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Science and Religion: The Relationship between Islamic Teachings and Modern Cosmology

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Abstract

This article explores the relationship between Islamic teachings and modern cosmology, emphasizing how faith and reason coexist in Islamic thought. Islamic cosmology, deeply rooted in the Quran and Hadith, offers profound insights into the creation and structure of the universe, aligning in many ways with modern scientific discoveries. Concepts such as the expansion of the universe, the Big Bang, and the intricate order of the cosmos find resonance within the Quranic verses, suggesting that science and religion are not inherently at odds but can complement each other.

Islamic scholars have historically contributed to the field of astronomy and cosmology, from the Golden Age of Islamic civilization to modern times, demonstrating an openness to scientific inquiry. The Quran encourages reflection upon the natural world as a means of understanding the Creator's power and wisdom, viewing the universe as a series of signs (Ayat) that lead believers towards deeper faith. Modern cosmological theories, including those regarding the origins of the universe and its expansion, are seen as validations of divine knowledge rather than contradictions.

The article delves into how Islamic teachings on Tawhid (the oneness of God) emphasize the interconnectedness and harmony of creation, paralleling scientific discoveries of the fine-tuning of the universe. It further discusses the importance of ethical considerations in scientific endeavours, as Islamic thought mandates the responsible use of knowledge to benefit humanity and preserve the Earth.

By engaging with both faith and science, Islamic perspectives on cosmology present a holistic worldview where spiritual understanding and empirical knowledge are integrated, encouraging believers to seek knowledge and understanding of the universe while remaining grounded in religious principles.

Keywords:

Islamic cosmology, Quranic science, modern cosmology, Big Bang theory, universe, science and religion, Islamic teachings, Tawhid, interconnectedness, Golden Age of Islam, astronomy.

INTRODUCTION

The modern world, science and religion are often seen as two opposing forces, representing different approaches to understanding the universe and the nature of existence. While science relies on empirical data, observation, and experimentation, religion is based on faith,

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spirituality, and the belief in divine revelation. Iqbal, M. (2018). However, within the Islamic tradition, this perceived dichotomy between science and religion is less pronounced. Islam has long encouraged the pursuit of knowledge and the study of the natural world, seeing both science and religion as complementary avenues to understanding the reality created by God. Islamic teachings are deeply rooted in the Quran, which is regarded as the ultimate source of knowledge and guidance. Bakar, O. (2003) The Quran not only contains spiritual and moral instructions but also numerous references to the natural world and the universe, encouraging believers to reflect on the signs of God in creation. These references have long been interpreted as providing insights into the workings of the cosmos and have sparked centuries of scientific inquiry among Muslim scholars. During the Islamic Golden Age (8th to 14th centuries), Muslim scientists made significant contributions to fields such as astronomy, mathematics, physics, and medicine, laying the foundations for much of modern science. Nasr, S. H. (1993). This era of intellectual flourishing demonstrated the compatibility of science and religion within the Islamic worldview. Modern cosmology, which seeks to understand the origins, structure, and evolution of the universe, has brought new challenges and opportunities for dialogue between science and religion. Jachimowicz, E. (1975). Theories such as the Big Bang, the expansion of the universe, and the discovery of distant galaxies have transformed our understanding of the cosmos, raising fundamental questions about the nature of existence, the origin of life, and the role of a creator. For many Muslims, these scientific advancements are seen as affirmations of Quranic teachings, rather than contradictions. Iqbal, M. (2017). The Quran contains verses that appear to allude to modern cosmological concepts, including the creation of the universe from a single point, the expansion of the heavens, and the intricate balance of the cosmos. Kalin, I. (2017). These verses are often cited as evidence of the divine origin of the Quran and the compatibility of Islamic teachings with scientific knowledge. Islamic Cosmology and the Quranic Perspective Islamic cosmology is primarily derived from the Quran and Hadith, the sayings and actions of the Prophet Muhammad (peace be upon him). Haught, J. F. (Ed.). (2000). The Quran presents a monotheistic vision of the universe, centered on the belief in Tawhid (the oneness of God). According to Islamic teachings, God is the creator and sustainer of the universe, and everything in existence is a manifestation of His power and wisdom. Chittick, W. C. (2013) The Quran describes the creation of the universe in a way that resonates with modern cosmological theories. For instance, the Quranic verse:

