Harmonizing Islamic Quantum in Islamic Education: An Islamic Perspective Through the Lens of Nidhal Guessoum's Philosophy

Shobihatul Fitroh Noviyanti [1]*, Ririn Inayatul Mahfudloh[2], Moh Romzi[1]

[1] UIN Maulana Malik Ibrahim, Malang, Indonesia
[2] Department of Islamic Education, Universitas Qomaruddin, Gresik, Indonesia
* Correspondence: shobihanoviyanti@gmail.com

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ABSTRACT

This article aims to discuss explore Nidhal Guessoum's perspective on the relationship between Islam and modern science, utilizing library research methods and a qualitative approach. The primary focus is on the views of Muslim thinkers regarding the cosmology of classical Islamic philosophy, scientific interpretations, traditionalism, and modern science. Guessoum proposes a theistic Islamic cosmological view, in which cosmology serves as a framework for monotheism. While cosmology cannot fully encompass science, Guessoum argues that a Muslim must study science while maintaining belief in the existence of God. He emphasizes that Islamic cosmology is not merely a scientific explanation but an integration of religion and modern science. Guessoum's quantum approach is based on three principles: conceptual integration between religion and science, interdisciplinary methods to understand natural and religious phenomena, and critical thinking to evaluate diverse views. He highlights the importance of Muslim identity in the study of science, which allows a Muslim to uphold their faith. Guessoum acknowledges the weaknesses in the traditional approach to Islamic cosmology and offers a more coherent and integrative alternative. His thinking offers a new perspective that combines Islamic cosmology with scientific principles, offering a framework for understanding how religion and science can coexist harmoniously.

Keywords: *Quantum Islam, Modern Science, Cosmology*

ABSTRAK

Artikel ini bertujuan untuk membahas perspektif Nidhal Guessoum tentang hubungan antara Islam dan sains modern, dengan menggunakan metode penelitian pustaka dan pendekatan kualitatif. Fokus utama adalah pada pandangan para pemikir Muslim mengenai kosmologi dalam filsafat Islam klasik, interpretasi ilmiah, tradisionalisme, dan sains modern. Guessoum mengusulkan pandangan kosmologi Islam teistik, di mana kosmologi berfungsi sebagai kerangka monoteisme. Meskipun kosmologi tidak dapat sepenuhnya mencakup sains, Guessoum berpendapat bahwa seorang Muslim harus mempelajari sains sambil mempertahankan keyakinan pada keberadaan Tuhan. Ia menekankan bahwa kosmologi Islam bukan hanya penjelasan ilmiah tetapi integrasi antara agama dan sains modern. Pendekatan kuantum Guessoum didasarkan pada tiga prinsip: integrasi konseptual antara agama dan sains, metode

interdisipliner untuk memahami fenomena alam dan agama, dan pemikiran kritis untuk mengevaluasi berbagai pandangan. Ia menyoroti pentingnya identitas Muslim dalam studi sains, yang memungkinkan seorang Muslim untuk mempertahankan imannya. Guessoum mengakui kelemahan dalam pendekatan tradisional terhadap kosmologi Islam dan menawarkan alternatif yang lebih koheren dan integratif. Pemikirannya menawarkan perspektif baru yang menggabungkan kosmologi Islam dengan prinsip-prinsip ilmiah, menawarkan kerangka kerja untuk memahami bagaimana agama dan sains dapat hidup berdampingan secara harmonis.

Kata kunci: Islam Kuantum, Ilmu Pengetahuan Modern, Kosmologi

1. Introduction

The integration of science and religion in modern education is an important issue that needs attention. In the context of Islamic education, this integration aims to create a new format between the relationship between science and religion, as well as answering questions regarding the relationship between science and religion (Nurdin & Jaya, 2023). This approach seeks harmony between science and religion while exploring ethical, moral, and spiritual values that complement scientific understanding (Amin, 2020). Integrating science and religion in Islamic education serves as a bridge, connecting empirical knowledge with religious teachings (Masruroh et al., 2023). This integration shows that science and religion complement each other, offering a holistic view of the world and human existence (Batubara, 2022). It aims to develop a generation skilled in science and technology with a strong moral foundation rooted in Islamic teachings. By incorporating Islamic values into the science curriculum, modern education guides students to make wise decisions, understand the ethical impact of scientific discoveries, and align their daily lives with religious values.

