The Challenges of Islamic Philosophy of Science Based On Contemporary Islamic Science Thinkers

Shahirah binti Said

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v8-i5/4232  DOI: 10.6007/IJARBSS/v8-i5/4232

Received: 17 April 2018, Revised: 25 May 2018, Accepted: 27 May 2018

Published Online: 04 June 2018

In-Text Citation: (Said, 2018)
To Cite this Article: Said, S. binti. (2018). The Challenges of Islamic Philosophy of Science Based On Contemporary Islamic Science Thinkers. International Journal of Academic Research in Business and Social Sciences, 8(5), 887–897.

Copyright: © 2018 The Author(s)
Published by Human Resource Management Academic Research Society (www.hrmars.com)
This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: http://creativecommons.org/licences/by/4.0/legalcode

Vol. 8, No. 5, May 2018, Pg. 887 - 897
http://hrmars.com/index.php/pages/detail/IJARBSS  JOURNAL HOMEPAGE

Full Terms & Conditions of access and use can be found at http://hrmars.com/index.php/pages/detail/publication-ethics
The Challenges of Islamic Philosophy of Science
Based On Contemporary Islamic Science Thinkers

Shahirah binti Said
PhD Candidate, Centre for Islamic Development Management Studies (ISDEV), University Sains Malaysia, 11800 Minden, Penang, Malaysia.

Abstract
Before the dawn of modern science and technology, there was the knowledge of philosophy pioneered by Muslim scientists such as al-Farabi and Ibn Sina. Even Imam al-Ghazali himself discussed science as a subject of philosophy. However, after the rise of Western civilization, there was a separation of religion in daily lives. This had an effect on many knowledge disciplines including Islamic philosophy of science, which was perceived to have been influenced, by modern scientific philosophy introduced by Western thinkers. Realizing this, Islamic thinkers has put an effort to put religion in back its rightful place. The Islamisation of scientific philosophy has its own challenges. Therefore, several questions arise. What are the challenges and issues present in Islamic philosophy of science? Is there still a widespread influence of modern scientific philosophy in Islamic science philosophy? Based on these questions, this working paper presents three objectives. The first is to identify the definition of Islamic philosophy of science. The second is to identify the criticisms of modern scientific philosophy. The third is to analyse the challenges faced by Islamic philosophy of science based on the thinking of contemporary Muslim science experts. This literary study has found two challenges faced by Islamic philosophy of science. The first challenge is the internal challenge which comes from the knowledge of Islamic science itself and the second challenge is the external challenge which is the influence of modern scientific philosophy upon Islamic philosophy of science. Therefore, there is a need to develop Islamic philosophy of science so that it will centre absolutely on tauhid towards Allah (SWT).

Keywords: Philosophy, Islamic Science, Modern Science

Introduction
Science is a process of which its beginning cannot be ascertained. It might have been in practice since the primitive era through the Paleolithic era until the era of modern civilisation. By then, societies have become complex and a new measurement was made to measure the development of a society. The human societies began to think, study and use their intellect to present scientific ideas. This is what became known as philosophy. In today’s time, philosophy and science are perceived as important due to their massive impact on human thought (Singer, 1993: 3-7).
Before the Renaissance Age, European science and Islamic science carried the same definition: the search for knowledge. This similarity was due to the fact that the arrival of scientific philosophy in Europe was brought about by Muslim scholars (Samian & Mastor, 2001:32). The majority of European philosophers at the time were also religious or at least have received education in churches and abbeys. They believed that there exists the power of God which arranged and created human life and nature (Wan Hassan, 1990: 4; Mohamad Zain, 2000:15). However, after the beginning of the Renaissance era during the 14th century, religion has lost its foothold among the European society’s education process and Christianity was only restricted in churches. They antagonized the church institutions because they believed it to no longer be compatible with human logical and critical thinking which are scientific in nature. European scholars also began to seek political gains and advertise the philosophies brought by the Greek and Roman civilizations as their inheritance (Noordin, 1992:17; Yahaya, 1996:56). The Renaissance Age was also the era which revitalized learning, art, and literature during the 15th to 17th centuries.

This movement also spread the ideology of scientism, rationalism, and empiricism which values human understanding and places human thought at the highest importance, ranking people according to their intellect, until it affected even the Islamic philosophy of science (Wan Hassan, 1990:229 and Othman, 2009). Therefore, several questions arise. What are the challenges and issues present in Islamic science philosophy? Is there still a widespread influence of modern scientific philosophy in Islamic science philosophy? Based on these questions, this working paper presents three objectives. The first is to identify the definition of Islamic science philosophy. The second is to identify the criticisms of modern scientific philosophy. The third is to analyze the challenges faced by Islamic science philosophy based on the thinking of contemporary Muslim science thinkers.

