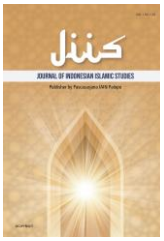
e-ISSN 2608-8395

Journal of Indonesian Islamic Studies
Vol 5, No. 2, April 2026, pp. 200 - 212



JOURNAL OF INDONESIAN ISLAMIC STUDIES

https://ejournal.iainpalopo.ac.id/index.php/jiis/

The Interaction Model of Qur'an and Science in The Indonesian Ministry of Religious Affairs' Scientific Tafsir

Muhammad Hadrawi[1]✉, Indal Abror[2]

[1,2]UIN Sunan Kalijaga, Indonesia

Articles Information

History:
Received: April
Approved: April
Publish: April

Keywords: Interaction, Science, Scientific Interpretation

Abstract

This study analyzes the model of interaction between Islam and science in the Tafsir Ilmi by the Ministry of Religious Affairs of the Republic of Indonesia through Agus Purwanto's typological framework, which categorizes the relationship into the Islamization of Science, the Scientification of Islam, and Islamic Science. Using a literature study method with a descriptive-analytical approach, the results of the study indicate that the Tafsir Ilmi by the Ministry of Religious Affairs of the Republic of Indonesia predominantly applies the model of Islamic Scientification, in which the verses of the Qur'an are positioned as a priori truths that are then verified using modern scientific facts. This finding is concretely identified through the explanation of physiological phenomena in the story of the Companions of the Cave and the role of soil elements in human creation, which are correlated with biochemical data to legitimize the narrative of the sacred text. Although this approach successfully proves the relevance of the Qur'an to the development of science, its apologetic-defensive nature and focus on compatibility are considered less productive for the development of an independent scientific paradigm because science only functions as an instrument supporting the truth of revelation. Consequently, this study recommends the need for further comparative and ethnographic studies to comprehensively understand the integration of religious authority and science in state-sponsored tafsir.

✉ Email Correspondent:
hadrawi9@gmail.com

Introduction

The relationship between science and religion is a fascinating issue among scientists and religious leaders. Both sometimes create a distortion, with some understanding science as more rational, empirical, observable, measurable, and testable. Others, however, understand religion as a belief, supernatural, non-empirical, and transcendental, making it difficult to reconcile them. This separation of science and religion does not prevent some groups from seeking a different perspective, arguing that science and religion complement each other (Hidayatulloh, 2016). Many Muslim scholars and scientists have attempted to connect the two. Although there are pros and cons regarding the connection between religion and science, interpretations linking the Quran with science continue to emerge, a form of Quranic interpretation called Tafsir Ilmi (ilmable interpretation).

Tafsir Ilmi is a form of Quranic interpretation that combines a scientific approach and rational thinking in explaining the verses of kauniyyah (the verses related to natural phenomena). This interpretation aims to explore the scientific content of the Quran and demonstrate its relevance to modern scientific developments. Scientific interpretation rests on the assumption that the Quran contains a variety of knowledge, both those already discovered and those yet to be discovered by humans (Mawarti, 2022). This interpretation is not intended to make the Quran a pure book of knowledge, but rather to demonstrate the relationship between revelation and reason as two complementary sources of truth.

The style of scientific interpretation is rooted in the history of classical Islamic thought. Figures such as Abu Hamid al-Ghazali, in his Ihya Ulum al-Din, argued that all knowledge is encompassed in the deeds and attributes of God described in the Quran. Fakhruddin al-Razi later interpreted the verses using the philosophical and scientific approaches of his time in his Tafsir al-Kabir, followed by Tantawi Jauhari in his work, al-Jawahir fi Tafsir al-Qur'an al-Karim (Rubini, 2016). Even though it has received widespread appreciation, this approach has also received criticism, such as from Abu Ishaq al-Syatibi and Mahmud Syaltut, who consider that scientific interpretation is prone to imposing scientific meanings that are not appropriate to the context of the verse (Maimun, 2019). This style continues to develop as a response to advances in science and the challenges of modern times. This trend in scientific interpretation is also developing in Indonesia. One important representation is the presence of the Tafsir Ilmi Ministry of Religion of the Republic of Indonesia which was prepared through collaboration between Lajnah Pentashihan Mushaf al-Qur'an and LIPI (Muttaqin, 2016). This interpretation is an example of the actualization of scientific interpretation in the local Indonesian context, showing continuity between the classical interpretation tradition and contemporary scientific approaches.

The study of scientific interpretation in Indonesia has developed through various empirical and theoretical perspectives to dissect the relationship between sacred texts and science. A number of previous literature has attempted to map the historical dynamics of Nusantara exegetical works over time to provide a general overview of the development of this discourse (Muchlisin & Nisa, 2017). Several other studies have focused on the analysis of the methodological procedures and interpretative styles in the Ministry of Religious Affairs' Tafsir Ilmi, but their discussions remain confined within a descriptive-normative framework (Anhar et al., 2018). In more specific theoretical developments, Agus

Purwanto's typology of science integration framework has begun to be adopted, but its application remains limited to the empirical realm as a teaching strategy instrument in Islamic education (Dartim & Ali, 2025). This literature review indicates a fundamental research gap: the majority of previous studies tend to stop at affirming the harmony of science and religion without questioning its institutional epistemological foundations. No study has specifically challenged this normative assumption by deconstructing the official state exegetical text to evaluate the interaction model and methodological implications hidden behind it.