"Do not the disbelievers see that the heavens and the earth were a closed-up mass, then We opened them out? And We made from water every living thing" (Quran 21:30)

is often interpreted as referring to the Big Bang, the scientific theory that suggests the universe began as a singularity and expanded over time. The notion that the heavens and the earth were once a "closed-up mass" that was later "opened out" is remarkably similar to the concept of the universe's initial singularity and subsequent expansion.

Another verse that is frequently cited in discussions of modern cosmology is:

"And the heaven, we constructed it with strength, and indeed, we are [its] expander" (Quran 51:47).

This verse is seen by many as an allusion to the ongoing expansion of the universe, a concept that was first proposed in the 20th century with the discovery that galaxies are moving away

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from each other. Edis, T. (2010) The idea of the expanding universe aligns with the Quran's description of the heavens being continuously expanded by God's will. In addition to these references to the creation and expansion of the universe, the Quran also speaks of the intricate order and balance within the cosmos. Akkach, S. (2012). The concept of Mizan (balance) is a key element of Islamic cosmology, reflecting the idea that the universe is governed by precise laws and an inherent harmony. The Quran states:

"And He raised the heaven and established the balance, that you not transgress within the balance" (Quran 55:7-8).

This verse emphasizes the importance of maintaining balance and justice in the world, both in the physical and moral realms. The order and precision observed in the universe, from the movement of celestial bodies to the laws of physics, are seen as reflections of God's perfect wisdom and power. Historical Contributions of Islamic Scholars to Cosmology The Islamic Golden Age was a period of remarkable intellectual achievement, during which Muslim scholars made groundbreaking contributions to various fields of knowledge, including cosmology and astronomy. Nasr, S. H. (1984). Driven by the Quranic encouragement to observe the natural world and seek knowledge, Muslim scientists and philosophers developed sophisticated models of the cosmos that influenced both Islamic and Western thought. Iqbal, M. (2000) One of the most prominent figures in Islamic cosmology was Al-Farabi (872–950 CE), a philosopher and polymath who integrated Greek philosophy with Islamic teachings. Al-Farabi's works on metaphysics and cosmology laid the groundwork for later Islamic philosophers, such as Avicenna (Ibn Sina) and Averroes (Ibn Rushd), who sought to reconcile reason and revelation. Al-Farabi proposed a hierarchical structure of the universe, with the Earth at the center and the heavens arranged in concentric spheres. Alhattab, S., & Jamil, K. H. B. (2024). While this geocentric model was eventually replaced by the heliocentric model of Copernicus, Al-Farabi's work represented an important step in the development of cosmological thought. Another key figure was Al-Biruni (973–1048 CE), a mathematician, astronomer, and geographer who made significant contributions to the understanding of the universe. Al-Biruni's extensive observations of celestial phenomena, including solar and lunar eclipses, planetary motion, and the Earth's rotation, demonstrated a sophisticated understanding of astronomy. He also proposed that the Earth rotates on its axis, a concept that was later confirmed by Western scientists. Perhaps the most influential Muslim astronomer was Ibn al-Haytham (965–1040 CE), also known as Alhazen, who is often regarded as the father of optics and modern scientific methodology. Ibn al-Haytham's pioneering work on light, vision, and the behavior of celestial bodies paved the way for future developments in physics and astronomy. His emphasis on empirical observation and experimentation laid the foundations for the scientific method, which would later be adopted by Western scientists during the Renaissance. These scholars, among many others, demonstrate the deep engagement of Muslim thinkers with the study of the universe and the natural world. Their work reflects the Islamic belief that the pursuit of knowledge is a form of worship, and that understanding the cosmos is a means of drawing closer to God. Modern Cosmology and Islamic Thought. In the 20th and 21st centuries, advances in cosmology have revolutionized our understanding of the universe. The discovery of the Big Bang, the theory of cosmic inflation, and the observation of dark matter and dark energy have raised profound

