

Scientific Approach in Quranic Exegesis: The Emergence and Issues

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ABSTRACT

This research studies the concept of scientific exegesis (Al-Tafsīr Al-‘Ilmī) which recently gained considerable significance in the Muslim world in order to understand the Quran in this contemporary era. In the beginning, we define the scientific exegesis, shedding light on its history in terms of its emergence, time context, scholars and their arguments. Later, we identify and discuss the following theoretical and practical issues of the scientific exegesis. It applies two methodologies, historical to collect relevant data and analysis to scrutinize the collected data. The study concludes that there have been numerous tafsīr that use scientific exegesis approaches that contain significant methodological issues which need to be examined to shed better light on this problem. On the basis of making the Quran to be contemporarily understood, this study suggested that the integration of both sciences and revealed knowledge should be applied in a correct methodological way or it will lead to serious misunderstanding of the Quran.

Keywords: Exegesis, I’jāz, Miracles, Scientific, Tafsīr.



INTRODUCTION

Recently, a special interest has developed with regards to connecting the Quran with the experimental sciences, and that is observable in the activities of exegesis and scientific miracles, as the world has encountered many publications that attempt to interpret the Quran within this direction. Additionally, many international organisations and entities were established and are responsible for developing this field by spending huge amounts of money by global Islamic countries and universities.

Due to that, this study attempts to understand the reasons behind the emergence of the scientific exegesis, and to investigate on the theoretical and practical issues associated with it; It is important to acknowledge that interpreters can be right and can be wrong, and explaining the words of Allah is an important matter because it involves understanding the purpose of Allah's words; thus, there is a need to respect the standards and approaches of exegesis.

METHODOLOGY

The methodology of this study is qualitative in nature that utilise library methodology to obtain authentic data. All information is used to support, supplement and deepen the study in order to be properly analysed. In this study, the researcher collected the information about the concept of scientific exegesis (Al-Tafsīr Al-ʿIlmī), shedding light on its history in terms of its emergence, time context, scholars and their arguments. After that, this study proceeds with an analysis phase, in which the researcher analysed the collected information on theoretical and practical issues of the selected Quranic verses that have been used in scientific exegesis. The doctrinal studies involve searching for primary sources such as the Quran and related tafsir. For the secondary sources, this study refers to the scholarly books, journals, proceedings, papers, dissertations, theses and related studies on this topic.

FINDING AND DISCUSSION

Definition of Scientific Exegesis (Al-Tafsīr Al-‘Ilmī)

Tafsir or Quranic exegesis is defined by Muslim scholars as a science that quest for how to pronounce the words of the Quran, their connotations, their individual and compositional rulings, their meanings that bear on them the state of composition (Quranic words and verses), and its sequences (Abū Hayyān Al-Andalusī, 1991). In other words, Quranic exegesis is a knowledge to understand the book of Allah that is sent down to His prophet Muhammad (PBUH), through explanation of meanings and extraction of rules and wisdoms. (Al-Zarkasyī, 1974).

In general, there are two different approaches towards science that came into existence in the Muslim world in recent decades. The first approach called Al-Tafsīr Al-‘Ilmī which tries to restore and highlight the real meaning of Qurānic verses through utilisation of modern scientific knowledge. The second approach called Al-I’jāz Al-‘Ilmī (scientific miracle) (Rahmah Ahmad Osman et al., 2018). However, this research will only focus on the first one which is Al-Tafsīr Al-‘Ilmī.

Numerous scholars in the past and current times have defined the scientific exegesis, and the most comprehensive definition is the one contributed by Fahd Al-Rumi as he defined the scientific exegesis as attempts to reveal the connection between the cosmic verses of the Quran and the discoveries of the experimental science, to depict the miracle of the Quran, proving its sacred source and validity throughout any time or place (Fahd Al-Rumi, 1986).

In this context, it can be understood that the attempt to understand by applying the concept of Al-Tafsīr Al-‘Ilmī is to prove that the Quran is a comprehensive message from God that has touched every single detail of human knowledge including the issues of natural phenomena. Though it did not give details of these physical matters; but, it left that duty for mankind to explore and discover those facts stated in the Quran by utilizing the faculty of intellect that Allah has bestowed him. This can be seen that how Quran seems to talk about embryology, astronomy, geology, botany, zoology etc. These facts indicate the comprehensiveness and holistic nature of Quran in which nothing is left out or neglected (Tijani Ahmad Ashimi, 2019).

