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TOWARDS A HOLISTIC FRAMEWORK FOR SCIENTIFIC EXEGESIS: A COMPARATIVE METHODOLOGICAL STUDY OF ELMALILI M. HAMDI YAZIR AND TANTAWI JAWHARI

Norain Azlan^{*}, Mohd Zulkifli Mohd Yusoff^{**}, and Sedek Bin Ariffin^{***}

Abstract: Scientific exegesis (*tafsir ilmi*), which connects Qur’anic verses with scientific discoveries, remains a significant discourse in contemporary Islamic scholarship, particularly concerning its methodology and interpretive validity. This study contributes to this area by analysing and comparing the methodological approaches of Elmalılı Hamdi Yazır and Tantawi Jawhari in interpreting the Qur’anic verses on creation (*ayat al-khalq*) based on *Hak Dini Kur’an Dili* and *al-Jawahir fi Tafsir al-Qur’an al-Karim*. Employing a qualitative research method and thematic analysis, the study focuses on three key themes: the creation of the universe, the heavens, and the earth. Findings reveal that Elmalılı adopts a rational-theological approach rooted in the *kalam* tradition and emphasises balance between revelation and reason, whereas Tantawi applies an empirical-reformist approach, employing science as an instrument of *da’wah* and intellectual renewal. Both affirm the harmony between revelation and science as manifestations of Divine unity. The synthesis of these two approaches offers a balanced epistemological framework that integrates revelation, reason, and empirical experience. Based on these findings, the study proposes the Holistic Scientific Exegesis Framework (HSEF)—an integrative model uniting *naql* (revelation), *‘aql* (reason), and *tajribah* (empirical observation). Future research is recommended to assess the effectiveness of HSEF in Islamic education, particularly in developing a holistic model of scientific literacy that balances cognitive, affective, and spiritual dimensions.

Keywords: *Scientific exegesis, Elmalılı Muhammed Hamdi Yazır, Tantawi Jawhari, Qur’anic hermeneutics, epistemology of revelation, Holistic Scientific Exegesis Framework (HSEF)*

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INTRODUCTION

Scientific exegesis (*tafsir ilmi*), which links Qur’anic verses with scientific discoveries, has sparked extensive discussions and polemics among Muslim scholars and intellectuals. This approach demonstrates the truth of the Qur’an through scientific enquiry while deepening understanding of cosmological verses.¹ However, this exegetical trend is not without challenges and criticisms, particularly concerning methodological consistency, interpretive accuracy, and epistemological validity.² These ongoing debates underscore the need to reassess the principles and frameworks applied in scientific exegesis to prevent interpretive errors and ensure alignment with the ultimate objectives of Qur’anic revelation.³ Among the most frequently raised concerns are the methodological issues inherent in the exegetical process.⁴

The methodology employed in scientific exegesis has been widely criticised by classical, contemporary, and Western scholars due to inherent weaknesses and ambiguities in its interpretive framework. Central to these critiques are the inconsistency of scientific interpretations, the use of analytical approaches incongruent with established exegetical principles, and the tendency to impose contemporary scientific paradigms onto Qur’anic language, resulting in deviations from the text’s original context and intended meanings. Such practices are further criticised for their apologetic orientation, selective hermeneutics, and epistemological instability, particularly when revelation is tied to provisional scientific theories that are subject to change. Scholars have warned that this approach risks narrowing the Qur’an’s semantic polyvalence, undermining its timeless theological and ethical authority, and compromising the sanctity and Divine purpose of revelation.⁵

Moreover, the failure of certain scientific exegesis works to adhere to the fundamental conditions of Qur’anic interpretation has drawn strong criticism. In certain cases, exegetes

¹ Bukhori Shomad and Munirul Abidin, “Rethinking Islam: Inspiring Qur’an for Conducting Scientific Research,” *Hamdard Islamicus* 43, no. 1–2 (2020).

² Bakar Zaki Ibrahim ‘Awaḍ, *Al-Tafsir al-‘Ilmi li al-Ayat al-Kawniyyah: Tarikhuhu – Mawaqif al-‘Ulama’ Minhu* [The Scientific Exegesis of the Cosmological Verses: Its History and the Scholarly Positions Toward it] (Qatar University, Faculty of Sharia and Islamic Studies, 1992); Ibrahim Hilmi Karsli, “Some Remarks on Scientific Interpretation of the Qur’an,” *Diyanet İlmî Dergi* 46, no. 3 (2010); Sujiat Zubaidi Saleh, “Epistemologi Penafsiran Ilmiah al-Qur’an” [Epistemology of Scientific Exegesis of the Qur’an], *Jurnal Tsaqafah* 7, no. 1 (2011); Ahmad Thaḳif Ismail and Aqdi Rofiq Asnawi, “Scientific Approach in Quranic Exegesis: The Emergence and Issues,” *Journal of Contemporary Islamic Studies* 7, no. 1 (2021); Adel Mohammed and Mohammed Fadl, “The Eighth Study: The Scientific Tafsir of the Holy Qur’an in the Twentieth Century,” *International Journal of Educational and Psychological Sciences* 71, no. 2 (2022); Rizki Firmansyah et al., “Urgensi Tafsir Ilmi di Masa Modern: Tanggapan Zaghul An-Najjar pada Kritis Tafsir Ilmi di dalam Kitabnya *Tafsir Ayat-Ayat Kauniyah fi al-Qur’an al-Karīm*” [The Urgency of Scientific Exegesis in the Modern Era: Zaghul An-Najjar’s Response to the Critics of Scientific Exegesis in His Work *Tafsir of the Cosmological Verses in the Noble Qur’an*], *Reslaj: Religion Education Social Laa Roiba Journal* 5, no. 6 (2023).

³ Zafar Ishaq Ansari, “Scientific Exegesis of the Qur’an,” *Journal of Qur’anic Studies* 3, no. 1 (2001): 100; Ismail and Asnawi, “Scientific Approach in Quranic Exegesis,” 76.

⁴ Saleh, “Epistemologi Penafsiran Ilmiah al-Qur’an,” 120.

⁵ Bustami Mohamed Khir, “The Qur’an and Science: The Debate on the Validity of Scientific Interpretations,” *Journal of Qur’anic Studies* 2, no. 2 (2000); Ansari, “Scientific Exegesis of the Qur’an,” 102; Naguib, “The Hermeneutics of Miracle: Evolution, Eloquence, and the Critique of Scientific Exegesis in the Literary School of Tafsir,” *Journal of Qur’anic Studies* 21, no. 3 (2019); Ismail and Asnawi, “Scientific Approach in Quranic Exegesis,” 80.

neglect to refer to authoritative *salaf* commentaries or fail to cite their sources, making it difficult for readers to assess whether the interpretations are grounded in recognised scholarly authority. This methodological weakness creates space for misuse or interpretations detached from the established discipline of Qur’anic exegesis.⁶ Some scholars emphasise the need to avoid excessive interpretations in scientific exegesis. Although *al-kawniyyah* verses are essential for understanding the universe, interpretations must be in accordance with sound exegetical principles without imposing scientific meanings that do not align with the text. This issue constitutes one of the major criticisms levelled against the methodological application of scientific exegesis.