The integration of science and religion significantly impacts various aspects of Islamic education (Mubarok & Mansur, 2023). Its main aim is to create a new framework that addresses the relationship between scientific knowledge and religious teachings (Makiah, 2021). This integration involves philosophical concepts, materials, methodologies, and strategies to holistically explain the relationship between religion and science (Purwaningrum et al., 2021). The impact is evident in the curriculum, teaching methods, and social education, aiming to harmonize religious and scientific views (Lubis, 2022). Educational institutions also play a role in merging these fields, overcoming dichotomies, and fostering a balanced environment (Putra, 2020).

Islamic thinkers have varied responses to modern science: 1) Some believe all science is based on the Quran and view modern science as universal and neutral (Siregar, 2022). Others seek to adapt science to meet the needs and ideals of Islam in Islamic societies (Karim & Suhaini, 2020), 3) Some advocate for a new Islamic paradigm, focusing on knowledge and behavioral frameworks that align with Islamic principles and ethical boundaries (Sodikin, 2020).

Nidhal Guessoum's thoughts on Islam and cosmology are detailed in his seminal book "Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science" (2010). He argues that science and religion are closely related and compatible with Islam, reinforcing that modern science and religious views do not always conflict (Rofiq & Hasbi, 2021). Many contemporary Muslim scientists contribute to various scientific fields while maintaining their religious beliefs (Rofiq & Hasbi, 2021).

This thinking aligns with historical figures like Ibn Hayyan, known as Geber in the Western tradition, who made significant contributions to chemistry and alchemy in the 8th century AD. Although his views on Islam and modern science are hard to pinpoint due to historical context, his emphasis on experimentation and observation as scientific methods is notable (Nurcholis, 2021). Similarly, Al-Faruqi stresses the importance of understanding science and technology within an Islamic context, advocating for education that equips Muslims to excel in both religious and scientific fields. He views science as "the verses of Allah," integral to understanding religion (Sudarto, 2020). As-Suyuti

echoes this sentiment, asserting that the Quran encompasses all classical and modern sciences, leaving no fundamental scientific problem unaddressed (Ramdhani & Said, 2021).

Integrating science and religion in Islamic education is important for balancing sacred knowledge with modern science (Meliani et al., 2021). This integration helps students understand spiritual aspects while applying scientific principles in everyday life, aiming to develop individuals who are strong in faith and skilled in critical thinking (Novarita et al., 2023) Such an approach ensures the younger generation develops holistically within the framework of Islamic teachings.

Despite these insights, a lack of consensus on interpreting Quranic verses in relation to scientific facts complicates integration efforts. Many Muslims question how the Quran aligns with or contradicts scientific theories. Two main principles address this. First, the Quran is a spiritual guide, not a science book, and its examples about nature are meant to convey meaningful ideas rather than scientific descriptions. Second, interpreting Quranic verses is often subjective, leading to interpretations that can be complementary or significantly different among various sects such as Sunni, Shia, Mu'tazilah, and Sufi. Therefore, it is important to explore Nidhal Guessoum' perspective regarding deep integrative thinking between science and religion.

2. Literature Review

Guessoum proposed a conscious effort to reinterpret classical Islamic texts in light of modern scientific knowledge. He argues that Islamic education curricula should support the view that science and Islam can coexist without conflict. In his book "*Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science*" (Guessoum, 2010). Guessoum discusses the relevance of quantum theory and other modern sciences within an Islamic context. Science and Islam share a common goal: understanding truth and reality. The difference lies in their approaches; science uses empirical methods to study the universe, while Islam relies on revelation and reason to understand God and His creation. However, these two disciplines can enrich each other. Science can help us interpret Quranic verses related to the universe, while Islam can provide an ethical framework for scientific research and its application.

Guessoum emphasizes the importance of studying both disciplines critically. We should not accept claims from science or Islam without scrutiny; instead, we must always question and seek evidence to support our beliefs. Building a dialogue between scientists and Muslim scholars is essential. By building a constructive dialogue, Guessoum demonstrates that science and Islam are compatible, complementing and enriching each other. This approach can help overcome existing challenges and deepen our understanding of the relationship between these two disciplines.

