



Philosophy of Science and Philosophy of Islamic Science on Definition and Object of Study

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Abstract

This research aims to analyze the concept of philosophy of science and philosophy of Islamic science by focusing on the definition and object of study. This study is motivated by the importance of a philosophical understanding of science, both in the general perspective and in the Islamic scientific tradition, as the basis for the development of integrative and holistic science. The research uses a qualitative approach with the type of library research. Data was obtained from various sources of literature, such as books, scientific journals, articles, and academic documents relevant to the research theme. The data analysis technique is carried out through content analysis to identify, classify, and interpret the main concepts related to the philosophy of science and the philosophy of Islamic science. The results of the study show that philosophy of science is a branch of philosophy that discusses the nature of science, methods of obtaining knowledge, and the validity and purpose of science. Meanwhile, the philosophy of Islamic science not only focuses on rational and empirical aspects, but also places revelation as the main source of knowledge. The object of study of philosophy of science includes ontology, epistemology, and axiology of science, while philosophy of Islamic science expands the study through the integration of spiritual values, ethics, and Islamic principles in the development of science. This research emphasizes that the philosophy of science and the philosophy of Islamic science are closely related in building a comprehensive scientific paradigm oriented towards human benefit.

Keywords: Philosophy; Islamic; Science

Abstrak

Penelitian ini bertujuan untuk menganalisis konsep filsafat ilmu dan filsafat ilmu keislaman dengan menitikberatkan pada definisi serta objek kajiannya. Kajian ini dilatarbelakangi oleh pentingnya pemahaman filosofis terhadap ilmu pengetahuan, baik dalam perspektif umum maupun dalam tradisi keilmuan Islam, sebagai dasar pengembangan ilmu yang bersifat integratif dan holistik. Penelitian menggunakan pendekatan kualitatif dengan jenis penelitian kepustakaan (library research). Data diperoleh dari berbagai sumber literatur, seperti buku, jurnal ilmiah, artikel, dan dokumen akademik yang relevan dengan tema penelitian. Teknik analisis data dilakukan melalui analisis isi (content analysis) untuk mengidentifikasi, mengklasifikasi, dan menafsirkan konsep-konsep utama yang berkaitan dengan filsafat ilmu dan filsafat ilmu keislaman. Hasil penelitian menunjukkan bahwa filsafat ilmu merupakan cabang filsafat yang membahas hakikat ilmu pengetahuan, metode memperoleh ilmu, serta validitas dan tujuan ilmu. Sementara itu, filsafat ilmu keislaman tidak hanya berfokus pada aspek rasional dan empiris, tetapi juga menempatkan wahyu sebagai sumber utama pengetahuan. Objek kajian filsafat ilmu mencakup ontologi, epistemologi, dan aksiologi ilmu, sedangkan filsafat ilmu keislaman memperluas kajian tersebut melalui integrasi nilai-nilai spiritual, etika, dan prinsip-prinsip keislaman dalam pengembangan ilmu pengetahuan. Penelitian ini menegaskan bahwa filsafat ilmu dan filsafat ilmu keislaman memiliki keterkaitan yang

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erat dalam membangun paradigma keilmuan yang komprehensif dan berorientasi pada kemaslahatan manusia.

Kata Kunci: Filsafat; Ilmu; Keislaman

INTRODUCTION

Science has a very important role in the development and progress of human civilization. Through science, humans are able to understand various life phenomena and create innovations that support the ease of life.¹ In the process of acquiring this knowledge, humans are inseparable from the scientific dynamics known as epistemology, which is a branch of philosophy that discusses the essence, sources, methods, and validity of knowledge.² The study of epistemology occupies an important position in philosophy, especially modern philosophy, because it is the basis for understanding how knowledge is acquired and developed rationally and systematically.³ Thus, the fundamental question of "how man knows" becomes one of the main focuses in the philosophy of science.