Based on these theoretical and empirical gaps, the main question of this research is: how is the model of interaction between the Qur'an and science constructed in the Indonesian Ministry of Religious Affairs' Scientific Interpretation, and what are the epistemological implications of this dominant approach? To answer these questions, this study aims to critically analyze the model of scientific interaction in this interpretation using Agus Purwanto's typological framework. The novelty of this research lies in the shift in focus from merely glorifying the compatibility of science and religion to a critical-analytical evaluation of state-sponsored exegetical texts. This study challenges and expands on previous findings by dismantling the dominant trend of "Islamic Scientification" to reveal the methodological risks of forcing meaning (eisegesis) and revealing the apologetic-defensive character of this discourse on scientific integration.

Method

This study is a library research study that uses a descriptive-analytical approach to deeply explore the patterns of interaction between Quranic verses and science in the official Indonesian government's tafsir literature. Through this approach, the researcher attempts to dissect the interpretive procedures and the substance of the thinking behind the efforts to harmonize the sacred text with modern scientific realities. The study focuses on a critical analysis of the methodological tendencies used by the drafting team in presenting the integration narrative, in order to identify the text's objective position in relation to scientific developments.

The primary data source in this study is the Tafsir Ilmi manuscript published by the Ministry of Religious Affairs of the Republic of Indonesia in collaboration with the Indonesian Institute of Sciences (LIPI). Several interpretations in 19 volumes with various kauniyyah themes became the material objects, supported by secondary data in the form of books, scientific journals, and articles relevant to the discourse of Islamic science and the thoughts of Agus Purwanto. All collected data were then processed using interpretive content analysis techniques. The analysis procedure began with an in-depth reading of the interpretative narratives on specific themes such as the story of the Companions of the Cave and the creation of man to then be classified based on the model of the relationship formed between the religious text and empirical data.

The theoretical framework used as an analytical tool in this study is the model of interaction between Islam and science according to Agus Purwanto, which is divided into three main typologies: the Islamization of Science, the Scientification of Islam, and Islamic Science (Alifa et al., 2023). The following is an explanation of these various interaction models:

The Islamization of Science is an approach that seeks to align the framework of modern science with the Islamic worldview in order to overcome the dominance of the Western secular paradigm. In this model, the empirical methodology of science is still accepted and allowed to operate independently, but its results and goals are reoriented to align with the values of monotheism and the principles of sharia. The main focus is to purify scientific concepts from the influence of secularism and make Islam the ethical and spiritual foundation that guides the development of knowledge. Thus, science remains free to explore empirical phenomena, but its meaning must be placed within the normative-dogmatic framework of Islam to avoid conflict with the creed (Yusuf, 2017).

Islamic scientification positions religious teachings as the primary a priori authority for truth, while science serves as an instrument to strengthen, verify, or illustrate the legitimacy of that revelation. In this theocentric model, truth is not produced through scientific processes, but is established by revelation and requires only scientific evidence to demonstrate that religious narratives align with objective reality. This approach tends to be apologetic and defensive, in which natural phenomena described in sacred texts such as embryology or astronomy are compared to modern scientific discoveries to prove the miraculousness of the Quran. If there is a discrepancy between religion and science, this model will question the validity of scientific findings because it believes that the truth of revelation is absolute and indisputable (Yusuf, 2017).

Islamic Science is a systematic effort to build a scientific paradigm that is completely independent and rooted in Islamic ontology, epistemology, and axiology. Unlike previous models, this approach does not simply add value to modern science or seek justification for verses, but rather makes revelation a primary source of knowledge that is equal to reason and empirical observation in shaping the structure of science itself. Ontologically, the universe is seen not as a neutral entity, but rather a creation of God that is full of spiritual meaning, so that the scientific process is also integral between rational and transcendental aspects. From an axiological perspective, the goal of developing this science is to realize the welfare of humanity according to the principles of maqasid sharia and carry out the mandate as a caliph on earth, not for the purpose of exploitation or accumulation of power alone (Yusuf, 2017).

Results

Scientific Interpretation of the Ministry of Religion of the Republic of Indonesia

The Quranic Manuscripts Review Committee (Lajnah Pentasihan Mushaf al-Quran) existed as a temporary team from 1957 to 2007. In 2007, it became a separate working organization within the Ministry of Religious Affairs' Research, Development, and Training Institute, and later became a major organization. It serves as a gateway to the preservation and study of the Quran as an inexhaustible source of knowledge. Its verses contain a wealth of knowledge that is timeless, extensive, specific, and scientific. It is hoped that the presence of this Tafsir Ilmi (Islamic Tafsir) will meet the public's need for religious interpretation and motivate them to earnestly seek and study knowledge and draw closer to God (Lajnah Pentashihan Mushaf Al-Qur'an, 2013b).