In addition, scientific approach in interpreting al-Quran has appeared in the recent time. It was borne out of the pressing need of the society to embrace the arrival of a new civilization and new disciplines of knowledge. Therefore, as long as it follows the general rules of Tafsir as laid out by the Ulama, this method is considered to be generally relevant, and therefore, accepted (Lukman Abdul Mutalib et al., 2019).

To sum up, a correct methodological study in Quranic exegesis is extremely crucial since it involves the knowledge of understanding the words of Allah, especially when it deals with the scientific explanation in understanding the Quran which should be done in proper methodological way that combine both Islamic and scientific discipline of studies.

Characteristics of Scientific Exegesis

The concept of the scientific exegesis is understand from its characteristics, and that can be done by comparing it to the scientific miracle, as follows:

1. Scientific exegesis (Al-Tafsīr Al-‘Ilmī) is an issue of research and debate. Meanwhile, the scientific miracle (Al-I‘jāz Al-‘Ilmī) is a recognised and indisputable topic, so there is no room for doubts about the precedence of the Qur’an in discussing it (Fahd Al-Rumi, 1986) & (Yusuf Al-Qaraḍāwī, 2000).
2. Scientific exegesis is subject to ijtihad with regards to the sciences used in exegesis, and in how these sciences are used and their indication in the Quran; meanwhile, the scientific miracles must be denoted.
3. The scientific exegesis of the Quran is subject to mistakes because it is done through the interpreter’s ijtihad, unlike the scientific miracle.
4. It is permissible to use scientific theories that are deemed to be true in the scientific exegesis. However, as for the scientific miracles, the theories should be based on fixed scientific facts.
5. Scientific exegesis is a method that leads to the scientific miracle. Every scientific miracle is originally a scientific exegesis, but not every

scientific exegesis is a scientific miracle, so the scientific exegesis is more general than the scientific miracle (Murhif, 2010).

The Emergence of the Scientific Exegesis

The scientific exegesis did not suddenly come to light, but its origins date back to the fifth century AH, and specifically to Abū Hāmīd Al-Ghazālī (d. 505 AH) when he mentioned it in his book (*Al-Ihyā'*) about the knowledge of the sciences of the ancient people and the latest ones in light of the Qur'anic exegesis; he said: "These sciences are endless, and the Quran has a reference to them comprehensively". (Al-Ghazālī, n.d)

Al-Ghazālī expanded the discussion of this topic in his book titled *Al-Jawāhīr*, where he stated that the Quran refers to the science of medicine, astrology, cosmology, zoology, anatomy and many more. However, Al-Ghazālī did not use scientific theories to interpret the Quran. Instead, he referred to these sciences in the Quran, and Al-Ghazālī is regarded as the first person to establish the theoretical foundations of the scientific exegesis of the Holy Quran (Abdul Mājid Al-Muḥtasab, 1982).

Ibn Abī Fādīl Al-Mursī came later with a similar opinion, in which he mentioned that the origins of skills are stated in the Quran, such as sewing, blacksmithing, construction, carpentry and pottery. Al-Suyūṭī also confirmed this opinion in his books *Al-Itqān* and *Iqlīl Al-Ta'wīl* (Jalāluddīn Al-Sūyūṭī, 1974). Moreover, other interpreters supported the same idea, such as Bayḍawī in his book *Anwar Al-Tanzīl*, and Nissab in *Gharā'ib Al-Qur'ān* and Al-Alūsī in *Rūh Al-Ma'ānī* (Adil Bin Ali Al-Syiddi, 2010).

Throughout 8th centuries, only eight interpreters who were interested in this matter, which is very few compared to the total number of general Quranic interpreters. Those exegeses were not defined as scientific ones because the interpreters were never practised, they only mentioned and emphasised theoretically. This case, however, was different for Fakhr Al-Dīn Al-Rīzī, which is considered the first to realistically apply the scientific exegesis in some of the verses in his book *Mafātīh Al-Ghayb* (Al-Syiddī, 2010).

The concept of scientific exegesis was not in existence until the contemporary era when many interpreters were interested to approach the knowledge. It can be said that the scientific exegesis started as a direction or an approach at the end of the 19th century. It was more developed at the beginning of the 20th century up to now, as many publications and modern means were introduced, as well as international entities supervising the field, conferences discussing the issues and the huge amounts of funds which were spent on research and developments to support this approach, especially with regards to the scientific miracles and the scientific exegesis (Al-Syiddi, 2010).

