

FUNDAMENTALS OF THE SCIENCE PHILOSOPHY: FROM ANCIENT GREECE TO ISLAMIC PHILOSOPHY

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Abstract

This study aims to examine the fundamentals of the science philosophy from ancient Greece to Islamic philosophy in a comprehensive and in-depth manner. The type of research used in this research is library research. This research is a descriptive research, because it focuses on a systematic explanation of the facts obtained during the literature and literature review. Researchers used content analysis techniques. Because this research discusses in depth the content of written or printed information in books, journals, and mass media as well as other relevant library materials. This research study concludes that the philosophy of science is a branch of philosophical knowledge that examines the differences in the characteristics of the types of science from one another and the various procedures that must be carried out scientifically and what must be done in obtaining a scientific explanation and whether the theory can be applied, taken as a concept. There are three basics of philosophy of science in Ancient Greece, namely, ontology, epistemology and axiology. The ontology of Islamic science can be concluded that the object of science in the view of Islam includes something material and non-material, phenomena and non-phenomena, and there are even forms that, let alone seen, are known to humans. The unseen form whose details are not known is also the object of study of the Islamic sciences. In the perspective of Islamic epistemology, the sources of knowledge consist of the Qur'an, hadith, the five senses and reason. In the perspective of Islamic axiology, the purpose of science is to know the Creator and submit to Allah.

Keywords: Ontology, epistemology, axiology, Ancient Greek philosophy and Islamic philosophy

Introduction

Since the presence of humans on this earth, in fact they had knowledge as a driving force for their lives to survive and carry out the sustainability of their generations to this day (Fadholi et al., 2020). Scientific understanding is indeed very limited to the human mind. In a religious perspective, knowledge comes from the *Khaliq* (Purwanto et al., 2020). When God wanted to create humans, of course God has equipped humans with minds to study and conduct research in the world. Likewise, the eyes of the heart and feelings to respond, judge, choose and make the right decisions (Hafidz, 2021).

Based on this, in essence, humans in themselves have the potential to have philosophy and knowledge. Philosophy and science are two interrelated words, both substantially and historically because the birth of science cannot be separated from the role of philosophy, and on the other hand the development of science will strengthen the existence of philosophy (Jang, 2018). Philosophy has succeeded in changing the thought patterns of the Greeks and mankind from a mythcentric view to a logocentric view. Initially the Greeks and other nations in the world thought that all events in nature were influenced by the gods (Still, 2012). Therefore the gods must be respected and at the same time feared and then worshiped. With philosophy, the mindset that always depends on the gods is

changed to a mindset that depends on the ratio (Aziz, 2018). The change from a mythcentric to a logocentric mindset has no small implications. This is feared and then approached and even exploited. The fundamental change is the discovery of natural laws and scientific theories that explain the changes that occur, both in the universe (macro-cosmos) and human nature (micro-cosmos) (Spears, 1996). From the study of the universe, astronomy, cosmology, physics, chemistry, and so on emerged, while from humans emerged the sciences of biology, psychology, sociology and so on. These sciences then become more specialized in a smaller form and at the same time more applicable and useful (Lestari et al., 2021).

With the passage of time, science is growing from time to time. Of course the development of science is also very impactful in human life both positively and negatively (Musthofiyah et al., 2021). Starting from this, the philosophy of science becomes the philosophical foundation for the birth, growth and development of science that It is not surprising that in contemporary developments, almost all branches of science have used critical analysis of the philosophy of science with great enthusiasm (Adinugraha, Din, et al., 2021). The philosophy of science invites us, especially intellectuals, scholars, academics and scientists to always look at all forms of science with an open perspective: open to criticism, testing, research, and questioning its relevance and significance for people's lives (Adinugraha & Muhtarom, 2021).

So this is one of the factors that causes the philosophy of science material to be loved by academics, both lecturers and students. Philosophy of science courses are not only taught in public universities but are also taught in almost all Islamic religious universities such as State Islamic University, State Islamic Institute, State Islamic College and other universities including UIN Walisongo Semarang (Adinugraha et al., 2018). This simple paper wants to highlight the basics of the philosophy of science both from the perspective of ancient Greece and the perspective of Islam.

