Study of the Concept of 'Jirim Mengambil Lapang' in *Aqidah al-Najin* and Its Conceptual Comparison to the Theory of Space in Physics

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Abstract

This article explores the concept of 'Jirim Mengambil Lapang' (Matter Occupies Space) as presented in *Aqidah al-Najin* and compares it with the scientific understanding of space in classical and modern physics. The theological perspective in *Aqidah al-Najin* asserts that matters (jirim) inherently occupies space, distinguishing creation from the Creator (al-Khaliq) that transcends spatial limitations. In contrast, physics has evolved from Newtonian mechanics, which defines space as an absolute framework, to Einstein's relativity, where space is dynamic and influenced by mass and energy. Quantum mechanics further challenges classical views by proposing that space may have discrete properties at microscopic scales. Using a qualitative and comparative approach, this study conceptually examines the similarities and differences between these perspectives, highlighting their epistemological foundations, methodologies, and implications for

understanding existence and reality. The findings reveal that while Islamic theology and modern physics approach space from different paradigms one rooted in metaphysical principles and the other in empirical observation both acknowledge space as a fundamental aspect of reality. This study contributes to the broader discourse on the relationship between science and religion, offering insights into how theological and scientific frameworks can coexist and enrich each other in understanding the nature of space and existence.

Keywords: matters; space; *Aqidah al-Najin*; physics

Introduction

The concept of space and matter has been a fundamental topic of discussion in both theological and scientific traditions. In Islamic theology, particularly in *Aqidah al-Najin*, the phrases 'jirim mengambil lapang' or 'matter occupies space' is a key principle that defines the nature of physical existence. This characteristic of matters was described in the book several times and one of it is in Chapter Two of the book titled The 20 Compulsory Attributes of Allah SWT and Its Explanation, quoted as:

> *Dan kata Musannif: Yang keempat daripada sifat yang wajib bagi Allah Ta'ala itu Mukhalafatuhu lil Hawadith. Ertinya: Bersalahan Allah Ta'ala bagi segala yang baharu, ertinya tiada bersamaan Allah Ta'ala bagi segala yang baharu. Maka, diketahui daripada yang demikian itu menafikan jirim dan aradh dan kulliyyah dan juz'iyyah dan segala yang lazim bagi segala perkara itu. Dan yang lazim bagi jirim empat perkara: Pertama: Baharu dan kedua: Bersusun dan Ketiga: Mengambil lapang dan Keempat: Menerima bagi aradh*.[1]

This attribute asserts that all created entities, classified as *jirim* (matter), inherently occupy space and cannot exist without spatial dimensions. Such theological discussions are essential in

[1] Zainal Abidin bin Muhammad al-Fathani, *Kitab ini yang Bernama Aqidatun Najin*, Noraine Abu (Batu Caves: al-Hidayah Publications, 2011), 51.

understanding the ontological structure of reality from an Islamic perspective. On the other hand, modern physics offers a distinct yet profound exploration of space through various theories. Classical physics, as developed by Newton, postulated the existence of absolute space, a fixed and independent entity in which matter exists and moves.[2] However, advancements in physics, particularly Einstein's theory of relativity, revolutionized the understanding of space by introducing the concept of space-time, where space is not an absolute void but a dynamic fabric influenced by mass and energy.[3] Quantum mechanics further challenges classical notions by suggesting that space itself may have discrete properties at the subatomic level.[4] This study aims to explore the theological notion of 'jirim mengambil lapang' in *Aqidah al-Najin* and compare it with scientific theories of space. By analyzing these perspectives, this article seeks to highlight their conceptual similarities, differences, and potential intersections. Understanding this comparison is crucial in bridging religious and scientific discourses, allowing for a more comprehensive perspective on the nature of existence. Furthermore, the study contributes to the broader discourse on the relationship between science and religion, particularly in the context of Islamic thought.

The concept of space plays a fundamental role in both Islamic theology and modern physics, shaping how reality, existence, and creation are understood. In Islamic theology, namely *Aqidah al-Najin*, the idea that *jirim* inherently occupies space is a key principle in defining the nature of physical existence. This concept is essential in distinguishing between the Creator (al-Khaliq) and the creation (makhluq)[5], as only created entities are bound by spatial dimensions, whereas Allah SWT is transcendent and beyond space.[6] By understanding this concept, scholars can reinforce the theological distinction between divine

[2] Jammer, Max, "Concepts of Space: The History of Theories of Space in Physics" (Mineola: Courier Corporation, 2013), 112-140.