The Scientific Exegesis in Contemporary Era

Sheikh Muḥammad ‘Abduh is eminent for being one of the pioneers of the modern rational school of Quran exegesis and had many followers who shared the same thoughts after him. He adopted the ideas of his Sheikh- Jamāl Al-Dīn Al-Afghānī- on which he built his own scientific and intellectual da‘wah. His student, Muḥammad Rashīd Reda, facilitated the publication of his ideas in the *Journal of Al-Manar* and *Tafsir Al-Manar* (Murhif, 2010). Sheikh Abduh used the scientific approach of exegesis for some of the verses since his exegesises of the Quranic verses were based on rationalism as well as reconciliation between Islam and western civilisation. Moreover, he believes that the Quran examines many scientific and historical issues which were not known during the era of revelation (Abdul Majid Al-Muhtasab, 1982).

Nevertheless, the first and most known person to interpret the whole Quran scientifically was Sheikh Ṭaṭṭawī Jawharī (1970-1940); he is considered as the greatest scholar of the scientific approach of exegesis, and the first to exploit the western detections and theories in his exegesis of Quran (Murhif, 2010), he assured that the Quran carries 750 verses connected clearly with the Physical cosmology. His gigantic book was composed of 25 sections, named *Al-Jawāhir fī tafsīr al-Qur’an Al-Karīm* (Ṭaṭṭawī Jawharī, n.d).

Meanwhile, South Asia observed the emergence of Aḥmad Khan (1817-1898) who wrote an exegesis book named *Tafsir Al-Quran*, where he explained all the verses related to miracles, for it to be subject to the logic of reason or natural law according to the European understanding,

as in this exegesis, he wanted to prove that Islam and its teachings do not contradict the laws of nature (Sayyid Ahmad Khan, 1994).

Reasons Behind the Emergence

The emergence of the scientific exegesis on this contemporary era is due to the following reasons which are; the impact of modernisation, secularism challenges, and eagerness to spread Islam in the name of da'wah by relating Islam with sciences, which will be discussed as followed.

1. Western Advancement in Science and Technology, and the Backwardness of the Muslim World

In the second half of the 19th century, the world of the west was developing industrially and scientifically. In contrast, the Arab world did not have any remarkable achievements, and it was even worse for them, as at that time, the western colonisation of the Muslim countries was taking place, not only geographically but also intellectually, economically and politically (Abdul Majid Al-Muhtasab, 1982). At this period, the Islāhiyyūn or reformers came into light; reformers are the Muslim intellectuals who wanted to put an end to the bad circumstances that were surrounding the Muslims. They believed that the reason behind the backwardness of the Muslims is that their abandonment of the Quran, in terms of understanding it or practising it. In this context, the reformers started to look into the book of Allah to find a solution, by interpreting it, as they believed that in the sacredness of His words, and the power of it in delivering indications of the origin of science (Dalāl Kuwairān As-Sulami, 2014).

Throughout the European colonisation of Egypt, a connection occurred between the two, realising an engagement between these two worlds in a variety of fields, such as education; many Egyptian intellectuals travelled to the west and were fascinated by the western civilisation especially that concerning science and technology, and thus they called for the importance of having those sciences and knowledge, as it helped the west develop, and that is exactly what was needed by the Muslims to overcome their weakness, inactivity and other bad circumstances (Zafar Ishaq Ansari, n.d).

Sheikh Ṭaṭṭāwī Jawharī, an Egyptian scholar and intellect was influenced by such beliefs. He was a member of the Muslim brotherhood, which shaped his political and religious experiences. He followed the ideas of Jamāl Al-Dīn Al-Afghīnī, and his student Sheikh Muḥammad ‘Abduh, and was known for his approach of connecting the Quranic verses with scientific exegesis throughout his intellectual career. Considering the challenges of the western modernisation and their progress, Sheikh Ṭaṭṭāwī felt that he carries a responsibility towards Muslims to free them from backwardness, and thus he wrote his first book in history that exclusively discusses scientific exegesis (Al-Jazeera, 2017).

2. The Challenges of Secularism

The western colonisation of the Islamic world was characterised by its secularisation agenda within the countries that they colonised in which they attempted to spread the idea that religion prevents progress, such as what happened in the west before the Renaissance when the church clergymen had the power and used to force the religion on the people, which led them to live in humiliation. This is because there are many issues in Christianity, specifically in the Bible, that go against natural sciences (Ṭāhā ‘Abdul Raḥmān, 2012). In the context of facing this challenge, Muslim intellectuals have attempted to demonstrate that Islam or the Qur’an itself is not incompatible with reason and science. As mentioned earlier, Ahmed Khan wrote his exegesis (Tafsīr Al-Qur’ān Al-Karīm) based on this reason, which is to demonstrate that Islam and its teachings do not contradict the laws of nature (Zafar Ishaq Ansari, n.d).

