



## The Modern Worldview and Islam's Perspective on Science

Radtria Alkaf<sup>1\*</sup> , Syafwan Rozi<sup>2</sup> , M. Arif<sup>3</sup> , Ulva Rahmi<sup>4</sup> , Dilla Desvi Yolanda<sup>5</sup> 

<sup>12345</sup>Islamic Law Study Program, Sjech M. Djamil State Islamic University Djambek Bukittinggi, Indonesia

**Abstract.** This research aims to analyze the Western and Islamic perspectives on science. From a Western perspective, science is often viewed as the outcome of objective scientific methods and empirical research. This approach emphasizes the use of reason and logic in developing knowledge. On the other hand, the Islamic perspective acknowledges the importance of scientific methods in acquiring knowledge but also emphasizes the spiritual and revelatory dimensions in understanding reality. In this study, we conducted a comparative analysis of these perspectives, examining the similarities and differences in the conceptions of science from both viewpoints. Literature studies and religious references were utilized to gain a comprehensive understanding of these perspectives. The research reveals that while there are differences between the Western and Islamic views on science, there are also significant points of convergence. The analysis results show that the Western perspective tends to lean towards a materialistic and secular dimension in understanding science, while the Islamic perspective integrates spiritual aspects and revelation in the comprehension of scientific knowledge. However, both perspectives recognize the importance of using scientific methods to obtain objective and verifiable knowledge. Additionally, both emphasize the values of ethics and responsibility in the application of scientific knowledge. This research provides valuable insights into the differences and similarities in the Western and Islamic perspectives on science. Its findings can be utilized to enrich the dialogue between the two traditions and promote a more inclusive and holistic understanding of science in multicultural and multireligious societies.

**Keywords:** Science, Knowledge, Islam, West, Modern

### 1. Introduction

In the development of civilization from generation to generation, progress and decline are often related to changes in knowledge. In modern life, particularly in Western thought, science is often placed as a substitute for divine revelation. On the other hand, from an Islamic perspective, science is seen as a result of the revelation given by God. This revelation serves as guidance for humans to use their intellect in developing understanding of the verses of the universe and religious commandments. In Islam, revelation is considered as the primary source of knowledge. This revelation encompasses knowledge directly bestowed by God to humans through sacred books such as the Quran. By understanding this revelation, humans are expected to use their intellect and reason to interpret the verses of the universe (kauniyah) and religious commandments ('am). This demonstrates that in Islam, science and revelation are not in conflict with each other, but rather complement each other.

This understanding differs from the Western view, which often separates science and religion as two separate entities. In this context, Western thought tends to place science as the highest authority in understanding the world and developing civilization. However, from an Islamic perspective, revelation is the primary source that provides guidance for the development of knowledge. The correct understanding and interpretation of this divine

revelation are expected to guide humans in using their intellect to explore knowledge and develop a civilization in line with the teachings of religion. Thus, the difference in views between the West and Islam regarding the source of knowledge highlights the importance of understanding the relationship between science and religion in the context of civilization's development.

According to Al-Attas, knowledge or science is a result of engineering caused by the development of reason. There is no dualism between worldly and spiritual views, and various currents that emerge are the result of human *ijtihad* (independent reasoning). Various understandings of knowledge, ranging from secularism, atheism, and others, will develop according to the mindset that nurtures them. However, as Muslims living in the modern era, according to Al-Attas, humans are required to utilize knowledge as a tool to fulfill their obligations to God and fellow humans, and vice versa. The development of knowledge or science should be a path or means to obey God in carrying out worship. (Al-Attas 2011)

## 2. Methods

In examining this writing, the author employs the method of library research to conduct a critical and in-depth analysis of relevant literature materials pertaining to the subject matter. Library research involves gathering information and data using various materials available in the library, such as documents, books, magazines, historical accounts, and so on. As an initial step in library research, the author identifies books and journals that have high quality and reliability to be used as references. In this case, several relevant books and journals have been selected to enrich the content of the writing. The use of these references aims to support and provide a strong foundation for the arguments and findings expressed in the writing.

