, the blood in the embryo does not circulate until the end of the third week (Moore and Persaud, 1993:65). Thus, the embryo at this stage is like a clot of blood.

No translator has presented a rendering which is compatible with the modern science. They have rendered **علق**

into a clot, a clot of blood, congealed blood, or embryo which are not in agreement with what has been said above. As such, we propose the following rendition:

He created man from alaq (leech, suspended thing, and blood clot).

In this translation we have transliterated the word علق and then put in brackets the three meanings of علق which represent the three stages that man has passed through.

﴿يَخْرُجُ مِنْ بَيْنِ الصُّلْبِ وَالتَّرَائِبِ﴾ (7/86)

Khan	Proceeding from between the back-bone and the ribs.
Maulana	Coming from between the back and the ribs.
Pickthall	That issued from between the loins and ribs.
Rashad	From between the spine and viscera.
Sarwar	which comes out of the loins and ribs.
Shakir	Coming from between the back and the ribs.
Sher Ali	Which issues forth from between the loins and the breastbones
Yusuf Ali	Proceeding from between the the backbone and the ribs.
Arberry	Issuing between the loins and the breast-bones.
Dawood	issues from between the loins and the ribs.
Palmer	that comes out from between the loins and the breast bones.
Sale	issuing from the loins, and the breastbones.

Discussion

The translators have used backbone, back, loins or viscer as equivalents for the Arabic word صُلْب whereas they have rendered التَّارَائِب into ribs or breastbones. All these renderings are not satisfactory because they seem more to be interpretations than translations. They are moreover hardly very comprehensible. The translation which may be more satisfactory from a scientific point of view is:

It issues (as a result) of the conjunction of the sexual area of the man and the sexual area of the woman.

The word **صُلْب** is translated into (the sexual area of the man) and the word **الترائب** is rendered into (the sexual area of the woman). This translation is satisfactory because it is comprehensible (see Bucaille,1982:221).

(16-15/96) ﴿ كَلَّا لَئِنْ لَمْ يَنْتَهِ لَنَسْفَعًا بِالنَّاصِيَةِ * نَاصِيَةٍ كَاذِبَةٍ خَاطِئَةٍ ﴾

Arberry No indeed; surely, if he gives not over. We shall seize him by the forelock, a lying, sinful forelock.

Dawood Let him desist, or We will drag him by the forelock, his lying, sinful forelock.

Khan Nay! If he (Abu Jahl) cease not, We will catch him by the forelock, A lying, sinful forelock!

Palmer Nay, surely, if he do not desist we will drag him by the forelock! the lying sinful forelock!

Pickthall Nay, but if he cease not. We will seize him by the forelock- The lying, sinful forelock.

Maulana Nay, if he desist not, We will seize him by the forelock- A lying, sinful forelock!

Rashad Indeed, unless he refrains, we will take him by the forelock. A forelock is disbelieving and sinful.

Sarwar Let him know that if he does not desist, We shall certainly drag him by his forelock, his lying sinful forelock.

Shakir Nay! If he desist not, We would certainly smite his forehead, A lying, sinful forehead.

Sher Ali Nay, if he desist not, WE will assuredly, seize and drag him by the forelock – A forelock, lying, sinful.

Sale Assuredly. Verily, if he forbear not, we will drag him by the forelock, the lying , sinful forelock.

Yusuf Ali Let him beware! If he desist not, We will drag him by the forelock,- lying, sinful forelock.

Discussion

This verse is about one of the evil unbelievers who forbade the Prophet Muhammad (P.B.U.H.) from praying at the Kaaba. Why did the Quran describe **الناصية** as being lying and sinful? Why did not the Quran say that the person was lying and sinful? What is the relationship between **الناصية** and lying and sinfulness? Before we proceed to answer these

questions it should be noted that **الناصية** means front of the head (Ibrahim,1997:16).

Seelely et al. (1996:211) speak of the prefrontal area of the cerebrum saying: “The motivation and the foresight to plan and initiate movements occur in the anterior portion of the frontal lobes, the prefrontal area. This is a region of association cortex ...”. They (Ibid) add that “In relation to its involvement in motivation, the prefrontal area is also thought to be the functional center for aggression ...”. So, this area if the cerebrum is responsible for planning, motivating, and initiating good and sinful behaviour and is responsible for the telling of lies and the speaking of truth (Ibrahim, 1997:16). As such, the front of the head is described lying and sinful when someone lies or commits a sin. (Ibid)

As for the translations, only Shakir has rendered **الناصية** correctly and in agreement with what has been mentioned above. He translated **الناصية** into (forehead) which is the same as (front of the head). The remaining translators have translated **الناصية** into (forelock), which is not correct since forelock means “a lock of hair growing from the front of the head” (Webster’s Ninth New Collegiate Dictionary, 1985, s.v. forelock).

3. Conclusion

This paper has examined the translations of the Quranic scientific verses in the light of modern science. A knowledge of the Islamic Revelation is indeed fundamental from this point of view. Unfortunately, the Quranic verses relating to scientific data are badly translated and interpreted. Inaccuracies in translation or erroneous commentaries which would not have surprised anybody one or two centuries ago, offend today’s scientists since they are incompatible with modern knowledge.

The errors committed by most, if not all, translators may be explained by the fact that modern translations often resume, rather uncritically, the interpretations given by older commentators. In their day, the latter had an excuse for having

given an inappropriate definition to an Arabic word containing several possible meanings: they could not possibly have understood the real sense of the word or phrase which has only become clear in the present day thanks to scientific knowledge. In other words, the problem is raised of the necessary revision of translations and commentaries in the light of modern science. It was not possible to do this at a certain period in the past, but nowadays we have knowledge that enables us to render their true sense.

The most important conclusion arrived at in this paper is the concrete evidence that the message of the Quran revealed over a period of twenty three years in both short and longer parts, on numerous occasions and in a variety of circumstances is free from any contradictions and is in agreement with modern knowledge. If the Quran had been written by a human being then certainly some contradiction would be there and could be discussed. Already the Quran has pointed out this fact.

أثر التقدم العلمي في تقويم ترجمات القرآن الكريم

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المستخلص

تسبر هذه الدراسة غور ترجمات الآيات القرآنية التي تعالج القضايا العلمية في ضوء العلم الحديث. إذ تستند على فرضية مفادها أن ترجمات الآيات القرآنية التي تعنى بالقضايا العلمية عرضة للنقد من وجهة نظر العلم الحديث. فقد تبين أن الترجمات غير متساوقة مع الآيات القرآنية بقدر ما يتعلق الأمر بالعلم الحديث. وتعزى الأخطاء التي وقع فيها المترجمون إلى حقيقة أن الترجمات الحديثة للقرآن الكريم غالباً ما تعتمد اعتماداً لا يخرج عن تأويلات القدامى من المفسرين. لذا توصي هذه الدراسة بتتقيح ترجمات القرآن الكريم وتفسيره في ضوء العلم الحديث.

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