In the history of philosophical thought, the question of knowledge has been a concern of philosophers since the time of Ancient Greece. Plato, for example, views knowledge as the process of recalling ideas that have existed before in the human psyche.⁴ This view shows that knowledge is not only understood as the result of empirical experience, but also related to the rational ability of humans to understand reality.⁵ Therefore, philosophy exists as a discipline that seeks to answer various fundamental questions about human nature, knowledge, and the reality of life.⁶ Nevertheless, philosophy is often seen as a complex, abstract, and elusive discipline. Some students consider that philosophy only requires the ability to think critically and deeply so that studying it is considered confusing and intellectually exhausting.⁷ This view causes philosophy to be less in demand and comprehensively understood. In fact, philosophy has made a great contribution to the development of modern science.⁸ Historically, philosophy

¹ Sang M. Lee and Silvana Trimi, "Innovation for Creating a Smart Future," *Journal of Innovation & Knowledge* 3, no. 1 (2018): 1–8, <https://doi.org/10.1016/j.jik.2016.11.001>.

² Abdeljalil Métioui, "Pre-Service Secondary Science Teachers and the Contemporary Epistemological and Philosophical Conceptions of the Nature of Science: Scientific Knowledge Construction Through History," *Metrics* 2, no. 2 (2025): 7, <https://doi.org/10.3390/metrics2020007>.

³ Ben Martin, *The Epistemology of Logic*, 1st ed. (Cambridge University Press, 2025), <https://doi.org/10.1017/9781009319881>.

⁴ Dung Bui Xuan, "Plato's Philosophy and Its Influence on Western Philosophy Today," *Futurity Philosophy* 4, no. 1 (2025): 86–110, <https://doi.org/10.57125/FP.2025.03.30.06>.

⁵ Kathia Castro Laszlo and Alexander Laszlo, "Evolving Knowledge for Development: The Role of Knowledge Management in a Changing World," *Journal of Knowledge Management* 6, no. 4 (2002): 400–412, <https://doi.org/10.1108/13673270210440893>.

⁶ Amjad Almusaed et al., "Philosophical Foundations of Research," in *Practice of Research Methodology in Civil Engineering and Architecture*, by Amjad Almusaed et al. (Springer Nature Switzerland, 2025), https://doi.org/10.1007/978-3-031-97393-2_6.

⁷ Almusaed et al., "Philosophical Foundations of Research."

⁸ Jakub Płoski and Bartłomiej Uzar, "Report on the Conference 'Philosophy and Christianity. Past – Present – Future,'" Institute of Philosophy, Cardinal Stefan Wyszyński University in Warsaw, Warsaw, 12-13 June 2025," *Studia Philosophiae Christianae* 61, no. 2 (2025): 285–305, <https://doi.org/10.21697/spch.2025.61.S.03>.

has been the source of the birth of various disciplines so that it is known as the mother of knowledge or the mother of all sciences.⁹

The development of philosophy is also inseparable from various historical challenges. In the Middle Ages, philosophical thought came under pressure from church authorities that restricted the freedom of rational thought.¹⁰ Thoughts that were considered contrary to church doctrine were often punished, so the period became known as the dark age. Nevertheless, philosophy continued to develop and gave birth to various major changes in the world of science. The change in human mindset from mythocentric to logocentric became an important point for the birth of modern sciences based on rationality and scientific observation. The progress of science that has developed to date shows the close relationship between philosophy and science.¹¹ Various scientific discoveries, such as the laws of nature, the development of astronomy, biology, sociology, and information technology, are the result of the development of rational thinking rooted in philosophy. Natural phenomena that were once considered supernatural forces can now be explained scientifically through rational and empirical approaches.¹² Even the development of technology in the modern era and the industrial revolution 4.0 increasingly shows that philosophy has an important role in building a critical and systematic thinking foundation that supports the advancement of science and technology.