[3] Petrov, A, *Z* (Einstein Spaces. Amsterdam: Elsevier, 2016), 20-25.

[4] Feynman, Richard P. "Space-Time Approach to Non-Relativistic Quantum Mechanics," *Reviews of Modern Physics* 20.2 (1948), 367–387.

[5] Al-Ash'ari, Abu al-Hasan, *Maqalat al-Islamiyyin wa Ikhtilaf al-Musallin* (Cairo: Dar al-Kutub al-'Ilmiyyah, 936), 100-150.

[6] Al-Baqillani, Abu Bakr, *al-Tamhid fi al-Radd 'ala al-Mulhidah* (Beirut: Dar al-Kutub al-'Ilmiyyah, 1013), 80-120.

attributes and the limitations of creation, strengthening core beliefs in *tawhid* (the oneness of God).[7] In physics, the study of space has undergone significant transformation, from Newton's concept of absolute space[8] to Einstein's space-time continuum[9] and the complexities of quantum mechanics. Space is no longer seen as a passive void but as an entity that interacts with matter and energy[10]. These scientific advancements not only reshape our understanding of the physical universe but also pose philosophical and theological questions regarding the nature of existence, causality, and the structure of reality.[11] Engaging with these ideas allows Islamic scholars to integrate scientific insights within an Islamic worldview, fostering a holistic approach to knowledge that embraces both revelation and reason.[12] Understanding space from both theological and scientific perspectives is also crucial in addressing contemporary discussions on metaphysics, cosmology, and the philosophy of science. By exploring the similarities and differences between Islamic theology and physics, this study contributes to the broader discourse on the relationship between science and religion. It also provides a platform for meaningful dialogue between scholars of theology and the natural sciences, encouraging an interdisciplinary approach to understanding existence.

This study aims to analyze the concept of 'jirim mengambil lapang' in *Aqidah al-Najin* and its theological significance while examining the understanding of space in classical and modern physics, including Newtonian mechanics, Einstein's relativity, and quantum mechanics. It seeks to conduct a comparative analysis between the Islamic theological perspective and scientific theories of space, exploring their similarities,

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[7] Al-Ghazali, A. H., *Ihya' Ulum al-Din* (Cairo: Dar al-Kutub al-'Ilmiyyah, 1111), 200.

[8] Newton, Isaac, *Philosophiæ Naturalis Principia Mathematica*, trans. A. Motte (Berkeley: University of California Press, 1999), 35-40.

[9] Einstein, Albert, "The Foundation of the General Theory of Relativity," *Annalen der Physik* 49.7 (1915), 769–822.

[10] Hawking, Stephen, *A Brief History of Time: From the Big Bang to Black Holes* (London: Bantam Books, 1988), 1-10.

[11] Nasr, Seyyed Hossein, *Science and Civilization in Islam* (Cambridge: Harvard University Press, 2006), 60-80.

[12] Iqbal, Muhammad, *The Reconstruction of Religious Thought in Islam* (Lahore: Sh. Muhammad Ashraf, 1930), 50-70.

differences, and broader philosophical implications. Therefore, this study employs a qualitative research approach, focusing on textual analysis and comparative methodology. Primary sources from *Aqidah al-Najin* and classical Islamic theological texts will be examined to understand the concept of this phrases and its theological significance. Additionally, relevant works from Islamic scholars who have discussed the nature of matter and space within the framework of Kalam (Islamic theology) will be analyzed. For the scientific perspective, this study will review key theories of space in physics, including Newtonian mechanics, Einstein's theory of relativity, and quantum mechanics, using academic sources such as physics textbooks, journal articles, and scholarly interpretations. The scope of this study is limited to the conceptual analysis of space in *Aqidah al-Najin* and modern physics, without delving into mathematical formulations or experimental aspects of physics. The research does not aim to reconcile religious and scientific perspectives definitively but rather to highlight their similarities, differences, and philosophical implications. By focusing on the theological and scientific discourse surrounding space, this study contributes to a broader understanding of how different epistemological traditions conceptualize reality.