At that time in Egypt, there was an attempt to reform education in Al-Azhar Al-Sharīf, led by Sheikh Muḥammad ‘Abduh, since Al-Azhar at that time was not incorporating the teachings of natural sciences; whenever the Egyptian government wanted to impose the teachings of these sciences, they asked for the opinion of Sheikh of Al-Azhar, and this indicates much science was separated from the religious thinking of Al-Azhar students at that time. According to Sheikh Muḥammad ‘Abduh, no progress will take place until the Al-Azhar is reformed, especially implementing the knowledge of different sciences in

religious thinking among Al-Azhar students. Hence, it becomes clear to us that the call to combine experimental sciences with Islamic sciences was a crucial call at that time, to prove that Islam does not contradict science and reason, to be able to overcome the challenge of the idea of secularism from the West (Muḥammad Hasanain Hassan, 2007).

Sheikh Muḥammad ‘Abduh in his reform mission did not only emphasise on the reformation of Al-Azhar but also focused on the exegesis; as mentioned earlier, he conducted a rational approach in exegesis to be able to reconcile Islam with Western civilisation, where he put a priority to the mind in his exegesis (Abdul Majid Al-Muhtasab, 1982). An example from his scientific exegesis is when he explained the words of Allah Almighty in Sūrah Al-Fīl about the bird that Allah sent with stones from the fire, interpreting it to be- what is today called- microbes and these stones maybe the germs of a disease (Muḥammad ‘Abduh, 1922).

Similarly, Sheikh Ṭaṭṭāwī Jaūharī wrote his scientific exegesis (Jawāhir Al-Qurān), having a zeal for the Muslim nation, and struggling to awaken it and its scientific Renaissance. He stated that in the Quran there are at least 750 scientific verses, which is the reason why he wrote this scientific Quranic exegesis, as he mentioned his aim; “And let this book be a rapid call towards studying the upper and lower sciences, and let some of this nation be better than the west in conducting agriculture, medicine, minerals, arithmetic, and engineering” (Ṭaṭṭāwī Jaūharī, n.d).

3. Issues in Previous Exegeses, with Special Attention to Verses of Cosmology

This issue is related to the one mentioned above, as Muslims attempted to prove that there is no contradiction between religion and reason; however, in previous exegeses, it was found that there are disagreements between the exegesis of the verses and the modern scientific discoveries with regards to cosmology. Early interpreters used to explain cosmic verses based on spontaneous thoughts, i.e. what is common and acceptable between the interpreters (Al-Qarḏāwī, 2000).

For instance, the following verse:

وَمِنْ كُلِّ شَيْءٍ خَلَقْنَا زَوْجَيْنِ لَعَلَّكُمْ تَتَذَكَّرُونَ

And of all things, We created two mates, so that you may reflect and ponder

(Adz Zhariyaat:49)

One of the early interpreters said that this totality is for the majority. Thus it is not general or absolute, as depicted by the holy verse “of all things”; meanwhile, others said that this word refers to every animal gender: male or female, i.e. specified for the genders of the animals. (Shihāb Al-Dīn Al-Alūsī, 1994).

Hence, they explained the verse based on their knowledge on the fact that dualism appears in humans and animals; however, they did not know that other things such as plants (e.g. palm), have the same characteristics. Later on, modern science discovered that all the creatures are based on dualism, even the atom contains protons (positively charged) and electrons (negatively charged). Indeed, Allah says:

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

Exalted is He who created all pairs – from what the earth grows and from themselves and from that which they do not know (Yassin: 36)

4. The Da’wah Purpose

Some Muslims believed that one of the essential benefits of scientific exegesis is the strength and success it carries in inviting people to the true religion. Scientific exegesis fills souls with the glorification of the Creator by recognising the wonders of his creation and thus, appreciating him, strengthening the faith of believers, and their certainty in the truthfulness of Allah and the Quran. Scientific exegesis is a fundamental approach to reach the scientific miracle, and the scientific miracle is an obstacle to atheists and unbelievers as it makes

them unable to find uncertainties in the Quran. Rational people agree that the scientific facts involving cosmic verses found in the Quran are strong proof that whoever revealed the Quran is the Creator of this scientific truth (Al-Qaradāwī, 2000).

Therefore, there are a lot of scientific interpreters were originally specialising in non-Sharia fields of study and thus not qualified to be interpreters such as natural or social sciences. Still, they quit their original specialisation and started being involved in the scientific exegesis for Da'wah, because they believe that scientific exegesis is one of the most powerful weapons of Da'wah (Mu'taz Al-Khatīb, 2007).