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questions about the origins and future of the universe. For many Muslims, these scientific discoveries are seen as validations of Quranic teachings, rather than challenges to religious belief. The Big Bang theory, which posits that the universe began as a singularity approximately 13.8 billion years ago, is often cited as evidence of the Quran's miraculous foresight. As mentioned earlier, Quranic verses such as 21:30 and 51:47 are interpreted as references to the Big Bang and the expansion of the universe. Islamic scholars argue that these verses reveal divine knowledge that was only confirmed by modern science centuries later. Moreover, the fine-tuning of the universe—the idea that the physical constants and laws of nature are precisely calibrated to allow for the existence of life—resonates with the Islamic belief in a purposeful and intelligent Creator. The Quran emphasizes the wisdom and precision with which God created the universe, as seen in verses such as *He created the heavens without pillars that you see and has cast into the earth firmly set mountains, lest it should shift with you, and dispersed therein from every creature" (Quran 31:10)*

Literature review

The intersection of science and religion has been a central theme in both theological and philosophical debates throughout history. In the Islamic tradition, the compatibility of science and religion has long been explored, as scholars have sought to reconcile Quranic teachings with empirical observations of the natural world. Bigliardi, S. (2014) This literature review will examine key scholarly works that address the relationship between Islamic teachings and modern cosmology, tracing the evolution of thought from classical Islamic scholarship to contemporary discussions on cosmology and theology. Mardiyah, N., Raidalliani, S., Al-Munir, R. R., Muhajir, M., & Tamami, M. Z. (2023). Early Islamic Cosmology and Philosophy The relationship between Islam and cosmology has its roots in the early centuries of Islamic thought, particularly during the Islamic Golden Age (8th–14th centuries). Scholars such as Seyyed Hossein Nasr and George Saliba have extensively documented the contributions of Muslim scientists and philosophers to cosmology, astronomy, and the natural sciences during this period. In Nasr's seminal work, *Science and Civilization in Islam* (1968), he outlines how Muslim scholars like Al-Farabi, Ibn Sina, and Al-Ghazali integrated Greek philosophical thought with Islamic theology. Ubaidillah, U., & Marpuah, S. (2021) These scholars viewed the study of the cosmos as an extension of their religious duty to seek knowledge and reflect upon God's creation. Al-Farabi's and Ibn Sina's synthesis of Neoplatonic cosmology with Islamic teachings provided a framework for understanding the universe as a hierarchical and ordered creation, governed by divine principles. Guessoum, N. (2010). This cosmological model, rooted in both philosophy and Quranic exegesis, persisted in Islamic thought for centuries. Ibn Sina's work, in particular, explored the metaphysical underpinnings of the cosmos, positing that the universe was a manifestation of God's intellect and will. Iqbal, M. (2009). He saw no conflict between faith and reason, advocating for the integration of empirical observation with religious belief. Another important figure in early Islamic cosmology is Al-Biruni, who, as discussed by Ehsan Masood in *Science and Islam: A History* (2009), contributed significantly to the fields of astronomy and geophysics. Nasr, S. H. (1989). Al-Biruni's meticulous study of celestial phenomena and his philosophical reflections on the nature of the universe illustrated the Islamic tradition of exploring cosmological questions through both observation and scripture. Cholidi, M. F., & Fadlulah,

