

# TRACES OF HARUN YAHYA'S CREATIONISM<sup>1</sup>

Liana Aisyah<sup>2</sup>

## Abstrak

*Evolusi merupakan salah satu konsep yang sangat menarik dalam relasi sains dan agama karena potensi konflik yang mungkin ditimbulkannya. Dewasa ini wacana evolusi dalam sudut pandang sains dan agama di Indonesia dan banyak negara berpenduduk mayoritas Muslim lainnya diperkaya oleh karya-karya Harun Yahya, seorang anti evolusionis muslim asal Turki.*

*Tulisan ini merupakan sebuah kajian pustaka yang bertujuan untuk melacak jejak ide kreasionisme Harun Yahya dengan terlebih dulu meninjau ulang definisi evolusi dan kreasionisme serta karakteristik sains dan posisi sains dalam Islam. Ditemukan bahwa argumen maupun pola penyebaran argumen anti evolusi Harun Yahya memiliki banyak kemiripan dengan argumen serta pola penyebaran argumen anti evolusi di Amerika Utara. Dalam perspektif pendidikan sains, penulis setuju dengan pendapat bahwa pemahaman yang lebih menyeluruh mengenai karakteristik sains akan sangat membantu dalam menyikapi wacana evolusi dan kreasionisme.*

**Keywords:** evolusi (*evolution*), kreasionisme (*creationism*), Harun Yahya, anti evolusi (*anti-evolution*)

---

<sup>1</sup> Tulisan ini merupakan bagian dari Master's Project penulis dalam rangka menyelesaikan program S2 Science Education di McGill University

<sup>2</sup> Pengajar pada Fakultas Sains dan Teknologi UIN Sunan Kalijaga Yogyakarta

## A. Introduction

In the USA, science education policy, curricula, textbooks, and standards have been very greatly shaped by the evolution versus creationism debate.<sup>3</sup> These include changing the wording (the word evolution is not used at all when teaching the subject), adding disclaimers, and reducing the overall coverage of specific evolution topics that might lead to negative reaction.<sup>4</sup>

Pre-service science teachers are cautioned in advanced about these controversies, including the history of legal cases related to creationism versus evolution, through a very in depth coverage of this topic in textbooks for teaching secondary science such as *Science Instruction in the Middle and Secondary Schools* written by Chiappetta and Koballa.<sup>5</sup> In this book, the writers caution new teachers to carefully plan how they will teach evolution, giving special attention to distinguishing between theory and fact, and being open to alternative work for students who wish to leave the classroom when evolution is taught.

Among other writers, Alters and Alters wrote *Defending Evolution: A Guide to the Creation/Evolution Controversy*, which is “dedicated to instructors who teach evolution despite the pressures to do otherwise”.<sup>6</sup> This is in line with many studies; for example, the 2005 National Science Teacher Association found that 30% of the respondents felt the pressure not to teach or downplay evolution while 31% felt the pressure to include creationism in science classroom.<sup>7</sup>

While all of these studies, as reported in international Science Education journals, have been mainly carried out in North America where a majority of the population is Christian, there is very little information on how evolution is perceived in the Muslim world, including Indonesia, a country with the largest Muslim population in the world.

---

<sup>3</sup> M. Matsumura, *Evolution, Creation, and Science Education*. National Center for Science Education, 2001.

<sup>4</sup> E. Scott, *Creation or Evolution*, National Center for Science Education, 2001.

<sup>5</sup> E.L. Chiappetta, & T.R. Koballa, Jr. (2002). *Science Instruction in the Middle and Secondary Schools* (5<sup>th</sup> edition). (Upper Saddle River, New Jersey: Pearson Education, 2002).

<sup>6</sup> B.J. Alters, & S.M. Alters, *Defending Evolution: A Guide to the Creation/ Evolution Controversy*. (Sudbury, Massachusetts: Jones and Bartlett Publishers, 2001), p v.

<sup>7</sup> website of National Center for Science Education, [http://www.ncseweb.org/resources/news/2005/US/701\\_nsta\\_survey\\_on\\_pressures\\_on\\_...](http://www.ncseweb.org/resources/news/2005/US/701_nsta_survey_on_pressures_on_...)