Among them is Dr Zaghāl Al-Najjār, who said that the connection between Islam and science through scientific exegesis and the scientific miracle is the most appropriate approach of Da'wah in this scientific and digital world, and that is to confirm the faith of believers and invite the ungrateful to Islam. (Zaghāl Al-Najjār, 2008).

The Scholars' Arguments on Scientific Exegesis

Many studies presented the arguments of the previous scholars that belong to the first half of the 20th century, thus it will only be highlighted briefly. The arguments of the modern scholars starting from the end of the 20th century up to date will be more elaborated, as that information is currently scarce and not commonly discussed.

Arguments of Scholars in the First Half of the 20th Century

In general, the most prominent opponents of that era are represented by Sheikh Maḥmūd Shaltūt, Amīn Al-Khūly, Sayyid Qutub, and others. The opponents reject the scientific approach in the exegesis because they believe that the Quran is a guide book, not one that discusses theories of science. Moreover, they think that the scientific exegesis of the Quran may cause confusions when it comes to issues of science at all times and places, and it may compel the practitioners towards a showy exegesis in terms of language and meaning (Al-Syaddī, 2010).

On the other hand, the most prominent proponents among them includes Sheikh Muḥammad ‘Abduh, Ibn ‘Āshur, Al-Marāghī and others (Al-Sulamī, 2014). Their justification states that Quran calls for reflection upon the universe and creatures and that the norm is allowing opinion-based exegesis. So, the scientific exegesis falls under this category. Moreover, they argue that anything generally included in the Quran, is considered to be one of its stipulations, including issues of exegesis (Al-Syaddi, 2010).

The Arguments of the Modern Scholars from the End of The 20th Century Up to Date

There are two opinions from the Muslim scholars with regards to this issue, as some accept it, and the others reject it which are discussed as follows:

1. Sheikh Al-Mutawalli Al-Sha’rawi

Al-Sheikh Al-Mutawalli Al-Sha’rawi is one of the prominent scholar of tafsir in which he has significant contribution and view about interpreting the Quran by applying the methodology of Al-Ilmi al-Naqli al-Ijtima’i (Revealed, scientific and sociological) in his Tafsir Al-Sya’rawi when he was dealing with the Quranic verses that seem as having the element of contemporary scientific knowledge. In this regard, his methodology can be seen when he tried to make a relation between the Quranic messages and the current knowledge that surround the humans such as natural sciences. For him, answers and the solutions for the problems face by humans can be found in the Quranic verses, that is reason the Quran is interpreted with this kind of methodology (Selamat Amir, 2016).

2. Dr. Zaghlūl Al-Najjār

One of his views on scientific exegesis is that the Quran abounds with many verses that refer to the universe, the creatures it carries, and the cosmic phenomena. He mentioned that there are about a thousand explicit verses related to cosmology, which represent one-sixth of the Quran, according to scholars’ calculations (Zaghlūl Al-Najjār, n.d).

He also highlighted an important standard in differentiating between exegesis and scientific miracle where he says: Scientific miracle means proving the precedence of the Holy Qur'an in referring to a fact of the universe or an explanation of one of its phenomena before the acquired knowledge finds it experimentally after many centuries. Meanwhile, the exegesis, is a human attempt to better understand the significance and meaning of the Quranic verse. If the interpreter was successful in delivering the correct explanation, he gets two rewards, and if he was not, he still gets one reward, and it all depends on his intention. Thus it must be emphasised that any errors made in the exegesis will be attributed to the interpreter himself, and does not touch the majesty of the Qur'an. (Zaghlūl Al-Najjār, 2004).

3. Sheikh 'Abdul Majīd Al-Zindānī

Sheikh Abdul Majeed 'Abdul Majīd Al-Zindānī believes that cosmic verses can be interpreted not in literal way because the classical mufasssiron are not familiar with the facts and details of God's creation; he believes that the scientific exegesis will lead to the discovery of the miracle of the Quran, and it emphasises that the Quran is the word of God, which includes facts that people were not aware of over many centuries ('Abdul Majīd Al-Zindānī, 2010).

4. Sheikh Ṭāha Jābir Al-'Alwānī

Sheikh Ṭāha Jābir Al-'Alwānī criticised this approach as he believes that those practicing scientific explanation and scientific miracles rely on the Western thought as if it the center of attention, which indicates that the Muslim's mind has not been liberated as they want to relate everything with sciences only to justify the truth of Quran. He also argues that we should not describe the Quran as a science book, in case there are any contradictions between the Qur'an and science (Mu'taz Al-Khatīb, 2005).