Nevertheless, criticism of philosophy still continues to emerge. Some people consider that philosophy has no practical benefit because it does not directly teach technical skills in everyday life.¹³ Louis Kattsoff, for example, criticized philosophy as a discipline that is incapable of providing practical guidance in creating technology or improving human standards directly.¹⁴ However, the main goal of philosophy is not to produce technical products, but to build a critical, systematic, and deep framework of thinking in understanding the nature of knowledge and life. Philosophy functions to criticize, assess, and organize knowledge in an orderly manner so that humans can obtain a correct and wise understanding in acting.

⁹ Nunung Masrurroh and Amril M. Amril M, "Philosophical and Sociological Background of the Integration of Religion and Science," *Belantika Pendidikan* 8, no. 1 (2025): 12–23, <https://doi.org/10.47213/bp.v8i1.428>.

¹⁰ Mykhailo Minakov, "FREEDOM AND PROGRESS AT THE DAWN OF THE AGE OF WILL:," *Ideology and Politics Journal (IT)* 27, no. 1 (2025): 97–144, <https://doi.org/10.36169/2227-6068.2025.01.00005>.

¹¹ Wencheng Liu et al., "The Contributions of Philosophy of Science in Science Education Research: A Literature Review," *Science & Education* 34, no. 3 (2025): 1203–22, <https://doi.org/10.1007/s11191-023-00485-w>.

¹² Ikechukwu Michael Oluikpe, "Beyond Science: A Look at the Biblical Christian View of the Supernatural," *Journal of Research on Christian Education* 28, no. 2 (2019): 193–209, <https://doi.org/10.1080/10656219.2019.1631235>.

¹³ Thao Van Vi, "Critical Thinking and Digital Adaptation in Philosophy Teaching: An Innovative Model to Develop Students' Soft Skills in the Context of Digital Transformation," *SN Social Sciences* 5, no. 11 (2025): 205, <https://doi.org/10.1007/s43545-025-01236-0>.

¹⁴ Louis O. Kattsoff and Morris Lazerowitz, "The Structure of Metaphysics.," *Philosophy and Phenomenological Research* 17, no. 3 (1957): 419, <https://doi.org/10.2307/2104149>.

Previous research on the philosophy of science and the philosophy of Islamic science has been carried out by many academics with various study focuses. Several studies have focused on the discussion of epistemology as the basis for scientific development. The research explains that epistemology has an important role in determining the sources, methods, and validity of knowledge so that it becomes the main foundation in the development of modern science. This study shows that philosophy of science not only discusses theoretical aspects, but also provides a critical and systematic framework for thinking about reality.¹⁵ In addition, there is research that discusses the relationship between philosophy and science in a historical perspective. The research explains that philosophy is the mother of all branches of science because at the beginning of its development all disciplines were born from philosophy.¹⁶ The results of the study show that the change in human mindset from mythocentric to logocentric is the starting point for the development of modern science. This research also emphasizes that the development of science cannot be separated from the role of philosophy as the basis for rational and critical thinking.

Another study examines the philosophy of Islamic science as an integrative paradigm between revelation and ratio. The study explains that the philosophy of Islamic science not only makes reason and empirical experience as a source of knowledge, but also places revelation as the main source in obtaining the truth.¹⁷ This research emphasizes the importance of integrating spiritual values and Islamic ethics in the development of science so that science is not only oriented to material aspects, but also to the benefit of humans as a whole.¹⁸ Furthermore, several studies also discuss students' perception of philosophy as a discipline that is considered difficult and abstract. The results of the study show that the low interest of students in philosophy is caused by the assumption that philosophy only contains complicated thoughts and has little practical benefits in daily life.¹⁹ Nevertheless, the study confirms that philosophy has a great contribution in shaping the critical, analytical, and reflective mindset that is indispensable in the development of science and social life.

Based on some of these previous researches, it can be seen that the study of the philosophy of science and the philosophy of Islamic science still has strong relevance for further research. The difference between this research and the previous research lies in the

¹⁵ Hanne Andersen, "Collaboration, Interdisciplinarity, and the Epistemology of Contemporary Science," *Studies in History and Philosophy of Science Part A* 56 (April 2016): 1–10, <https://doi.org/10.1016/j.shpsa.2015.10.006>.