Evolution is supposedly, as mandated in the national curriculum, taught in every Biology class in Indonesia, including private schools with strong emphasis on religious teachings (Islamic, Catholic, and Protestant schools). Thus far, there have been few controversies and external pressures reported over the standard biology curriculum on evolution which completely disregards creationism. It should be noted, however, that the idea of creationism is taught in religion classes.

Lately, the debates have been enriched by the view of a Muslim creationist from Turkey, Harun Yahya, who has sold many copies of books and CDs on the refutation of evolution and popular science themes.<sup>8</sup> A significant example would be a polemic between three biology professors, Wildan Yatim (Diponegoro University), Taufikurrahman (Bandung Institute of Technology), and Ferry F. Karwur (Christian University of Satya Wacana) in *Kompas*, the largest newspaper in Indonesia in 2003.<sup>9</sup>

In response to Taufikurrahman's press release about his idea to revise biology curriculum to also include creationism along with evolution in explaining the origin of life, Yatim writes that this idea cannot be justified because creationism is not science and he cannot understand how a biology professor could hold such a belief. He discounts the influence of Harun Yahya who is not a scientist; whereas, evolution is considered a fact in the science community. Taufikurrahman furthermore writes to clarify that he is not influenced by Harun Yahya. Before reading Harun Yahya's books, he says that the theory of evolution is in contrast with his beliefs and that it is not supported by sufficient facts. Karwur ends this polemic by supporting and clarifying some of Yatim's points, saying that it is inappropriate to revise science curriculum based on one's beliefs.

In addition to the debates found in the newspaper, this issue has also been discussed in public seminars. For example, in January 2003 there was an international seminar on "Science and Religion in the Postcolonial World" in Yogyakarta, in June 2003 there was a seminar on "Science and Religion" at Gadjah Mada University, Yogyakarta, and in mid 2003 there was a public debate at Bandung Institute of Technology on the subject.

---

<sup>8</sup> Harun Yahya's official website, [www.harunyahya.com](http://www.harunyahya.com)

<sup>9</sup> Kompas online, [www.kompas.com](http://www.kompas.com)



Based on the description above, it is fair enough to conclude that the controversies over evolution in Indonesia do exist, but the scale is not as large as that in the USA. Another important point is that Harun Yahya's work so far seems to have a great influence mainly on relatively educated people, and university students are among those who are mainly interested in reading his books. This article aims to trace the roots of Harun Yahya's creationism, more specifically on its relation to the one developed in the USA. In doing so, I will begin with a brief review of evolution and a more detailed review of creationism followed by another brief review on relevant nature of science issues. Then a section on how science is positioned in Islam is presented just before delving into the heart of this literature study, Harun Yahya and 'Islamic' creationism. This article concludes with the writer's modest proposal on how the science education community in Indonesia should response to the evolution and anti-evolution controversies.

## B. Evolution

Broadly defined, evolution means "a cumulative change through time" and is integral to several disciplines from astronomy and geology to the most popular discipline related to this concept, biology. Astronomical evolution focuses on the history of the cosmos, the origins of elements and how stars, galaxies, and planets were formed. Geological evolution deals with the origin of the Earth and its changes over time. Although the concept of evolution is not often thought as a part of physics and chemistry, the laws and principles of physics and chemistry such as thermodynamics, expansion, contraction and erosion are all involved in both geological and astronomical evolution. Finally, biological evolution, as suggested in its name, is concerned with the origin of life and how it changes over time with one central concept—all organisms have common ancestors.

Evolutionary biology has two main concerns:

1. The history of life or the tracing of life's genealogy. The focus here is the *pattern of evolution* which is often represented in the form of the tree of life which shows how one group of organisms is related to other groups.
2. The *processes and the mechanisms of evolution* that produced the tree of life.