Space According to Greek Philosophy and Islamic Theology

The concept of space in Aristotle's thought does not extend as far as the modern understanding of space in physics or geometry. Aristotle viewed space as the relationship between physical objects in the universe, but his focus was more on the objects themselves rather than space as an independent entity. He regarded space as the potential to contain physical objects, rather than an entity with its own independent existence. In his works, Aristotle discussed space within the broader context of natural physics. For him, space was not considered a primary object of study but rather a part of the understanding of place (topos), where objects exist and move.[13] Aristotle distinguished between place and the objects that occupy it. Place represents the potential or capacity to accommodate physical bodies, whereas the objects

[13] Aristotle, *The Complete Works of Aristotle*, ed J. Barnes (Princeton: Princeton University Press, 1984), 205-215.

that fill that space represent actual reality. He rejected the idea of empty space or vacuum, which was proposed by atomists, as it contradicted his principles of natural physics.[14]

In his book named Physics, Aristotle explained that space cannot be separated from the objects within it. According to him, physical objects exist within a specific space and move in relation to different places in the universe. He also explored the connection between space and motion, viewing motion as a change in an object's position within space, which is inherently linked to the presence of physical bodies and their locations in the universe. Aristotle's concept of space had a significant influence on later philosophical and scientific thought, even though his ideas on space were not as developed as those in modern geometry or physics. Basically, Aristotle's understanding of space was based on the relationship between physical objects in the universe, where space was understood as a place that allows for the existence of these objects. He did not view space as an entity with independent existence or as a primary subject of study in his works.[15]

Meanwhile, in the context of Kalam (Islamic scholastic theology), the concept of space is not discussed explicitly or in as much detail as in physics or modern philosophy. Kalam primarily focuses on theological and metaphysical issues related to the attributes of Allah SWT, creation, existence, and the relationship between human will and divine will.[16] However, certain ideas or concepts related to space can be inferred or discussed in specific theological discourses within Kalam. In some contexts, Kalam explores metaphysical dimensions that go beyond human understanding of physical space and time. While it does not directly examine space as a physical dimension, it often considers the relationship between the universe (including space) and Allah SWT as its Creator and Sustainer.[17] This

[14] Sorabji, Richard, *Matter, Space, and Motion: Theories in Antiquity and Their Sequels* (Ithaca: Cornell University Press, 1988), 13.

[15] Grant, Edward, *Much Ado About Nothing: Theories of Space and Vacuum from the Middle Ages to the Scientific Revolution* (Cambridge: Cambridge University Press, 1981), 13.

[16] Frank, Richard M., "The Structure of Created Existence in Avicenna and al-Ghazali," *Studia Islamica* 47 (1978), 7-8.

[17] Wolfson, Harry Austryn, *The Philosophy of the Kalam* (Cambridge: Harvard University Press, 1976), 200-250.

perspective leads to the understanding that Allah SWT is not limited by spatial dimensions but rather created space as part of His divine creation.[18] Discussions on creation and existence in Kalam frequently address how Allah brought the universe into existence from nothingness, including space and everything within it. These discussions highlight that everything, including space, depends entirely on the will and power of Allah SWT.[19] Some scholars of Kalam, such as al-Ghazali, engaged in debates with classical Greek philosophers like Aristotle, particularly regarding the nature of space and time. Although they did not fully adopt Aristotelian views, Kalam developed rational arguments to support Islamic beliefs regarding creation and the existence of the universe as an act of divine will.[20]

Kalam also delves into causality (sebab musabab) and the relationship between cause and effect in the universe. While this discussion does not directly address physical space, it involves the understanding of how Allah SWT governs and sustains the universe, in which space is a part of the structure of creation.[21] In general, Kalam does not develop the concept of space in the same way as physics or modern philosophy. However, it provides a theological and rational foundation for understanding the relationship between divine creation, the existence of the universe, and the metaphysical nature of all things. Discussions in Kalam primarily focus on theological and metaphysical aspects concerning Allah's attributes and the creation of the universe, with the understanding that Allah SWT is the Supreme Creator who holds absolute power over everything, including space and time[22]. Ultimately, this theological perspective plays a crucial role in science, as many aspects of the universe remain unexplored and human intellect struggles to fully grasp them

[18] Ibn Taymiyyah, Ahmad, *Introduction to the Principles of Tafsir*, trans. S. Williams (Riyadh: Darussalam, 2009), 320-330.

[19] Al-Ghazali, Abu Hamid, *The Incoherence of the Philosophers*, trans. M. E. Marmura (Provo: Brigham Young University Press, 2000), 240-260.

[20] Dhanani, Alnoor, *The Physical Theory of Kalam: Atoms, Space, and Void in Basrian Mu'tazili Cosmology* (Leiden: Brill, 1994), 54-89.

[21] Grant, Edward, *Much Ado About Nothing: Theories of Space and Vacuum from the Middle Ages to the Scientific Revolution* (Cambridge: Cambridge University Press, 1981), 13.