Additionally, the approach in scientific exegesis that attempts to subordinate the Qur’an to scientific theories clearly contradicts the essence of its miraculous nature (*i’jaz*). Such interpretations may even undermine the Qur’an’s inimitability, as scientific theories are inherently provisional and subject to change over time.⁷ The main criticism surrounding the development of scientific exegesis studies arises from the methodological weaknesses inherent in its approach. These include a failure to adhere to the established disciplines of Qur’anic exegesis, a tendency toward excessive scientific interpretation of Qur’anic verses, and misalignment with the Qur’an’s original purpose as a book of Divine guidance. Consequently, this approach has been rejected by numerous scholars. Therefore, a critical reassessment of the scientific exegesis methodology is essential to ensure it is rigorous, authentic, and grounded in Islamic epistemology, while maintaining consistency with the principles of *tawhid* and the Qur’an’s objective of intellectual and spiritual enlightenment.⁸

A review of the literature indicates that research within the field of scientific exegesis and its methodological discourse has yet to emphasise the construction of an integrated methodological framework. Studies such as those by Mohd Hafizullah, Selamat Amir, and Ade Naelul Huda have strengthened the correlation between revelation and scientific discovery but remain limited to phenomenological themes—such as animals, the heavens, and the earth—without providing in-depth methodological analysis.⁹ Meanwhile, the study by Mohamed Akhiruddin on al-Harari’s exegetical method, which combines *al-‘ilmi* and *al-bayani*

⁶ Mohamed Akhiruddin Ibrahim, Mohd Yakub @ Zulkifli Hj. Mohd Yusoff, and Azniwati Abdul Aziz, “Transformasi Epistemologi Kajian Ayat Kawniyyah: Tinjauan Terhadap Karya Era Klasik dan Modern dalam Bahasa Arab” [Epistemological Transformation in the Study of Qur’anic Cosmological Verses: An Examination of Classical and Modern Scholarship], *Al-‘Abqari Journal* 2 (2012): 39–62.

⁷ Amīn al-Khūlī, *Al-Tafsir: Ma’ālim Hayātihi Manhajuhu al-Yawm* [Al-Tafsir: The Milestones of his Life and his Contemporary Methodology] (al-Hay’ah al-Miṣriyyah al-‘Āmmah li al-Kitāb, 2003), 19–27.

⁸ Shomad and Abidin, “Rethinking Islam,” 4.

⁹ Mohd Hafizullah bin Md Abas, “Haiwan dalam al-Qur’an Menurut Tafsir Ilmi: Kajian terhadap Lebah, Semut dan Labah-Labah” [Animals in the Qur’an According to Scientific Exegesis: A Study on the Bee, the Ant, and the Spider] (Master’s diss., Universiti Teknologi Malaysia, 2015); Selamat bin Amir, “Elemen Sainik dalam al-Qur’an: Analisis terhadap *Tafsir al-Sha’rawi* karangan Muḥammad Mutawalli al-Sha’rawi” [Scientific Elements in the Qur’an: An Analysis of al-Sha’rawī’s Tafsir by Muḥammad Mutawalli al-Sha’rawi] (PhD diss., University of Malaya, 2016), 399–400; Ade Naelul Huda, *Tafsir Ilmi: Telaah Tafsir Ayat-Ayat Kauniyah dalam al-Qur’an* [Scientific Exegesis: A Study of the Tafsir of Cosmological Verses in the Qur’an], ed. Muhammad Azizan Fitriana (Penerbit Wahana Resolusi, 2022), xvii–xx.

approaches, still lacks scientific justification and systematic argumentation.¹⁰ Overall, these findings reveal that previous studies in the Malay world on scientific exegesis have yet to focus on the comprehensive development of an Islamic epistemology-based exegetical methodology—one that integrates *naql* (revelation), *‘aql* (reason), and *tajrubah* (empirical experience) as foundational elements for scientific interpretation of cosmic verses.

Within this broader scholarly landscape, Western studies on scientific exegesis further demonstrate that the challenges identified in the Malay world are not isolated but reflect deeper methodological and epistemological tensions shaped by distinct intellectual and geographical contexts. Early Western scholarship was largely dominated by methodological critiques that questioned scientific exegesis not due to a lack of empirical data, but because of its apologetic tendencies, interpretive fragility, and reliance on modern Western scientific paradigms.¹¹ Subsequent studies, however, shifted towards analysing figures and trends, distinguishing more clearly between scientific exegesis as a hermeneutical tool employing science for interpretive support, and *i’jaz ‘ilmi* as a theological project that positions science as proof of Qur’anic miraculousness.¹²

Nevertheless, much of this literature remains framed within general, Arab-centric, or global discussions, with limited attention to how differing socio-political and intellectual settings shape scientific interpretation. In this regard, Yalçinkaya’s study of the 19th century Ottoman Empire is significant, as it shows the relationship between Islam and science emerged through an active process of “religion-making,” driven by intellectual and political pressures rather than an inherent conflict between two pre-existing entities. Ottoman intellectuals such as Namık Kemal, Ahmed Midhat, and Şemseddin Sami emphasised the authority of Qur’anic and prophetic texts to construct a notion of “true Islam” compatible with science and modernity, while simultaneously narrowing interpretive plurality to preserve Islam’s image as a rational and progressive religion.¹³ Despite these insights, existing scholarship has yet to systematically integrate such cross-regional differences into a comprehensive methodological framework for scientific exegesis, one that remains grounded in the classical exegetical tradition while responding coherently to modern scientific discourse.

Within this context of the scientific exegesis tradition, the works of Elmalılı Hamdi Yazır and Tantawi Jawhari deserve significant attention, as both exemplify scientific approaches to *al-kawniyyah* verses in distinct forms and intellectual settings. Elmalılı believed the Qur’an

¹⁰ Mohamed Akhiruddin bin Ibrahim, “Pentafsiran Ayat Kawniyyah: Kajian terhadap Metodologi Muḥammad al-Amin al-Harari dalam *Tafsir Hada’iq al-Rawḥ wa al-Rayḥan fi Rawabi ‘Ulum al-Qur’an*” [Interpretation of Cosmological Verses: A Study of Muhammad al-Amin al-Harari’s *Methodology in Tafsir Gardens of the Soul and the Breeze in the Meadows of Qur’anic Sciences*] (PhD diss., Academy of Islamic Studies, University of Malaya, 2013), 32–33.

¹¹ Khir, “The Qur’an and Science”; Mustansir Mir, “Scientific Exegesis of the Qur’an—A Viable Project?” *Islam and Science* 2, no. 1 (2004); Ansari, “Scientific Exegesis of the Qur’an.”

¹² Ayman Shabana, “In Pursuit of Consonance: Science and Religion in Modern Works of Tafsir,” *Journal of Qur’anic Studies* 21, no. 3 (2019); Naguib, “The Hermeneutics of Miracle”; Melanie Guénon, “Science, Religion, and the Limits of Scientific Exegesis,” *Journal of Qur’anic Studies* 21, no. 3 (2019); Majid Daneshgar, “The Qur’ān and Science, Part I: The Premodern Era,” *Zygon* 58, no. 4 (2023).