It is worth noting that while evolution refers to “cumulative changes through time” and it is a fact in science, evolutionary biologists might still disagree about the pattern of evolution and even more so about the mechanisms of evolution. Unfortunately, these arguments – which are all based on the overwhelming consensus in the scientific community that the occurrence of evolution is a scientific fact – are often misused by anti evolutionists in order to suggest that evolution is not a valid scientific theory or that even the scientific community is still debating the occurrence of evolution.

### C. Creationism

The general meaning of “creationism” is the idea that there is a supernatural force (God or other deities) that has/have created the universe. However, the term “creationism” to many people now has a special meaning. It refers to a theological doctrine of special creation: “that God created the universe essentially as we see it today and that this universe has not changed appreciably since that creation event”.<sup>10</sup> Also, in North America it generally reflects the *Christian* view “that God created directly”.<sup>11</sup>

Contrary to what many people think, acceptance of evolution and creationism are not two sides of totally opposing views. Rather, they are a continuum which suggests to what degree the holders accept modern science and, inversely, the degree of literalism in interpreting the Bible.

The following are several views on the creationism-evolution continuum:<sup>12</sup>

#### 1. Flat Earthism

Flat Earthism is the strictest view of biblical literalists. Holders of this view believe that many of the passages of the Bible imply that “God created an Earth that is shaped like a coin, not a ball: flat and round at the edges”.<sup>13</sup> To them, and other literalists, the information written in the Bible is scientifically superior to that

---

<sup>10</sup> E. Scott, E. (2004). *Evolution vs. Creationism: an Introduction*. (Westport: Greenwood Press. 2004). p 50-81

<sup>11</sup> Ibid

<sup>12</sup> Ibid

<sup>13</sup> Ibid

provided by modern science. Therefore, modern science is considered to be in error whenever they contradict any strict biblical interpretation.

## 2. Geocentrism

Geocentrists, similar to Flat Earthers, reject almost all of modern physics, biology, and astronomy; they deny that the sun is the center of the solar system. They are different from the former, however, in that Geocentrists accept the fact that the Earth is a sphere.

## 3. Young Earth Creationism (YEC)

Although there are a few proponents of YEC that hold Flat Earth or Geocentric interpretation of the Bible, most of them accept heliocentrism. They, however, deny modern physics, astronomy, chemistry, and geology regarding the age of Earth because in their view the earth is only about 10,000 years old. They also reject that all living organisms share common ancestors. To them, descent with modification occurs only within “kinds” (which in general refers to a higher taxonomic level than species), but each “kind” was supernaturally created separately.

In their view, the “big bang” never happened and catastrophic mechanisms are responsible for most of the world’s geological forms. For example, Noah’s Flood is considered responsible for carving out the Grand Canyon as described in in the 1961 modern creationist foundational work by Morris and Whitcomb, *The Genesis Flood*).

Not only did this book claim to provide a scientific basis for YEC, the term Young Earth Creationist itself is in fact often associated with the followers of Henry Morris. The Institute for Creation Research (ICR), of which Morris was the founder and former President, has also been a major center for the creationist movement and reference to most other YEC organizations. In addition to publishing books (and other forms of publication such as pamphlets, videos, movies, and newsletters), ICR also founded a museum and a graduate school that offers master’s degrees in science and science education.

## 4. Old Earth Creationism (OEC)

As suggested by its name, Old Earth Creationists accept the idea that the Earth is ancient. To them, the idea that God was personally involved in creation is the most critical element in special creation,

while the details of *how* he created it are considered less important. OEC has several variants, for example:

- a. Gap or Restitution Creationism whose main purpose is to accommodate science with the Christian view of *Creation in 6 Days* as described in the Book of Genesis. Its main idea is that there was a long gap between verses 1 and 2 of Chapter 1 in Genesis, and pre-Adamic creation was destroyed before Genesis 1:2, when God recreated the world and all life in it and Adam and Eve were created on day six.
- b. Day-Age Creationism. Here, science is accommodated into Christianity by interpreting each of the six days of creation not as 24-hour days but very long periods of time, even millions of years.
- c. Evolutionary Creationism, which is actually a type of evolution and very similar to Theistic Evolution in that both views see God as using evolution to bring about the universe according to His plan. The only difference between the two is that the holders of the first tend to view God as being more active in the process of evolution than those of the later.