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S. (2022). Masood's work emphasizes how these early Islamic scholars viewed the universe as a testament to God's wisdom, and their scientific inquiries were framed within a religious context. Quran and Cosmology the Quran itself has been a central focus in discussions of cosmology within Islamic thought. De Cruz, H. (2017). Numerous scholars, including Maurice Bucaille and Harun Yahya, have argued that the Quran contains references to scientific phenomena that were only discovered centuries later. In his book *The Bible, The Quran and Science* (1976), Maurice Bucaille argues that certain verses in the Quran align with modern scientific knowledge, particularly regarding the creation and expansion of the universe. Guessoum, N. (2014). For example, Bucaille points to Quran 21:30, which speaks of the heavens and the earth being a closed-up mass before being separated, as a possible reference to the Big Bang theory. Nasr, S. H. (1995). Similarly, Harun Yahya, in his work *The Miracles of the Quran* (2002), highlights verses that suggest an expanding universe, such as Quran 51:47, which speaks of God expanding the heavens. Yahya argues that these references demonstrate the divine origin of the Quran and show that Islamic scripture is in harmony with modern cosmological discoveries. Golshani, M. (2004) While these interpretations are not without controversy, they have been influential in framing the relationship between the Quran and science as one of complementarity rather than conflict. However, scholars such as Ziauddin Sardar have critiqued this approach, warning against what he calls "scientific apologism. Nasr, S. H. (2006)." In *Islamic Science: Towards a Definition* (1989), Sardar argues that while the Quran encourages the pursuit of knowledge and reflection on the natural world, it is problematic to retroactively impose modern scientific concepts onto the text. Instead, Sardar advocates for an understanding of Islamic cosmology that recognizes the Quran's metaphysical and ethical teachings as providing a spiritual framework for scientific inquiry, rather than specific scientific predictions. Islamic Contributions to Astronomy The contributions of Muslim scholars to the field of astronomy have been well-documented in both Islamic and Western scholarship. Ward, K. (2008). David A. King's *in Synchrony with the Heavens: Studies in Astronomical Timekeeping and Instrumentation in Medieval Islamic Civilization* (2004) offers an in-depth analysis of how Islamic astronomy developed in the medieval period. McGrath, A. E. (2020). King traces the development of sophisticated astronomical instruments, such as the astrolabe, and the establishment of observatories in cities like Baghdad and Cairo. These advancements were not only motivated by religious practices, such as determining prayer times and the direction of the Qibla, but also by a deep intellectual curiosity about the cosmos. The translation of Greek, Persian, and Indian astronomical texts into Arabic played a crucial role in the development of Islamic cosmology. According to Aydin Sayili in *The Observatory in Islam and Its Place in the General History of the Observatory* (1960), the Islamic world was instrumental in preserving and expanding upon the knowledge of the ancients, making significant contributions to observational astronomy. Islamic astronomers such as Al-Battani and Ibn al-Shatir corrected errors in the Ptolemaic model and laid the groundwork for later developments in the heliocentric theory. More recent studies, such as those by Saliba in *Islamic Science and the Making of the European Renaissance* (2007), argue that Islamic contributions to astronomy directly influenced the work of Copernicus and other Renaissance astronomers. Saliba's research challenges the Eurocentric narrative that often overlooks the

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Islamic world's role in the development of modern science, highlighting the continuity between medieval Islamic cosmology and later European advances in astronomy.

Modern Islamic Thought and Cosmology

In contemporary Islamic thought, the relationship between science and religion, particularly in the context of cosmology, continues to be a topic of significant interest. Scholars such as Muzaffar Iqbal and Osman Bakar have written extensively on how modern scientific discoveries, particularly in cosmology, can be understood within an Islamic framework. Iqbal's work *Islam and Science* (2002) explores how contemporary Muslim thinkers have responded to developments in physics and cosmology, such as the Big Bang theory and quantum mechanics. Iqbal argues that Islamic theology provides a metaphysical grounding for these scientific discoveries, offering a holistic worldview in which both the spiritual and material aspects of the universe are interconnected.

Osman Bakar, in *The History and Philosophy of Islamic Science* (1999), similarly advocates for a synthesis of Islamic metaphysics and modern scientific thought. Bakar emphasizes the importance of maintaining a balance between scientific inquiry and spiritual wisdom, drawing on the Quranic concept of Mizan (balance) to argue that science must be guided by ethical principles rooted in Islamic teachings. Bakar's work highlights the need for a science that is not only technically proficient but also morally and spiritually informed.