[22] Frank, Richard M., "The Structure of Created Existence in Avicenna and al-Ghazali," Studia Islamica 47 (1978), 7-8.

without the insights provided by theological thought, such as those found in Kalam.

Concept of Matter and Space in *Aqidah al-Najin*

In *Aqidah al-Najin*, *jirim* is defined as any entity that possesses a physical existence and occupies space.[23] This concept is rooted in Islamic theological discourse, particularly in Kalam, where scholars sought to explain the fundamental nature of creation in contrast to the attributes of the Creator (al-Khaliq). According to this framework, *jirim* is distinct from *'aradh* (accidents or attributes), which refer to qualities that exist within matter but do not have independent existence. The categorization of *jirim* as an entity that takes up space aligns with the classical Islamic understanding that all created things are confined by spatial and temporal limitations.[24]

From a linguistic perspective, the phrase 'jirim mengambil lapang' implies that matter can occupy or exist within an open or empty space. However, the word 'mengambil (takes up)' suggests that this space was not necessarily empty to begin with; it may have been previously occupied by another entity, which then moved or was replaced by the new matter. The concept of space in Islamic theology is not discussed as extensively as in modern physics or philosophy. However, interpretations of space can be found in various theological discussions, differing according to schools of thought and theological perspectives.[25] In Islam, space is considered a physical dimension where objects or matter exist. This understanding aligns with human everyday experience and is not considered a primary theological issue, except in specific discussions such as the attributes of God or the creation of the universe.[26]

From an Islamic perspective, space, time, and matter are all part of God's creation. The Qur'an states that Allah SWT created the heavens and the earth (including the space within them) and

[23] Al-Jurjani, Ali, *al-Ta'rifat* (Beirut: Dar al-Kutub al-Ilmiyyah, 1983), 35.
[24] Nasafi, Abdullah, *Tafsir al-Nasafi* (Beirut: Dar Ibn Kathir, 1997), 10-30.
[25] Fakhry, Majid, A History of Islamic Philosophy (New York: Columbia University Press, 2002), 323-329.
[26] Rahman, Fazlur, *Islam and Modernity: Transformation of an Intellectual Tradition* (Chicago: University of Chicago Press, 1975), 45-60.

has complete dominion over the universe, as mentioned in Surah al-An'am (6:1):

ٱلْحَمْدُ لِلَّهِ ٱلَّذِى خَلَقَ ٱلسَّمَٰوَٰتِ وَٱلْأَرْضَ وَجَعَلَ
ٱلظُّلُمَٰتِ وَٱلنُّورَ ۖ ثُمَّ ٱلَّذِينَ كَفَرُوا۟ بِرَبِّهِمْ يَعْدِلُونَ

Translation: All praise is due to Allah, who created the heavens and the earth and made darkness and light. Yet those who disbelieve set up equals to their Lord.

This concept emphasizes that space is not an independent or self-existing entity, but rather a part of God's creation, relative in dimension and interactive with matter.[27] In Islamic theology, space is often viewed as something beyond full human comprehension. Humans can only perceive space phenomenologically that is, through their physical experience but its true essence remains elusive.[28] Scholars of Kalam (Islamic theological discourse), such as al-Ghazali and Ibn Taymiyyah, have discussed the nature of God and His relation to space, emphasizing that God is neither bound by nor contained within physical space as are created beings. In other contexts, such as metaphysics, space is linked to the concept of the afterlife or higher dimensions realities that are not constrained by physical or temporal boundaries.[29] Such perspectives suggest that there may be other dimensions of creation beyond human comprehension in this world.[30]

In theology, space is often viewed in relation to time. In pre-Islamic Arabic poetry, time (dahr) was often blamed as a force responsible for human suffering, personified as a destructive or eroding influence that symbolizes change, loss, and death.[31] The

[27] Ibn Sina, Abu Ali, *al-Shifa* (Oxford: Oxford University Press, 1027), 155-160.
[28] Wolfson, Harry Austryn, The Philosophy of the Kalam (Cambridge: Harvard University Press, 1976), 200-250.
[29] Nasr, Seyyed Hossein, *Islamic Science: An Illustrated Study* (Bloomington: World Wisdom, 2006), 45-50.
[30] Frank, Richard M, "The Structure of Created Existence in Avicenna and al-Ghazali," *Studia Islamica* 47 (1978), 7-10.
[31] Izutsu, Toshihiko, Ethico-Religious Concepts in the Qur'an (Montreal: McGill-Queen's University Press, 2002), 10-20.