¹³ M. Alper Yalçinkaya, “‘Science,’ ‘Religion,’ and ‘Science-and-Religion’ in the Late Ottoman Empire,” *Zygon* 54, no. 4 (2019).

had not yet been fully interpreted in relation to science and thus produced *Hak Dîni Kur'an Dili* as a comprehensive modern commentary firmly rooted in classical tradition.¹⁴ According to Gunasti, this work presents a model of scientific exegesis grounded in traditional disciplines, while addressing the challenges of modernism without neglecting the Islamic epistemological framework.¹⁵ In contrast, Tantawi Jawhari's *al-Jawahir fi Tafsir al-Qur'an al-Karim* has often been criticised for resembling a scientific encyclopedia;¹⁶ however, al-Nayfar argues that such criticisms are generalised and disregard the work's socio-historical context and methodological intent.¹⁷ Hence, Tantawi's commentary must be re-evaluated critically and systematically to ensure its contributions to the discourse of scientific exegesis are fairly understood and optimally appreciated.¹⁸

Furthermore, comparative studies on scientific exegesis remain limited and have yet to directly involve Elmalılı Hamdi Yazır and Tantawi Jawhari. Several works, such as that by Venhar Özer, compare Elmalılı with al-Razi,¹⁹ while other studies examine his intellectual connection with Muḥammad 'Abduh. However, both primarily focus on linguistic and philosophical dimensions without addressing scientific exegesis.²⁰ In the case of Tantawi, most previous research has concentrated on *al-Jawāhir*, often comparing it with *Tafsir al-Manar*,²¹ *Tafsir al-Razī*,²² *Tafsir al-Sha'rawī*,²³ *Tafsir Zaghlul al-Najjar*,²⁴ and the works of Maurice Bucaille.²⁵ Yet no study has thus far examined his commentary in relation to the Turkish

¹⁴ Halis Albayrak, "Elmalılı Muhammed Hamdi Yazır'ın Tefsir Anlayışı" [Elmalılı Muhammed Hamdi Yazır's Approach to Qur'anic Exegesis], in *Elmalılı Muhammed Hamdi Yazır Sempozyumu* (Türkiye Diyanet Vakfı, 1993); Ismail Albayrak, "Turkish Exegeses of the Twentieth Century: *Hak Dini Kur'an Dili*," *Islamic Studies* 43, no. 3 (2004).

¹⁵ Susan Gunasti, *The Qur'an Between the Ottoman Empire and the Turkish Republic: An Exegetical Tradition* (Routledge, 2019), 193.

¹⁶ 'Awaḍ, *Al-Tafsir al-İlmî li al-Āyât al-Kawniyyah Minhu*, 486; Majid Daneshgar, *Tantawi Jawhari and the Qur'an: Tafsir and Social Concerns in the Twentieth Century* (Routledge, 2017), 4.

¹⁷ Ḥamīdah al-Nayfar, *Al-Tafsir al-İlmî: Min Tantawi Jawhari ilā Abī Ḥāmid al-Ghazālī* [Scientific Exegesis: From Tantawi Jawhari to Abū Ḥāmid al-Ghazālī] (al-Ma'had al-Ālī li al-Ḥaḍārah al-Islāmiyyah, 1994), 26.

¹⁸ Qayyum Akhtar, "Comparison Between Sheikh Tantawi Johri and Muhammad Matwali al-Sha'rāwī about Cosmic Verses of the Qur'an" (PhD diss., Islamia University of Bahawalpur, Pakistan, 2009), 366–67.

¹⁹ Venhar Özer, "Elmalılı Muhammed Hamdi Yazır'ın Fahreddin er-Rāzī'den Etkilenmesi ve Yararlanması" [Elmalılı Muhammed Hamdi Yazır's Being Influenced and Benefit from Fahreddin er-Razi] (Master's diss., Erciyes University, 2021).

²⁰ Mustafa Güven, "The Opinions Elmalılı Muhammad Hamdi Yazır about Islamic Modernism and in This Context the Criticisms Directed to Muhammad Abduh – At the Example of Sūra al-Fil," *Ekev Akademi Dergisi* 19, no. 61 (2015).

²¹ Ahmad Nabil Amir, "Metode Tafsir al-İlmî (Saintifik) antara Kitab *al-Jawahir fi Tafsir al-Qur'an al-Karīm* dan *Tafsir al-Manār*" [The Method of Scientific Exegesis between *al-Jawahir fi Tafsir al-Qur'an al-Karīm* and *Tafsir al-Manār*], *International Social Science and Humanities Journal* 1, no. 4 (2018); Shabana, "In Pursuit of Consonance."

²² M. Mohammed Jabir, "Methodology of al-Rāzī and Ṭāntāwī in Interpreting the Qur'an 3:190: An Analysis," *Journal of Islamic Studies and Thought for Specialized Research* 5, no. 1 (2022).

²³ Akhtar, "Comparison Between Sheikh Tantawi Johri and Muhammad Matwali al-Sha'rāwī," 366–67.

²⁴ Mizanur Rahman and Abu Talib Mohammad Monawer, "Methodology of Tantawi Jawhari and Zaghloul Naggar in the Scientific Interpretation of the Holy Qur'an: A Comparative Study," in *The 1st International Conference on Islam and Contemporary Issues in the Muslim World: Challenges and Way Forward (ICIC 2016)* (Academy of Islamic Studies, University of Malaya, 2016).

²⁵ Majid Daneshgar, "An Analytical Study on Two Modern Approaches to Science in the Qur'an: Tantawi and Bucaille" (PhD diss., University of Malaya, 2013).

exegetical tradition. Armainingsih recognises Tantawi as a pioneer of modern scientific exegesis,²⁶ while Firdaus highlights the originality of his methodology;²⁷ however, both studies limit their analyses to individual perspectives. Hence, a significant research gap persists in comparative analysis between two major intellectual traditions in Islam—post-Ottoman Turkey represented by Elmalılı, and *nahdah*-era Egypt represented by Tantawi—to understand how their respective social, philosophical, and epistemological contexts shaped their approaches to scientific exegesis.

Accordingly, this article analyses and compares the methodological approaches of scientific exegesis employed by Elmalılı Hamdi Yazır and Tantawi Jawhari through the interpretation of the verses of creation (*ayat al-khalq*) from a scientific perspective, particularly those containing scientific explanations of cosmic, celestial, and terrestrial phenomena. The primary focus lies on two key exegetical texts—*Hak Dini Kur'an Dili* and *al-Jawahir fi Tafsir al-Qur'an al-Karim*—with particular attention to verses on the creation of the universe, the heavens, and the earth. The analysis employs a thematic approach, which enables the researcher to identify recurring patterns, explicit and implicit meanings, as well as conceptual relationships between exegetical interpretations and scientific explanations.

Through this combination of methods, the study is rigorous and comprehensive to evaluate the epistemological frameworks of scientific exegesis employed by Elmalılı and Tantawi, and to analyse how their educational, cultural, and socio-political backgrounds shaped their respective approaches to scientific interpretation. The findings are expected to contribute to the development of a new conceptual framework for scientific exegesis that integrates *naqli* (revealed) and *'aqli* (rational) knowledge, thereby rejecting the perceived dichotomy between religion and science in the discourse of modern Islamic exegesis.