Over time, the Lajnah's duties have expanded. Based on Minister of Religious Affairs Regulation Number 1 of 1982, this institution is responsible for:

1. Researching and safeguarding Quranic Manuscripts, recordings of Quranic recitations, translations, and interpretations of the Quran in a preventive and repressive manner.

2. Studying and researching the authenticity of Quranic manuscripts, Quranic recitations for the blind (Braille), Quranic recitations on cassettes, vinyl records, and other electronic devices circulating in Indonesia.
3. Stopping the circulation of Quranic manuscripts that have not been authenticated by the Lajnah for the Revision of Quranic Manuscripts (Shohib, 2013).

These tasks later evolved into interpretive research in the field of Quranic studies. This responds to the public's need for thematic interpretation of Quranic verses. In this regard, the Lajnah also publishes, interprets, and officially disseminates the results of this research (Shohib, 2013). The Ministry of Religious Affairs' Scientific Interpretation (Tafsir Ilmi) is a fusion of Quranic interpretation and science, initiated by the Ministry of Religious Affairs of the Republic of Indonesia through the Research and Development and Training Division conducted by the Lajnah for the Revision of Quranic Manuscripts (Lajnah Pentasihan Mushaf Al-Qur'an) in collaboration with the Indonesian Institute of Sciences (LIPI). This work can be considered the first work of the Indonesian government in the field of scientific interpretation. Scientific interpretation is not only scientific in nature but also uses a thematic method (maudhu'i) by discussing several issues related to the Qur'an and scientific interpretation. This interpretation is an interesting study because it was conducted by two teams from two different backgrounds (ulama and scientists), and the official government interpretation serves as a public reference. The Indonesian Ministry of Religious Affairs' Scientific Interpretation (Tafsir Ilmi) was introduced in 2009. This scientific interpretation study has produced 19 main themes related to the Qur'an and science and was published in 2010. The translation project has since continued until 2019 (Faizin, 2017).

History of writing interpretations

Addresses from various important figures, such as the Minister of Religious Affairs, the Head of Research and Development, the Head of the Indonesian Institute of Sciences (LIPI), and the Head of the Indonesian Institute of Sciences (LPMA), indicate that the existence of the Tafsir Ilmi (Islamic Tafsir) by the Indonesian Ministry of Religious Affairs was born out of several factors related to the needs of the Indonesian people, namely:

1. A response to developments in science and technology
2. Awareness of the Iqra' as an effort to study the Qur'an through modern science, aimed at strengthening faith
3. As a model for introducing God to modern humans, and
4. Making the Qur'an a paradigm and foundation that provides spiritual meaning to science and technology, preventing them from being value-free and secular (Faizin, 2017).

The writing of Tafsir Ilmi was also motivated by the presence of verses containing scientific references in the Qur'an and the increasing verification of the truth of these verses through objective and empirical scientific findings. This demonstrates that the Qur'an is capable of dialogue with developments in modern science (Muttaqin, 2016). Lukman Hakim, Chairman of the Indonesian Institute of Sciences (LIPI), explained that the goal of this scientific interpretation is to make the Quran a paradigm and foundation that provides spiritual meaning for science and technology, not the other way around. With this in mind, the two statements above suggest that the goal of this scientific interpretation is inseparable from both external and internal factors. The Ministry of Religious Affairs' interpretation utilizes scientific theories as evidence for the Quran, while the Quran itself serves as a starting point for scientific study.

In a national context, the compilation of this interpretation also represents a concrete manifestation of the implementation of Article 29 of the 1945 Constitution, which emphasizes the importance of improving the quality of religious life. This is supported by regulations such as Presidential Regulation of the Republic of Indonesia Number 5 of 2010, which emphasizes that

interpretation of the Quran (including scientific interpretation) must be provided to achieve a better religious life (Muttaqin, 2016). Apart from this background, the writings of the Tafsir Ilmi (Islamic Interpretation) of the Indonesian Ministry of Religious Affairs are also motivated by the desire to build an Islamic civilization initiated by the intersection of science and interpretation. The compilation of this scientific interpretation was carried out through a series of studies conducted jointly by scholars and scholars from the Lajnah Pentasihan Mushaf Al-Quran, LIPI, LAPAN, Bossha Observatory, and several universities. The scientists involved were divided into two teams, Syar'i and Kauni. The Syar'i team was tasked with research from an Islamic and Arabic perspective, while the Kauni team studied from a scientific perspective. The Tafsir Ilmi of the Indonesian Ministry of Religious Affairs does not aim to justify science with Quranic verses, but rather to dialogue with them in the context of science. This tafsir study was born from the awareness that the Quran is not an absolute text from the perspective of interpretation or science but is relative in its interpretation (Lajnah Pentashihan Mushaf Al-Qur'an, 2013b).