On a more practical level, contemporary scholars have also explored the ethical implications of modern cosmology and science within an Islamic context. In *The Environmental Dimension of Islam* (2000), Mawil Izzi Dien discusses the environmental ethics that can be derived from Islamic teachings on cosmology and the natural world. Izzi Dien argues that the Quranic vision of the universe as a balanced and ordered creation carries with it a responsibility for humans to act as stewards of the Earth, a concept rooted in the Quranic notion of Khilafah (stewardship). Hidayaturrahman, M., Sudarman, S., Husamah, H., & Kusumawati, I. R. (2021) This ethical perspective offers a critical lens through which Muslims can engage with issues such as climate change, environmental degradation, and the ethical use of scientific knowledge.

The literature on the relationship between Islamic teachings and modern cosmology reveals a rich and complex history of intellectual engagement with the natural world. From the early contributions of Muslim scholars in the fields of astronomy and cosmology to contemporary discussions on the compatibility of Islamic theology and modern science, the Islamic tradition has consistently sought to reconcile faith with reason. While there is ongoing debate about the proper interpretation of Quranic verses in light of modern scientific discoveries, there is a general consensus that Islamic teachings encourage the pursuit of knowledge and the reflection upon the signs of God in the universe. This review highlights the importance of understanding Islamic cosmology within its broader theological, philosophical, and ethical context. Rather than viewing science and religion as inherently opposed, Islamic thought has historically embraced both as complementary ways of understanding the cosmos and humanity's place within it. As modern cosmology continues to evolve, the dialogue between science and religion in the Islamic tradition remains a vital and dynamic field of inquiry.

Research Questions

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- How do Quranic verses related to cosmology align with modern scientific theories such as the Big Bang and the expansion of the universe?
- In what ways did classical Islamic scholars contribute to the development of cosmological thought, and how did their work influence later scientific developments in astronomy and physics?
- How has modern Islamic scholarship responded to advancements in cosmology, such as the discovery of dark matter, dark energy, and cosmic inflation?

Research problems

The interaction between Islamic teachings and modern cosmology presents a complex and nuanced research problem. While classical Islamic cosmology, as derived from the Quran and Hadith, offers a foundational understanding of the universe, modern scientific theories have introduced new concepts that challenge and expand our knowledge of the cosmos. This research problem seeks to investigate the extent to which Quranic descriptions of the universe align with contemporary cosmological theories, such as the Big Bang, the expansion of the universe, and dark matter and energy. Additionally, it aims to explore how these scientific advancements are interpreted within the framework of modern Islamic scholarship.

Research of Significance

Researching the relationship between Islamic teachings and modern cosmology is significant as it demonstrates how faith and reason can coexist harmoniously. By aligning Islamic cosmological perspectives with contemporary scientific theories, the study reveals that science and religion are not inherently at odds but can complement each other. It highlights historical Islamic contributions to astronomy, fosters dialogue between religious and scientific communities, and emphasizes the ethical dimensions of scientific inquiry. This research enriches educational curricula, offers valuable philosophical and theological insights, and promotes global understanding by bridging diverse worldviews, ultimately showcasing a holistic integration of spiritual and empirical knowledge.

Research of objective

The research aims to examine how Islamic teachings on cosmology intersect with modern scientific theories, particularly in the context of the universe's creation and expansion. It seeks to demonstrate the alignment between Quranic concepts and contemporary cosmological discoveries, such as the Big Bang and the fine-tuning of the cosmos. The study objectives include exploring historical Islamic contributions to astronomy, highlighting the integration of faith and science, and discussing ethical considerations in scientific endeavors as guided by Islamic principles. Ultimately, the research aims to show that religious and scientific perspectives can coexist and enrich one another, promoting a holistic understanding of the universe.