Philosophy and the Philosophy of Science: An Introduction

Getting to know philosophy

Before we study more about the philosophy of science, then we must know the meaning of philosophy itself because all science leads to philosophy (Wu, 1986). Understanding philosophy can be viewed from two aspects, namely: Etymological aspects: Etymologically, the term philosophy comes from the Greek, *Philosophia*. The word *philosophia* is a compound word consisting of two words, namely *Philos* and *Sophia*. If the word *Philos* means love, then the word *Sophia* means wisdom, wisdom and can also mean knowledge. So literally, philosophy means loving wisdom. Meanwhile, subjects who love wisdom in classical Greek tradition are called *philosophos* (or philosophers in Indonesian) (Abdullah, 2021). However, in the classical Greek tradition, the scope of the meaning of the word *shopia* turned out to be very broad. At that time, *shopia* did not only mean wisdom, wisdom, or knowledge, but also included the first truth, broad knowledge, intellectual virtue, sound judgment to the craftsmanship of craftsmen, and even ingenuity in deciding practical questions (De Haro, 2020).

Terminological Aspect: The understanding of philosophy in terminology is very diverse, both in terms of expression and point of emphasis. Even Moh. Hatta and Langeveld said that the definition of philosophy does not need to be given because everyone has their own pressing point in their definition. Therefore, let someone research philosophy first and then draw their own conclusions. Among the definitions of philosophy put forward by Western and Islamic thinkers as well as thinkers from the homeland are as follows:

First, Plato (427-347 BC) said philosophy is knowledge of all that exists, philosophy is science that can fulfill the desires of those who are interested in achieving the real truth (Buckels, 2020). Second, Aristotle (384-322 BC), a student of Plato, said that philosophy studies the causes and principles of all things. Philosophy is a science that includes the truth contained in it the science of metaphysics, logic, rhetoric, ethics, economics, politics, and aesthetics (Setiya, 2021). Third, Descartes (1590-1650), philosophy is a collection of all sciences in which God, nature, and man are the main subjects of investigation (Acharya, 2018). Fourth, Immanuel Kant (1724-1804), philosophy is a science which is the principal and base of all knowledge which includes metaphysics, ethics, religion and

anthropology (Pomerleau, 2013). Fifth, al-Farabi who died in 950 AD, he was the greatest Muslim philosopher before Ibn Sina who stated that philosophy is the science of nature that exists and aims to investigate the true nature (Pratama, 2018). Sixth, Harun Nasution, philosophy is thinking according to order (logic) freely (not bound by tradition, dogma, or religion) and as deeply as possible so that it gets to the bottom of the problem (Ashari, 2020).

From the various views on the definition of philosophy above, it can be concluded that the essence of philosophy is the study of philosophy about a particular object that relies on deep/radic thinking by using skeptical and dialectical laws to give birth to a science that bases its object on God, nature and humans.

Getting to know philosophy of science

After we know briefly the definition of philosophy, we will examine further the philosophy of science itself. The dimension of philosophy may be the same as the dimension of science, but the point of view is different. Philosophy and science are urgent and necessary because they complement each other (Ivlev et al., 2019). In general, the philosophy of science can be understood from two sides, namely as a scientific discipline and as a philosophical foundation for the scientific process. As a scientific discipline, philosophy of science is a branch of philosophy that discusses a special object, namely science that has certain characteristics and characteristics that are almost the same as philosophy in general. Meanwhile, the philosophy of science as the philosophical foundation for the scientific process is the basic framework of the scientific process itself (Popov, 2019).

Many definitions of the philosophy of science put forward by scientists and philosophers, including:

Jerome R. Ravetz: Philosophy of science tries to explain the elements involved in the scientific research process, namely observational procedures, argument patterns, methods of presentation and calculation, metaphysical presuppositions and so on. Then evaluate the basis of its validity from the point of view of formal logic, practical methodology and metaphysics.

Robert Ackerman: Philosophy of science in a sense is a critical review of current scientific opinion with comparisons to past opinions have been proven or within the framework of criteria developed from such opinions, but philosophy of science is clearly not an independent branch of science from actual scientific practice.

Lewis While Beck: Philosophy of science discusses and evaluates the methods of scientific thought and tries to discover and the importance of scientific endeavor as a whole.

A. Cornelius Benjamin: The branch of philosophical knowledge which is the systematic study of science, in particular its methods, concepts, and presuppositions and their position within the general framework of the branch of intellectual knowledge.