Methods and Styles of Interpretation

One approach used in Quranic interpretation research is the thematic method, which is currently trending in the development of interpretation in the modern-contemporary era. In a thematic study, researchers select a specific topic from the Quran and explore various verses related to that topic. The basic assumption is that the verses in the Quran are interconnected, like links in a sequential chain. Therefore, scholars often interpret one verse by referring to another. This method encompasses linguistic aspects such as semantics, morphology, syntax, stylistics, and others, but the primary focus is the relevant thematic content and message. The interpreter acts as a guide to clarify the main ideas or concepts of the Quran based on a specific theme, rather than as the primary subject (Fahimah, 2017).

This type of tafsir study falls into the category of tafsir bi al-ra'yi. This means that this interpretation utilizes not only the text of the Quran or hadith but also rationales to provide explanations for the interpreted verses, which become clearly evident through various explanations. The method used in this scientific interpretation is the thematic method (maudhu'i). This method seeks the Quran's perspective on the topic being discussed by focusing on a specific topic, collecting all relevant verses, analyzing them, and understanding them verse by verse. While the Ministry of Religious Affairs' earlier Thematic Tafsir focused on more contemporary issues, the issues raised in the Ministry of Religious Affairs' Ilmi Tafsir concern the discussion of kauniyyah verses, or cosmic issues, using a scientific approach (Muttaqin, 2016).

Ilmi Tafsir is a model of interpretation that uses a theoretical approach from science to understand Quranic verses. The goal is not to justify scientific theories with the Quran, but to explore the scientific values within the Quranic text itself(Afifah dan Nurhidayah, 2023). This style of interpretation is based on the belief that the Quran contains various types of knowledge that can be used to explain natural and social phenomena. This style is born from the paradigm that the Quran does not contradict science. It even includes religious knowledge and also secular insights, including scientific theories.

Principles and Mechanisms of Writing

In the process of compiling the Scientific Interpretation of the Indonesian Ministry of Religious Affairs, the Ministry of Religious Affairs team referred to several key points established by the Institute for the Development of Al-I'jaz al-Qur'an and guidelines compiled by the Rabithah 'Alam Islami. The purpose of these references is to maintain the purity and sanctity of the Quran. The scholars involved also established several basic principles that must serve as a reference in designing a scientific interpretation of the Quran, namely:

1. Paying attention to the meaning and principles.
2. Paying attention to the context of the verse being interpreted, because the verses and chapters in the Quran, even the words within its sentences, are interrelated, so understanding a single verse must be comprehensive, not partial.
3. Paying attention to the interpretations of the Prophet Muhammad (peace be upon him), as the highest authority, his companions, his followers, and the scholars of tafsir, especially regarding the verse being interpreted. Furthermore, it is also important to understand other Quranic sciences such as Nasikh Mansukh, Asbabun Nuzul, and so on.
4. Do not use verses containing scientific clues to determine the truth or falsity of a scientific discovery. The Quran serves a much greater purpose than simply confirming or disproving scientific theories.
5. Consider the possibility that a single word or phrase may contain multiple meanings, even if those meanings are somewhat remote (weak), as explained by Arabic language expert Ibn Jinni in his book al-Khasâ'is (2/488). Al-Gamrawi, an Egyptian scholar of Quranic exegesis, stated, "The interpretation of the Quran should not be fixated on a single meaning. As long as the expression contains various possibilities and is linguistically justified, then perhaps that is what God intended."
6. To understand scientific clues, one must thoroughly understand everything related to the subject of the verse, including the scientific discoveries associated with it.
7. Do not use scientific discoveries that are still theoretical and hypothetical, which are subject to change. Because a theory is the result of a generalized assessment of natural phenomena, a hypothesis is still being tested for its validity. Only those that have reached the level of scientific truth that cannot be rejected by human reason are used (Lajnah Pentashihan Mushaf Al-Qur'an, 2013b).

The process for writing a scientific interpretation involves the following steps:

1. Determining the study topic;
2. Assigning teams to the agreed-upon topic;
3. Inviting experts in their respective fields as resource persons to provide a general perspective on the topic being studied;
4. Conducting inter-team studies;
5. Holding several ongoing plenary sessions to discuss the results of each team's work;
6. Finalizing the study results for publication as a scientific interpretation (Julkarnain, 2014).

The story of Ashabul Kahfi (Cave Youth) in the Koran (Lajnah Pentashihan Mushaf Al-Qur'an, 2013b)

The story of the Cave's Companions is found in Surah al-Kahf, verses 9-26. The revelation of Surah al-Kahf stemmed from questions posed by the Quraysh of Mecca after receiving input from the Jews of Medina. The questions were: Who are the Companions of the Cave, or the youth of the cave? Who is Zulqarnain? And what is the essence of the soul? Through revelation, the Prophet Muhammad (peace be upon him) answered all these questions. These youth of the cave were a people who remained steadfast in their monotheism and worshipped Allah as the one and only God. They lived in a polytheistic society, making their faith a source of danger to their lives. Therefore, Allah commanded them to hide in a cave for protection (al-Kahf 18:16). In the story, several interesting phenomena are seen in the way Allah put them to sleep:

1. Their ears were covered (verse 11).
2. They were placed in a spacious cave, where sunlight did not enter. The sun rises to the right of the cave and sets to the left (verse 17).