5. Sheikh Yousuf Qaraḍāwī

Al-Qaraḍāwī's stance in this issue was an intermediate opinion as he does not absolutely reject it but also does not accept it. He set the

conditions for the use of cosmic sciences in exegesis, such as relying on facts rather than assumptions, avoiding affectation in understanding the text, and avoiding words that indicate the accusation of the whole nation with *Jahl* (ignorance), i.e. assuming that companions, followers, and great imams did not understand the Qur'an until these sciences came into light in our time. However, scientific exegesis is permissible if it is an addition to the old exegesis and not a complete abolition of it (Al-Qaraḍāwī, 2000).

Issues in Scientific Exegeses

In this study, the researcher has found two categories of issues in the scientific exegesis of Quran which are theoretical and practical issues.

Theoretical Issues

1. The Issue of the Definitiveness of the Quranic Text and the Probability of the Experimental Science

This issue is the largest and most important theoretical issue in scientific exegesis because one of the conditions for accepting the scientific exegesis is to be in line with facts and not assumptions or theories. This is because scientific facts are fixed, while scientific theories may change. Exegesis according to scientific theories may expose the Quran to accusations of being wrong when it comes in contradiction with new scientific theories and hypotheses which discovered in the later period of times (Al-Syaddi, 2010).

It is worth noting here that the scientific fact in itself is a difficult concept to identify and define, as theories sometimes prove their validity for some time until a new scientific fact comes into light. For example, Newton's theory of gravity was deemed a scientific fact until Einstein came up with his theory that nullified Newton's one, which was previously considered a scientific fact (Mu'taz Al-Khatīb, 2006). The truth at a time may become otherwise as time goes by, and thus, sometimes uncertainties may arise with regards to the fixed source (the Quran) and instead of strengthening faith, it leads to its weakening (Tāha 'Abdul Rahmān, 2012).

Therefore, the scientific interpreter must pay attention to the fixed sources and variables when it comes to scientific issues, and be aware of them to avoid mistakes when interpreting the words of Allah. Referring to this problem, Sheikh Yūsūf Al-Qaradāwī said, “We calculated the relative stability of the facts because this is what we can afford as human beings. Exegesis has been defined as a statement of what is meant by the words of Allah concerning the human capabilities” (Al-Qaradāwī, 2000).

2. Confusion Between the Scientific Exegesis (Al-Tafsīr Al-‘ilmī) And the Scientific Miracles of the Quran (Al-‘ijaz Al-‘ilmi)

Some scientific interpreters rarely distinguished between scientific exegesis and scientific miracle, and often confuse them together. The truth is the scope of scientific exegesis is very wide, while the scientific miracle is more narrow and specified. Scientific miracles are the clear and definite issues, where there is no room for doubt or uncertainties in the precedence of the Quran, for example the phases of the fetus mentioned in several Surah in the Quran such as Sūrah al-Mu’minīn and Sūrah Al-Ḥajj, as well as the rule of dualism in all creatures, as the Almighty says:

وَمِنْ كُلِّ شَيْءٍ خَلَقْنَا زَوْجَيْنِ لَعَلَّكُمْ تَتَذَكَّرُونَ

And of all things, We created two mates, so that you may reflect and ponder

(Adz Zhariyaat: 49)

Also, stating in the Quran that water is the origin of life, as Allah says:

وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ أَفَلَا يُؤْمِنُونَ

We made from water every living thing. Will they not then believe?

(Al Anbiya’: 30)

Dr Zaghāl Al-Najjār is one of the contemporary pioneers of the scientific miracles in the Quran. He put the guidelines in distinguishing between exegesis and scientific miracle, he says:

“Scientific miracle means proving the precedence of the Quran in referring to a fact of the universe or an explanation of one of its phenomena before the acquired knowledge finds it experimentally after many centuries. Meanwhile, the exegesis, is a human attempt to better understand the significance and meaning of the Quranic verse; If the interpreter was successful in delivering the correct explanation, he gets two rewards, and if he was not, he still gets one reward, and it all depends on his intention; it must be emphasised that any errors made in the exegesis will be attributed to the interpreter himself, and does not touch the majesty of the Quran.” (Al-Najjar, 2004).

3. Lack of Consideration of Exegesis-related Sciences in Tafsir

Examples of these sciences is being aware of the reasons of revelation, the rules of abrogation (Al-Nāsikh wa al-Mansukh), the rules of general and specific (Al-‘Am wa al-Khās), the knowledge of the Sunnah of the Prophet and its dimensions, knowledge of the Arabic language and its rhetoric methods (Al-Balāghah wa Al-Bayān) (Al-Syaddī, 2010).

