

**Tracking the Traces of God in Science: Islamic *Tafsir* on Science**

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By *Mehdi Golshani*

Reviewed By

Syamsul Kurniawan

*Pontianak State Institute of Islamic Studies*

To Muslims, the Qur'an should serve as the model of thinking. It is a model which should become the paradigm. The advancement of science based on the paradigm of the Qur'an will obviously enrich science. This paradigm will subsequently trigger the emergence of alternative science. We understand that normative premises of the Qur'an can be formulated into empirical and rational theories. The transcendental structure of the Qur'an is an idea which is normative and philosophical in nature, and it can be formulated into a theoretical paradigm, and provide a framework for the development of empirical and rational science, based on the pragmatic needs of humans as the vicegerent on earth. Kuntowijoyo (2006) argued that the development of theories of Islamic science is intended for the welfare of the Muslims.

However, in the path of the history of Muslims, there is a dichotomy between religion and science, which prompt an initiative to integrate both. To date, the dichotomy is a current discourse. Some people argued that religion and science are two different categories, each has a different area of study and is oriented to different things. Some said the opposite, both religion and science are integrated; two similar activities and both should not be separated, because both can complement each other and can be used for human interests.

The separation between religion and science is not something new, because it occurred in late medieval times especially when Islam began to decline. In fact, the dichotomy between religion and science was actually never found in the early history of the Muslims or the classical period of Islam. As we understand from the first paragraph received by Prophet Muhammad, i.e. al-'Alaq (96): 1-5 which begins with a verse "iqra", and in line with the mission of Prophet Muhammad to eradicate ignorance and mission to improve morality. It is also mentioned in *Surah al-Mujadilah* (58): 11, science and scientists have a high degree, and are parallel to the degree of the believers. As a guideline for Muslims, the Qur'an strengthens integrative relationship between religion and science.

The dichotomous standpoint in the history of Muslims has in fact led to the

decline of Islamic scientists in both the development of scientific insights and the resolution of various problems with multidimensional approach. This is the reason behind the publication of the book written by Mehdi Golshani, *Melacak Jejak Tuhan dalam Sains: Tafsir Islami Atas Sains* (Tracking the Traces of God in Science: Islamic *Tafsir* on Science) translated from *Issues in Islam and Science* by CRCS UGM in collaboration with Mizan.

Golshani in his book described how Muslim scholars in the golden era of Islamic civilization emphasized that the motivation behind the search for the natural and mathematical sciences was to know the verses of God in the universe. In their view, Golshani wrote, each of these disciplines indicated one dimension of God's creation, and science into one organic unity. In summary, as we mentioned earlier, the Muslim scholars of the Islamic classical period did not separate the study of the nature from their religious worldview, and they sought an inclusive framework that enabled them to explain the whole universe. The idea of the oneness of the Creator and harmony of creation was a fundamental principle that governs all aspects of science (pp. 3-4).

In Islamic perspective, according to Golshani, science and religion have the same basic metaphysics, and the purpose of revealing knowledge and seeking knowledge is to reveal the verses of God and His nature to humans. Therefore, we can include scientific activities as part of religious obligations, but it has its own methodology and language. We believe that inconsistency as many pointed out to science and religion in the past or even today, is because of the neglect of the limitations of science by most scientists, or because of interference of religious authorities in scientific issues. It is also the case in the West, some prominent scientists view scientific activities as part of religious experience (p. 8).

Conversely, according to Golshani, the Qur'an warns us that the study of nature can take us from the creation to the Creator only if we have faith in Him (*Sura Yunus* 10: 101). Therefore, when a scientist approaches nature with faith in God, faith will be strengthened by its scientific activities. Otherwise, the study of nature will never lead to God. This is due to the fact that scientific activities are always accompanied metaphysical presumptions of the scientists although they are unaware of it. In summary, according Golshani, faulty assessment can only take people to God only if it has a corresponding metaphysical framework (p. 9).