#### 5. Intelligent Design Creationism (IDC)

Although IDC is the latest form of creationism, in some ways it resembles “Argument from Design,” an old idea from William Paley dating back to 1803. He basically argued that we could prove God’s existence by examining His works. While Paley used the vertebrate eye as an example of design in nature, the proponents of IDC use phenomena at the molecular level such DNA structure and cellular mechanisms which they argue are “too complex to have evolved by chance” and thus demand a role of an intelligent designer (God).<sup>14</sup>

#### 6. Theistic Evolutionism (TE)

The proponents of TE hold a theological view that God creates through the laws of nature. While accepting all (or almost all) modern science including biological evolution, their views vary somewhat in whether and how much God intervened. To some, God created the laws of nature and left the universe with no further intervention; whereas others believe that God may still intervene at critical points during the history of life (for example, in the origin of human life).

---

<sup>14</sup> Ibid



## 7. Agnostic Evolutionism

Agnostic evolutionists also accept modern science including evolution, but to them it is not important whether God is or was or will be involved. In their view, it is impossible to truly know whether God exists or not.

## 8. Materialist Evolutionism

Here, materialism or naturalism is a philosophical view which is different from methodological naturalism used in science. Methodological naturalism means science is limited to explain natural phenomena by using only natural phenomena. Materialist Evolutionists do not only accept modern science and methodological naturalism, but they also go beyond the realm of science by proposing that the supernatural does not exist. Because of this view, materialist evolutionism is often used by some anti-evolutionists to criticize evolution and science in general; they claim that evolution and science in general rule out God.

## D. The Nature of Science

Science refers to a methodology as well as the body of knowledge obtained through that methodology; it is used to understand and explain phenomena in our material universe (matter and energy) by using the natural world itself. This is often called methodological naturalism. Therefore, by definition, science cannot ask or answer a question with respect to anything beyond nature such as whether God created the world or not. What science can do in relation to the history of the universe or life or other natural phenomena is decide which alternative natural explanation best suits the facts seen in the natural world itself.

In testing an explanation of a natural phenomenon, scientists can conduct direct and indirect experiments. While an experiment in which scientists directly observe their object of study is very powerful to explain many natural phenomena, it cannot be used in some fields simply because the phenomena themselves cannot be directly observable. These include phenomena that are too far away (such as planets of other galaxies), too small (such as subatomic particles), or too far back in time (such as the history of the universe or the origin of life). To study these phenomena we need indirect experimentation in which we infer a conclusion through the application of principles and laws.

Another important characteristic of science is that statements in science are tentative. Therefore, unlike Mathematics, scientists do not usually use the term “proof” in science. Rather, an explanation of a natural phenomenon, or a hypothesis, is said to have been verified and is always ready in principle to be further discarded when opposing, new evidence is found.

There are four important terms in science that are often misunderstood because they are used in different ways in everyday life. They are facts, hypotheses, laws, and theories.

In science, facts are confirmed observations such as “living things are composed of cells” and “gravity causes things to fall” (but in principle, even these facts can change). Hypotheses are statements of the relationship among things usually in the form of “if ... then ...” statements. For example, “if natural zeolite is heated up to more than 300°C for more than one hour, its crystal structures will be cracked.” Again, to be in the realm of science, a hypothesis must be capable of being tested. Scientific laws, such as the laws of thermodynamics and Newton’s law, are empirical generalizations that state what will happen under certain conditions. Finally, a theory in science, such as the theory of evolution, is “well-substantiated explanations of some aspect of the natural world that can incorporate facts, laws, inferences, and tested hypotheses”.<sup>15</sup> Therefore, far from being “a guess” like in everyday use, a theory must be very well supported by facts and laws in order to be a theory in science.