Unfortunately, these sciences have been neglected by some scientific interpreters, because they do not have the backgrounds that qualify them to be interpreters in its true meaning. Many of them were not specialised in the sciences of Sharia in the first place, where most of them had a background of experimental sciences. Still, then they started getting involved in the exegesis process with a noble intention and began to interpret the Quran without following the right methodology due to the lack of consideration of these sciences that are crucial to the Quran, and so they made mistakes. Al-Zarkashī (1957) said:

“It is not permissible to interpret the Qur’an merely based on opinion and ijtiḥad without having any proper backgrounds, for God Almighty said:

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

And do not pursue that of which you have no knowledge. Indeed, the hearing, the sight and the heart – about all those [one] will be questioned.

(Al Isrā’:36)

Practical Issues

1. Affectation in Understanding the Text

Affectation here refers to loading the verses with what it cannot bear, i.e. with meanings that are beyond what it is referring to; It is possible to have a deduction based on the words, but without carrying it beyond what it can bear; on the other hand, sometimes even if this is not applied, the context of the verse may interrupt it. We observe in some scientific exegeses that the authors want only limiting themselves to wanting to achieve the goals or reach the meanings that were previously found, so they start to search and connect science and Quran to denote that the verses of the Quran agree with whatever science is saying, without focusing on the verse topic, context, or the connotation of the word. (Ali As’ad, 2009).

For instance, Kamal Mohammad Bazy attempted to interpret the word “inqilāb” (rotation) in the following verse:

وَنُقَلِّبُهمْ ذَاتَ الْيَمِينِ وَذَاتَ الشَّمَالِ وَكُلُّهُمْ بَاسِطٌ ذِرَاعَيْهِ بِالْوَصِيدِ

and We turned them about to the right and to the left, while their dog (lay) outstretching its paws at the entrance (Al Kahfi:18)

He said that the word qallaba (قَلَّبَ) from nuqallibuhum (نُقَلِّبُهُمْ) also means inqilab which means rotation, i.e. the rotation of two solstices (Inqilābain): winter solstice and summer solstice (Al-Inqilāb Al-Shitawī wa Al-Inqilāb Al-Soifī) which happen on 22 December, and

21 June, every year during the earth's rotation around the sun, where the direction of its rotation changes to the opposite side through a rapid rotation. According to him, the verse indicates that it is not literally the rotation of the dog but the earth (Kamāl Muḥammad Bazzi, 1995). The issue lies in this explanation is that the scientific concept of "rotation" (Inqilab) was introduced in the recent times, and it is not acceptable to apply it to the Quranic verses just because they share the same root words which are قلب (qalb), this may lead to dismantling the meanings of the Quran. Furthermore the Quran is using the word which origins from قَلْب (Qallaba) and not انقلب (inqalaba), which indicates a totally different meaning. Here we can see the linguistic mistakes that have been done only to reach a scientific exegesis of the Quran (Ali As'ad, 2009).

2. Inconsistencies with the Sunnah

The word "Dābbah" (beast)- mentioned in the following verse-:

وَأِذَا وَقَعَ الْقَوْلُ عَلَيْهِمْ أَخْرَجْنَا لَهُمْ دَابَّةً مِّنَ الْأَرْضِ تُكَلِّمُهُمْ أَنَّ النَّاسَ كَانُوا بِآيَاتِنَا لَا يُوقِنُونَ

We will bring out for them a creature from the earth that will speak to them of how humanity was not certain of Our revelations
(Al Namlu: 82)

The verse interpreted by Abdul Razaq Nawfal as the satellite in the space (Abdul Razaq Nawfal, 1993). This exegesis is inconsistent with what was mentioned in the Sunnah, where the text mentions that the beast will come out during the noontime as one of the major signs of the hereafter. It is narrated on the authority of Abu Huraira that the Messenger of Allah (PBUH) observed: When three things appear faith will not benefit one who has not previously believed or has derived no good from his faith: the rising of the sun in its place of setting, the Dajjal, and the beast of the earth (Muslim, 2003).

3. Inconsistencies with the Verses' Context

(يَفْذِفُونَ بِالْأَعْيَابِ مِنْ مَكَانٍ بَعِيدٍ)

And indulged in conjectures from far away (Saba': 53)

Mohammad Kāmil Abdul-ṣamad considers the following verse as a proof to the Quran's prophesy of the means of modern communication, as people can call each other from far away using the phone, or listen to the radio from another country, or see things in a different country through television. This prophesy is regarded as a miracle within the rational standards (Mohammad Kāmil Abdul Samad, 1992).