Golshani, who is a professor of physics at the Sharif Technology University, Tehran, also revealed that religious belief can provide good motivation for scientific work. In fact, it was the main motivation behind the works of great scientists in the golden age of Islamic civilization (p. 9).

Thus, how can we understand the nature? From the explanation of the Qur'an, according to Golshani, there are several ways. First, the sensory impression, which is perceived by the senses through experimentation and observation (al-Ghasiyah 88: 17-19). Second, the use of reasoning. Experimentation and observation are necessary to acquire knowledge of the outside world, but they are not sufficient to interpret and correlate the experimental data. In fact, what distinguishes human from animals is not their external senses but reasoning and reflection on empirical data (al-Araf 07: 179). In addition to the information embedded in sensory impressions, various realities of the world cannot be accessed through empirical data (Surah Yasin 36: 36). So, in this light, the Qur'an invites us to examine the nature empirically with an emphasis on the use of intelligence and understanding. Therefore, one is not expected to stop at the level of the sensory data, but must go beyond the observable part of the nature and explore the supra-sensory realities. Third, intuition, which is another way to gain knowledge about the reality of the world. At the highest level, intuition can be a revelation specific to the Prophet, and at a lower level it is in the form of inspiration that sometimes can be seen in most of the knowledgeable individuals (pp. 10-11).

What Golshani described above, is relevant to the beliefs of Muslims of the truth of the *qauliyah* verses (Holy Book) and *qauniyah* verses (the universe), that eventually leads to agreement that there is no contradiction or dichotomy between religion and science in Islam. Ontologically, the *qauliyah* and *qauniyah* are derived from "The One". The science and knowledge about *qauliyah* and *qauniyah* verses according Ramayulis and Samsul Nizar (2009:78) --which is in line with the Golshani's opinion-- first, empirically are obtained through the senses; second, science acquired through the senses and reasoning; third, philosophy is obtained through reasoning; and fourth, intuition gained through the heart. In addition, there is also science directly given by God to His messengers in the form of revelation, inspiration received by the human mind, and the guidance received by the human heart.

This outlook is in fact contrary to the view of those who believe that the sensory data are the only source of our knowledge (p. 11). In the Qur'an, a natural phenomenon known as the verses of Allah of which understanding these verses will enable a person to obtain the knowledge of the owner of such verses (al-Rum 30: 22). In the Qur'an, we often find references to the creation and composition of forms, precision and order in creation, as well as the harmony between human beings and parts of the physical universe (al-Ankabut 29: 20; at-Tariq 86 : 5; an-Naml 27: 88; al-Baqarah 02: 29). In another context, Golshani argued that according to the Qur'an the harmony

of creation is to prove the unity of God (as in al-Anbiya' 21: 22), that takes us closer to God (QS Fushilat 41: 53) (pp. 118- 119).

Finally, Golshani quoted the opinion of a leading Muslim scholar of the 11<sup>th</sup> century, Al-Biruni:

“When one decides to tell the difference between truth and falsehood, he must examine the universe and discover whether he is eternal or created. If someone thinks that he does not require this kind of knowledge, he needs to think about the laws that control our world, in part or as a whole. It will take them to know the truth about them, and paved the way to know the One that directs and controls the manifestation of the universe, and to know His attributes. This, in fact, is a form of truth which has been commanded by God to be searched by His knowledgeable servants, and He said, “... and give thought to the creation of the heavens and the earth, [saying], “Our Lord, You did not create this aimlessly” Surah Al ‘Imran / 03: 191). This verse contains what has been described, and if people are working in accordance with it, they will have access to all fields of science (p. 120).”

Despite the fact that the discourse put forward by Golshani on tracking the traces of God in science is not a novelty, this is an important book to read. It is simply because a book written Golshani emerged as a response to the Muslims who are still developing a culture dichotomy: separation between religion and science. This is completely comprehensible as the separation of religion and science practiced by most Muslims today led to the decline of Muslims in all fields, if compared to the West.