3. Allah turns the bodies of the Companions of the Cave to the right and to the left (verse 18).

فَضَرَبْنَا عَلٰٓى اٰذَانِهِمْ فِى الْكَهْفِ سِنِيْنَ عَدَدًاۙ

Ministry of Religious Affairs Translation 2019

11. So We sealed their ears in the cave for many years.

Verse 11 mentions that their ears were sealed. By this action, the youth of the cave could not hear outside noise, which could wake them from sleep. In other words, closing the ears means "cutting off" external hearing, resulting in silence. This can prolong the duration of deep sleep. The ears are known to contain four acupuncture points responsible for suppressing appetite. Therefore, the phrase "Allah sealed the ears" also means that Allah pressed four acupuncture points in the ears of the Companions of the Cave, thereby significantly reducing their appetite.

۞ وَتَرَى الشَّمْسَ اِذَا طَلَعَتْ تَّزٰوَرُ عَنْ كَهْفِهِمْ ذَاتَ الْيَمِيْنِ وَاِذَا غَرَبَتْ تَّقْرِضُهُمْ ذَاتَ الشِّمَالِ وَهُمْ فِيْ فَجْوَةٍ مِّنْهُ ۗذٰلِكَ مِنْ اٰيٰتِ اللّٰهِ ۗمَنْ يَّهْدِ اللّٰهُ فَهُوَ الْمُهْتَدِ وَمَنْ يُّضْلِلْ فَلَنْ تَجِدَ لَهٗ وَلِيًّا مُّرْشِدًا ع

Ministry of Religious Affairs Translation 2019

17. You will see the sun rising, inclining to the right of their cave, and setting, turning away from them to the left, while they were in a spacious area within it. These are among the signs of Allah. Whoever Allah guides is truly guided. Whoever He leads astray, you will not find any helper to guide him.

Furthermore, verse 17 explains that the cave was not exposed to direct light, because the sun rose from one side and set from the other. So throughout the day, the vast cave was always dim or dark; the temperature inside was naturally cool. The darkness, or lack of light, combined with the cool temperature, would have prolonged sleep time. As an illustration, if we boarded a plane from Mecca to Jakarta at night, it would be daylight in less than six hours because the plane was heading toward sunrise. To ensure we could sleep for those six hours, the flight crew ordered the windows to be closed to prevent sunlight from entering. This way, passengers can sleep up to 6 hours as if it were still night.

وَتَحْسَبُهُمْ اَيْقَاظًا وَّهُمْ رُقُوْدٌ ۖوَّنُقَلِّبُهُمْ ذَاتَ الْيَمِيْنِ وَذَاتَ الشِّمَالِ ۖوَكَلْبُهُمْ بَاسِطٌ ذِرَاعَيْهِ بِالْوَصِيْدِ ۗلَوِ اطَّلَعْتَ عَلَيْهِمْ لَوَلَّيْتَ مِنْهُمْ فِرَارًا وَّلَمُلِئْتَ مِنْهُمْ رُعْبًا

Ministry of Religious Affairs Translation 2019

18. You think they are awake, but they are asleep. We turn them to the right and to the left, while their dog stretches its forelegs at the entrance of the cave. If you had seen them, you would have turned away from them and would have been filled with fear of them.

Verse 18 explains that their bodies were turned over by Allah. In this way, the blood circulation of the Cave Youth was maintained. The cave's spacious space prevented them from being crowded together, allowing them to wake up. The spacious space also allowed them to move freely, maintaining their blood circulation and maintaining their metabolic processes, thus enabling them to survive for a long time.

Thus, the above phenomena: silence/quietude, darkness/darkness, cool/cold temperatures, reduced or absent appetite, and bodies constantly moving in a spacious space, experienced by

those in a sleeping state, enabled them to prolong their sleep time and their bodies to survive. By Allah's will they can sleep for a period of 300 years if calculated by the Solar Calendar, or 309 years (verse 25) if calculated by the Lunar Calendar.

Adam is able to explain the names of objects (Lajnah Pentashihan Mushaf Al-Qur'an, 2013a)

In a series of verses discussing the creation of man, it is mentioned that Adam was taught by Allah to know the names of objects (al-Baqarah/2:31-33). When asked to name them again, Adam was able to do so correctly, unlike the angels who were unable to answer. This raises the question of why Adam possessed this ability. The answer is explained in several verses of the Quran that mention that humans were created from the earth, as in the following verse.