¹⁶ Refet Ramiz, "New Perspective for the Philosophy of Education: Education Components, Education System Administration, Ideal Education Construction, and Engineering Education," *Philosophy Study* 15, no. 6 (2025): 373, <https://doi.org/10.17265/2159-5313/2025.06.005>.

¹⁷ Subhan Subhan, "Epistemology of Knowledge in the Perspective of the Quran," *Journal of Social Research* 5, no. 1 (2025): 34–45, <https://doi.org/10.55324/josr.v5i1.2929>.

¹⁸ Dahlia Bonang et al., "Islamic Worldview and the Green Economy: A Philosophical Nexus for Sustainability and Equity," *International Journal of Ethics and Systems*, February 16, 2026, 1–25, <https://doi.org/10.1108/IJOES-01-2025-0047>.

¹⁹ Frantz Rowe, "Being Critical Is Good, but Better with Philosophy! From Digital Transformation and Values to the Future of IS Research," *European Journal of Information Systems* 27, no. 3 (2018): 380–93, <https://doi.org/10.1080/0960085X.2018.1471789>.

focus of the study which specifically analyzes the definition and object of study of the philosophy of science and the philosophy of Islamic science comprehensively. Thus, this research is expected to make a scientific contribution in enriching the understanding of the relationship between philosophy, science, and Islamic values in the development of modern scientific paradigms.

RESEARCH METHOD

This research uses a qualitative approach with the type of library research. The qualitative approach was chosen because this research aims to understand and analyze the concepts of philosophy of science and the philosophy of Islamic science in depth, especially related to the definition and object of study.²⁰ Literature research is carried out by collecting various relevant literature sources, such as books, scientific journals, academic articles, and other scientific documents that discuss the philosophy of science and the philosophy of Islamic science.²¹ The data sources in this study consist of primary data and secondary data. Primary data is obtained from scientific works that directly discuss the concept of philosophy of science and philosophy of Islamic science, while secondary data is obtained from supporting literature that is related to the research theme. The data collection technique is carried out through documentation studies by reading, recording, identifying, and classifying various information in accordance with the focus of the research.

The data analysis technique in this study uses content analysis. The analysis is carried out systematically through several stages, namely data reduction, data presentation, and drawing conclusions.²² In the data reduction stage, the researcher selects and focuses data that is relevant to the object of study. Furthermore, the data is presented in a descriptive-analytical manner to facilitate the interpretation process. The last stage is carried out by drawing conclusions based on the results of analysis of the concepts of philosophy of science and philosophy of Islamic science. To maintain the validity of the data, this study uses the source triangulation technique by comparing various relevant references so that a more objective and comprehensive understanding is obtained. With this method, this research is expected to be able to produce a systematic, in-depth, and academically accountable scientific study.²³

RESULTS AND DISCUSSION

The Denial of the Polytheists on the Day of Resurrection and the Objection Against Them

The philosophy of science and the philosophy of Islamic science are closely related in discussing the nature of knowledge, the source of knowledge, the method of obtaining

²⁰ Patrik Aspers and Ugo Corte, "What Is Qualitative in Qualitative Research," *Qualitative Sociology* 42, no. 2 (2019): 139–60, <https://doi.org/10.1007/s11133-019-9413-7>.

²¹ Hannah Snyder, "Literature Review as a Research Methodology: An Overview and Guidelines," *Journal of Business Research* 104 (November 2019): 333–39, <https://doi.org/10.1016/j.jbusres.2019.07.039>.

²² Hani Morgan, "Conducting a Qualitative Document Analysis," *The Qualitative Report*, ahead of print, 2022, <https://doi.org/10.46743/2160-3715/2022.5044>.