## E. Science in Islam

Historically, science and Islam have generally not shown significant signs of conflict, at least not in the magnitude as in the Christian context. In medieval times when Islamic civilization reached its glory, Greek science and mathematics were adopted and developed at first for religious purposes, such as using logic in Islamic Laws and mathematics and astronomy to determine prayer times, although other branches of science also received attention.<sup>16</sup> In fact, from the point

---

<sup>15</sup> National Academy of Sciences, *Teaching about Evolution and the Nature of Science*. 1998, p.7

<sup>16</sup> Muhammad R. Mirza, & Muhammad I. Siddiqi, *Muslim Contribution to Science*. (Lahore, Pakistan: Kazi Publication, 1986).

of view of the development of science, the development of science during the golden age of Islam served as a bridge between the science of the Greek civilization and the Renaissance in Europe:

From the second half of the eight century to the end of the eleventh century, Arabic was the scientific, the progressive language of mankind .... It will suffice here to evoke a few glorious names without contemporary equivalents in the West: Jabir ibn Hayyan, al-Kindi, al-Khawarizmi, al-Farghani, al-Razi, Thabit ibn Qurra, al-Battani, hunain bin Ishaq, al-Farabi, Ibrahim ibn Sinan, al-Masudi, al-Sina, Ibn Yunus, al-Karkhi, Ibn al-Haytham, Ali ibn Isa, al-Ghazzali, alZaqali, Omar Khayyam!<sup>17</sup>

In the modern era where the Muslim world lags behind in many fields, including science, there have been several attempts by Muslim scientists and philosophers of science to find the philosophical basis to integrate modern science and Islam and propose the so-called Islamic science. In a sense, these attempts show the acknowledgement of the importance of science in our times, and developing Islamic science is a way to motivate Muslims to pursue the advances in science. However, they also show some concern that the philosophy of science dominating Western Science, which they incorrectly contend is scientific materialism, would influence and then destroy the order of life based on Islamic views.

What then, to use Muzaffar Iqbal's phrase, "makes Islamic science *Islamic*?"<sup>18</sup> Among Muslim thinkers, there is no single, homogenous answer to this question, although one answer might be more popular than others. As Loo (1996) contends, there are four different philosophies of Islamic science: <sup>19</sup>

#### 1. Islamic Science as Modernist Science within Muslim Polity

The main proponent of this view is Abdul Salam who won the Nobel Prize for Physics in 1979 with Steven Weinberg and Sheldon Glashow. For Salam, "science is the supreme expression of human

---

<sup>17</sup> G. Sarton, *Introduction to the History of Islamic Science* Vol.1. (New York: Krieger, 1975), p. 71.

<sup>18</sup> M. Iqbal, "What makes Islamic Science 'Islamic'?" *Reports of the National Center for Science Education* 1999 Nov/Dec Vol. 19 No. 6. p. 38.

<sup>19</sup> Seng Piew Loo, "The Four Horsemen of Islamic Science: A Critical Analysis" in *International Journal of Science Education* v. 18 no. 3. p 285-294 (1996).



rationality and Islamic science is the supreme expression of rationalism of Muslim societies”.<sup>20</sup> Therefore, there is no difference between science in the West, science in Japan, science in Islam, and science in other parts of the world. In fact, he himself tends not to use the term Islamic science. While recognizing that science and Islam are complementary and not contradictory to each other, Salam is inclined to the idea of keeping the distance between science and religion.

## 2. Islamic Science as Revealed Truth and Knowledge

The main concern of this form of Islamic science is to change the ontological foundation of science from one based on empirical validation of scientific accuracy to another based on literal interpretation of the Quran. The champion of this view is actually a French Catholic, Maurice Bucaille, who asserts that the Quran is the source of knowledge, and scientific knowledge can be discovered through the literal interpretation of the Quran. Bucaille’s idea is very well received in Muslim countries including Indonesia. His book, *The Bible, the Qur’an and Science* became a bestseller in Turkey, Malaysia, and Indonesia. Many Muslim scientists have since tried to find Quranic ‘evidence’ that supports currently accepted scientific theories such as the theory of relativity and the Big Bang theory (Haq, 1983).<sup>21</sup>

However, as the biblical literalists in Christianity, many of the followers of this type of Islamic science also reject the modern evolutionary theory.