motif of 'blaming time' (dhamm al-dahr) reflected a sense of defiance against the unpredictable nature of fate. From an Islamic perspective, space and time are part of God's will and power. Allah SWT created and governs all aspects of His creation, including space and time, as manifestations of His divine oneness (tawhid). However, Allah Himself is not bound by space or time rather, He created and controls both. This theological understanding reinforces that while humans exist within the limitations of space and time, God transcends these dimensions, governing them as part of His creation.[32]

In the first impossible attribute of Allah SWT under *Mumasalatu lil Hawadith* in *Aqidah al-Najin*, quoted "*Bahawa adalah Ia jirim* (that He is a material entity)", the author, Tuan Minal explains that *jirim* refers to anything that occupies space, such as stones, wood and other objects that may exist either as a collection or singularly. According to his desciption in the book:

> Dan sesungguhnya telah akan dia oleh musannif oleh musannif atas ini tertib dengan katanya:
> Translation: Indeed, the author (*musannif*) has arranged this matter in an orderly manner, as stated in his words:
>
> بِأَنْ يَكُونَ جِرْمًا: أَيْ تَأْخُذَ ذَاتُهُ الْعِلِّيَّةُ قَدْرًا مِنَ الْفَرَاغِ
>
> Ertinya: Dengan bahawa ada ia jirim, ertinya bahawa mengambil oleh zatNya yang Maha Tinggi kadar daripada lapang.
> Translation: By being a substance, that is, its exalted essence occupies a portion of space.
>
> Dan makna jirim itu tiap-tiap yang memenuhi lapang seperti batu dan kayu dan jasad sekalian binatang dan matahari dan bulan dan lainnya, sama ada jirim itu murakkab

[32] Rahman, Fazlur, *Islam and Modernity: Transformation of an Intellectual Tradition* (Chicago: University of Chicago Press, 1975), 36.

(tersusun) atau mufrad (bersendirian tidak tersusun).
Translation: The meaning of substance is anything that fills space, such as stone, wood, the bodies of living creatures, the sun, the moon, and other objects. A substance may either be composite or simple.

Dan yang murakkab itu dinamakan jisim dan yang mufrad itu dinamakan jawhar. Dan erti jisim itu yang menerima bahagi kerana bersusun ia daripada dua jawhar atau lebih. Dan makna jawhar itu yang tiada menerima bahagian akan dia seperti roh umpamanya.
Translation: A composite substance is called a body, which means something that consists of multiple parts, formed by two or more individual substances. A simple substance, which does not have divisible parts, is called a jawhar. An example of a jawhar is the soul, which does not undergo division.

Dan '**جِرْم**' itu kadar daripada lapang dan erti lapang itu iaitu barang yang antara langit dan bumi dan dinamakan dia lapang hanya sanya ia dengan sekira waham dan kerana demikian itulah dinamakan lapang mawhum, yakni disangka akan dia lapang bukan lapang sebenar-benarnya kerana antara langit dan bumi itu penuh ia dengan hawa' ghayah pekerjaannya bahawa 'hawa' itu jisim yang latif dan bermasuk-masuk setengah di dalam setengahnya apabila turun oleh jisim yang lain pada tempatnya.[33]

[33] Zainal Abidin bin Muhammad al-Fathani, Kitab ini yang Bernama Aqidatun Najin, Noraine Abu (Batu Caves: al-Hidayah Publications, 2011), 104-105.

> Translation: The term 'جِرْم' refers to a portion of space, while space itself is defined as that which exists between the heavens and the earth. However, this so-called empty space is merely a perceived emptiness, which means it is an imaginary void rather than an actual vacuum. In reality, the space between the heavens and the earth is entirely filled with air, which is a subtle substance that interpenetrates itself. When another substance enters a space, the air rearranges itself to accommodate the new matter.

The definition of occupying space is literally refering to the physical ability of the *jirim* to exist, according to the its sub-matter arrangement, either multiple (collection, *murakkab*) or single (*murad*). Space is defined as *lapang mawhum* (illusional void) which gathered all creations '*antara langit dan bumi'* (between the earth and the sky) the universe, which actually a compression and collection of *jirim* without any so-called 'empty' space. Therefore matter would not be able to be described without its physicsal existence in space, where their 'main' physicalities are based on their internal '*susunan*', the arrangement which produce the shape (form) of the *jirim*.