Peter Caws: The philosophy of science is a branch of philosophy that tries to do for science what philosophy in general does to the whole of human experience. Philosophy does two things: on the one hand, it constructs theories about man and the universe, and presents them as foundations for belief and action; on the other hand, philosophy critically examines everything that can be presented as a basis for belief or action including its own theories, with the hope of eliminating inadvertence and error.

Koento Wibisono: Philosophy of science is a philosophical reflection that never recognizes a stopping point in exploring the scientific area to reach the truth or reality, something that will never be thought out and will never be explained.

The Liang Gie: Philosophy of science is all reflective thinking on issues concerning all matters concerning the foundation of science and the relationship of science with all aspects of human life (Chirimuuta, 2020).

Based on a number of definitions of the philosophy of science that have been put forward by philosophers and scientists above, we can understand more concretely the position of the philosophy of science, as stated by John Losee with questions about the philosophy of science as follows. First, what are the scientific differences in the characteristics of each type? between one science and another through research. Second, what procedures must be carried out scientifically in

conducting research on the reality that occurs in nature. Third, what should be done in obtaining scientific explanations for conducting research and experiments. Fourth, whether the theory can be taken as a concept of scientific principles. This means that the two disciplines, both philosophy of science and science itself, are all on one main foundation, namely facts or reality as the main basis for building all scientific disciplines. If science explains facts, while philosophy of science is the subject matter, namely analyzing logical procedures from science or analysis of the procedures and logic of scientific explanation (Nagatsu et al., 2020).

Fundamentals of Ancient Greek Philosophy

The basis of science is substantially based on ontology, epistemology and axiology. Through these three philosophical foundations of science, man should know what to do, how to do it and for what purpose he does the work (Jang, 2018). Because everything that humans do will not come out of these three basics. So that the emergence of views and theories as well as schools of belief definitely carry the three basic philosophy of science. Observations about the universe and its contents will always use the three basics above. Therefore, since the emergence of philosophy from the ancient Greeks until today, these three philosophical foundations are very urgent in human thought and development (Alavi & Leidner, 2001).

Etymologically, the term ontology comes from the Greek language which consists of two words, namely *ontos* which means existence or existence and *logos* which means study or knowledge (Siebers, 2020).

Meanwhile, epistemologically in the study of philosophy, there are several definitions of ontology from philosophers, including the following: First, talking about the nature of what is being studied. Second, the study of the essential characteristics of Being in itself which stems from the study of things that exist in particular. In studying Being in its very abstract form the study raises questions such as: "What is It in itself?" "What is the essence of being as Being?" Third, ontology is a science that discusses the nature that exists, which is the ultimate reality in the form of physical/concrete and spiritual/abstract. Fourth, ontology is a branch of philosophy that deals with the order and structure of reality in the broadest possible sense, using categories such as being/being, actuality/potentiality, real/appearing, change, time, existence/non-existence, essence, necessity, existing as existing, self-reliance, self-sufficiency, ultimate things, base. Fifth, Sidi Gazalba said that ontology questions the ultimate nature and circumstances rather than reality. Therefore, it is called the science of nature, the nature that depends on knowledge. Natural science or physics thinks about what is real, without questioning its essence. Reality science actually questions that nature by sharply separating subject and object. In religion, ontology thinks about God (Leaman, 2020).

Based on several definitions of ontology above, it can be concluded that ontology is the study of the nature of the existence of something either in the form of concrete or abstract form, namely about the existence of the real world and the existence of the visible/unseen world. Because of the breadth of ontology studies, there are various schools of ontology in explaining the nature of reality. Of course, these schools are then known as philosophical schools whose views we can see until now as an ideology in life. Several well-known schools of ontology that seek to explain the nature of reality include: monism, dualism, pluralism, materialism, idealism, nihilism and agnosticism .

Monism. The term monism comes from the Greek *monos* which means singular singular or alone, namely the understanding that considers that the original nature of all reality is only one, it cannot be two. This understanding is divided into two schools, namely, first, materialism which assumes that the original source is material , not spiritual. This school is also known as the flow of Naturalism, but actually there is a slight difference. In terms of dimensions, this understanding is often associated with the theory of atomism. This thought was pioneered by Thales (624-546 BC), Anaximander (585-528 BC) and Democritus (460-370 BC). Second, is idealism which assumes that the various essences come from the spirit (soul) or something similar to it, namely something that is formless and does not occupy space. The figures of this school include Aristotle (384-322 BC), George Berkeley (1685-1753 AD), Immanuel Kant (1724-1804 AD), Fichte (1762-1814 AD), Hegel (1770-1831 AD) and Schelling (AD). 1775-1854 AD). Historically, monism was first introduced by Parmenides, a

Greek philosopher in the 6th century BC. According to him, our senses are deceptive and the various forms of sensory objects we see are actually just illusions. The only true existence is the one, which is infinite and indivisible.