In order to achieve these three objectives, this literary study working paper is divided into four sections. The first is the definition of Islamic philosophy of science. The second is the identification of the criticisms towards modern scientific philosophy. The third is analyzing the challenges faced by Islamic science philosophy and the fourth is the conclusion drawn from the entirety of this working paper.

**Definition of Islamic Philosophy of Science**

This paper divides the discussion of definition of Islamic philosophy of science into two parts which are: philosophy and Islamic science. Then a conclusion will be drawn on the definition which will be used in this working paper.

Generally, philosophy has always been related to fields of knowledge which emphasis conceptuality rather than facts. Concept means an idea which involves understanding while fact is more inclined towards the truth of a matter as a result of observation. The facts which we accept as true today might not prove to be true tomorrow such as historical facts, scientific facts and others (Long, 2008:14). Ismail (2006:56) stated that philosophy in general means the love of knowledge, truth, morality and is a metaphysical system through the sound logic of the human
mind. Therefore, in order to understand the definition of philosophy in higher detail, there are two themes to be addressed. The first is that philosophy presents a method or an activity which is done to achieve the meaning of that particular philosophy and the second, the goal of the philosophy field of study, itself.

Other than that, Othman (1999:1) stated that the concept of thinking is also related to an individual’s *tasawwur* (world view). With the ability to think, an individual can generate many creative activities and develop; and on the same time it increases that individual’s knowledge. However, according to Taha Jabir al-‘Awani (1995), the activity of thinking should make way to the function of the soul, which means it should conform to good morality and manners and also other *mahmudat* characteristics.

Similarly, as Othman (1999:1), Abdullah (2010: 89-90) has furthermore explained the definition of philosophy according to the four following criteria: First, philosophy involves a process of critical thinking which tries to ascertain strengths and weaknesses. Second, it involves thorough and integral thinking which covers all parts. Third, it involves universal thinking which is based on the particular experience of humans and fourth, it involves fundamental thinking which leads to truth but not only the apparent truth. These four characteristics are seen as more comprehensive and holistic for this study.

Science when simplified is defined as any process (Singer, 1993: 3). In detail, science is an effort of human understanding which was arranged in a system based on statements, structures, parts and laws regarding generally researched matters such as nature, humanity and religion. Science also can be grasped by the human mind aided by the five senses and truth can be tested empirically and experimentally; this opinion was stated by Syed Ahmad al-Idrus (2003:43), Wan Hassan (1990) and Othman (2009: 85).

According to Othman (11:2014) and Harun (1992:6), science is a knowledge for understanding the nature of this world systematically, logically and objectively. It was born from humanity’s curiosity and their efforts in getting as much information as possible. This differs from Muhammad (2012:69) who saw that the Western scientists have had a role in advancing science over the period of five centuries. This mastery of science includes theory, practicality, organization, community and complex scientific technologies which ultimately led to many new innovations and creativities of which impact can be seen until this day.

Science from the Islamic perspective means a process which explains the phenomena of nature using certain scientific methods but not overstepping the tauhid quality of Allah (SWT) (Othman, 1996:69). According to Sardar (1992: 55) and Nasr (2008), Islamic science comprises of certain activities which are used to find out truths and solve problems. All of this should operate under the structure of certain Islamic values. This means the goals, the equipment’s, the methods and the processes should be Islamic. Therefore, science is a tool to understand the might of God.

---

1 Othman (2009: 292)
but we must understand that God cannot be explained based on science alone (Akdogan, 2008:201 and Awang, 2003:4-5).

In that vein, Ismail (2006:179) also stated that researching the laws of nature is equivalent of researching the laws of Allah (SWT) and those activities are part of worship. Revelations should serve as the main source in science. Research should serve as the secondary source to study the Sunnah of Allah. This is what differs modern science with Islamic science. Based on this discussion, the researcher concludes that Islamic science philosophy involves a thinking concept which leads to scientific actions in order to solve a problem. However, all processes involving thinking and acting should use tauhid as their foundation and they should be in line with Islamic principles entirely.