وَلَقَدْ خَلَقْنَا الْاِنْسَانَ مِنْ سُلٰلَةٍ مِّنْ طِيْنٍ ۚ

Ministry of Religion Translation 2019
12. Indeed, We created man from the essence of clay. (QS. Al-Mu'minun)

وَلَقَدْ خَلَقْنَا الْاِنْسَانَ مِنْ صَلْصَالٍ مِّنْ حَمَاٍ مَّسْنُوْنٍۚ

Ministry of Religion 2019 translation
26. Indeed, We have indeed created man (Adam) from dry clay from which black mud was molded. (QS. Al-Hijr)

خَلَقَ الْاِنْسَانَ مِنْ صَلْصَالٍ كَالْفَخَّارِ

Ministry of Religious Affairs Translation 2019
14. He created man from dry clay like pottery. (QS. Ar-Rahman)

Modern science explains that soil contains various metals and metalloids (semi-metals), such as iron (Fe), copper (Cu), cobalt (Co), and manganese (Mn), all of which function as catalysts in chemical and biochemical reactions that form complex molecules, such as amino acids and nucleotides. These elements are likely referred to as the essence of soil in Surah al-Mu'minun/23:12. Meanwhile, Surah al-Hijr/15:26 indicates the presence of water (mud, meaning soil plus water). Water is the medium for a reaction process between the existing elements to form a molecule. With the presence of carbon (C), hydrogen (H), nitrogen (N), phosphorus (P), and oxygen (O), these metals and metalloids can act as catalysts in biochemical reactions to form more complex molecules such as urea, amino acids, or even nucleotides. These molecules are known as organic molecules, supporting life processes.

In Surah ar-Rahman 55:14, Allah refers to "dry earth like pottery." Pottery or porcelain, in chemical reactions, is commonly used as a catalyst for polymerization (the extension of chemical chains). This verse implies the polymerization of molecules into macromolecules. These molecules are known as organic molecules, supporting life processes. These molecules then form macromolecules, supramacromolecules, and body cell tissue, through the polymerization process, including the formation of brain tissue. Therefore, the entire human body, including the brain, lungs, heart, blood, and so on, originates from the earth.

The human brain, as the center for storing and processing information, is composed of the same earth elements. Besides the brain, DNA (deoxyribonucleic acid) also plays a role in storing genetic information. According to Prof. Carl Sagan in his book, *The Dragons of Eden*,

Speculations on the Evolution of Human Intelligence, the human brain stores 1013 bits of information, equivalent to 107 gigabits—a staggering amount, equivalent to 2 million pages of a book or approximately 4,000 volumes. Human memory is divided into two types:

1. Brain tissue, which stores various types of memory, such as working memory, the brain's ability to temporarily maintain information about tasks; episodic memory, the ability to recall details of specific events; semantic memory, the ability to learn facts and relationships; instrumental learning, the ability to provide rewards and punishments to modify ganglionic traits; and motor learning, the ability to refine body movement patterns through practice or repeated repetition.
2. Chromosomal DNA, which stores and passes on genetic information to offspring, has a storage capacity of approximately 2x1010 bits.

These two sophisticated memory devices were made from elements found in the earth. Thanks to this sophisticated memory, Adam was able to understand and name the objects taught by Allah. This ability is lacking for angels, as they were not created from earth. Iblis prided himself on his ignorance in understanding Allah's creation by despising the elements of earth. Because this human being was more intelligent than the angels, Allah commanded all the angels to prostrate (prostrate) to Adam. All the angels, except Iblis, paid homage to Adam, obeying Allah's command.

Discussion

Analysis of the Trends of the Interaction Model of Islam and Science

These facts indicate that this interpretation falls within the Islamic Scientification model. This scientific approach is evident in how the interpretation takes the verses of Al-Kahf as its starting point and then explains their meaning with scientific knowledge. For example, the verse that mentions the young man being "turned upside down" is literally interpreted scientifically as a mechanism for maintaining blood circulation and the body's metabolism, thus maintaining life during a long sleep. Similarly, the calculation of "300 years" is examined using the solar and lunar calendars as astronomical calculations. In other words, this interpretation attempts to present the truth of the Quranic narrative through the lens of science.

This approach differs from the Islamization of Science, because the interpretation does not begin with scientific concepts (e.g., the theory of relativity or biology) to construct the narrative, but rather interprets religious texts with science. It also differs from Islamic Science in the broader sense, because this interpretation does not construct a completely new science but instead examines the verses with scientific references. Therefore, the interpretation model of the Companions of the Kahf in the Tafsir Ilmi of the Indonesian Ministry of Religious Affairs is classified as Islamic Scientification. This is reinforced by the explanatory style, which emphasizes the direct correlation between Quranic verses and scientific concepts: "The bodies of the Companions of the Cave were turned over and over by Allah... their metabolism continued so that they could survive for a long time," clearly demonstrating Islam's scientific orientation.

On the theme of Adam's ability to explain the names of objects, the Ministry of Religious Affairs' Scientific Interpretation examines the story of Adam in the Quran (Al-Baqarah 2:31–33), which states that Allah taught Adam the names of objects. The question then arises as to why Adam, made of clay, could master this knowledge, while angels could not. In response, the interpretation cites modern science. For example, it states: "Science informs us that soil contains many atoms or elements, both metals and metalloids... which are essential as catalysts in chemical and biochemical reactions to form more complex organic molecules. Examples of elements found in soil include: iron (Fe), copper (Cu), cobalt (Co), manganese (Mn), and others."

The sentence above shows that the interpretation explicitly uses modern scientific facts (the content of soil elements and their biological roles) to explain or strengthen the religious narrative.