Dualism. The term dualism comes from the Latin, *dualis* which means two. Dualism holds that there are two substances in this life. First, dualism in general, in contrast to monism, maintains the basic differences that exist in reality between contingent existence and absolute existence. (the world and God), between the knower and the contingent, between matter and spirit (or between matter and life bound to matter), between substance and accident and so on. Second, dualism is a philosophical view that asserts the existence of two separate, irreducible, unique fields (worlds). Example: Supernatural / natural. God / universe. Spirit / matter. Soul / body. The visible world / The invisible world. The sensory world / Intellectual world. The noumenal world / Phenomenal world. The power of good / The power of evil. that. The figures of this understanding include Descartes (1596-1650 AD), Benedictus De Spinoza (1632-1677 AD), and Göttinger Wilhelm von Leibniz (1646-1716 AD). The one who developed this thought was Descartes. According to him, the soul in humans is a substance whose main character is thinking and being able to express in various forms of thought conceptually. Although the substance of matter and soul are both derived from God, both matter (physical) and soul are independent. Both can influence each other. The body can affect the soul and the soul can affect the body because the two are substantially separated from each other.

Pluralism. The term pluralism is rooted in the Latin word *pluralis* which means plural or plural. The flow of pluralism is generally characterized by the following beliefs: First, fundamental reality is plural; different from dualism and monism. Second, there are many levels of things in a separate universe, which are irreducible and in themselves independent. Third, the universe is essentially indeterminate in form; has no fundamental harmonious unity or continuity, no fundamental coherent and rational order. In classical Greek philosophy, the idea of pluralism can be found in the thought of Anaxagoras and Empedocles. According to Empedocles, the universe consists of four elements or roots, namely earth, air, fire and water. According to him, each of these elements is eternal, but the elements can mix with each other in different sizes and thus produce a variety of substances that are constantly changing as we find in this world. The modern figure of this school was named William James (1842-1910 AD) (Barton et al., 2021).

Nihilism. Nihilism comes from the Latin word meaning nothing or nothing. Dick Hartono defines *nil* = nothingness; nothing exists, is true, is of value. The term nihilism itself was introduced by Ivan Turgenev in his novel *Fathers and Children* written in 1862 in Russia. The doctrine of nihilism has actually existed since the time of Ancient Greece, namely in the view of Gorgias (483-360 BC) who gave three propositions about reality. First, nothing exists. Second, if something exists, it cannot be known. Third, even though the reality can be known, we cannot tell it to others. Another figure of this school is Friedrich Nietzsche (1844-1900). According to him, God is dead. The Christian God with all his commandments and prohibitions is no longer an obstacle. The world is open to freedom and human creativity.

Agnosticism. The term agnosticism comes from the Greek *Agnostos* language which means unknown. This understanding denies the human ability to know the nature of things. Both material and spiritual nature. The emergence of this flow is because people have not been able to concretely recognize the existence of an independent and recognizable reality. This school firmly denies the existence of an absolute reality that is transcendent. This school can be found in the philosophy of existence with its figures such as Soren Kierkegaard, Heidegger, Sartre, and Jaspers. Soren Kierkegaard (1813-1855) who is famously known as the Father of Philosophy of Existentialism stated that humans never lived as a general I but as an individual I that was completely unique and could not be translated into anything else. Meanwhile, Martin Heidegger (1889-1976 AD), a German philosopher said that the only thing that exists is humans, because only humans can understand themselves. So this world is for humans, there is no problem for the metaphysical realm.