2.1. Quantum Education and Philosophy

In his approach to quantum theory through an Islamic lens, Guessoum criticizes traditional views that reject new theories contradicting the direct interpretation of sacred texts. He advocates a more metaphorical interpretation of the Quran, particularly concerning the creation of the universe and natural phenomena. This perspective is relevant in Islamic education, where Guessoum suggests integrating scientific narratives into religious teaching to promote a deeper and more dynamic understanding of the miracles of creation described in Islamic sources (Guessoum, 2010). Further, he suggests quantum principles in education as follow:

- Wave-Particle Duality: This concept illustrates that reality can be viewed from different perspectives, just as light and matter can behave as both waves and particles. In education, it encourages students to think critically and consider multiple viewpoints.
- Uncertainty Principle: This principle asserts that it is impossible to simultaneously know both the position and momentum of a particle accurately. It can be associated with the idea of humility and uncertainty in knowledge, encouraging students to continually learn and seek new understanding.
- Interconnectivity: This principle suggests that all particles in the universe are interconnected. It can be linked to the concepts of community and global responsibility, encouraging students to collaborate, work together, and respect each other.

Guessoum's approach emphasizes the integration of these quantum principles into education to foster critical thinking, continuous learning, and a sense of interconnectedness among students.

2.2. Application of the Quantum Principles in Education: A Participant-Centric Curriculum

A curriculum designed based on the quantum principle encourages students to become active and independent learners. Students are encouraged to explore their interests, ask questions, and find answers. This approach promotes:

1. Collaborative Learning: Encourages students to learn from each other and develop mutual respect. It aligns with the quantum principle of interconnectivity, indicating that everyone is connected.
2. Holistic Assessment: Focuses on academic achievement as well as character development, talents, and interests. This aligns with the quantum principle that reality can be viewed from different perspectives.
3. Islamic values in quantum education:
    a. Tauhid: The idea of the unity of God (Tauhid) linked to the principle of quantum interconnectivity, encouraging students to see God's creation as interrelated and interdependent.
    b. Justice: Applied in education by ensuring equal opportunities for all students to learn and thrive.
    c. Responsibility Encourages students to use their knowledge and skills for the benefit of themselves, others, and the environment.

Guessoum offers an exciting perspective on integrating education and quantum philosophy. By applying quantum principles and Islamic values to education, we can create a more holistic learning system centred on the student and aligned with the purposes of Islamic education.

2.3. Implications for Educators and Students

Guessoum also stressed the need for educators trained in Islamic science and theology to facilitate dialogue between these two disciplines. It is essential in Islamic education because it helps students understand how scientific principles can be seen through the prism of their faith without experiencing internal conflict. He suggested developing educational modules that focus not only on dogma but also on critical and analytical skills. Strategies can be done:

2.3.1. Implications for Educators:

- Deepening the Understanding of Science and Islam: Educators need to thoroughly understand both science and Islam, including their interrelationship. This can be achieved through continuous study, training, and collaboration with experts in both fields.
- Developing an Integrated Curriculum: he curriculum should be designed to integrate science and Islam by incorporating examples from the Qur'an and Hadith in science lessons and using scientific principles to explain Islamic concepts
- Creating a Comfortable and Supportive Learning Environment: Educators should foster a safe and supportive environment where students feel comfortable exploring ideas and asking questions.
- Be a good example: Educators should demostrate scientific and Islamic attitudes in everyday life, serving as role models for students.

2.3.2. Implications For Students

- Developing Interest in Science and Islam tudents should be encouraged to develop an interest in both science and Islam through engaging and relevant activities and resources
- Critical and Independent Thinking: Students should be encouraged to think critically and independently in their studies of science and Islam. This involves asking questions, seeking evidence, and forming their own conclusions.

- Understanding the Relationship between Science and Islam: Students need to understand how science and Islam can complement and enrich each other. Educators can facilitate this by illustrating the connections between the two disciplines.
- Applying Knowledge and Skills in Everyday Life: Students should be encouraged to apply the knowledge and skills they acquire in science and Islam to their daily lives. This can be achieved by involving them in projects that benefit their communities.