In *Aqidah al-Najin*, the author explains the concept of *lapang* (space or void) as follows:

> Dan فَرَاغٌ itu kadar daripada lapang dan erti lapang itu iaitu barang yang antara langit dan bumi dan dinamakan dia lapang hanyasanya ia dengan sekira *waham* (sangkaan) dan kerana demikian itulah dinamakan lapang *mauhum* yakni disangka akan dia lapang bukan lapang sebenar-benarnya kerana antara langit dan bumi itu penuh ia dengan hawa' *ghayah* pekerjaannya bahawa *hawa'* itu jisim yang *lathif* dan bermasuk-masuk setengah di

> dalam setengahnya apabila turun oleh jisim yang lain pada tempatnya.
> Translation: And emptiness is a measure of space, and the meaning of space is that which exists between the sky and the earth. It is named empty only as a matter of perception and is therefore called an imagined emptiness. This is because the space between the sky and the earth is actually filled with air, which is a subtle substance that permeates and intermingles. When another body enters this space, the air adjusts itself to accommodate the new presence.

In the passage above, Tuan Minal describes the concept of faragh as the measure of emptiness or void within the space between the sky and the earth.[34] However, he argues that this apparent emptiness is merely a construct of human perception or imagination. The term 'lapang mauhum' refers to an illusory void, suggesting that what is perceived as empty space is not truly empty. The text explains that the space between the sky and the earth is actually filled with air, which is described as *jisim lathif* a fine or subtle substance that penetrates and fills the space.[35] When another object enters this space, the air reorganizes itself to accommodate it, highlighting that air possesses a physical presence despite being invisible. This explanation rejects the idea of absolute emptiness or a true void. It aligns with the principle that all space is filled with some form of matter, even if it is as fine as air.[36] The description of air permeating objects reflects a perspective of material reality as interconnected and continuous. The contrast between perceived emptiness and actual physical presence (air) emphasizes the distinction between human perception and the true nature of reality an essential theme in

[34] Zainal Abidin bin Muhammad al-Fathani, Kitab ini yang Bernama Aqidatun Najin, Noraine Abu (Batu Caves: al-Hidayah Publications, 2011), 105.
[35] Frank, Richard M, "The Structure of Created Existence in Avicenna and al-Ghazali," *Studia Islamica* 47 (1978), 7-10.
[36] Wolfson, Harry Austryn, *The Philosophy of the Kalam* (Cambridge: Harvard University Press, 1976), 200-250.

many philosophical traditions, which stress that human perception can often be misleading[37].

The concept of *lapang mauhum* analogous to the Western notion of void has been widely discussed by early Islamic philosophers, including the renowned physicist and theologian Fakhr al-Din al-Razi.[38] Al-Razi refuted the existence of absolute emptiness or a completely empty space, arguing that what humans perceive as empty space is, in reality, not devoid of matter. He proposed that emptiness is merely an illusion, a construct of perception that does not correspond to actual reality. Al-Razi maintained that all space is perpetually filled with some form of substance, even if it is invisible to the naked eye. This substance could be air or another fine material that occupies the space. His view aligns with the belief in the interconnectedness of all physical entities, asserting that no space is truly empty it is always occupied by some form of material presence.[39] In al-Razi's perspective, air itself is a physical substance that fills space. He described it as *jisim lathif* (a fine and subtle matter) that permeates and adapts its form to accommodate objects entering the space. His rejection of the void carries significant philosophical and theological implications. It aligns with the Islamic belief that God created the universe in such a way that there are no gaps or discontinuities in creation. The continuous presence of matter in space reflects God's attribute as the Ever-Creating Being who maintains the universe in a state of ongoing existence.[40] Al-Razi's perspective also influenced the development of Islamic physics during the Golden Age of Islam. By denying the existence of absolute emptiness, he emphasized that the natural world is a continuous and interrelated entity. This view challenged earlier Greek concepts of the void, which were supported by some theologians who believed in the existence of empty space.[41]

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[37] Fakhry, Majid, *A History of Islamic Philosophy* (New York: Columbia University Press, 2002), 323-329.

[38] Al-Razi, *Fakhr al-Din, Mafatih al-Ghayb*, vol.5 (Beirut: Dar al-Kutub al-'Ilmiyyah, 1210), 205-210.

[39] Izutsu, Toshihiko, *Ethico-Religious Concepts in the Qur'an* (Montreal: McGill-Queen's University Press, 2002), 10-40.

[40] Nasafi, Abdullah, *Tafsir al-Nasafi* (Beirut: Dar Ibn Kathir, 1997), 5-20.