As stated by Miqzaqon T. and Purwoko, library research is a valuable study method for gathering information and data using various materials available in the library. This method enables researchers to explore existing knowledge and critically analyze it to gain a deeper understanding of the topic under investigation. In the context of this writing, library research is an appropriate approach to obtain insightful knowledge about the subject matter. Through library research, the author can explore relevant sources, critically analyze them, and utilize the findings as a basis for discussing the topic in more detail.

However, it is important for the author to ensure that the sources used are accurate, reliable, and up-to-date. In library research, it is crucial to evaluate the reliability and relevance of each source used in order to gain a proper and in-depth understanding of the topic being discussed. By adopting the library research approach, the author can enrich this writing with deeper analysis, provide a broader context, and support the statements made with relevant evidence. This will strengthen the strength and quality of the writing and provide a solid foundation for presenting compelling arguments. (Sari, Milya 2020)

## 3. Finding and Discussions

### A. The Concept of Knowledge in the Qur'an

Knowledge, a frequently used term in the Indonesian language, has its root in the Arabic language, known as *al-'ilm*. This word carries a deep meaning, which is "to know the essence of something truly." However, in English, the word "knowledge" is the equivalent translation for *al-ma'rifah*, while another counterpart for *ilmu* is "science." Although they have comparable counterparts in English, *al-ilm* and *al-ma'rifat* have differences in their

usage. Al-ilm, generally, is used to refer to knowledge that is of a general nature. It encompasses fields such as mathematics, natural sciences, social sciences, and others. Science, in this sense, is the human endeavor to understand the world through scientific and rational methods. On the other hand, al-ma'rifat is used to refer to more specific or specialized knowledge. It involves a deep understanding of a subject, spiritual wisdom, or knowledge gained through direct experience. Al-ma'rifat focuses on a profound comprehension and recognition of deeper and abstract matters.

In the Arabic language, the word "knowledge" has a strong root in the word "al-'ilm." Although it is translated as "science" in English, there are also other equivalents such as "knowledge." The difference in usage between "al-'ilm" and "al-ma'rifat" lies in their level of specificity. "Al-'ilm" is used for general knowledge, while "al-ma'rifat" refers to more specific and profound knowledge, particularly in the context of spirituality and wisdom. (Hasan Langgung 1995)

In the life of a Muslim, knowledge holds a high position, as evidenced by the repetition of the word "al-'ilm" 105 times in the Qur'an. From the interpretation of several verses in the Qur'an regarding the usage of the word "ilm," it is implied that knowledge can be divided into two categories. The first is knowledge that is directly taught by Allah, referred to as "al-'ilm al-laduni," such as the revelation sent down by Allah to the Prophets. The second category is knowledge acquired through the process of inquiry, encompassing all knowledge present in the universe that can be known by humans through research, experimentation, and investigation. (Syafi'ie 2000)

"The Qur'an indicates that the knowledge enjoyed by humans comes from Allah. For example, when Prophet Adam (peace be upon him) was created by Allah, he was 'endowed' with knowledge by being informed of the names of all things. As a result, Prophet Adam expressed gratitude to Allah by saying:"

وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى الْمَلَائِكَةِ فَقَالَ أَنْبِئُونِي بِأَسْمَاءِ هَؤُلَاءِ إِنْ كُنْتُمْ صَادِقِينَ قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

*"He taught Adam the names of all things, then presented them to the angels and said, 'Tell Me the names of these things if you are truthful.' They said, 'Glory be to You! We have no knowledge except what You have taught us. Surely, You are the All-Knowing, the All-Wise.'"*

As the Rabb Al-'Alamin (Lord of all the worlds), Allah demonstrates His existence as the Lord by revealing that there are indicators in the process of creation. Firstly, the presence of a Creator, secondly, the existence of materials used for creation, thirdly, the methods and ways of creation, and finally, the presence of transformation. Thus, Allah functions as the Creator (QS. Al-Rad;16), and creation begins with smoke (QS Yunus:3 and Qaf:38). Everything that Allah creates is beneficial (QS Al-Anbiya:16, QS Ad-Dukhan:38, and QS Ali-Imran:191), and everything created by Allah is true (QS Al-Dukhan:39). All creations of Allah are important studies for all mankind (QS Al-Baqarah:164 and Ali-Imran:190).