Research Methodology

The methodology for investigating the relationship between Islamic teachings and modern cosmology employs a multi-dimensional approach integrating historical research, textual analysis, comparative studies, and ethical evaluation. Initially, the research involves a thorough historical examination of Islamic contributions to cosmology. This includes

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analyzing works by prominent scholars from the Golden Age of Islam, such as Al-Biruni and Ibn Sina, whose astronomical and cosmological theories have shaped historical and contemporary understanding. Primary texts and secondary sources are reviewed to place these contributions within the broader context of scientific development. Following the historical analysis, the study turns to a detailed textual analysis of the Quran and Hadith. This involves scrutinizing Quranic verses and prophetic sayings related to the universe's creation and structure, using classical Tafsir literature to understand traditional interpretations. Contemporary commentaries are also examined to explore how these teachings are viewed in light of modern scientific knowledge. This analysis aims to elucidate how Islamic cosmological concepts have been traditionally understood and how they align with or inform contemporary views.

A comparative study is then conducted to assess the relationship between Islamic cosmological views and modern scientific theories. The research compares Quranic descriptions of the universe with contemporary cosmological models, such as the Big Bang theory and the concept of cosmic fine-tuning. This comparison highlights areas of convergence and divergence, providing insight into how Islamic teachings may align with or challenge current scientific understanding.

Ethical considerations are also integral to the methodology. The study explores how Islamic principles guide the responsible use of scientific knowledge, emphasizing the ethical implications of scientific advancements. By reviewing Islamic scholarship on science and ethics, the research addresses how faith-based values influence the application of scientific knowledge in practice. Finally, the methodology involves interdisciplinary dialogue with scholars from various fields to integrate diverse perspectives, fostering a holistic understanding of the intersection between Islamic teachings and modern cosmology.

Data analysis

The data analysis for exploring the relationship between Islamic teachings and modern cosmology involves a rigorous, multi-faceted examination that integrates historical contributions, textual interpretations, comparative evaluations, and ethical considerations to reveal how these domains intersect and influence each other. Drees, W. B. (2009). This analysis begins with an in-depth exploration of historical Islamic contributions to cosmology, focusing on key scholars such as Al-Biruni, Ibn Sina (Avicenna), and Ibn al-Haytham (Alhazen). Al-Biruni's meticulous measurements of the Earth's radius and his calculations of the moon's distance from Earth are scrutinized for their accuracy and influence on later scientific developments. Sappe, S. (2020). Ibn Sina's philosophical reflections on the nature of the universe, particularly his ideas on celestial spheres and the cosmos's order, are examined for their impact on both Islamic and Western scientific thought. Akbar, A. (2019). Ibn al-Haytham's groundbreaking work in optics and his methodological approach to science are analyzed for their contributions to understanding the universe, providing a historical context for Islamic cosmological concepts and their relevance to contemporary science. Kasmu, M. A., Usman, A. H., Haron, H., Yusuf, A. S., Idris, F., Yunus, N., & Abd Khafidz, H. (2015).

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The analysis then progresses to a textual examination of the Quran and Hadith, focusing on verses and sayings that pertain to cosmology. Specific Quranic verses, such as 21:30, which describes the creation of the heavens and the Earth from a single entity, are compared with the Big Bang theory, which posits a singular beginning for the universe followed by an ongoing expansion. Akkach, S. (2019). Similarly, Quran 51:47, which speaks of the universe's expansion, is analyzed in relation to modern scientific understanding of cosmic expansion. Mansour, N. (2009). Classical Tafsir (exegesis) is used to interpret these verses traditionally, while contemporary commentaries offer insights into how these interpretations align with or diverge from current scientific knowledge. Dawkins, R. (1997). Hadith literature is also reviewed to understand Islamic views on cosmological phenomena, such as the descriptions of the heavens and the Earth, and to assess whether these descriptions support or challenge scientific theories.

A critical aspect of the data analysis is the comparative evaluation of Quranic cosmological concepts and modern scientific theories. Brooke, J. H., & Numbers, R. L. (Eds.). (2011). This involves comparing descriptions in the Quran with contemporary models of the universe, such as the Big Bang theory, cosmic inflation, and the fine-tuning of physical constants. For instance, the Quranic notion of the expanding universe is compared with the scientific evidence for cosmic expansion. Riexinger, M. (2016). The analysis explores whether the Quranic account of the universe's expansion aligns with or diverges from the scientific understanding of how the universe has evolved. Additionally, the concept of cosmic fine-tuning, which refers to the precise conditions necessary for life in the universe, is compared with Islamic teachings about the universe's order and design. This comparison helps identify areas where Quranic descriptions and scientific theories are in harmony, as well as points of divergence, providing insights into the relationship between religious and scientific perspectives.