2.3.3. Challenges and Solutions

- Paradigm Change: Applying the harmonization of science and Islam in education requires a paradigm shift in the traditional education system and the commitment of educators, administrators, and parents. Challenges include a lack of resources, such as teacher training and appropriate learning materials.
- Assessment: Developing a holistic assessment system that aligns with the principles of harmonizing science and Islam can be difficult.

Nidhal Guessoum offers a valuable perspective on the implications of harmonising science and Islam for educators and learners. Educators and learners can create a more holistic, meaningful, and aligned learning system with Islamic values by working together.

3. Method

This article explores the intersection of Islam and the philosophy of science in the context of modern science, focusing on the views of Nidhal Guessoum. The study employs a qualitative approach, specifically library research, drawing data from books and relevant research journals (Ridwan et al., 2021). The data comprises primary and secondary sources (Firmansyah & Dede, 2022). Primary data includes books discussing the integration of science and religion, particularly from Guessoum's perspective. Secondary data is sourced from research journals related to the study's focus. Data analysis is conducted using text analysis methods to examine the integration of science and religion and educational thought from Guessoum's perspective.

4. Results and Discussion

4.1. Islam and Modern Science

Islam and modern science can coexist and complement each other (Multahada, 2021). Islam emphasizes belief in the oneness of Allah and the importance of knowledge and understanding the universe as signs of His greatness. Modern science seeks to understand and explain natural phenomena through scientific methods (Hilmi, 2020). Classical Muslim scientists, such as Ibn Sina and Al-Razi, believed scientific research could strengthen faith and enhance understanding of God's creation. Today, many Muslim scientists continue to contribute to science, striving to reconcile new scientific findings with Islamic values.

Nidhal's admiration for Ibn Rushd was based on several extraordinary aspects (Makiah, 2021). First, Ibn Rushd showed great intelligence by mastering three fields of knowledge at once: Islamic jurisprudence (*fiqh*), science and medicine at a very young age, namely 12 years. This recognition of his skills continued into his adulthood, and he was instrumental in establishing theological foundations. Second, Ibn Rushd's thoughts significantly impacted post-his thinking, especially in science, technology and philosophy. In philosophy, for example, Ibn Rushd's contribution included cleaning up and straightening out previous erroneous interpretations and bringing a new paradigm that logic is not only about right and wrong but is also related to empirical reality and its explanations. Third, Guessoum details the harmonious relationship built by Ibn Rushd between religion, science and philosophy. In his book "Islam's Quantum Question," Guessoum interprets God from the perspective of Islamic philosophy and science, proving that the three are not contradictory but interrelated in a harmonious relationship.

Guessoum explains Ibn Rushd's success in harmoniously connecting religious principles with intellectual work (Makiah, 2021). Ibn Rushd is a figure who harmoniously united science, philosophy

and Islam. In "Islam's Quantum Question," Guessoum interprets God through Islamic philosophy and science, asserting that modern cosmology reinforces the need for a Creator by reviving the concept of a creation event (Daud, 2019). He contrasts this with the Protestant Reformation, which made religion less reason-based and more faith-based, and with Darwinism, which explains natural phenomena without invoking a Designer.

The Quran encourages humans to observe, reflect, and seek knowledge, as highlighted in verses such as Al-Rahman 5-7 (Ardiyanti, 2020). Despite this emphasis on exploration and study, many struggle to connect scientific concepts with Quranic teachings. The debate between traditionalists and reformers centers on the interpretation of *'ilm* (knowledge), which appears 780 times in the Quran and originally had a broader meaning. This debate underscores differing views on integrating science and religion, reflecting both the challenges and opportunities in harmonizing these fields, and highlights the contrasting perspectives on interpreting Quranic cases and scientific *I'jaz*.

The concept of "*I'jaz al-ilm*" refers to the belief that the verses of the Quran, when read and interpreted with a scientific perspective, can reveal scientific truths. This perspective means that the Quran contains various types of knowledge, from classical to modern, suggesting that it has a scientific dimension encompassing multiple aspects of knowledge. This idea is supported by verses in the Quran, such as Al-An'am 6:38, which states, "We have not forgotten anything in the Book." This verse is interpreted as evidence that the Quran encompasses everything, including scientific knowledge.