²³ Morgan, "Conducting a Qualitative Document Analysis."

knowledge, and the validity of knowledge.²⁴ In the study of the philosophy of science, epistemology is understood as a branch of philosophy that discusses the theory of knowledge. Etymologically, epistemology comes from the Greek word *episteme* which means knowledge and *logos* which means science or theory.²⁵ Terminologically, epistemology is the study of the origin, structure, method, and validity of knowledge. Through epistemology, knowledge can be tested for its truth so that it is recognized as a legitimate and systematic science.²⁶ The opposite of epistemology is *doxa*, which is a belief that is accepted without rational or empirical proof. In the Islamic scientific tradition, there is no known dichotomy between religious science and general science because all science is basically sourced from the Qur'an and hadith. However, when Islamic civilization interacted with the Greek philosophical tradition, there was a process of intellectual dialectic that gave birth to Islamic philosophy. Islamic philosophy developed through the fusion of Greek thought and Islamic scientific traditions, especially *kalam*. In this context, the term philosophy comes from the Greek word *philosophia* which means love of wisdom, while in the Islamic tradition the term is equated with the concept of wisdom.²⁷

The development of Islamic philosophy was heavily influenced by the thought of Plato and Aristotle. Plato represents a pattern of idealism that emphasizes reason as the primary source of knowledge, while Aristotle represents empiricism that recognizes sensory experience as the basis of knowledge. Plato's thought influenced Al-Farabi and Ibn Sina, while Aristotle exerted a great influence on Ibn Rushd. According to Plato, knowledge is obtained through intellectual reflection on metaphysical reality that is fixed and universal.²⁸ He rejects knowledge that comes only from the senses because it is considered uncertain and capricious. On the contrary, Aristotle was of the view that empirical experience is the main basis for acquiring knowledge so that man cannot understand universal concepts without sensory experience. The interaction between Greek philosophy and Islamic thought gave rise to a debate about the relationship between philosophy and sharia.²⁹ Some Islamic thinkers place sharia above philosophy, such as Imam al-Ghazali, while others place philosophy as the main source of knowledge. On the other hand, there has emerged a group of Muslim thinkers such as Al-Kindi, Al-Farabi, and Ibn Sina who seek to reconcile philosophy and sharia through an

²⁴ Arwani Amin Moh. Miftakhul Huda, *A Qur'anic Epistemology of Anxiety: Reconstructing Islamic Psychology Through Ibn Qayyim Al-Jawziyya's Exegetical Framework*, November 15, 2025, <https://doi.org/10.5281/ZENODO.18505681>.

²⁵ Muhammad Daffa and Agus Himmawan Utomo, "ISLAMIC EPISTEMOLOGY IN THE THOUGHT OF ḤASAN ḤANAFĪ AND FAZLUR RAHMAN ON THE GENEALOGY OF ḤADĪTH," *Kanz Philosophia: A Journal for Islamic Philosophy and Mysticism* 11, no. 1 (2025): 191–212, <https://doi.org/10.20871/kpjipm.v11i1.415>.

²⁶ Adnan Adnan et al., "Science, Religion, and Religious Moderation in Al-Ghazali's Thought," *Journal of Islamic Thought and Philosophy* 5, no. 1 (2026): 1–23, <https://doi.org/10.15642/jitp.2026.5.1.1-23>.

²⁷ Adnan et al., "Science, Religion, and Religious Moderation in Al-Ghazali's Thought."

²⁸ Adil Hassan Abdelrhman Alagab, "The Philosophical Methodology of Aristotle and Al-Kindi: A Comparative Study," *South Asian Research Journal of Humanities and Social Sciences* 7, no. 01 (2025): 35–41, <https://doi.org/10.36346/sarjhss.2025.v07i01.010>.