**Criticisms of Modern Philosophy of Science**

Modern science gave many contributions to society and therefore was able to improve the quality of life for all of humanity such as explaining the phenomena of the universe\(^2\). Even so, modern science is still open to criticism because of its philosophy and principles which are based on science alone. According to Samian (2009a:246), criticisms that highlight the weaknesses of modern science will cause scientists to move closer to Islam and Islamise science. Therefore, based on previous works, the researcher has found five criticisms towards modern science philosophy which highlight its weaknesses.

The first criticism, Othman (2009:150-157) and Bakar (2008: 71) stated that there were previous authors who claim that modern science is the pioneer of science in civilisation, even though Islam had contributed to science and development to civilisation first\(^3\). Mawlana Ali al-Kettani (1991: 89) also stated that the claim that all religious experiences are the same and taking the religious experiences in the West to equate it with the Islamic world, comes from an ignorance of history.

The second criticism, Mohd Zain (2009:187), Samian (2009b:315) and Schuon (2008:94) viewed the problem of modern science in its practical aspect. Modern science places the human mind higher than anything else. The maximum potential of a modern science civilisation is only in the abilities of human minds and they reject religion from influencing science. This belief is called secularism and is seen as a major threat to religions. In discussing the secularism of knowledge, Nordin (2009:127) gave emphasis in the usage of terms. Muslims should be careful in using certain secular terms used by Western thinkers because it reflects on their secular beliefs\(^4\).

\(^2\) Science has also benefited the processes of development, industrialisation, agriculture and others to the point where humanity could reduce the rates of poverty, illnesses and illiteracy and so improve the quality of a country (Othman, 2009b: 151).

\(^3\) Hakim Said and Zaid (1981) has listed this as “intellectual plagiarism” within Western modern science which was taken from Islamic civilisation. Examples include Harvey, Snell, Toricelli, Newton, Darwin, Copernicus, Galileo and Bacon (Othman, 2009b: 151).

\(^4\) The terms used by the Western scientists reflect their world view such as the term ‘philosophy of natural science’, ‘natural philosophy’, and ‘natural philosophers’ or Ph.D; while in Islam, the terms used to describe knowledge and belief in *tawhid* are...
The third criticism is that science is not an absolute field of knowledge; that is, science cannot explain all occurring phenomena in this world. In order to explain the world’s phenomena, Western modern science has introduced the scientific methods. This is as stated by Othman (2009). However, Bakar (2008:72) has a different view. He believes the important effect of scientific research is that humans will get to know more about their Creator. Even so, many scientists still could not accept this new epistemology as part of science. Therefore, they remain rejecting Al-Quran and intellectual intuition as an epistemology of science. According to Samian dan Mastor (2003: 132), the real concern is the philosophy behind such scientific thought. For example, scientific thought based on the mechanism of Descartes rejects the role of God in understanding the creation of the universe; and Juian Offrey de la Mettrie denies the existence of soul in human life. These denials present major implications in the relationship between man and God.

The fourth criticism, Mohamad Zain (2009: 187) believes that modern science is not free of values. This is because, without realizing, a system of knowledge is dependent on the values subscribed by its researchers and their *tasawwur*. Modern science was built upon the beliefs of Marxism or Communism or Socialism. Baharuddin, and Amran (2012:3) stated that modern science is not free of values and in it contains the Western *tasawwur* which has been absorbed directly or indirectly in their knowledge tradition for thousands of years. In more detail, Samian and Mastor (2003:114) stated that these values refer to the use and application of science which can be used to do good or do harm.

The fifth criticism, Othman (2009b:155) stated that, modern science does not have a sense of identity and self. It only serves to collect information, analyse objectives and hypothesis and so on. Humans have two elements which is spirituality and corporeality. What is considered as high spiritual value is a human’s ability to strengthen worship, be responsible, trustworthy, patience, open-minded and so on. Therefore, modern science cannot give an identity to humanity.

The final criticism refers to the work of Ahmad (2008b:175). He stated that as a result of a science free from religion and values, the Western civilisation allowed a boundless mastery of nature. Furthermore, humanity cannot be seen as beings who exist separate from the universe and all of its contents including animals and plants.