However, Nidhal Guessoum takes a different stance, rejecting the view that the Quran completely contains science (Makiah, 2021). While the Quran often references the creation of the universe and encourages the pursuit of knowledge through observation and reading, Guessoum argues that this does not mean the Quran provides scientific details. He contends that the modern concept of science is not explicitly found in the Quran or the entire classical Muslim intellectual heritage. Therefore, Guessoum rejects the notion that the Quran contains explicit scientific details.

Ken Wilber, an American writer with an initial background in biophysics and biochemistry, shifted his focus to psychology and Eastern spirituality. He has authored twenty books, translated into twenty-five languages, and contributed significantly to the discourse on the relationship between science and religion. According to Wilber, science is a process that produces truth devoid of inherent value (Afifah, 2023). He believes that faith can fill this value void in scientific facts. Although challenging, Wilber emphasizes that achieving this integration is not impossible. His views propose not just conciliation but a profound integration between religion and science. Wilber is renowned for his concept of The Four Quadrants, which outlines four main models involved in the relationship between religion and science.

Conversely, Sadik J. Al-Azm highlights the ongoing controversy between revelation and reason within Islam, Judaism, and Christianity, pointing out that this debate persists in societies with diverse scientific understandings of their religious aspects (Afifah, 2023). Al-Azm argues that the conflict between science and religion began during the Renaissance and has continued into contemporary times, affecting the Islamic world in places like Turkey and Lebanon. However, he notes that during the golden age of Islam, there were fewer conflicts between science and religion.

Nidhal Guessoum identifies three dimensions in the relationship between modern science and Islam: theoretical, historical, and practical (Guessoum, 2010). These dimensions create a significant meeting point between the two fields.

1. Theoretical Dimension: This focuses on the relationship between science and Islam, exploring both harmony and potential conflicts.
2. Historical Dimension: This examines the development of science within Islamic civilization.
3. Practical Dimension: This considers the implementation and use of science in Islamic society.

These dimensions highlight the diverse perspectives on the relationship between Islam and science, with a common belief that the two can form a mutually reinforcing integration. While academic debates on this topic are valuable, it is crucial to maintain boundaries to ensure focused discussions. Viewing science and religion as irreconcilable is likely to persist unless there are concrete efforts to increase research on the development of science based on Islamic principles without temporal and spatial limitations.

4.2. Nidhal Guessoum's Thoughts

Guessoum explains that Islam's attitude towards science is highly complex and varies depending on the subject, particularly in applied science (Ghazali, 2021). He highlights the various views of Muslim scientists on modern science, drawing on research and experiences. As an astronomer, Guessoum focuses on the philosophy of science and examines current scientific theories in relation to Islamic sources and traditions. He is both a theoretical expert and a practitioner, finding scientific truths that affirm modern science while establishing intrinsic rationality in understanding the universe. His framework aims to develop science in harmony with religious beliefs.

Guessoum is deeply influenced by Ibn Rushd's theory. He states, "Ibn Rushd's modernity is not difficult to detect in his writings. But above all, what makes him important is the flawless coherence and harmony he has achieved between his religious principles and his intellectual training. We have adopted him as a model for a harmonious fusion of science, philosophy, and religion in Islam today. That spirit of Averroes is what this book will try to capture and use to illuminate various topics of relevance."

Ibn Rushd's spirit of modernity is evident in his writings, particularly in his ability to create a perfect relationship between science, philosophy, and religion in mature Islam. Guessoum argues that Islamic cosmology should not limit itself to pseudo-scientific interpretations of sacred texts but must allow for creativity and freedom of thought. He believes that Islamic culture, as it was thousands of years ago, should still be able to absorb human knowledge, science, and progress, producing valuable syntheses (Daud, 2019). According to Guessoum, building a modern Islamic or theistic cosmology fully compatible with science is feasible if intellectual actors remain open, creative, and flexible in their religious and scientific knowledge.