Epistemologically or theory of knowledge is a branch of philosophy that deals with the nature and scope of knowledge, presuppositions, and its foundations as well as accountability for statements about knowledge possessed (Hasan, 2019). According to Suparman Syukur, epistemology is one of

the main branches of discussion in the area of philosophy that discusses the intricacies of knowledge. Meanwhile, according to Jujun S. Suriasumantri, the epistemological basis is the method or ways of getting the right knowledge. As a branch of philosophy, epistemology intends to study and try to find the general and essential characteristics of human knowledge. How is that knowledge basically obtained and tested for truth? What are the scope or limits of human ability to know? Epistemology also intends to critically examine the presuppositions and logical conditions that underlie the making of knowledge possible and to try to give a rational account for the claims of truth and objectivity. In other words, epistemology is the way or model we acquire knowledge. There are several methods to gain knowledge, namely:

Empiricism. Empiricism is a philosophical doctrine that emphasizes the role of experience in acquiring knowledge and minimizes the role of reason. An empiricist usually holds that we can gain knowledge through sensory experience and reason is only a shelter that passively accepts the results of these senses.

Rationalism. Rationalism is the view that we know what we think and that reason has the ability to reveal the truth with itself, or that knowledge is obtained by comparing ideas with ideas. In other words, that the mind or reason is the main factor in our knowledge.

criticism. Criticism was initiated by the great 18th century German philosopher, Immanuel Kant. According to him, our knowledge of all external reality is only its appearance, that is, our view of it. We only know our experience of the external world, not the external world in essence. Because for criticism, in every human being there are certain conditions in the mind that regulate how the mind works and affect the way they see the world.

Intuitionism. Intuitionism is an understanding that emphasizes the non-intermediary of knowledge or evidence of the character of certain ideas. In the method of acquiring knowledge, intuitionism teaches that there is no separation between the knower and the known. Indirectly, intuitionism is actually a continuation or method that can complement the shortcomings of the criticalism method in creating reality. Criticism says that in uncovering reality, we can only know the appearance of that reality, not the actual reality. understood through intuition.

Scientific Method. The scientific method is usually used in the field of natural science or science. The scientific method seeks to combine empirical experience (observation) and reason in obtaining knowledge or solving problems being faced by scientists (scientists).

Axiology review. Etymologically, axiology comes from the Greek language which consists of two words, namely *axios* which means proper or appropriate and *logos* which means science or study of. According to Jujun S. Suriasumantri, axiology is the basis of science that talks about the usefulness of science. Historically, axiology or general theory of value stems from the debate between Alexius Meinong and Christian von Ahrens in the 1890s regarding the source of value. Meinong views that the source of value is a feeling or estimate or possibility of pleasure in an object. Ahrens (also Spinoza) sees that the source of value is desire or desire. An object unites with value through actual or probable desires, meaning that an object has value because it is attractive. According to both opinions, value belongs to the object itself. The language value comes from the Latin *Valere* which means useful, capable, empowered, valid, or strong. From here, value can mean dignity, namely the quality of something that makes it likeable, desirable, useful, or can become an object of interest. However, value can also mean privilege, which is what is valued, highly valued, or valued as a good. Meanwhile, according to K. Bertens, value is something that interests us, something we seek, something pleasant, something we like and want, in short something good (Rofiq et al., 2019).

In general, there are three kinds of theories regarding value, namely: First, the objectivity theory of value which assumes that values such as goodness, truth, beauty, exist in the real world and can be found as entities, qualities or real relationships in the form) just as we can find objects, qualities or relationships such as table or red. Second, the theory of value subjectivity which states that values such as goodness, truth, beauty, do not exist in the objective real world, but are feelings, personal attitudes and are interpretations of reality. Third, value relativism which assumes that values are relative because they are related to preferences (attitudes, desires, dislikes, feelings, tastes, tendencies and so on) both socially and personally conditioned by the environment, culture, or

heredity and that values it differs (radically in many ways) from one culture to another and that judgments such as right/wrong, good/bad, right/inappropriate cannot be applied to it and that there are and cannot be universal values, absolute, and any object that can be applied to all people at all times (Sholehuddin et al., 2021).

Fundamentals of Islamic Philosophy

Islamic Science Ontology

As we mentioned earlier that every building of science or science is always based on three main pillars, namely ontology, epistemology and axiology. In the discussion of Islamic religious sciences, the three main pillars are also used. must be formulated based on the principle of monotheism whose substance is summarized in the sentence *la ilaha illallah* (Adinugraha, Fahmi, et al., 2021).