Based on the information above, it indicates that:

1. Allah demonstrates His knowledge to mankind through the process of human creation.
2. The natural world can be a significant subject of study, as human beings strive to develop knowledge and come closer to Allah.
3. Knowledge can be acquired through human experience and scientific investigations.
4. Revelation (wahyu) and reason (akal) are two important factors that drive individuals to acquire knowledge.

5. The Qur'an is a holy book that contains abundant information about knowledge and science.(Milton K. Munitz 1981)

#### B. Western Civilization and Science

Science is understood as a systematic and rational endeavor to explain the events occurring in the universe. The human pursuit of knowledge may be limited due to the finite capacity of human reasoning. Science is a product of both logical and imaginative thinking. Logic and imagination are two crucial elements in the overall process of scientific inquiry.(Hilmawati Hindersah 2005)

The advancement of science in the West, according to the history of Western philosophy, began with the Renaissance in the mid-14th century. Nicolaus Copernicus (1473-1543) was a prominent figure who discovered that the sun is the center of the solar system, a view that was considered bold as it contradicted the prevailing beliefs of the Church at that time. Copernicus's ideas were supported by Johannes Kepler (1571-1630) and Galileo Galilei (1564-1642). The peak of Renaissance thinking occurred in the 17th century, with Rene Descartes (1596-1650) being a key figure who laid the foundation for modern thought, particularly in the emergence of empiricism. The 18th century is known as the Age of Enlightenment, characterized by the motto "dare to think." One of the movements during this period was Deism in England, which held different views from organized religion. Deists believed that there was a Creator who brought the world into existence but did not intervene in its affairs afterward, leaving the world to its own fate. John Toland (1670-1722) and Matthew Tindal (1656-1733) were among the notable figures of this movement.(Natshir Haedar 1997)

The 19th century marked the rise of Positivism as the era that shaped modern science. Followers of this philosophical movement believed that science should be value-free, meaning it should be objective and independent of personal values or biases.(M Rasjidi 1994). In the 20th century, various pragmatic movements emerged, emphasizing human existence and unlimited autonomy. From the history of Western philosophical civilization, scientific knowledge began to flourish when prominent figures rejected the hegemony of the church, which viewed science merely as a servant of religion.(Rizal Muntasyir 2013) The Middle Ages gave way to the Renaissance movement, which broke the stagnation of the medieval period and paved the way for the modern era.(J.D Bernald 1969)

To fulfill human needs, the West has reached the pinnacle of civilization with science and knowledge, even with advanced technology. The development of modern science has given rise to the discourse that science is value-free and neutral. Science is believed to be uninfluenced by personal beliefs. The West has achieved its current level of development because it has experienced trauma from a history of religious constraints. The ongoing development has led society to feel liberated by distancing themselves from what they perceive as the constraints of religion. As a result, scientific progress has spread throughout the world.

#### C. Islamic Views on Science

Islam divides reality into the seen and the unseen (this world and the Hereafter). Thus, the world cannot be separated from the Hereafter, and vice versa. Islam places the Qur'an and revelation (wahyu) as the highest influence. This is what distinguishes it from Western epistemology. Revelation, as the verses of God, provides guidance for Muslims in their thinking and actions.(Kuntowijoyo 2007). In its development, Islamic science is considered

to be distinct from Western science. However, there are also some Islamic thinkers who acknowledge Western science and do not reject its compatibility with Islam. Science in Islam is seen as a form of utilizing the resources of the universe, which originate from the Almighty Creator, Allah SWT. It is viewed as a means to harness the facilities of the natural world, acknowledging Allah as the Supreme Creator. (Seyyed Hossain Nasr 1997)

The response regarding the perceived intellectual lag of Islam compared to the West has been extensively discussed by Muslim thinkers, who can be grouped into three major orientations:

#### 1. Affirmative-Apologetic Group

For this group, Islam is considered a complete religion that encompasses all aspects of knowledge. The Qur'an serves as the primary reference, encompassing all fields of knowledge. Based on this assumption, this group argues that all scientific discoveries made by the West already exist in the Qur'an. They attempt to affirm these discoveries using Qur'anic verses. One of the figures associated with this movement is Maurice Bucaille, who published the work "The Bible, the Qur'an, and Science: The Origin of Man" in 1988. Bucaille developed a method known as Buccaillism, in which he conducted research on bees, spiders, and plants, asking readers to reflect on specific Qur'anic verses. In the end, he concluded that the revelations found in the Qur'an are evidence of its miraculous nature. (Maurice Bucaille 1998)