According to Nidhal Guessoum, the Qur'anic *i'jaz* theory is based on flawed principles. Two key principles he highlights are:

1. The results of verse interpretation can be compared with scientific results and statements.
2. Science is simple and clear, containing facts that are easily distinguishable from theories.

Guessoum emphasizes that this theory is a product of confusion that initially emerged gradually but has now become widespread (Daud, 2019). This confusion stems from attempts to combine the interpretation of Quranic texts with newly discovered human knowledge, including modern scientific discoveries. There is a mistaken belief that scientific laws and discoveries, ranging from general to specific, can be found in the Quran. This confusion is akin to reinterpreting verses in a way that is comparable to a snowball collecting dirt as it rolls, a method that Guessoum finds ludicrous.

Guessoum argues that the approach of comparing Quranic statements with scientific facts shows a misunderstanding of the nature of scientific knowledge. While the initial idea of using science to better understand the Quran was interesting and valuable, the theory of *i'jaz* has become flawed. He questions whether this theory can be salvaged, cleaned up, and directed so that the Quranic verses can be interpreted singularly and definitively in a scientific manner.

4.2.1. What do you think are the most significant challenges in harmonizing the interpretation of Quranic texts with modern scientific knowledge?

There are many verses in the Qur'an that discuss the creation of the cosmos and other branches of knowledge. However, it is not accurate to claim that the Qur'an is a book containing scientific content. Nidhal Guessoum acknowledges that the Qur'an implies a great deal about the creation of the universe and encourages humans to seek knowledge through observation and reading (Permono, 2019). Despite this, Guessoum rejects the view that the Qur'an contains scientific content in the modern sense. He argues that the concept of modern science is not easily found in the Qur'an or in almost all classical Muslim heritage. There is confusion between the concepts created by thinkers and educators, particularly the use of the term *'ilm* to denote science. Therefore, Guessoum believes the idea of 'scientific content' in the Qur'an must be rejected.

Guessoum further strengthens his argument using the theory of *I'jâz* (parable). He suggests that verses in the Qur'an describing the creation of the universe should be understood as metaphors rather

than literal scientific descriptions (Solikhudin, 2016). For example, he interprets the verse "He said to it (the heavens) and to the earth: 'Come both of you according to My command willingly or under compulsion'" (Q.S. Fushhilat/41: 11) as a metaphor for the creation of the universe. Similarly, the verse "Then We made the essence of semen (which was stored) in a sturdy place" (Q.S. Mu'minûn/23: 13) is seen as a metaphor for the formation of a human embryo.

The integration of science with Islam becomes significant when placed within the discourse of the "science crisis" occurring in Western countries. Science, initially intended to improve human life, has become a force that threatens human existence due to its potential for destruction. The rapid development of technology has led to the depletion of natural resources, environmental degradation, uncontrolled waste, and the dangers of nuclear, chemical, and biological weapons. These issues highlight the need for a balanced approach to science, incorporating ethical and philosophical perspectives to mitigate its harmful effects on the future of humanity.

4.3. Islam and Cosmology

Cosmology is an interesting branch of science, perhaps unique, because it allows its thinkers to freely express their views, including incorporating religious and philosophical principles, similar to the fields of physics and astronomy (Daud, 2019). This freedom may stem from cosmology's historical role as a speculative science. Many holy books contain religious perspectives and descriptions of the cosmos, its creation, its contents, its purpose, and often its destruction.

There is a controversy regarding when cosmology, as a comprehensive concept of the universe, was first formulated. Some scholars argue that Qur'anic cosmology was among the earliest sciences to emerge in Islam. In contrast, others believe that Muslim philosophers (*falasifah*), who absorbed ancient Greek science, formulated a cohesive cosmos based on traditional and astronomical principles.

Seyyed Hossein Nasr and Muzaffar Iqbal, as quoted by Guessoum, argue that the science of cosmology first appeared in Islamic descriptions of the cosmos (Muzawir & Halid, 2021). They highlight Radiant Cosmography, a science that emerged during the time of the Prophet and his companions, constructed through interpretations of Quranic verses. This approach indicates that early Islamic cosmology was not only derived from pure Islamic sources but also served as a crucial counterbalance to later Aristotelian cosmology, which was integrated into Islamic thought through the translation movement. Today, many Muslim scholars and advisors maintain that the Quran supports an ex-nihilo act of creation by Allah, meaning creation from nothing. They use contemporary scientific findings to support and reconstruct this concept.