In other words, the verses of the Quran are linked to contemporary scientific knowledge to appear "scientific" and relevant. This approach also falls under the category of Islamic scientification, which is the effort to "scientify" Islamic teachings by referring to modern scientific knowledge. This commentary attempts to emphasize the scientific consistency of the Quranic narrative about Adam, for example, highlighting that the elements of soil ("the essence of soil") contain biologically important metals. Furthermore, this section also presents other data (e.g., the brain's memory capacity and DNA) to emphasize the scientific uniqueness of humans. Overall, this text, the Indonesian Ministry of Religious Affairs' Scientific Interpretation, uses modern science to strengthen and explain the truth of religious narratives (rather than incorporating religious values into scientific thinking), thus emphasizing its approach as Islamic scientification.

Based on the analysis of the interaction trends between the Qur'anic text and science in the above presentation, it can be concluded that the methodology used by the drafting team gives rise to complex discursive implications. The tendency of the Indonesian Ministry of Religious Affairs' Scientific Interpretation, which focuses on the Islamic Scientification model, emphasizes that the revealed text is positioned as an absolute guideline, while modern science functions as an instrument of empirical validation. The trend of science-religion integration thinking in Indonesia (such as scientification and ayatization) is indeed projected to emphasize that Islam has strong compatibility with modernity and scientific rationality (Bahri, 2018). This scientification approach shows that science is not used to build natural sciences autonomously, but merely as a "scientific garment" to rationalize sacred texts. This is concretely evident when the Indonesian Ministry of Religious Affairs' Scientific Interpretation borrows anatomical and biochemical theories such as metal elements, metalloids, and DNA networks to legitimize and provide a logical explanation for the process of Adam's creation from the elements of earth.

While this harmonization effort successfully bridges revelation with modern reason, it faces significant methodological limitations. An interpretive approach that focuses on the justification function is highly susceptible to apologetic claims that assume all modern scientific theories were already present in the Qur'an (Wardani, 2022). If the Qur'an is merely positioned as a recipient of empirical theoretical explanations, it actually limits its breadth. Even more acute is the danger of the practice of eisegesis (forcing meaning), where scientific theories are often forced into verses even though Arabic grammar does not permit it (Alviana et al., 2026). This approach has the potential to reduce the Qur'an to merely a tool for justifying scientific theories that are inherently temporary and subject to change. This is particularly relevant when considering how the Ministry of Religious Affairs' Scientific Interpretation (Tafsir Ilm) matches the phenomenon of the sleeping Companions of the Cave with the theory of ear acupuncture points; a tendency that could potentially undermine the authority of the sacred text if these medical theories are later revised by new discoveries.

The presence of the Indonesian Ministry of Religious Affairs' Scientific Interpretation as an official state product not only reflects scientific integration but also carries a strategic narrative about identity. The obsession with continually proving that the verses of the Quran are in accordance with modern science actually emphasizes its apologetic-defensive character. This apologetic attitude, whether carried out by individual scientists or supported by institutions, is essentially driven by a passion to fight the hegemony of Western positivistic science (Bahri, 2018). This phenomenon can be read as a representation of political and religious identity born of a post-colonial mentality to overcome the feeling of inferiority of Muslims to Western cultural and civilizational domination. As a result, the integration approach implemented by the Indonesian Ministry of Religious Affairs tends to stop at the euphoria of conformity alone. Instead of formulating Islamic Science capable of producing an autonomous methodological paradigm, this interpretation remains trapped in the glorification of the text while simultaneously remaining heavily dependent on the epistemological structure of secular science as its standard of proof.

Conclusion

The Indonesian Ministry of Religious Affairs' scientific interpretation predominantly applies the Islamic scientific model, in which the verses of the Qur'an are positioned as the starting point for absolute truth, which is then verified through modern scientific facts. This interpretation pattern is concretely seen in the explanation of biological phenomena in the miracle of the Companions of the Cave and the analysis of material elements in human creation, which are legitimized using scientific terminology as a supporting instrument. However, this approach has an apologetic-defensive character that is prone to being trapped in the practice of eisegesis or forcing the meaning of the text to align revelation with scientific theories that are inherently tentative. So this work tends to stop at the euphoria of compatibility rather than giving birth to a productive independent scientific paradigm.

This research is limited by its scope, which focuses only on two specific themes, and its literature review method, which fails to capture the dynamics of negotiations behind the scenes of the interpretation's creation. Therefore, further research is recommended to conduct a comparative study with international scientific interpretations to examine their differing ideological orientations. Furthermore, the use of ethnographic methods through in-depth interviews with the authors from the Ministry of Religious Affairs and scientists is crucial for a more comprehensive understanding of the integration of religious and scientific authority..