In the perspective of the Koran, the nature of knowledge is divided into two kinds. The first type of knowledge is knowledge obtained without human effort. This type of knowledge is called Ladunni science. The definition of Ladunni science is an inner science that is not the result of thought. Ladunni science is also defined as knowledge received directly through inspiration, illumination or inspiration from the side of God. Regarding the knowledge of ladunni, Allah said, "Then they (Moses and his students) met a servant among Our servants, whom We had given him mercy from Our side and whom We had taught him knowledge from Our side. The word of God in the Qur'an Surah al-Jin (72) verses 26-27 also explains that Allah is Knowing of the Unseen. Allah does not show anyone about the unseen except to the Messengers whom He is pleased with. According to this verse, knowledge of the unseen is only given to the Prophets and Messengers whom He wills. to a certain station. That state can be achieved if a servant is able to rid himself of the reprehensible nature through *riyadhah* (practice) and *mujahadah* (really) (Maulana & Adinugraha, 2020). In the context of tasawwuf, a servant who consistently has commendable character means that he has reached the position of the guardian of Allah. This servant means that he will experience musyahadah (witness) so that the hijab (barrier wall) is opened between the servant and God. That's when the servant reached the station of Allah's guardian so that he obtained the knowledge of Ladunni.

The second type of knowledge is the knowledge that is obtained because of human effort. This type of knowledge is called 'ilm kasbi. The verses of the Qur'an that talk about this second type of knowledge are clearly more numerous than the first type of knowledge. there is a form that is material and sensed, there is also a form that is immaterial. The order of creation or creatures also consists of three fundamental states, namely material, psychic and spiritual. In the perspective of the Sufis, the three states are called the nasut realm (material realm), the malakut realm (psychological and spiritual realms) and the lahut realm (divine attributes). Al-Ghazali divides the classification of knowledge seekers into four groups, namely theologians (*mutakallimun*), philosophers (*al-falasifah*), *ta'limiyyah* (*al-Bathiniyyah*) and Sufis (*al-Shufiyyah*) (Adinugraha & Zayadi, 2020).

Based on the explanation of the ontology of Islamic science, it can be concluded that the objects of knowledge in the view of Islam include material and non-material things, phenomena and non-phenomena, and even forms that, let alone seen, are known to humans. object of study of Islamic sciences.

Epistemology of Islamic Religion

The second pillar is epistemology which aims to answer the question of how or by what method humans acquire true knowledge. In the belief of Muslims, the Qur'an is the greatest miracle given by Allah to the Prophet Muhammad. It is also said that the Qur'an is the source of the intellectual and spirituality of the people. Generally, Muslim scientists develop Islamic sciences as an effort to understand revelation to be practiced in everyday life. Revelation in this context is the Koran and hadith which are the main sources of these Islamic sciences (Adinugraha, Zayadi, et al., 2021).

In the Qur'an it is emphasized that humans can gain knowledge by using the eyes, ears, and mind. In addition, the Qur'an also underlines the importance of the role of purity of heart in acquiring knowledge. It is from here that Muslim scholars emphasize the importance of purification of the

heart (tazkiyatun nafs) to obtain the teachings of Allah. In the Qur'an it is emphasized that science is not just ordinary knowledge, but a knowledge that contains certain reasoning. In this regard, Allah said, "Explain to Me with information based on knowledge if you are indeed truthful. It can be concluded that in the perspective of Islamic epistemology the sources of knowledge consist of the Qur'an, hadith, the five senses and reason (Nugroho et al., 2020).

Axiology of Islamic Religion

The third pillar of the building of science is axiology. Axiology is a branch of philosophy that studies values in general. The field of axiology relates the position of science to moral or moral principles. For this reason, it was asked about the relationship between science and morals, morals, and religious values. For example, it is said that the aim of Islamic science is to know the true nature of all things as given by God. Islamic science also aims to show the unity of natural law and the interrelationship of all its parts and aspects as a reflection of the unity of divine principles. Islamic religious knowledge is to know the Creator through the patterns of His creation. In this regard Allah says, "Those who remember Allah while standing or sitting or lying down and they think about the creation of the heavens and the earth (saying); O our Lord, You did not create this in vain. Glory be to You, so protect us from the torment of Hell." QS. Ali Imran (3) : 191.