For Muslims who feel disheartened by their perceived lag in the field of scientific knowledge, the method employed by Buccaillism provides some psychological satisfaction. However, there are also those who consider Buccaillism to be quite dangerous. Pervez Hoodbhoy, a physicist from Pakistan, identified certain shortcomings in the Buccaillism method. Firstly, individuals who already have faith in the infallibility of the Qur'an would consider any attempt to prove the validity of its revelations as misguided. Secondly, relying on science to determine eternal truths is a mistake because the universe is subject to change, and science is a continuously evolving theory that discards old theories for new ones. Therefore, placing an idea on shifting sands is a disaster. (Pervez Hoodbhoy 1991)

Therefore, revelation cannot be equated with scientific discoveries because revelation is sacred and possesses absolute truth.

#### 2. Instrumentalist Group

For this group, science is considered a tool that is detached from specific values or religions. Science is seen as neutral, universal, and impartial. It is likened to a knife, where its goodness or badness depends on the intentions of the user. Therefore, in order to bridge the gap in scientific knowledge between Muslims and the West, there is a need for knowledge transfer from the Western world to the Islamic world. Sayyid Jamal ad-Din al-Afghani (1838-1897), known as an advocate of imperialism, openly admired the progress of Western science. Thus, Muslims should also study and master it. (Bagir 2002)

The views of Al-Afghani were also embraced by Muhammad Abduh (1849-1905) and Muhammad Rashid Rida (1865-1935). Both of them even traveled to European countries as a manifestation of their appreciation for the developed Western knowledge and were impressed by their experiences there. For both of them, there is nothing inherently wrong with modern science. The issue lies in the intentions behind its use.

Fazlur Rahman, another notable figure, argues that science is essentially good, and what makes it bad depends on its users. According to Rahman, Muslims do not need to strive to create "Islamic" science. Instead, they should focus on engaging with existing scientific knowledge and disciplines, utilizing them in a manner that aligns with Islamic values and ethics. In his perspective, Islam provides a framework for understanding and applying knowledge rather than producing a separate body of knowledge labeled as "Islamic science." (Fazlur Rahman 1992)

### 3. Critical Group

This is the most critical group when it comes to their view of Western science. According to them, there is no such thing as neutral science. Science is always biased in its construction. Generally, the thinkers involved in this group are those who reside or are based in the West, such as Sayyed Hossein Nasr, for example. They express concern over the secular nature of Western science, which they believe has oppressed both nature and religion. They perceive religion as nothing more than myths and superstitions in the eyes of secular science. (Seyyed Hossain Nasr 1989)

This group offers many criticisms regarding the treatment and perspective of the West towards science. Western science is seen as causing more problems and confusion, resulting in injustice. They argue that Western science has lost its true purpose because it is not approached with fairness, leading to chaos in human life. (Syekh M. Naquib al-Attas 1978)

Then, this critical group systematically developed an idea called the Islamization of knowledge. This is considered the best option to restore the enthusiasm of Muslims in the field of knowledge without abandoning Islamic values. This movement has continued since its inception in the 1970s. The concept of this idea was initiated by al-Attas. In a conference held in Mecca in 1977, he presented these ideas, emphasizing the importance of education for the contemporary history of the Islamic community. The conference was attended by 313 Islamic scholars and thinkers from around the world. During the forum, al-Attas conveyed that knowledge is not neutral in nature.

Eventually, the concept of the Islamization of knowledge gave rise to various interpretations with different assumptions. One common assumption that emerged is that modern knowledge is a product of Western scientists heavily influenced by their worldview. Muslims should not simply transfer knowledge from the West but instead filter it through an Islamic lens. According to this perspective, Islam is a comprehensive package that does not separate religion from knowledge. However, historical reality cannot be ignored. History has shown that Islam has achieved excellence in various fields of knowledge, including medicine, astronomy, philosophy, and logic. (Wahbah az-Zuhaili 2002)

### Conclusion

The human need for knowledge aims to facilitate human life in this world and to fulfill their role as both servants and leaders. The differences in views regarding knowledge between Islam and the West can be summarized as follows:

1. Source of Knowledge: In Islam, knowledge is ascribed to God and revealed through the Quran and Hadith as the primary source. In addition, knowledge can also be obtained through the observation of nature and common sense bestowed by God. In the West, science tends to be based on the scientific method that uses rational observation, testing, and analysis.