References

Afifah, A., & Nurhidayah, L. (2023). Tafsir 'Ilmi dalam Perspektif Ulama Klasik dan Kontemporer. *Izzatuna: Jurnal Ilmu Al-Quran dan Tafsir*, *4*(1), 1–7. https://doi.org/10.62109/ijiat.v4i1.33

Alifa, A. Z., Anshari, M. I., & Barizi, A. (2023). Epistemology of Islamic integralism as a solution to building a global civilization: The thoughts of Mahzard and Agus Purwanto. *AL-IRFAN: Journal of Arabic Literature and Islamic Studies*, *6*(2), 293-317. https://doi.org/10.58223/alirfan.v6i1.6934

Alviana, A., Dauliya, P., & Mubin, N. (2026). Sains Al-Qur'an: Memadukan Qur'anisasi sains dan saintifikasi Al-Qur'an. *Sujud: Jurnal Agama, Sosial Dan Budaya*, *2*(2), 1015–1020. https://doi.org/10.63822/ag0nvk95

Anhar, P. M. A., Sadewo, I., & Al-Asy Ari, M. K. H. (2018). Tafsir ilmi: Studi metode penafsiran berbasis ilmu pengetahuan pada tafsir Kemenag. *Prosiding Konferensi Integrasi Interkoneksi Islam dan Sains*, *1*, 109–113. https://sunankalijaga.org/prosiding/index.php/kiiis/article/view/18

Bahri, M. Z. (2018). Expressing political and religious identity: Religion-science relations in Indonesian Muslim thinkers 1970-2014. *Al-Jami'ah: Journal of Islamic Studies*, *56*(1), 155–186. https://doi.org/10.14421/ajis.2018.561.155-186

Dartim, & Ali, M. (2025). Implementasi konsep integrasi Islam dan sains perspektif Agus Purwanto sebagai strategi pengajaran pendidikan Islam. *Jurnal Pendidikan Islam AL-ILMI*, *8*(2), 148–157. https://doi.org/10.32529/al-ilmi.v8i2.2487

Fahimah, S. (2023). Metode Maudhu'i dalam Menemukan Urgensitas Maknanya: Telaah atas Sejarah dan Tokoh. *Madinah: Jurnal Studi Islam*, *10*(2), 314–330. https://doi.org/10.58518/madinah.v10i2.2024

Faizin, (2017). Integrasi Agama dan Sains dalam Tafsir Ilmi Kementerian Agama RI. *Jurnal Ushuluddin*,*25*(1), 19-33 http://dx.doi.org/10.24014/jush.v25i1.2560

Hidayatulloh, (2017). Realasi Pengetahuan dan Agama. *International Seminar on Generating Through Research, 1,* 901-902
https://doi.org/10.21070/picecrs.v1i1.627
Julkarnain, M. (2014). Epistemologi Tafsir Ilmi Kemenag, *Jurnal Penelitian Keislaman*, *10*(1), 1-26
https://adoc.pub/epistemologi-tafsir-ilmi-muhammad-julkarnain.html
Lajnah Pentashihan Mushaf Al-Qur'an. (2013a). *Kisah para nabi pra-Ibrahim dalam perspektif al-Qur'an dan sains*. Kementerian Agama RI. https://pustakalajnah.kemenag.go.id/detail/35
Lajnah Pentashihan Mushaf Al-Qur'an. (2013b). *Waktu dalam perspektif al-Qur'an dan sains*. Kementerian Agama RI. https://pustakalajnah.kemenag.go.id/detail/73
Maimun. Ach. (2019). Integrasi Agama dan Sains Melalui Tafsir Ilmi, *Jurnal 'Ainil Islam*, *12*(1),
Mawarti, T. F. (2022). Tafsir Saintifik. *Tafsere*, *10*(1), 10–29
https://doi.org/10.24252/jt.v10i1.35547
Muchlisin, A. R., & Nisa, K. (2017). Geliat tafsir 'ilmi di Indonesia dari tafsir Al-Nur hingga tafsir Salman. *Millati, Journal of Islamic Studies and Humanities*, *2*(2), 239–257.
https://doi.org/10.18326/millati.v2i2.239-257
Muttaqin, A. (2016). "Konstruksi Tafsir Ilmi Kemenag RI-LIPI: Melacak Unsur Kepentingan Pemerintah dalam Tafsir", *Religia*, *19*(2), 74-88
https://doi.org/10.28918/religia.v19i2.751
Rubini. (2016) "Tafsir Ilmi", *Jurnal Komunikasi dan Pendidikan Islam*, *5*(2), 89-115
https://journal.staimsyk.ac.id/index.php/almanar/article/view/37
Shohib, M. (2013). *Profil Lajnah Pentashih Mushaf Al-Qur'an Badan Litbang dan Diklat Kementerian Agama Republik Indonesia*, Perpustakaan Nasional RI
Wardani. (2022). Tafsir ilmiah sebagai implementasi integrasi ilmu: Kasus UIN Maulana Malik Ibrahim Malang. *Jurnal Ilmiah Ilmu Ushuluddin*, *21*(1), 45–71.
https://doi.org/10.18592/jiiu.v21i1.7230
Yusuf, M. Y. (2017). *Epistemologi sains Islam (Studi pemikiran Agus Purwanto dalam buku Ayat-Ayat Semesta dan Nalar Ayat-Ayat Semesta)* [Disertasi doktoral, UIN Sunan Kalijaga]. Digilib UIN Sunan Kalijaga.
https://digilib.uin-suka.ac.id/id/eprint/28683/