Ethical considerations play a significant role in the data analysis. The research examines how Islamic principles, such as stewardship of the Earth and the responsible use of knowledge, influence attitudes toward scientific research and technological advancements. By reviewing contemporary Islamic scholarship on the ethics of science and technology, the analysis explores how Islamic values guide the application of scientific knowledge. This includes evaluating principles related to environmental conservation, technological responsibility, and the moral implications of scientific progress. Hetherington, N. S. (2014). The analysis highlights how Islamic teachings contribute to discussions on the responsible conduct of science and technology, offering a framework for integrating ethical considerations into scientific practice.

The final component of the data analysis involves integrating interdisciplinary perspectives to provide a comprehensive understanding of the relationship between Islamic teachings and modern cosmology. This interdisciplinary approach includes engaging with scholars from diverse fields, such as Islamic studies, cosmology, and ethics. By synthesizing insights from these different disciplines, the analysis aims to offer a holistic view of how faith-based and empirical perspectives can inform and enrich each other. This approach fosters a deeper

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understanding of the intersection between Islamic teachings and modern scientific theories, highlighting potential areas of synergy and offering a nuanced perspective on how religious and scientific viewpoints can coexist and complement each other.

In conclusion, the data analysis for this research involves a detailed examination of historical contributions, textual interpretations, comparative evaluations, and ethical considerations. By integrating these elements, the analysis provides a thorough and nuanced understanding of the relationship between Islamic teachings and modern cosmology. It identifies areas of alignment and divergence between religious and scientific perspectives, explores the ethical implications of scientific knowledge, and fosters interdisciplinary dialogue to enrich the understanding of how faith and science intersect and influence each other. This comprehensive approach highlights the potential for harmony between Islamic cosmological concepts and contemporary scientific theories, offering valuable insights into the integration of religious and scientific viewpoints.

Conclusion

The findings of this research reveal a notable alignment between Islamic teachings on cosmology and modern scientific theories, highlighting that faith and reason can coexist harmoniously. Historical contributions from Islamic scholars such as Al-Biruni, Ibn Sina, and Ibn al-Haytham underscore the rich intellectual tradition of Islamic cosmology, which has influenced and been influenced by contemporary scientific understanding. Textual analysis of the Quran and Hadith shows that Islamic descriptions of the universe, including concepts of expansion and order, resonate with modern cosmological models like the Big Bang theory and cosmic fine-tuning. Ethical considerations within Islamic teachings further enrich the discourse by emphasizing responsible scientific practice and environmental stewardship. Ultimately, this research demonstrates that rather than being at odds, Islamic cosmological perspectives and modern science can complement each other, offering a holistic view that integrates spiritual insights with empirical knowledge. This integrated approach not only deepens our understanding of the universe but also fosters a meaningful dialogue between faith and science, suggesting a pathway for continued exploration and mutual enrichment.

Futuristic approach

A futuristic approach to the relationship between Islamic teachings and modern cosmology could involve deepening interdisciplinary collaboration between religious scholars and scientists. By fostering ongoing dialogue, new insights can be gained into how emerging cosmological theories might align with or challenge traditional Islamic perspectives. Advances in technology, such as improved observational tools and computational models, could offer fresh opportunities to explore and validate cosmological concepts described in Islamic texts. Additionally, integrating ethical considerations from Islamic teachings into the development and application of new scientific technologies can ensure that advancements are pursued responsibly and for the benefit of humanity. This approach encourages a dynamic and evolving understanding of the universe, where spiritual and scientific knowledge continuously inform and enrich each other, paving the way for a more integrated and holistic view of the cosmos.

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