## 3. Islamic Science as Novum Organum

This type of Islamic science, with Seyyed Hossein Nasr as the main proponent, tries to create a new scientific epistemology based on Islam. His basic assertion is that human reasoning has a dual structure, one rational and the other intuitive, and truth can only be discovered through the realization of the true potential of the human mind by uniting the two. Put simply, Islamic science in his view is an attempt to integrate the empiricism of science with Islamic faith by extending the domain of science to not only cover

---

<sup>20</sup> Ibid

<sup>21</sup> Haq, S. *The Qur’an and Modern Cosmology. Science and Technology in the Islamic World vol. 1 no.1. p 47-52 (1983).*

the world of nature as in western science, but also supernatural phenomena by using intuition.

#### 4. Islamic Science as a Science Guided by Environmental Ethics

The chief proponent of this type of Islamic science is Ziauddin Sardar. His main concern is not the methodology, but the environmental ethics in doing science based on the moral code of Islam. Islamic science in his view is a “science whose processes and methodologies incorporate the spirit of Islamic values”.<sup>22</sup>

### F. Harun Yahya and ‘Islamic’ Creationism

According to the biography section on his official website, Harun Yahya is the pen name of Adnan Oktar, “a prominent Turkish intellectual” who has become a phenomenon in the anti-evolution movement in Turkish as well as many other Muslim countries, including Indonesia.<sup>23</sup> He has written over 100 books and produced videos on many topics ranging from the stories of the prophets, the miracles of bees, and how anti-evolution leads to terrorism which has led some observers, for examples Edis<sup>24</sup> and Sayin & Kence<sup>25</sup> to believe that Yahya is not really a person but the flag for Turkish creationists. The flagship itself is indeed BAV or the “Science Research Foundation,” an institution he established in 1991 similar to Henry Morris’s ICR in the USA.

Since its establishment, it appears BAV has been in contact with ICR judging from Henry Morris’ visit to participate in a 1992 creationist conference organized by BAV in Turkey. Indeed the arguments used to defeat evolution in Harun Yahya’s work are very similar with those ICR has developed including “claims concerning the lack of transitional fossils, the impossibility of functioning intermediate forms, the fraud of human evolution, the unreliability of dating methods, and the statistical impossibility of evolution at the molecular level”.<sup>26</sup> The

---

<sup>22</sup> Z. Sardar, *Islamic Future: the Shape of Ideas to Come*. (Petaling Jaya, Malaysia: Pelanduk Publication, 1988), p. 62.

<sup>23</sup> Harun Yahya’s official website. <http://www.harunyahya.com/theauthor.php>

<sup>24</sup> T. Edis, “Cloning Creationism in Turkey” in *Reports of the National Center for Science Education 1999 Nov/Dec Vol. 19 No. 6*, p 30-35.

<sup>25</sup> U. Sayin, and A. Kence, “Islamic Scientific Creationism: A New Challenge in Turkey”. *Reports of the National Center for Science Education 1999 Nov/Dec Vol. 19 No. 6*, p 18-20, 25-29.

<sup>26</sup> T. Edis, “Cloning Creationism in Turkey” p 30-35.

differences appear to be minor and would relate to different scriptural bases. For example, their position concerning the date of creation and the Noah's Flood which are not as strict as ICR's.<sup>27</sup>

Some basic ideas concerning anti-evolution found in Yahya's work are as follows:<sup>28</sup>

1. On the Qur'an and science: the Qur'an is the best of religious scriptures with no mistakes unlike other sacred books; it is the ultimate scientific truth as well. Evolution is not a fact because it is not reported in the Qur'an.
2. On the creation of the Earth and life: both were created by Allah and involved no evolutionary process.
3. On the creation of humans: humans were created in the image of Allah; therefore it is impossible that humans have evolved from apes. Also, science has in fact not found a single clue showing apes are relatives of *Homo sapiens*.
4. On the deceit of evolution: all the scientific data, from DNA to organisms, collected during the last 150 years actually disprove evolution, and on the other hand prove that everything has a design and purpose. Evolutionists' attempt to defend evolution is ideological – defending ideologies which are communist, materialist, or racist, rather than scientific.