[41] Rahman, Fazlur, *Islam and Modernity: Transformation of an Intellectual Tradition* (Chicago: University of Chicago Press, 1975). 36.

Based on the text from *Aqidah al-Najin* and the philosophical perspectives mentioned above, the definition of *lapang* (space) can be summarized as follows:

i. *Lapang* encompasses the space between the sky and the earth (the universe).
ii. *Lapang mauhum* refers to the apparent emptiness seen by the naked eye, which appears to be devoid of any visible substance.
iii. In reality, lapang is filled with air, which is a subtle matter that is composite, intermingling and adjusting its position dynamically.
iv. *Lapang* is not truly empty it is always occupied by some form of matter, rejecting the notion of absolute void.

This perspective integrates Islamic theological views with scientific and philosophical discussions on space, offering a comprehensive understanding of existence that bridges both religious and rational insights.

Understanding the Theory of Space in Physics

Space is a dimensional field that can be characterized by its distances between coordinates in terms of height, length, width, and depth, extending infinitely and existing in direct relation to time.[42] To illustrate, a 2D sheet of paper (such as an A4 drawing) has its space defined by the x and y axes, representing its area. In contrast, in a 3D world, matter occupies volume, defined by three axes: x, y, and z. This means that the volume of a 3D object represents the space it occupies.[43] The laws of physics discuss space through various principles from classical mechanics, general relativity, and quantum mechanics. These laws describe the behavior of objects within space, the nature of space itself, and interactions within it. Some of the key theories include

[42] Hawking, Stephen, *A Brief History of Time: From the Big Bang to Black Holes* (London: Bantam Books, 1988), 23 -27.
[43] Einstein, A., *Relativity: The Special and General Theory* (Methuen & Co., 1920), 8-10.

Newton's Law of Universal Gravitation[44], Kepler's Laws of Planetary Motion[45], Einstein's Special and General Relativity[46], Quantum Mechanics[47], Hubble's Law of Cosmic Expansion[48], and Black Hole Theory[49].

Physics provides a comprehensive framework to understand space, particularly through classical mechanics, electromagnetism, relativity, and quantum mechanics.[50] In classical mechanics, space is treated as an absolute background where events occur. The concept of matter taking up space in classical physics implies that any object with mass must occupy a certain volume. Matter, composed of atoms and molecules, requires space to exist. This means that two objects cannot occupy the same space at the same time they must have their own volume.[51] This idea is further elaborated in Newtonian motion, where space acts as a three-dimensional continuum where objects exist and move.[52] According to Field Theory, the electromagnetic field permeates space, showing that space itself can carry and transmit fields, affecting charged particles even across a vacuum[53]. These theories could not have been proposed without accepting the fundamental concept of space as a medium in which matter exists and moves. In Einstein's Special Relativity, space and time are interwoven into a four-dimensional spacetime continuum. Light in a vacuum travels at a constant speed

[44] Newton, I., *Philosophiæ Naturalis Principia Mathematica*, trans A. Motte (University of California Press, 1687/1999), 240-242.

[45] Kepler, Johannes, *Astronomia Nova*, trans. W. H. Donahue (Cambridge: Cambridge University Press, 1992), 1-50.

[46] Einstein, Albert, "The Field Equations of Gravitation," *Sitzungsberichte der Preußischen Akademie der Wissenschaften* (1915), 844–847.

[47] Heisenberg, Werner, "Über den Anschaulichen Inhalt der Quantentheoretischen Kinematik und Mechanik," *Zeitschrift für Physik* 43.3–4 (1927), 172–198.

[48] Hubble, Edwin. "A Relation Between Distance and Radial Velocity Among Extra-Galactic Nebulae," *Proceedings of the National Academy of Sciences* 15.3 (1929), 168–173.

[49] Penrose, Roger, "Gravitational Collapse: The Role of General Relativity," *Rivista del Nuovo Cimento 1* (Special) (1969), 252–276.

[50] Griffiths, David J., *Introduction to Electrodynamics* (Cambridge: Cambridge University Press, 2017), 612-630.

[51] Feynman, R. P., Leighton, R. B., & Sands, M. The Feynman Lectures on Physics, Vol. 1 (Reading, MA: Addison-Wesley, 1963), 1-3.

[52] Feynman, Leighton & Sands *The Feynman Lectures on Physics*, 29.