This exegesis is consistent with the verses' context, as the verse is coupled with what came before it, which is:

(وَقَدْ كَفَرُوا بِهِ مِنْ قَبْلُ)

They disbelieved in it before

Which indicates that the verse is talking about disbelievers, and that is emphasised by the two verses that come before it, as follows:

وَلَوْ تَرَى إِذْ فَزِعُوا فَلَا فَوْتَ وَأُخِذُوا مِنْ مَكَانٍ قَرِيبٍ (51) وَقَالُوا آمَنَّا بِهِ
وَأَنَّى لَهُمُ التَّنَاطُشُ مِنْ مَكَانٍ بَعِيدٍ

If you could only see when the unbelievers will go about in a state of terror. They will have no escape and will be seized from a place near at hand. (Saba': 51)

They will then say: "We believe in it"; but whence can they attain it from so far-off a place? (Saba':52)

The verses indicate that on the Day of Judgment, the disbelievers will announce their faith, but that will not do any good to them, because now they are far away from the place where announcing faith was acceptable, i.e. they were disbelievers in the dunya (wordly life) and rejected all the unseen matters (Ibn Kathir Al-Dimasyqi, 1998). This is the exegesis of the verse, with regards to its context. Thus it is easy

to observe that the previous scientific exegesis does not take into consideration the context of the verses, and is inconsistent.

4. Inconsistencies with the Language Denotations

The Quran was revealed in Arabic. Thus the scientific interpreter should be able to fully understand the language, knowing all the denotations that can come with the Arabic language and its grammar, as well as uncommon words and their dimensions.

One of the examples that do not consider those standards is the exegesis of the following verse:

(السَّمَاءِ ذَاتِ الرَّجْعِ [الطارق: 11])

One of the scientific interpreters argued that the word of (ذَاتِ الرَّجْعِ) refers to the force of **gravity**, and its impact on the rotation of the planets and the stars around other planets and stars, and that these spinning planets and stars return to their place of departure due to the force of gravity (Muḥammad Rātib Al-Nablūsī, 2005).

The issue of this exegesis is the non-consideration of the denotation of the language with regards to the word “الرجع” when it was originally revealed. The term “الرجع” is different from “الرجوع”, where the latter means “coming back”, while the former means “bringing back”¹. The word “الرجع” can also refer to water or thunder. Al-Rāghib emphasised that the meaning of الرجع in verse refers to the rain, and it was called so because it gives back the water it originally took. (Muḥammad Rāghib Al-Aṣfahānī, 1991). Hence, that word means rain, which is how the righteous Salāfuṣṣāliḥ - such as Ibn ‘Abbās and Qatādah - understood it (Abū Ja’far Al-Ṭabāri, ٢٠٠٠). The exegesis that says that the word “الرجع” means the force of gravity is very different from the meaning indicated by the language.

CONCLUSION

After a deep study into the issues of scientific exegesis, this study has identified that the origins of scientific exegesis date back to the fifth century AH, and came fully in action at the end of the nineteenth century. Taken together, the reasons for the emergence of scientific exegesis in the modern era is due to the impact of the challenges of Western modernisation, the role of the relationship between the text and the reader, and its use for effective Da'wah.

The scholars' arguments on the scientific exegesis are mixed, some of them supported it, some rejected it, and others conditionally accepted it. In general, the scientific exegesis is permissible because it is a type of opinion-based exegesis, but in an absolute way, there are standards that must be observed.

The findings of this research found that the theoretical issues in scientific exegesis are arising due to the issue of the definitiveness of the Quranic text and the probability of the experimental science, confusion between the scientific exegesis and the scientific miracles of the Quran, and the lack of consideration of exegesis-related sciences. Practical issues include affectation in understanding the text, inconsistencies with the Sunnah, inconsistencies with the context of the verse, and inconsistencies with the language denotations.

Next, these findings provide the following insights for future research and scholarly works that it is necessary to review the previous scientific exegeses and to compose an encyclopaedic scientific exegesis supervised by a group of scholars from various disciplines - both experimental and Shariah sciences - because we live in the era of specialisation, and we rarely find a person who is experienced with more than one specialisation. Thus, it is important for both disciplines to be integrated in order to obtain the best scientific explanation and the most accurate to avoid making mistakes. The scientific exegesis alone is not sufficient to achieve any progress. Thus, it requires to educate the Ummah with the experimental sciences as well. The west was developed due to its interest in science. As for the Muslim ummah, if it paid equal attention to science and revelation together, remarkable progress will be achieved, and will be able to be ahead of the rest of the nations.

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