In conclusion, these external challenges indirectly influenced Islamic science philosophy, causing it which was once strong and great, to become fallible and faulty not only from the philosophical aspect but also including the methods and the goals of the field. Samian (2009:233) stated that by highlighting the weaknesses and shortcomings of modern science, the process of returning the greatness of Islamic science today will be much easier.

terms such as ustaz, sheikh al-kuliah, imam, al-hafiz, hujjat Allah, sheikh al-Islam, al mujaddid and others. These terms are reflect worship towards Allah (SWT) (god-centred) instead of emphasising on human needs (man-centred) (Nordin, 2009: 127-128).
The Challenges Faced by Islamic Philosophy of Science

The challenges faced by Islamic science philosophy today are becoming tougher and tougher. As a result, from the feeling of responsibility towards religion and knowledge disciplines, there are many authors who discussed them. Among them, Ali al-Kettani (1991: 116-117) stated that there are three challenges which Islamic science and its proponents must face. The first challenge is that Muslim scientists did not study the works of the great scholars of old and duplicate their success. This in turn bred complacency which caused the loosening of morals and ideas. The second challenge is that Muslim scientists’ tolerance towards other religions from the West caused Islamic science to become weak and this process of ‘surrender’ is what caused the colonization of the Western world upon the Muslim world. The third challenge is that the research funding and the operational field for Muslims scholars became smaller and more isolated, resulting in mediocre products and results. The fourth challenge is that while the interest in Islamic science is growing, its scope has been minimized to the point where many of its important subjects are dropped and local universities became only a place to study Islam as a religion. If an individual would like to study science deeper, they would have to enroll in Western universities.

In more detail, Majid (2007:5-7) stated that the challenges from within Islamic science philosophy is a disappointing reality. After the Muslim community experienced development, science fell out of favour. An aspect of this is the matter that Muslims would rather discuss polemic issues and debate minor things about aqidah, fiqh and other subjects. They then were influenced by the Western world which brought secularism such as in Malaysia where religious education is separated from modern education. Separation also happens in tertiary education. When the ulama would refer to experts in religious matters, scholars would refer to those of other fields such as science and technology. This dualism in the field of knowledge gives a negative impact towards the development of the Muslim community.

According to Salleh (2007:106), Muslim scientists are more focused in building knowledge, while their sponsors are only focused on the building and the commercialization of the end product. Therefore, several long-term issues arose in the world of scientific research such as: different inclinations between scientists and sponsors, focusing only on marketing and profit, individualized work ethics instead of collaborating, and other issues. This work has found that science has begun to focus only on academic research and industries.

As for scientific issues, al-Ghazali strongly opposed scientism, but not science itself. He made an effort to free science from foreign philosophy when it comes to interpreting facts and summarizing theories, while making sure that the human mind did not overstep its limits until it tried to grasp the questions of the metaphysical (Baharuddin & Rahman, 2012:6). This has also been discussed Samian & Mastor (2003:132) where they stated that science cannot determine who is the Creator of this universe because such a matter is outside of the comprehension of human mind and logic. The scientific issues in Islamic science philosophy were also discussed by Bakar (2008:71) and Othman (2009: 84). In the pursuit of truth, science utilizes many methods and paths of research. This variety of methods complement each other. One of those methods is the scientific method. The scientific method used by modern science is the same as the one used
in Islamic science but the epistemology of each is different from one another. According to Abdullah (2010: 246), using scientific methods to understand Al-Qur’an is a commendable effort. However, care must be taken because not only is the epistemology in philosophy of science, fallible, but it would also cause the truth of revelations to be measured by science.

This is also agreed by Omar (2011:59) and Ahmad (2008:xix). Today many Muslim scholars connect scientific discoveries with Al-Qur’an and increases their faith. However, Al-Qur’an is not a science scripture which reports all scientific facts until it overshadows the Al-Qur’an’s purpose as a scripture of guidance. The purpose and effort put in this research was not meant to belittle science and technology, but instead to ‘widen’ the limits of the reality of creation and the reality of humanity. It aims to make Islamic philosophy of science into a cohesive and balanced philosophy of science. It takes science as a field of knowledge, but not as the ‘knowledge’ of everything.

Conclusion
In conclusion, all challenges faced by Islamic science philosophy should be overcome. This is the responsibility of Muslim scholars known as ulama and scientists who can think and act to conduct intellectual research aimed at rebuilding the field of Islamic science. Al-Qur’an was sent down with Allah’s (SWT) guidance such as His command, meaning:

“Say: ‘Behold all that is in the heavens and the earth.’ But neither Ayat (Verse) nor warners benefit those who do not believe.” (Yunus, 10:101)

There is another verse of Allah’s (SWT) command which explains the role of humans as His caliphs and that they should observe and study all things created by Him. Allah’s (SWT) command, meaning:

“And it is He Who has made you generations coming after generations, replacing each other on the earth. And He has raised you in ranks, some above others that He may try you in that which He has bestowed on you. Surely, your Lord is Swift in retribution, and certainly He is Oft-Forgiving, Most Merciful.” (al-An’am, 6:165).