EPISTEMOLOGICAL FOUNDATIONS OF SCIENTIFIC EXEGESIS: THE VIEWS OF ELMALILI AND TANTAWI

Within the context of scientific exegesis of the Qur'an, *wahy* (revelation), *'aql* (reason), and *tajrubah* (empirical experience) are viewed as interrelated and complementary sources of knowledge that enable holistic understanding of the Qur'an and the reality of the cosmos.²⁸ *Wahy* functions as the ultimate source of truth and Divine guidance, situating all forms of human knowledge—including science—within a framework governed by Divine values and

²⁶ Armainingsih, “Studi Tafsir Saintifik: *al-Jawahir fi Tafsir al-Qur'an al-Karim* Karya Syaikh Tantawi Jauhari” [Scientific Qur'anic Exegesis: *Al-Jawahir fi Tafsir al-Qur'an al-Karim* by Shaykh Tantawi Jauhari], *Jurnal At-Tibyan* 1, no. 1 (2016): 94–117.

²⁷ Muhammad Firdaus, “Tafsir Ayat Kauniyyah Perspektif Thanthawi Jauhari dalam *Tafsir al-Jawahir fi Tafsir al-Qur'an al-Karim*” [Cosmological Verses in the Qur'an: Tantawi Jauhari's Perspective in *al-Jawahir fi Tafsir al-Qur'an al-Karim*], *Basha'ir: Jurnal Studi al-Qur'an dan Tafsir* 4, no. 1 (2024).

²⁸ Muhamad Hafizuddin Ghani et al., “Integration of Revelation and Science in the Context of al-Tafsir al-'Ilmi: An Overview,” *International Journal of Academic Research in Business and Social Sciences* 14, no. 12 (2024): 3337.

purpose.²⁹ *‘Aql* is the intellectual faculty entrusted by God to observe, reflect, and interpret the *ayat kawniyyah* (cosmic verses), as the Qur’an frequently urges humankind to think and comprehend through the expression *ya ‘qilun*.³⁰ Meanwhile, *tajrubah* (empirical experience) is the means through which humanity discovers the signs of God’s power in nature—not as an independent source of knowledge detached from revelation, but as a complementary medium that affirms Divine truth through observation and experimentation.³¹

In this epistemological framework, *wahy* provides the foundational direction and guiding principles; *‘aql* connects, analyses, and interprets meaning; while *tajrubah* offers empirical substantiation of Divine creation. The harmonious integration of these three dimensions leads to the highest epistemological objective:³² affirmation and recognition of God’s oneness (*tawhid al-ma‘rifah*). Through this integration, scientific exegesis not only demonstrates the harmony between religion and science but also guides humanity to perceive natural phenomena as signs of the existence and majesty of Allah Almighty.

From a historical standpoint, Elmalılı emerged as one of the most significant exegetes during the transitional period from the Ottoman Empire to the Turkish Republic.³³ His educational background in the *madrasah* tradition and his position as a late Ottoman scholar shaped an epistemological outlook grounded in classical exegesis, while remaining conscious of the growing influence of modern science and philosophy. At the request of the early Republican government, he authored the monumental *Hak Dini Kur’an Dili*—the first Qur’anic exegesis written in modern Turkish using the Latin script—which was not only a *tafsir* but also an intellectual document recording the tension between tradition and modernity.³⁴ Although some critics argue that his approach did not represent a methodological renewal,³⁵ his work remains comprehensive, intellectually nuanced, and deeply influential in shaping the discourse of *tafsir* and Islamic scholarship in modern Turkey.³⁶

²⁹ Nazir Ahmad Zargar, “Between ‘Aql and Naql: Negotiating Reason and Revelation in the Islamic Intellectual Tradition,” *Maqalat: Journal of Islamic Studies* 3, no. 3 (2025).

³⁰ Siti Noor Mawar Abdul Rahman and Azrin Ibrahim, “Thematic Analysis of ‘Aql in the al-Qur’an,” *International Journal of Academic Research in Business and Social Sciences* 9, no. 11 (2019).

³¹ Sarinah binti Haji Yahya, *Tafsir ‘Ilmi (Ayat-ayat Kawniyyat) MABIMS: Mengenal Metode dan Aliran Tafsir al-Qur’an Saintifik* [Scientific Tafsir of Cosmological Verses: Exploring the Methodologies and Currents of Qur’anic Scientific Exegesis] (MABIMS, 2023), 66–67.

³² Ahmad Yunus Mohd Noor, “Islamic Scientific Exegesis Endeavor: An Introduction,” in *Revelation & Science in the 21st Century*, ed. Esam Eltigani Mohamed Ibrahim and Raudlotul Firdaus Fatah Yasin (International Islamic University Malaysia, 2015), 178.

³³ Resul Ersöz, “The Influence of Classical Islamic Modernism on the Qur’an Comments: The Example of Elmalılı Muhammed Hamdi Yazır,” *Amasya İlahiyat Dergisi* 13, no. 13 (2019): 259–95.

³⁴ İsmet Ersöz, “Elmalılı Hamdi Yazır ve Tefsirinin Özellikleri” [Elmalılı Hamdi Yazır and the Characteristics of his Qur’anic Exegesis], in *Elmalılı M. Hamdi Yazır Sempozyumu* (Türkiye Diyanet Vakfı Yayınları, 1993), 169; İshak Özgel, “Elmalılı Muhammed Hamdi Yazır’ın Tefsiri ve Hakkında Yapılmış Çalışmalar Bibliyografyası” [Elmalılı Muhammed Hamdi Yazır’s Tafsir and a Bibliography of Studies Conducted on it], *Türkiye Araştırmaları Literatür Dergisi* 19 (2012).

³⁵ Albayrak, “Elmalılı Muhammed Hamdi Yazır’ın Tefsir Anlayışı,” 172–73; Albayrak, “Turkish Exegeses of the Twentieth Century,” 412–13.

³⁶ Ahmet Sait Sıcak and Recep Bilgin, “Elmalılı Muhammed Hamdi Yazır (1878–1942) and a Bibliography of Research on his Literature (1923–2018),” *Turkish Studies – Social Sciences* 14, no. 2 (2019).

Meanwhile, Tanatawi adopted a more reformist and scientific approach, making his work *al-Jawahir fi Tafsir al-Qur'an al-Karim* a form of modern encyclopaedic exegesis that integrates science, philosophy, and spiritual reflection.³⁷ As a modern Egyptian intellectual exposed to Western academic discourse, he regarded science as an instrument of social reform and Islamic civilisation, rather than merely an empirical field of study. His profound admiration for the beauty of creation inspired an exegetical vision that glorifies Divine power through the wonders of the cosmos, while criticising scholars who neglect the scientific dimension of the Qur'an. During his tenure at Dar al-'Ulum, he expanded these ideas through scholarly publications and public sermons,³⁸ ultimately developing a comprehensive *tafsir* grounded in the principle of uniting revelation and science as the two manifestations of Divine truth: the *recited book* (the Qur'an) and the *observed book* (the universe). Although widely recognised as a pioneer of modern scientific exegesis, some scholars interpret his approach as a response to the intellectual crisis and dominance of Western thought, aimed at restoring Muslim confidence in the harmony of religion, peace, and universal progress.³⁹

The scientific interpretation of the Qur'an by Elmalılı and Tantawi is founded on an epistemological awareness that revelation (*wahy*) and empirical knowledge must be interconnected to restore equilibrium between the spiritual and rational dimensions of Islamic scholarship. Both exegetes conceptualised scientific exegesis as an effort to harmonise *naql* (revelation), *'aql* (reason), and *tajrubah* (empirical experience) within the framework of *tawhid al-ma'rifah*—the unity of knowledge grounded in the oneness of Allah SWT.