2. Object of Knowledge: In Islam, science includes aspects of the material world (general science) as well as metaphysical and spiritual dimensions (religious science). Islam recognizes that there is knowledge that is empirical, but also considers realities that cannot be seen directly, such as moral values and the existence of God. In the West, science tends to focus more on empirical knowledge and directly observable objects.

3. Tujuan Pengetahuan: Dalam Islam, tujuan utama pengetahuan adalah untuk mencapai kebenaran mutlak dan menghantarkan manusia kepada pemahaman yang lebih mendalam tentang Allah dan makhluk-Nya. Dalam perspektif Barat, tujuan pengetahuan sering kali lebih praktis dan berkaitan dengan kemajuan teknologi, kesejahteraan manusia, dan pemecahan masalah dunia.

4. Ethical Implications: In Islam, knowledge is regarded as amanah and has strong ethical implications. Knowledge must be used responsibly and for the good of mankind and to draw closer to God. In the West, knowledge tends to be more value- and ethically neutral, with ethical implications depending on the use made by individuals or societies.

According to at-Attas there is no separation between general science and religion, everything comes from God. In the West, the development of science and technology has set them apart from religious values. Therefore, the concept of science in Islam and the West is very different.

## References

- Al-Attas, Muhammad Naquib. 2011. *Islam Dan Sekularisme*. Bandung: PIMPIN.
- Bagir, Zainal Abidin. 2002. *Pergolakan Pemikiran Di Bidang Ilmu Pengetahuan Dalam Ensiklopedi Tematis Dunia Islam*. Jakarta: Ichtiar Baru Van Hoeve.
- Fazlur Rahman. 1992. "Islamisasi Ilmu Sebuah Respon." *Ulumul Qur'an* 1992 IV: 68-72.
- Hasan Langgulung. 1995. *Manusia Dan Pendidikan Suatu Analisa Psikologi Dan Pendidikan*. Jakarta: PT.Al-Husna Zikro.
- Hilmawati Hindersah. 2005. *Krisis Ilmu Pengetahuan Modern; Menuju Metodologi Partisipatif*. Bandung: Unisba.
- J.D Bernald. 1969. *Science in History, Volume 3 The Natural Sciences in Our Time*. Cambridge: M.I.T. Press.
- Kuntowijoyo. 2007. *Islam Sebagai Ilmu*. Yogyakarta: Tiara Wacana.
- M Rasjidi. 1994. *Filsafat Agama*. Jakarta: Bulan Bintang.
- Maurice Bucaille, terj. 1998. *Asal Usul Manusia Menurut Bibel, Al-Qur'an Dan Sains*. Bandung: Mizan.
- Milton K. Munitz. 1981. *Space, Time and Creation*. New York; Dover Publication.
- Natshir Haedar. 1997. *Agama Dan Krisis Kemanusiaan Modern*. Yogyakarta: Pustaka Pelajar.
- Pervez Hoodbhoy. 1991. *Islam and Science: Religious Orthodoxy and the Battle for Rationality*. London: Zed Books.
- Rizal Muntasyir, Misnal Munir. 2013. *Filsafat Ilmu*. Yogyakarta: Pustaka Pelajar.
- Sari, Milya, Asmendri. 2020. "Penelitian Kepustakaan (Library Research) Dalam Penelitian Pendidikan IPA." 2020.
- Seyyed Hossain Nasr. 1989. *Knowledge and the Sacred*. New York: Crossroad.
- . 1997. *Sains Dan Peradaban Di Dalam Islam*. Bandung: Penerbit Pustaka.

Syafi'ie. 2000. *Konsep Ilmu Pengetahuan Dalam AL-Qur'an*. Yogyakarta: UII Press.

Syekh M. Naquib al-Attas. 1978. *Islam Dan Secularism*. Kuala Lumpur: ABIM.

Wahbah az-Zuhaili. 2002. *Al-Qur'an Menjawab Tantangan Zaman*. Jakarta: Mustaqim.