²⁹ Azmi Putri Ayu Wardani and Achmad Khudori Soleh, "Evolusi Filsafat Islam: Menjembatani Kearifan Kuno Dan Pemikiran Kontemporer," *Aqlania* 15, no. 1 (2024), <https://doi.org/10.32678/aqlania.v15i1.10584>.

integrative approach between revelation and ratio.³⁰ This approach shows that the philosophy of Islamic science is not only rational, but also recognizes revelation as an important source of knowledge.

Islamic epistemology develops in three main models as proposed by Abid al-Jabiri, namely the epistemology of bayani, burhani, and irfani. Bayani epistemology is a model of knowledge that relies on the text (nas) as the main source of knowledge.³¹ This model develops in the Islamic scientific tradition through disciplines such as fiqh, tafsir, hadith, nahwu, and kalam. Bayani epistemology emphasizes the understanding of texts based on linguistic rules and sharia authority so that reason functions as a tool in understanding the text, not as the main source of knowledge. The epistemology of bayani developed historically in tandem with the development of the Arabic language and the Islamic intellectual tradition. Imam Shafi'i became one of the important figures in the development of bayani epistemology through the concept of bayan which includes the Qur'an, sunnah, qiyas, and ijma'. In its development, Al-Jahizh developed the concept of bayani not only as a method of understanding the text, but also as a method of communication and argumentation in conveying understanding to the community. Thus, bayani epistemology developed into a systematic method of thinking in understanding, interpreting, and explaining religious texts.

Bayani, Burhani dan Irfani

The philosophy of Islamic science has a distinctive epistemological pattern through the burhani and irfani approaches as part of the Islamic knowledge system. From the perspective of the philosophy of science, burhani epistemology is a model of knowledge that comes from empirical realities, both natural, social, and human, which are obtained through the activity of the senses and intellect. Terminologically, burhan means a strong and clear argument. In the logical tradition, burhani epistemology is understood as the intellectual activity of proving the truth of a proposition through a rational and deductive approach. Thus, burhani knowledge is obtained through logical analysis, empirical observation, research, experimentation, and scientific proof.

Burhani epistemology strongly emphasizes the role of reason as the main instrument in acquiring knowledge. According to Abed al-Jabiri, reason in burhani epistemology is divided into two forms, namely *al-'aql al-mukawwin* (active reason) and *al-'aql al-mukawwan* (dominant reason).³² Active reason is the universal ability of man to understand cause-and-effect relationships and to draw general principles from reality. The dominant reason is a system of thought formed by certain traditions and rules in society. This research shows that burhani epistemology develops strongly in the philosophical tradition of Aristotle which

³⁰ Akmal Vadly, "Religion and Philosophy in Dialogue: Reinterpreting the Eastern Peripatetic Synthesis of Reason and Revelation," *Aqlania* 16, no. 2 (2025), <https://doi.org/10.32678/aqlania.v16i2.86>.

³¹ Ibrahim Siregar and Suheri Sahputra Rangkuti, "Universalism of Islamic Scholarly Tradition: New Directions for Islamic Studies," *Islam Transformatif: Journal of Islamic Studies* 7, no. 2 (2023): 202, <https://doi.org/10.30983/it.v7i2.8050>.

³² Mohamad Anas, "EXPOSING THE NATURE OF ARAB ISLAMIC REASONING AND ITS INFLUENCE TOWARD INDONESIA (Experiment of the Approach of M. Abed al-Jabiri's Post Structuralism)," *Analisa: Journal of Social Science and Religion* 4, no. 01 (2019): 39–58, <https://doi.org/10.18784/analisa.v4i01.826>.

prioritizes ratios and empirical experience as the main source of knowledge. Burhanipistemology views knowledge as the result of the interaction between sensory experience and human rational ability. In this view, a truth does not depend entirely on the text of revelation, but can be proven through observation, experiment, and logical analysis. Burhani knowledge gave birth to a scientific tradition that developed in the fields of natural, social, and humanities. Therefore, burhani epistemology is an important basis for the development of modern science that is rational and empirical.