[53] Maxwell, James Clerk, "A Dynamical Theory of the Electromagnetic Field," *Philosophical Transactions of the Royal Society of London* 155 (1865), 459–512.

regardless of the observer's movement.[54] General Relativity expands this idea by incorporating gravity, describing it as the curvature of spacetime caused by mass and energy. Large objects cause spacetime to bend, influencing the motion of other objects what we perceive as gravity.

Quantum mechanics introduces wave-particle duality, where particles at the quantum level exhibit both wave-like and particle-like properties. It also suggests that space itself has a complex structure at microscopic scales. Quantum fields permeate space, representing fundamental forces and particles, even in a vacuum.[55] The Heisenberg Uncertainty Principle implies that certain properties, such as position and momentum, cannot be simultaneously known with absolute precision, placing fundamental limits on how we describe space at the smallest scales. Observations of distant galaxies reveal that the universe is expanding, meaning that space itself is stretching. This led to the Big Bang Theory, explaining the origin of space and time. The uniform cosmic microwave background radiation provides evidence for the hot, dense state of the early universe.[56] Hypothetical dark matter and dark energy are believed to constitute the majority of the universe's mass-energy content, influencing the structure and expansion of space.[57] Some advanced theories, such as String Theory, propose that space has more than three dimensions, but these extra dimensions are compactified at minuscule scales.[58] String Theory also introduces the concept of branes (multidimensional objects) and suggests the possibility of multiple universes with different physical properties.[59]

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[54] Einstein, Albert, "On the Electrodynamics of Moving Bodies," *Annalen der Physik* 17 (1905), 891–921.

[55] Dirac, P. A. M., "The Quantum Theory of the Electron," *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences* 117.778 (1928), 610–624.

[56] Penzias, Arno A. & Robert W. Wilson, "A Measurement of Excess Antenna Temperature at 4080 Mc/s," *The Astrophysical Journal* 142 (1965), 419–421.

[57] Peebles, P. J. E, *Cosmology's Century: An Inside History of Our Modern Understanding of the Universe* (Princeton: Princeton University Press, 2019), 289.

[58] Greene, Brian, *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory* (New York: W. W. Norton & Company, 1999), 160-200.

[59] Polchinski, Joseph, *String Theory and Brane Dynamics* (Cambridge: Cambridge University Press, 2005), 350-400.

Conclusion

Despite their differences, both Islamic theology and modern physics acknowledge that space is a fundamental aspect of reality. The theological principle that *jirim* requires space aligns with the scientific understanding that physical objects exist within a spatial framework. Both perspectives also agree that space is not an independent force but rather a medium that interacts with matter. Islamic theology and modern physics approach the study of space with different methodologies. Islamic theology derives knowledge from divine revelation and rational discourse, emphasizing metaphysical principles. Physics, on the other hand, relies on empirical observation, experimentation, and mathematical models. Another key difference is that theology views space as part of the created order, whereas physics investigates space as a measurable and observable entity without necessarily invoking a creator. The Islamic theological perspective reinforces the belief that space is contingent upon divine creation, emphasizing the dependence of all existence on Allah SWT. Physics, while not denying the possibility of creation, does not inherently address metaphysical questions about why space exists. This contrast highlights the importance of interdisciplinary discourse, as both perspectives contribute valuable insights into the nature of existence.

Throughout Islamic history, scholars have debated the nature of space and matter, particularly in response to philosophical influences such as Aristotelian thought. Some argued that space is merely a relational property of matter, while others considered it an independent created entity. These debates continue to be relevant in contemporary Islamic thought. The study of space presents an opportunity for dialogue between science and theology. While physics provides models and mathematical descriptions of space, Islamic theology offers metaphysical insights into the origins and purpose of space. Engaging with both perspectives allows for a more holistic understanding of reality. As scientific discoveries continue to reshape our understanding of space, it is essential to integrate theological perspectives into these discussions. This interdisciplinary approach can help bridge the gap between

science and religion, fostering a deeper appreciation for both the empirical and metaphysical dimensions of existence.

This study has explored the concept of 'Jirim Mengambil Lapang' in *Aqidah al-Najin* and compared it to modern scientific theories of space. It has shown that while Islamic theology and physics approach space differently, both acknowledge its fundamental role in defining existence. Future research could explore how other Islamic theological traditions interpret space, or how emerging scientific theories such as quantum gravity influence philosophical discussions about space and matter. By engaging in comparative analysis, scholars can create meaningful conversations between science and religion, ensuring that both perspectives contribute to a richer understanding of the universe. This study highlights the importance of integrating theological wisdom with scientific inquiry, offering a more comprehensive view of existence.

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