According to Jusoh (2014:153-160), Allah (SWT) also repeated the phrase ‘sakhara lakum’ 31 times in Al-Qur’an which means Allah (SWT) has “made it subject to you”. This proves that Allah (SWT) is the grand Creator who made His creations according to His Sunnah (the laws of Allah (SWT)). Therefore, all studies about Islam generally, and philosophy of science specifically, should follow the laws of Allah (SWT) that is to return to Al-Qur’an so that we can improve our creativity to benefit all of humanity.

Corresponding Author
Shahirah binti Said
Centre for Islamic Development Management Studies (ISDEV),
University Sains Malaysia, 11800 Minden, Penang, Malaysia.
Email: shahirahsaid@gmail.com

References
Ab. Majid, M. Z. (2007). Agama dan sains sebagai wahana pembangunan ummah dalam era globalisasi. Dlm. Syed Muhammad Dawilah al-Edrus (ed). *Wacana sejarah dan falsafah sains pendekatan holistik sains dan agama cabaran ketamduan*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Ab.Rahman, L. (2013). *Saintis dan halal*. Diakses dari http://www.pehma.org.my/artikel/101-saintis-dan-halal.html Pada Tarikh 19 April 2016

Abdullah, A. R. (2010). *Wacana falsafah sains, sejarah dan pemikiran. Pulau pinang*: Pusat Kajian Pengurusan Pembangunan Islam (ISDEV), USM.

Ahmad, B. (2008a). Pengantar. Dlm. Baharudin Ahmad (ed). *Falsafah Sains Daripada Perspektif Islam*. Kuala Lumpur: Dewan Bahasa dan Pustaka

Ahmad, B. (2008b). Ilmu tradisional: pencarian moden. Dlm. Baharudin Ahmad (ed). *Falsafah sains daripada perspektif Islam*. Kuala Lumpur: Dewan Bahasa dan Pustaka

Ahmad, B. (2008c). Agama mengenai kaedah dalam sains. Dlm. Baharudin Ahmad (ed). *Falsafah sains daripada perspektif Islam*. Kuala Lumpur: Dewan Bahasa dan Pustaka

Akdogan, C. (2008). Sains dalam Islam dan Barat. Dlm. Baharudin Ahmad. *Falsafah Sains dari Perspektif Islam*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Awang. R. (2003). *Falsafah sains dan pembangunan ke arah dimensi baru*. Skudai: Penerbit Universiti Teknologi Malaysia.

Baharuddin, A. R., & Amran, A. S. (2012). Pengislanaman sains: satu tinjauan terhadap Kitab Kubra al-Yaqiniyyat al-Kawniyyah Dr. Muhammad Sa’id Ramadan al-Buti. Dlm. Noor naemah Abdul Rahman, Shaikh Mohd Saifudden Shaikh Mohd Salleh & Mohd Rezuan Masran (ed). *Dimensi Islam Dalam Wacana Sains*. Kuala Lumpur: Yayasan Ulmuwan

Bakar, O. (2008a). Persoalan Mengenai Kaedah Dalam Sains Islam. Dlm. Baharudin Ahmad (ed). *Falsafah Sains Dari Perspektif Islam*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Bakar, O. (2008b). Mewujudkan tamadun ilmu berdasarkan tauhid. Dlm. Baharudin Ahmad (ed). *Falsafah Sains Dari Perspektif Islam*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Bakar, O. (2011). Islamic science, modern science, and post-modernity: towards a new synthesis through a tawhidic epistemology. *Revelation and Science*. Vol. 01, No. 03. 13-20.

Ismail, M. R. (2006). *Falsafah sains pendekatan kualitatif*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Jusoh, Y. (2014). *Falsafah Sains dan teknologi menurut al-Quran*. Skudai: Penerbit UTM

Kettani, A. (1991). Sains dan teknologi dalam Islam: sistem nilai sandaran. dlm. Ziauddin Sardar. *Sentuhan midas sains, nilai dan persekitaran menurut Islam dan Barat*. Rosnani Hashim Hashim dan Abdul Karim Abdul Ghani (terj). Kuala Lumpur: Dewan Bahasa dan Pustaka.

Long, A. S. (2008). *Sejarah Falsafah Edisi Kedua*. Bangi: Penerbit Universiti Kebangsaan Malaysia.