Al-Ghazali's thinking also makes an important contribution to the discussion of epistemology through the concept of reason. According to Al-Ghazali, reason is human nature which is the source and basis of science.³³ Reason functions to understand reality and distinguish between right and wrong. In this perspective, reason is seen as the main means of acquiring knowledge, although it still requires the guidance of revelation so as not to be separated from divine values. In addition, Ibn Rushd places great emphasis on the function of ratios in understanding reality. According to him, the human mind has the ability to understand the laws of nature and the content of revelation rationally. Ibn Rushd divided reason into several levels, namely *active intellect*, *receptive intellect*, and *theoretical and practical intellect*. This thinking shows that the philosophy of Islamic science does not reject rationality, but rather places reason as an important instrument in understanding the essence of knowledge.

Irfani pistemology is a model of knowledge that comes from the heart, intuition, and spiritual experience. Irfani knowledge is not obtained through rational analysis or sensory experience, but through the process of purification of the soul and self-approach to God.³⁴ In irfani epistemology, knowledge is obtained through *kasyf* or the revelation of the essence of reality directly by Allah to humans who have spiritual closeness. Therefore, irfani knowledge emphasizes more on the inner and spiritual dimensions in obtaining the truth. Proses to acquire irfani knowledge takes place through several stages, namely preparation, acceptance, and disclosure. The preparation stage is carried out through purification of the soul, self-control, and spiritual practice. The acceptance stage occurs when a person acquires an abundance of knowledge intuitively, while the disclosure stage is carried out through the transmission of the spiritual experience in oral and written form. Thus, the epistemology of irfani developed strongly in the tradition of Sufism and Islamic spirituality.

In addition to the epistemological model, the philosophy of Islamic science recognizes three main instruments of knowledge, namely the intellect, the senses, and the heart. Reason becomes the main instrument in bayani and burhani epistemology through the process of rational analysis and interpretation of texts. The senses function to acquire empirical knowledge through direct experience of natural and social realities. Meanwhile, the heart is the main instrument in irfani epistemology which produces intuitive knowledge through the

³³ Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia et al., "The Truth on Al-Ghazali Perspective," *International Journal of Innovative Research in Multidisciplinary Education* 02, no. 09 (2023), <https://doi.org/10.58806/ijirme.2023.v2i9n10>.

³⁴ Himyari Yusuf et al., "Integrative-Multidimensional Science Paradigm: A Perspective of Islamic Epistemology," *Journal of Islamic Studies and Humanities* 4, no. 1 (2019): 1–27, <https://doi.org/10.21580/jish.41.4181>.

process of purification of the soul (*tazkiyatun nafs*).³⁵ Muslim philosophers have made great contributions to the development of Islamic philosophy. Al-Kindi divides knowledge into divine knowledge and human knowledge. Divine knowledge comes from revelation, whereas human knowledge is obtained through the senses and reason. Al-Kindi also explained that human knowledge consists of sensory, rational, and intuitive knowledge (*isyraqi*).³⁶ Thus, Al-Kindi became an early figure who sought to integrate revelation and ratio in the Islamic philosophical tradition.

Al-Farabi developed the concepts of theoretical philosophy and practical philosophy. Theoretical philosophy includes mathematics, physics, and metaphysics, while practical philosophy includes ethics, politics, jurisprudence, and kalam science. Al-Farabi also developed a theory of emanation that explains the relationship between God, reason, and the process of human knowledge.³⁷ In his view, man acquires knowledge through the development of intellect from the potential stage to actual intellect and acquired intellect with the help of active intellect. Meanwhile, Ibn Sina made an important contribution through the division of philosophy into theoretical philosophy and practical philosophy. Theoretical philosophy according to Ibn Sina includes physics, mathematics, and metaphysics, while practical philosophy includes ethics, family, and politics. Ibn Sina emphasizes metaphysics as the highest study in philosophy because it is related to the essence of form and divinity (*obligatory al-wujud*). Ibn Sina's thought shows the integration between philosophical rationality and the spiritual dimension in the philosophy of Islamic science.³⁸ The philosophy of science and the philosophy of Islamic science have the same object of study, namely knowledge and how to obtain it. However, the philosophy of Islamic science has integrative characteristics because it combines revelation, ratios, empirical experience, and spiritual intuition in building a system of knowledge. Thus, the philosophy of Islamic science not only places reason as the main instrument of science, but also recognizes the role of revelation and the heart in understanding the essence of truth as a whole.