In *Hak Dini Kur'an Dili*, Elmalılı asserts that his exegesis incorporates discussions on science and philosophy consistent with the intellectual demands of the modern age.⁴⁰ He presents the Qur'anic verses as a Divine sign—whether *ayat fi 'liyyah* (signs in creation) or *ayat qawliyyah* (signs in revelation)—both of which mutually reinforce understanding of religion and life.⁴¹ Conversely, in *al-Jawahir fi Tafsir al-Qur'an al-Karim*, Tantawi constructs a more comprehensive paradigm of scientific exegesis by affirming the concept of two Divine books—the *recited Qur'an* and the *observed cosmos*—as two complementary manifestations of truth that must be studied in unison.⁴²

³⁷ Fathi Salih, *Al-'Aqd al-Jawhari fi Manaqib al-Shaykh Tantawi Jawhari li-Tilmidhih Zakariyya Ahmad Rashdi al-Iskandari* [The Jewelled Necklace on the Virtues of Shaykh Tantawi Jawhari by his Student Zakariyya Ahmad Rashdi al-Iskandari] (Mu'assasah al-Bina' al-Insani wa al-Tanmiyah, 2000), 9.

³⁸ Tantawi Jawhari, *Al-Jawahir fi Tafsir al-Qur'an al-Karim al-Mushtamil 'ala 'aja'ib bada'i' al-mukawwinat wa-ghara'ib al-ayat al-bahirat* [The Jewels in the Exegesis of the Noble Qur'an, Containing the Marvels of Creation and the Wonders of the Radiant Verses], ed. Muḥammad 'Abd al-Salām Shāhīn (Dar al-Kutub al-'Ilmiyya, 2004), 1:93, 7:2, 13:84–85; Shabana, "In Pursuit of Consonance," 18–19.

³⁹ Fathi Salih, *Al-'Aqd al-Jawhari fi Manaqib al-Shaykh Tantawi Jawhari*, 9; Khayr al-Din al-Zirikli, *Al-'A'lam: Qamus Tarajim li-Ashhar al-Rijal wa-al-Nisa' min al-'Arab wa-al-Musta'rabin wa-al-Mustashriqin* [The Notables: A Biographical Dictionary of the Most Famous Men and Women among the Arabs, Arabized, and Orientalists], 7th ed. (Dar al-'Ilm li al-Malayin, 1984), 3:230.

⁴⁰ Elmalılı Muhammed Hamdi Yazır, *Hak Dini Kur'an Dili (Mukaddime)* [The Qur'an in the Language of True Religion (Introduction)] (Eser Neşriyat, 1971), 1:19.

⁴¹ Ibid., 1:480–81.

⁴² Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 1:50, 4:14.

Together, their works illustrate that scientific exegesis is not merely a hermeneutical approach but an epistemological and civilisational strategy designed to strengthen the Muslim worldview on the coherence between revelation and science. It seeks to re-establish the Qur'an as the intellectual foundation for spiritual enlightenment and scientific advancement within the modern Islamic world.

Nevertheless, both scholars demonstrate distinct approaches. The epistemology of scientific exegesis according to Elmalılı—rooted in his educational background within the traditions of *kalam* and classical Islamic philosophy—emphasises a balanced relationship between revelation (*wahy*) and reason (*'aql*) in understanding the Qur'anic text. For Elmalılı, the miraculous nature (*i'jaz*) of the Qur'an does not lie in its conformity with scientific discoveries, but in the eloquence of its language, strength of its rational arguments, and vastness of its meanings, which demand interpretation grounded in logic and deep mastery of the Arabic language.⁴³

Elmalılı regarded scientific exegesis as part of the Qur'an's *i'jaz*, provided it did not contradict the principles of Islamic creed (*'aqidah*), yet he rejected literalist interpretations that force the text to align with modern scientific theories.⁴⁴ In his view, science is an auxiliary tool to affirm and reinforce understanding of revelation, not the primary basis of exegesis.⁴⁵ His approach reflects a *tawhidic rationalism*, in which scientific knowledge functions as a means to unveil Divine majesty without compromising the integrity of revelation. Hence, he did not consider science or empirical experience as a threat to the Qur'an or faith, but as a medium through which one may attain deeper comprehension of Divine meaning. In line with this view, he believed, as human knowledge advances, understanding of the Qur'an will continue to unfold — echoing his famous expression: “The older the universe becomes, the younger the Qur'an appears.”⁴⁶ Clearly, his epistemology maintains the rationalistic orientation of *kalam* while engaging with modern scientific knowledge, positioning *tafsir* as a field of synthesis between classical tradition and modern science.

The epistemology of scientific exegesis in Tantawi's thought, however, is shaped by the *nahdah* (renaissance) and reformist spirit of modern Egypt, which underscores the integration of religion and scientific progress as the foundation for Muslim revival.⁴⁷ In *al-Jawahir fi Tafsir al-Qur'an al-Karim*, he elevates science as an instrument of *da'wah* and social reform, considering the mastery of scientific knowledge a *fard kifayah*—a collective obligation on the Muslim community.⁴⁸ His exegesis demonstrates extensive engagement with contemporary disciplines, including geology, astronomy, and biology, aiming to show that scientific discoveries do not contradict revelation but strengthen belief in the oneness and omnipotence

⁴³ Yazır, *Hak Dini Kur'an Dili*, 1:570.

⁴⁴ *Ibid.*, 7:5193–94.

⁴⁵ Amin Al-Khuli, *Al-Tafsir: Ma'alim Hayatihi Manhajuhu al-Yawm* [Exegesis: The Milestones of his Life and his Contemporary Methodology] (Egyptian General Authority for Books, 2003), 57.

⁴⁶ Yazır, *Hak Dini Kur'an Dili*, 7:5195.

⁴⁷ Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 26:27, 26:29; Baha' al-Din Hurrām Shahi. *Al-Tafsir wa al-Tafasir al-Hadithah* [Exegesis and Modern Commentaries] (Dar al-Raudah, 1991), 86.

⁴⁸ Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 1:20.

of Allah SWT. For instance, in his commentary on Surat al-Naml (27:18), which mentions the ants, he provides a detailed discussion of various species of ants, their anatomical structures, social colony systems, and unique biological characteristics.⁴⁹ Through such elaborate interpretations of *ayat kawniyyah* (verses of creation), Tantawi asserts that every natural phenomenon constitutes a manifestation of Divine greatness to be studied, understood, and appreciated as an *ayah* (sign) that guides humanity toward recognition of the Creator. In this context, Tantawi's conception of "scientific exegesis" does not merely refer to the application of scientific terminology to Qur'anic expressions but also entails the endeavour to open new semantic and epistemic horizons within the Qur'anic text—dimensions of meaning previously unexplored or unimagined.⁵⁰

In general, Elmalılı Hamdi Yazır and Tantawi Jawhari share common objectives in *tafsir 'ilmi*: to demonstrate there is no contradiction between the Qur'an and science, and to strengthen faith through an understanding of the two Divine books—revelation (*wahy*) and the universe—which mutually interpret one another. In terms of knowledge sources, both scholars are grounded in the integration of *wahy*, *'aql*, and *tajrubah* (empirical experience). However, Elmalılı's approach is rooted in the tradition of *kalam* and classical Islamic philosophy, which emphasises rational–revelatory balance, whereas Tantawi was inspired by the Egyptian *nahdah* spirit, employing modern science as an instrument of *da'wah* and social reform.