Zain, M. S. (2000). *Pengenalan sejarah dan falsafah sains*. Bangi: Penerbit Universiti Kebangsaan Malaysia.
Zain, M. S. (2009). Kewujudan sains alternatif. Dlm. Mohd Yusof Othman (ed). *Wacana sejarah dan falsafah sains sains dan masyarakat*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Nasar, S. H. (2008). Islam dan sains moden. Dlm. Baharudin Ahmad (ed). *Falsafah sains dari perspektif Islam*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Nordin, S. (1992). Sains falsafah dan Islam. Bangi: Pusat Pengajian Umum UKM.

Nordin, S. (2009). Sains, falsafah dan Islam. Dlm. Mohd Yusof Othman (ed). *Wacana Sejarah dan Falsafah Sains*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Omar, N. (2011). *Al-Qur'an dan pemikiran manusia*. Terengganu: Penerbit UMT.

Othman, M. Y. (2008). Sains dan teknologi dari perspektif Islam. Dlm. Mohd Yusod Othman (ed). *Wacana sejarah dan falsafah sains*. Sains, teknologi dan globalisasi. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Othman, M. Y. (2009a). *Sains, masyarakat dan Islam*. Kuala Lumpur: Utusan Publications And Distributors Sdn Bhd.

Othman, M. Y. (2010). *Islam dan sains dari perspektif sejarah dan al-Qur’an*. Dlm. Azizan Baharuddin dan Shamsuddin Moner El-Askarey. *Islam dan Sains Dalam Pembangunan Tamadun*. Kuala Lumpur: Yayasan Dakwah Malaysia.

Othman, M. Y. (2014). *Pengenalan sains tauhidik*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Othman, M. Y. (2016). Al-Qur’an dan sains: Penyelidikan universiti tempatan- Kajian kes Universiti Kebangsaan Malaysia (UKM). Dlm. Azizan Baharudin dan Norkumala Awang (eds). *Al-Qur’an dan sains: Pemetaan rintis penyelidikan*. Kuala Lumpur: IKIM.

Othman, M. Y. (1999). Isu dalam pemikiran sains. Dlm. Mohd Yusof Othman (ed). *Siri Wacana Sejarah dan Falsafah Sains Jilid 7*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Othman, M. Y. (2009b). Beberapa kritikan terhadap sains Barat moden. Dlm. Mohd Yusof Othman. *Wacana sejarah dan falsafah sains: sains dan masyarakat*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Samian, A. L., & Mastor, K. A. (2001). *Perkembangan sains dan peradaban manusia*. Bangi: Penerbit Universiti Kebangsaan Malaysia.

Samian, A. L. (2009a). Pensekularan matematik. Dlm. Mohd Yusof Othman (ed). *Wacana sejarah dan falsafah sains: sains dan masyarakat*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Samian, A. L. (2009b). Pendekatan permasalahan dalam sains dan teknologi. Dlm. Mohd Yusoff Othman. *Wacana Sejarah dan Falsafah Sains, Sains dan Masyarakat*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
Samian, A. L. (2009c). Al-quran dan sunah dalam falsafah sains. Dlm. Mohd Yusoff Othman. *Wacana Sejarah dan Falsafah Sains, Sains dan Masyarakat. Kuala Lumpur: Dewan Bahasa dan Pustaka*

Sardar, Z. (1992). *Hujah sains Islam*. Terj. Abdul Latif Samian. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Schuon, F. (2008). Kritikan terhadap sains moden. Dlm. Baharudin Ahmad (ed). *Falsafah sains daripada perspektif Islam*. Kuala Lumpur: Dewan Bahasa dan Pustaka

Singer, C. (1993). *Sejarah ringkas idea saintifik sehingga 1990*. Terj. Khidmat Terjemahan Nusantara Sdn Bhd. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Ahmad, S., Al-Idrus, T. S. M. (2003), Falsafah sains dan teknologi Islam, dlm. Ramli Awang (ed.), *Falsafah sains dan teknologi*. Pahang: PTS Publications

Hassan, W. F. (1990). *Ringkasan sejarah sains*. Kuala Lumpur: Dewan Bahasa Dan Pustaka.

Yahaya, M. (1996). Pandangan Islam terhadap sejarah: falsafah sejarah Barat dan Islam dlm. Wan Hashim Wan The dan Mahayudin Yahaya (ed). *Sains Sosial Dari Persepektif Islam*. Bangi: Penerbit Universiti Kebangsaan Malaysia.