CONCLUSION

Based on the results of the research, it can be concluded that the philosophy of science and the philosophy of Islamic science have a close relationship in examining the essence of knowledge, the source of knowledge, the method of obtaining knowledge, and the validity of knowledge. The philosophy of science serves as a foundation for critical and systematic

³⁵ M. Fadli Al Azhari and Athok Fuadi, "Intuition as an Epistemological Foundation in Islamic Educational Management: A Systematic Literature Review," *Jurnal At-Tarbiyat: Jurnal Pendidikan Islam* 9, no. 1 (2026): 138–50, <https://doi.org/10.37758/jat.99i1.431>.

³⁶ Muh Ibnu Sholeh et al., "The Relevance of Educational Thoughts by Al-Kindi, Al-Farabi, and Ibn Sina in Contemporary Context," *International Journal of Indonesian Philosophy & Theology* 6, no. 1 (2025): 35–47, <https://doi.org/10.47043/ijipth.v6i1.82>.

³⁷ Zein Muchamad Masykur, "Comparative Epistemology of Al-Farabi and Al-Kindi in the Contextualization of Modern Knowledge," *Journal of Indonesian Islamic Studies* 4, no. 2 (2025): 90–109, <https://doi.org/10.24256/jiis.v4i2.6513>.

³⁸ Azharida Chaniago and Restu Arya Saputri, "Integrasi Rasionalitas Dan Spiritualitas: Kajian Komparatif Pemikiran Pendidikan Ibnu Sina Dan Aristoteles," *AJIRSS: Asian Journal of Innovative Research in Social Science* 4, no. 3 (2025): 170–76, <https://doi.org/10.53866/ajirss.v4i3.1036>.

thinking in understanding the truth, while the philosophy of Islamic science integrates ratios, empirical experiences, revelation, and spiritual intuition as sources of knowledge. Thus, the philosophy of Islamic science is not only rational and empirical, but also theocentric and spiritual. This research shows that the development of Islamic philosophy is influenced by the interaction between the Islamic intellectual tradition and Greek philosophy, especially the thought of Plato and Aristotle. This influence gave birth to various epistemological patterns in Islam which later developed through the thought of Muslim philosophers such as Al-Kindi, Al-Farabi, Ibn Sina, Al-Ghazali, and Ibn Rushd. These figures sought to build an integration between philosophy and sharia so that a comprehensive Islamic scientific tradition was born.

The results of the study also confirm that Islamic epistemology consists of three main models, namely bayani, burhani, and irfani. Bayani epistemology places the text of revelation as the main source of knowledge, burhani epistemology emphasizes emphasical ratios and empirical experience, while irfani epistemology emphasizes intuition and spiritual experience. The three epistemological models show that the philosophy of Islamic science has an integrative character that combines rational, empirical, and spiritual dimensions in obtaining truth. In addition, this study found that the main instruments of knowledge in the philosophy of Islamic science include the intellect, senses, and heart. The intellect is used to think rationally and logically, the senses are used to obtain empirical experience, while the heart functions to acquire intuitive knowledge through purification of the soul and a spiritual approach to God. Therefore, the philosophy of Islamic science provides a holistic view of science because it not only places humans as rational beings, but also as spiritual beings.

Thus, the philosophy of Islamic science can be understood as a system of thought that seeks to integrate revelation and reason in building a comprehensive tradition of science. The existence of Islamic philosophy is important in the development of modern science because it is able to present a balance between scientific, moral, and spiritual dimensions in human life.

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