From the perspective of exegetical purpose, Elmalılı focused on *tahqiq*—verification and affirmation of revelation as a rational miracle—while Tantawi's orientation leaned toward intellectual revival and the advancement of Islamic civilisation. Stylistically, Elmalılı's *tafsir* is analytical and cautious, grounded in rational argumentation and the eloquence of the Arabic language, whereas Tantawi's exegesis is progressive and encyclopaedic, characterised by extensive engagement with contemporary scientific theories and vivid descriptive elements. Regarding their respective attitudes toward science, Elmalılı viewed it as a supporting tool that reinforces faith-based reasoning, while ensuring it remains constrained to avoid deviation from the principles of revelation. In contrast, Tantawi regarded science as a dynamic medium for renewal and a means of reaffirming belief in the grandeur of Divine creation.

Despite differences in orientation and methodology, the epistemological foundations of both scholars can be synthesised to form a balanced model of scientific exegesis that upholds the harmonious relationship among revelation, reason, and science within the framework of *tawhid al-ma'rifah*. This epistemological synthesis opens the way for developing a contemporary model of scientific exegesis that not only balances *naql* and *'aql*, but also affirms spiritual, ethical, and cosmological values as the core of the dialogue between religion and modern science.

⁴⁹ Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 23:37–165.

⁵⁰ Al-Nayfar, *Al-Tafsir al-'Ilmī*, 22.

COMPARATIVE METHODOLOGICAL ANALYSIS OF ELMALILI AND TANTAWI ON CREATION VERSES

This part examines the interpretations of Elmalılı and Tantawi concerning several Qur’anic verses on the creation of the universe, which can be classified into three principal thematic categories.

First, the interpretations of both exegetes on the beginning of cosmic creation, in which the heavens and earth were originally a single entity (*al-ratq*) before being separated (*al-fatq*), as described in Surat al-Anbiya’ (21:30). Second, their interpretation of the creation of the heavens, associated with its primordial origin from *dukhan* (smoke or vapour), as mentioned in Surat Fussilat (41:11). Third, their exegesis focuses on the creation of the earth, particularly on the process of formation over two phases (*fi yawmayn*), based on Surat Fussilat (41:9).

The comparative methodological analysis between these two scholars explores their respective scientific approaches and how their interpretations reflect a balance between theological and rational dimensions in understanding the *ayat al-kawniyyah* (cosmological verses).

The Creation of the Universe

The discussion on *ratq* and *fatq* (the union and separation of the heavens and the earth) centres on a single verse in the Qur’an, in which Allah the Almighty declares:

Are the disbelievers not aware that the heavens and the earth used to be joined together and that We ripped them apart, that We made every living thing from water? Will they not believe?”⁵¹

This verse presents an initial depiction of the creation of the universe, describing it as a single entity (*al-ratq*) that was subsequently separated (*al-fatq*) by the will of Allah Almighty. In interpreting this verse, Elmalılı Hamdi Yazır provides three principal explanations, drawing from classical exegetical sources.

First, he interprets the separation of the heavens and the earth metaphorically, as a reference to their transformation in function—particularly the descent of rain and the emergence of vegetation.⁵² Second, he provides a literal explanation of the cosmic separation based on a transmitted report,⁵³ aligning his discussion—though implicitly—with what modern science recognises as the Big Bang theory. Third, he introduces a symbolic interpretation of creation

⁵¹ Qur’an 21:30. All Qur’anic translations cited in this article are from M. A. S. Abdel Haleem, trans., *The Qur’an* (Oxford University Press, 2004).

⁵² Ibn Abi Ḥatim al-Razi, *Tafsir al-Qur’an al-‘Azim* [Exegesis of the Great Qur’an] (Dar Ibn al-Jawzi, 2018), 8:2450.

⁵³ Based on a narration: *Al-Ḥasan narrated to us; he said: ‘Abd al-Razzaq informed us; he said: al-Thawri informed us, from his father, from ‘Ikrimah, from Ibn ‘Abbas, who said: “The night was created before the day.” Then he recited: كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا “They were both joined together, then We split them apart” (al-Anbiyā’ 21:30).* Muḥammad b. Jarīr al-Ṭabarī, *Tārīkh al-Rusul wa-l-Mulūk* [History of the Prophets and Kings/The History of al-Tabarī], ed. Muḥammad Abū al-Faḍl Ibrāhīm, 2nd ed. (Dar al-Ma‘arif, 1967), 1:61.

as the transition from non-existence to existence.⁵⁴ Elmalılı's interpretive approach is grounded in the integration of *naql* (revelation), *'aql* (reason), and *mushahadah* (empirical observation).⁵⁵ This synthesis demonstrates his balance between textual and rational argumentation, emphasising that science is a tool for understanding the Divine order (*sunnatuallah*), not as a measure for validating revelation.

In contrast, Tantawi Jawhari interprets this verse by establishing a direct relationship between revelation and scientific discovery. Under the section titled "*Fi Nubdhah min 'Ilm al-Falak wa 'Ilm Ṭabaqat al-Ard*," he identifies five signs of scientific miraculousness (*i'jaz 'ilmi*):

- The separation of the heavens and the earth (*ratq-fatq*)
- The origin of living beings from water
- The function of mountains as stabilisers of the earth's crust
- The motion of the earth
- The orderly orbits of planets⁵⁶

He interprets *ratq* as "joined together" and *fatq* as "separated," linking these terms to Laplace's Nebular Hypothesis and Hubble's theory of cosmic expansion. His exegesis reflects an empirical and *da'wah*-oriented methodology, using scientific explanations as arguments for faith and evidence of the Qur'an's miraculous nature.⁵⁷

Comparison between the two exegetes reveals two distinct methodological orientations within scientific exegesis. Elmalılı's approach is rational-theological, marked by caution toward aligning revelation too closely with contemporary scientific theories, whereas Tantawi's approach is empirical and missionary, seeking to reinforce faith by connecting the Qur'an with modern scientific discoveries.

The Creation of the Sky

Allah mentions in the Qur'an:

Then He turned to the sky, which was smoke—He said to it and the earth, 'Come into being, willingly or not,' and they said, 'We come willingly'—⁵⁸

Elmalılı Hamdi Yazır and Tantawi Jawhari interpret the term *dukhan* (smoke) in Surah Fuṣṣilat (41:11) as referring to the primordial state of the heavens in the form of vapour or gaseous matter.⁵⁹ However, their approaches differ regarding the sequence of creation and the scientific interpretation of this phenomenon. Elmalılı aligns with the majority view (*jumhur*) that the earth was created first, while *dukhan* refers to the gases emitted from an initially fiery earth that later ascended to form the atmosphere—the foundational layer of the heavens. He

⁵⁴ Fakhr al-Din al-Razi, *Mafatih al-Ghayb* (Dar Iḥya' al-Turath al-'Arabi, 1999), 22:137.

⁵⁵ Yazır, *Hak Dini Kur'an Dili*, 5:13.

⁵⁶ Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 10:231.

⁵⁷ *Ibid.*, 10:228–29.

⁵⁸ Qur'an 41:11.