BAV not only adapted ICR's content, but also the ICR's strategies to spread their ideas as Sayin & Kence (1999) show:<sup>29</sup>

1. BAV misquotes references, taking one or two sentences from known scientists, books, or journals, out of context to support its position.
2. BAV ignores the overwhelming weight of scientific research supporting evolution and twists a single news item to support their position, although the whole article may actually be in favour of evolution.

BAV uses a prior conviction that evolution must be wrong, and then emphasizes the scientific truth of the scriptures. Therefore to be "true," science must be concordant, and most of the time literally, with scripture. If we look back to the previous section, this shows a Bucaillist approach to Islamic science.

---

<sup>27</sup> U. Sayin, and A. Kence, "Islamic Scientific Creationism"

<sup>28</sup> Ibid

<sup>29</sup> Ibid



## G. Concluding Words

In the previous sections, the writer has examined the roots of Harun Yahya's anti evolution ideas and found it has many similarities, in the content as well as the campaign strategies, with the oldest version developed in the USA. Given that it seems much of the rejection of evolution has its source in misunderstanding (and misuse by the creationists) of the fundamental concepts of evolution and the nature of science, in the context of science education in Indonesia, the writer agrees with the idea that strengthening the two will help students and science teachers take positions on this issue proportionally.

## REFERENCES

- Alters, B.J. & Alters, S.M., *Defending evolution: A guide to the creation/ evolution controversy*. Sudbury, Massachusetts: Jones and Bartlett Publishers, 2001. p v.
- Chiappetta, E.L. & Koballa, T.R., Jr. *Science instruction in the middle and secondary schools (5<sup>th</sup> edition)*. Upper Saddle River, New Jersey: Pearson Education, 2002.
- Edis, T. "Cloning Creationism in Turkey". *Reports of the National Center for Science Education 1999 Nov/Dec Vol. 19 No. 6*, p. 30-35.
- Haq, S. "The Qur'an and Modern Cosmology". *Science and Technology in the Islamic World vol. 1 no.1*, p. 47-52 (1983).
- Harun Yahya's official website. <http://www.harunyahya.com/>
- Iqbal, M., "What makes Islamic Science 'Islamic'?" *Reports of the National Center for Science Education. November 1999*, p. 38.
- Kompas online, [www.kompas.com](http://www.kompas.com)
- Loo, Seng Piew, "The Four Horsemen of Islamic Science: A Critical Analysis" in *International Journal of Science Education v. 18 no. 3*, p. 285-294 (1996).
- Matsumura, M., "Evolution, Creation, and Science Education" in *National Center for Science Education*, 2001.
- Mirza, Muhammad R & Siddiqi, Muhammad I., *Muslim Contribution to Science*. Lahore, Pakistan: Kazi Publication, 1986..
- National Academy of Sciences, *Teaching about Evolution and the Nature of Science.*, 1998, p.7
- Sardar, Z., *Islamic Future: the Shape of Ideas to Come*. Petaling Jaya, Malaysia: Pelanduk Publication, 1988.
- Sarton, G., *Introduction to the History of Islamic Science Vol.1*. New York: Krieger, 1975.
- Sayin, U. and Kence, A., "Islamic Scientific Creationism: A New Challenge in Turkey" in *Reports of the National Center for Science Education 1999 Nov/Dec Vol. 19 No. 6*, p. 18-20, 25-29.
- Scott, E., "Creation or Evolution". *National Center for Science Education*, 2001.
- Scott, E., *Evolution vs. Creationism: an introduction*. Westport: Greenwood Press, 2004.

Website of National Center for Science Education, [http://  
www.ncseweb.org/resources/news/2005/US/  
701\\_nsta\\_survey\\_on\\_pressures\\_on...](http://www.ncseweb.org/resources/news/2005/US/701_nsta_survey_on_pressures_on...)