The Qur'an implies the beginning of the universe, but great Muslim scholars of the 9th century, influenced significantly by Greek thought, assert that an Islamic cosmological view must assume the universe was created a very long time ago (Daud, 2019). The core issue lies in interpreting these 'cosmological' verses. Muslim scholars have long debated whether the Qur'an indicates that the earth was created before or after other cosmic layers, based on verses such as Fushshilat: 9-12 and Al-Baqarah: 29, which mention the universe's creation in six stages. During the Middle Ages, scholars like Ibn Rushd and Ibn Sina, under Greek influence, followed to the view that the universe's creation occurred in the distant past.

Sayyed Hossein Nasr and his followers emphasize that cosmology should not be considered as a purely scientific discipline focused only on the physical aspects of the universe. Nasr argues that previous civilizations viewed natural sciences as an integrated field studying both physical and non-physical realities holistically (Nasr, 2022) He further notes that the concept of cosmology in Islam, or traditional views, differs significantly from the understanding of Islamic cosmology in modern science.

Traditional cosmology addresses the entirety of cosmic reality, which encompasses dimensions that can only be understood through angelic realms and metaphysical principles. William Chittick, following Sayyed Hossein Nasr's philosophy, outlines several main characteristics of traditional cosmology (Kurniawan, 2023):

1. The cosmos is a grand hierarchy that displays multiple levels of reality simultaneously without regard to temporal succession.
2. The hierarchical cosmos is divided into two parts, namely the visible and the invisible.

3. Humans are considered unique creatures in the cosmos because everything in the universe is thought to be found essentially in the primordial reality known as fitrah.
4. Guessoum emphasizes that Islamic cosmology should not be confined to superficially scientific interpretations of sacred texts. Instead, it must allow for creativity and freedom of thought within the framework of Islamic culture. Guessoum believes that, just as it did thousands of years ago, Islamic culture still possesses the ability to absorb human knowledge, science, and progress, thereby creating a valuable and interesting synthesis.

5. Conclusion

The goal of this study was to explore the intersection of Islam and modern science through the perspectives of Nidhal Guessoum and other influential thinkers, aiming to understand how these fields can harmonize and the challenges involved.

Guessoum identifies three dimensions—theoretical, historical, and practical—through which Islam and modern science can be integrated. He argues that the Qur'an encourages the pursuit of knowledge but does not contain modern scientific content. He criticizes the *i'jaz* theory for conflating metaphorical expressions with scientific facts and advocates for a nuanced approach that allows for creativity and freedom of thought within Islamic culture.

Traditional cosmology, as described by thinkers like Sayyed Hossein Nasr and William Chittick, views the cosmos as a hierarchical reality that includes both visible and invisible dimensions. This perspective integrates physical and metaphysical realities, highlighting the unique position of humans in the cosmic order. Nasr argues for a holistic approach that includes both dimensions.

Guessoum, who respects Ibn Rushd and considers him a "guiding spirit," believes that reason and revelation, philosophy and religion, support each other. He argues that revelation should be interpreted allegorically if it appears to contradict reason. Guessoum emphasizes that Islamic cosmology should not be limited to purely scientific interpretations of sacred texts but should provide space for creativity and freedom of thought. He believes that Islamic culture has the potential to absorb human knowledge, science, and progress, creating a valuable synthesis. Building a modern Islamic/theistic cosmology compatible with science is possible if intellectuals remain open, creative, and flexible in their religious and scientific knowledge.

In sum, integrating science and religion within Islamic education and thought requires a balanced approach that respects both empirical and spiritual knowledge. By fostering dialogue between science and religion, encouraging critical thinking, and maintaining openness to new ideas, it is possible to create a harmonious and enriching synthesis. This approach honors Islam's rich intellectual heritage while addressing contemporary challenges, building a foundation for a more integrated and holistic understanding of the universe.

Declaration of Conflict of Interest

The authors declare that there are no potential conflicts of interest related to the research, writing, and/or publication of this article.

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