⁵⁹ Yazır, *Hak Dini Kur'an Dili*, 5:447–48; Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 19:107.

interprets *al-sama'* in this verse as referring to the upper region of the earth (the atmospheric layers), not the highest heavens, drawing linguistic support from the parallel usage of the same term in Surat al-Mu'minun (23:18).⁶⁰

Tantawi, on the other hand, explains *dukhan* by referencing modern scientific findings on *'alam al-sadim* (the nebular world), describing it as a cosmic cloud of gas that was the primordial substance from which the sun, earth, planets, and entire solar system were formed.⁶¹

This difference illustrates two distinct hermeneutical orientations in interpreting *kawniyyah* verses. For Elmalılı, the exegesis of *dukhan* is grounded in a rational–theological framework rooted in classical *tafsir* tradition and physical observation of the earth. For Tantawi, however, it is based on an empirical–cosmological framework that correlates Qur'anic discourse with modern scientific theories, such as the nebular hypothesis. Thus, Elmalılı views *dukhan* as the atmospheric gases that emerged after the creation of the earth, while Tantawi regards it as the primordial substance from which the entire cosmos originated. Both interpretations reflect the methodological orientations of their authors—one anchored in theological rationalism, the other in empirical openness toward modern science—together enriching the discourse of scientific exegesis on the origins of the universe.

The Creation of the Earth

Allah mentions in the Qur'an:

Say, 'How can you disregard the One who created the earth in two Days? How can you set up other gods as His equals? He is the Lord of all the worlds!'⁶²

In the discussion of the phrase *fi yawmayn* ("in two periods," *Fussilat*, 41:9), exegetes have debated why the earth is mentioned before the heavens. Elmalılı holds that the earth was created prior to the heavens, which later formed the atmosphere. Tantawi, by contrast, argues that the earth is mentioned first because its cooling process occurred earlier, while most stars were still in a heated state and required longer periods before transforming into planets. Elmalılı does not interpret the expression "two days" literally but proposes two scientifically meaningful possibilities.

First, Elmalılı interprets *yawmayn* as two major stages in the earth's formation, not as two literal 24-hour days. The first stage corresponds to the separation of the earth from the heavens, as described in Surah al-Anbiya' (21:30), while the second stage refers to the spreading and structuring of the earth's crust. This interpretation parallels modern geological theories, which describe the earth's formation as a series of progressive physical evolutions. Second, he interprets *yawmayn* as two key points in the earth's orbital system—representing the two transitional moments of the year (the equinoxes or solstices)—which signify the order and precision of God's creative system.⁶³ This approach reflects Elmalılı's rational–theological

⁶⁰ Yazır, *Hak Dini Kur'an Dili*, 5:447–48.

⁶¹ Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 19:106–8.

⁶² Qur'an 41:9.

⁶³ Yazır, *Hak Dini Kur'an Dili*, 5:446.

inclination, blending classical linguistic analysis with contemporary scientific awareness, while maintaining fidelity to the semantic discipline of the Qur'an.

Tantawi Jawhari, in contrast, explains this verse through an empirical and cosmological approach. He states that Allah created the earth in two successive stages: first, as a spherical mass of gaseous matter that gradually cooled, and second, through the formation of 26 terrestrial layers in six distinct phases as described in modern geology.⁶⁴ In his *tafsir*, he dedicates an entire chapter titled *al-'Ilm* ("Science"), detailing eight stages of the earth's development—from the nebular (*sadim*) stage to various geological epochs such as the Paleozoic, Mesozoic, Cenozoic, Paleolithic, Neolithic, and Bronze Ages. Across nearly 15 pages, his discussion includes a cross-sectional diagram of the earth (see Figure 1 below), dividing its structure into four principal layers: air (*atmosphere*), water (*hydrosphere*), land (*lithosphere*), and the inner core (*jauf al-ard*). This presentation demonstrates Tantawi's ability to visually and empirically connect Qur'anic revelation with earth science.⁶⁵

Hence, both exegetes agree that the phrase *yawmayn* signifies stages in the creation of the earth, but they differ in emphasis: Elmalılı interprets it within a linguistic and theological framework, while Tantawi approaches it from a more empirical and descriptive scientific lens.

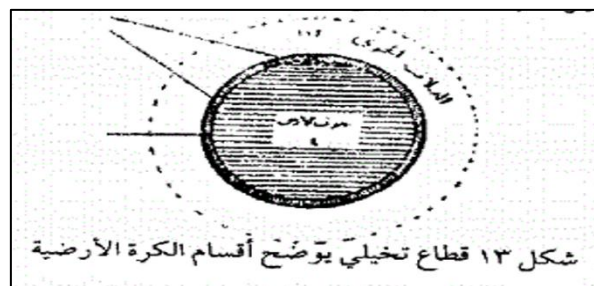


Figure 1: Cross-section showing the structural divisions of the Earth

Source: Tantawi Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 19:137–52

TOWARDS A HOLISTIC FRAMEWORK OF SCIENTIFIC EXEGESIS

The comparison between Elmalılı Hamdi Yazır and Tantawi reveals two distinct yet complementary methodological orientations within *tafsir 'ilmi*. Elmalılı represents a rational–theological approach that is cautious and deeply rooted in the traditions of *kalam* and Qur'anic linguistics, emphasising the epistemic integrity of revelation as the ultimate foundation of truth. Tantawi, in contrast, embodies an empirical–moral orientation that is more open to the integration of modern scientific theories, grounded in the spirit of *da'wah* and intellectual reform that underscores the miraculous nature (*i'jaz*) of the Qur'an in the modern context. Despite these differing epistemological starting points, both converge on common goals—to reaffirm the unity between revelation and reason, and to regard science as a bridge toward

⁶⁴ Jawhari, *Al-Jawahir fi Tafsir al-Qur'an*, 19:106.

⁶⁵ *Ibid.*, 19:137–52.

recognising the majesty of Allah SWT through contemplation of the *ayat kawniyyah* (cosmic verses).

These findings bear significant implications for the development of contemporary scientific exegesis. The synthesis of these two approaches helps overcome the extreme tendencies of literalist scientific interpretation, which subordinates revelation to fluctuating scientific theories,⁶⁶ while restoring equilibrium between revelation and science as interdependent dimensions of knowledge.⁶⁷ Elmalılı's approach reinforces the semantic discipline and epistemological authority of revelation, whereas Tantawi's perspective revitalises the spirit of scientific exploration and moral consciousness of creation. Accordingly, modern scientific exegesis should not be confined to seeking direct correspondences between the Qur'an and scientific theories; rather, it should construct an integrative intellectual framework that unites the theological, rational, and empirical dimensions in understanding the nature of the cosmos and the human role as *khalifah* (vicegerent) on earth.

Based on these findings, this study proposes the formation of a model termed the Holistic Scientific Exegesis Framework (HSEF), which consolidates the methodological strengths of both scholars into a balanced and integrated system of scientific exegesis. Epistemologically, this framework is grounded in the concept of *tawhid*—affirming that all forms of knowledge and natural phenomena are manifestations of Divine unity. As explained by Kathryn A. Johnson, level of faith plays a crucial role in shaping how individuals perceive the relationship between religion and science; those with strong faith foundations tend to view both as complementary and dialogical, rather than contradictory.⁶⁸ This principle forms the core of HSEF, serving to restore balance between scientific rigour and spiritual consciousness in the interpretation of *kawniyyah* verses.

Methodologically, the HSEF integrates three primary approaches to exegesis. It begins with revelation (*wahy*), which is the principal source of meaning and value (*naql*), providing the Divine framework that guides all interpretive activity. Next, it incorporates reason (*‘aql*) as the instrument of logical and synthetic analysis, enabling the exegete to engage in critical reflection and rational inference grounded in sound theological principles. Finally, it includes empirical enquiry (*tajribah*) as the means of verification through observation of natural phenomena, thus linking the empirical world to Divine revelation.

The convergence of these three epistemic dimensions produces an integration layer (*ta'wil al-hikmah*), which functions as the locus of synthesis between textual and scientific knowledge.

⁶⁶ Al-Khuli, *Al-Tafsir*, 19–27; Ansari, “Scientific Exegesis of the Qur’an,” 100.

⁶⁷ ‘Awad, *Al-Tafsir al-‘Ilmī li al-Ayat al-Kawniyyah*, 503–4; Ahmad Bazli Ahmad Hilmi, Zulkifli Hj. Mohd Yusoff, and Zulkarnin Zakaria, “The Meaning in Kawniyyat Verses Based on Science-Oriented Exegesis: An Evaluation of the English Translation,” *International Journal of Quranic Research* 8, no. 1 (2016); ‘Abd al-‘Aziz Dahman, *Al-Irshadat al-Manhajiyah ila Tafsir al-Ayat al-Kawniyyah* [Methodological Directions for Interpreting Qur’anic Cosmological Verses] (Dar al-Nafa’is, 2005), 67–68; Yahya, *Tafsir ‘Ilmi*, 53–54.

⁶⁸ Kathryn A. Johnson, Morris A. Okun, and Jordan W. Moon, “The Interaction of Faith and Science Mindsets Predicts Perceptions of the Relationship Between Religion and Science,” *Current Research in Ecological and Social Psychology* 4 (2023).

From this integration emerges spiritual internalisation (*tadhakkur*), representing the state of *tawhidic* awareness and ethical consciousness in engaging with science. In this stage, the act of interpretation transcends intellectual comprehension, leading to a deeper spiritual realisation of Divine unity (*tawhid*) as reflected in the harmony of revelation, reason, and the natural world.

The HSEF offers a new synthesis for modern scientific exegesis. It rejects scientific reductionism, which treats the Qur’an as a “book of science,” and anti-scientific attitudes, which separate reason from revelation. By grounding its epistemology in *tawhid*, the framework unites the rational–theological strength of Elmalılı and the empirical–missionary dynamism of Tantawi into a comprehensive, ethical, and faith-centred model of scientific exegesis. The HSEF has the potential to be applied within modern Islamic science education, particularly in developing a form of *scientific literacy* that extends beyond cognitive competence to encompass spiritual values and moral responsibility toward God’s creation. It also provides the epistemological foundation for designing Islamic science education modules that integrate Qur’anic exegesis, Islamic epistemology, and empirical enquiry. Moreover, it contributes to the establishment of an Islamic scientific ethics framework aimed at nurturing graduates with *tawhidic* consciousness—individuals who recognise their role as *khalifah* (vicegerents) entrusted to manage the natural world with wisdom (*hikmah*) and balance (*mizan*).

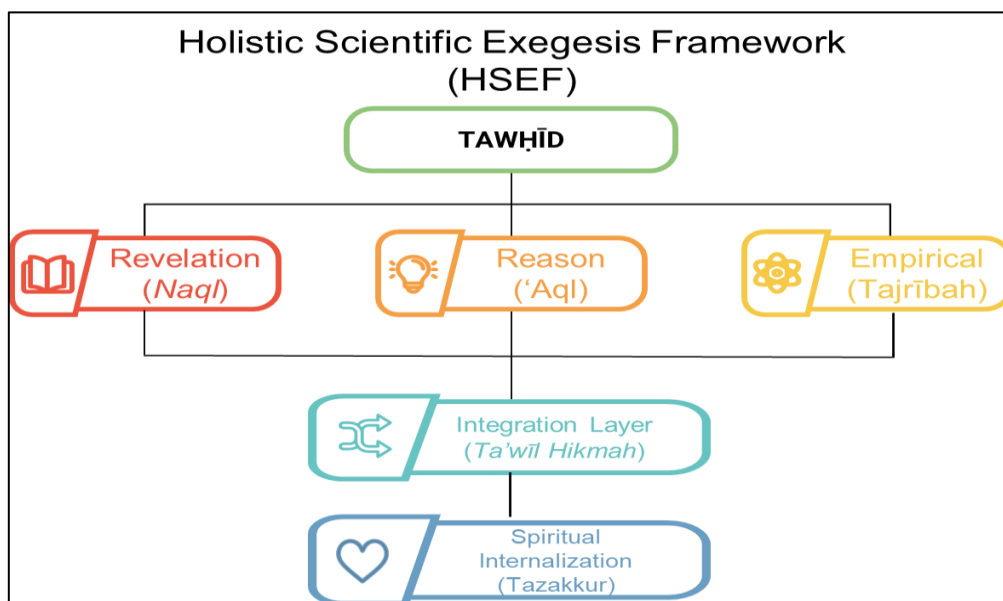


Figure 2: Holistic Scientific Exegesis Framework

Source: Researcher’s analysis (2025)

CONCLUSION

Scientific exegesis, which connects the verses of the Qur’an with scientific discoveries, remains a significant discourse in modern Islamic scholarship, particularly in relation to its methodological validity and interpretive soundness. Previous studies have identified

methodological weaknesses within this field, including excessive reliance on scientific interpretation and the failure to integrate *wahy* (revelation), *'aql* (reason), and *tajribah* (empirical experience) within an Islamic epistemological framework.

Addressing this gap, the present study examined and compared the methodologies of Elmalılı Hamdi Yazır and Tantawi Jawhari through their interpretations of the *ayat al-khalq* (verses of creation) in *Hak Dini Kur'an Dili* and *al-Jawahir fi Tafsir al-Qur'an al-Karam*. The analysis reveals that Elmalılı embodies a rational–theological approach grounded in the traditions of *kalam* and classical Islamic philosophy, while Tantawi adopts an empirical–reformist approach that employs science as an instrument of *da'wah* and intellectual renewal. Both scholars, however, share the conviction that revelation and science complement one another in manifesting the oneness (*tawhid*) and majesty of Allah SWT.

The synthesis of their methodologies offers renewed balance within scientific exegesis by harmonising revelation, reason, and empirical experience as components of a *tawhidic* epistemological system. Consequently, this study proposes the development of the Holistic Scientific Exegesis Framework (HSEF)—an integrative model based on *naql*, *'aql*, and *tajribah*—to strengthen scientific exegesis as an ethical, spiritual, and scientifically grounded discipline. Conceptually, the HSEF has the potential to be a foundation for the development of a holistic Islamic scientific literacy and as a model for Qur'an-based science education rooted in ethical and spiritual values.

Future research is encouraged to expand the scope of analysis to include modern *tafsir* works from diverse regions of the Muslim world and to assess the pedagogical applicability of the HSEF in fostering balanced cognitive, affective, and spiritual dimensions in scientific understanding grounded in *tawhid*.

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