The Word of God should be the axiological basis for the development of Islamic sciences. Through various scientific activities, scientists should be closer and submissive to the Creator (Miftakhuddin et al., 2021). Obviously, there is a fundamental difference between the secular sciences and the Islamic sciences. In the secular sciences, there has been a trend towards desecralization, which has resulted in the western sciences being detached from moral values. It is in this context that the issue of epistemology and axiology of the Islamic sciences needs to be explained clearly as a problem solving for the moral problems that plague the world of science (Adinugraha, Mawaddah, et al., 2021).

Conclusion

Based on the explanation above, it can be concluded that since humans have been on Earth, they have had knowledge. Philosophy is the study of philosophy about a particular object that relies on deep/radic thinking by using skeptical and dialectical laws to give birth to a science that bases its object on God, nature and humans. Philosophy of science is a branch of philosophical knowledge that examines the differences in the characteristics of each type of science from one another and what procedures must be carried out scientifically and what must be done in obtaining scientific explanations and whether the theory can be taken as a concept. There are three basics of philosophy of science in Ancient Greece, namely, ontology, epistemology and axiology. Ontology is the study of the nature of the existence of things, both concrete and abstract, namely the existence of the real world and the existence of the visible / unseen world. The most famous schools of ontology are monism, dualism, pluralism, materialism, idealism, nihilism and agnosticism. Epistemology is a branch of philosophy that deals with the nature and scope of knowledge, its presuppositions, and its basis as well as accountability for statements about knowledge possessed. The methods for obtaining knowledge are empiricism, rationalism, criticism, intuitionism and the scientific method. Axiology is the basis of science that talks about the usefulness of science. Theories about value include the theory of value objectivity, value subjectivity and value relativism. The ontology of Islamic science can be concluded that the object of science in the view of Islam includes something material and non-material, phenomena and non-phenomena, and there are even forms that, let alone seen, are known to humans. The unseen form whose details are not known is also the object of study of the Islamic sciences. In the perspective of Islamic epistemology, the sources of knowledge consist of the Qur'an, hadith, the five senses and reason. In the perspective of Islamic axiology, the purpose of science is to know Allah and submit to Him.

References

- Abdullah, M. A. (2021). Nurcholish Madjid and Religious Pluralism in Indonesian Islam. In *Philosophy and Politics - Critical Explorations* (Vol. 16). https://doi.org/10.1007/978-3-030-66089-5_11
- Acharya, D. (2018). A Critical Analysis of Right to Water in India in the Context of Water Policies of the Union Government (1987-2012). In *PQDT - Global*.
- Adinugraha, H. H., Din, M. U., & Muhtarom, A. (2021). The Spirituality of Rural Muslim Communities through Jam'iyah Nahdlatul Ulama Routine Activities. *Prosperity*, 1(1), 1–14. <https://doi.org/10.21580/prosperity.2021.1.1.7896>
- Adinugraha, H. H., Fahmi, I., Nasution, A., Faisal, F., & Daulay, M. (2021). *Halal Tourism in Indonesia : An Indonesian Council of Ulama National*. 8(3), 665–673. <https://doi.org/10.13106/jafeb.2021.vol8.no3.0665>
- Adinugraha, H. H., Hidayanti, E., & Riyadi, A. (2018). Fenomena Integrasi Ilmu di Perguruan Tinggi Keagamaan Islam Negeri: Analisis Terhadap Konsep Unity of Sciences di UIN Walisongo Semarang. *HIKMATUNA : Journal for Integrative Islamic Studies*, 4(1), 1. <https://doi.org/10.28918/hikmatuna.v4i1.1267>
- Adinugraha, H. H., Mawaddah, E. V., & Muhtarom, A. (2021). Gaduh Sapi Cooperation System In Fiqh Mua'malah At Tanjung Kulon Kajen Pekalongan Village. *ALHURRIYAH : Jurnal Hukum Islam*, 6(1).
- Adinugraha, H. H., & Muhtarom, A. (2021). Understanding Of Islamic Studiethrough Sharia Economics Perspective In Indonesia. *Journal of Islamic Economics Perspectives*, 3(1), 17–31.
- Adinugraha, H. H., & Zayadi, A. (2020). Contextualization Of Islamic Economic Principles Of The Imam Khomeini. *Al-Buhuts*, 16, 111–126.
- Adinugraha, H. H., Zayadi, A., & Hasan, A. (2021). The Concept Of Imâm In Shia Imamiyyah Perspective. *ISLAMUNA*, 8(2), 82–105.
- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly: Management Information Systems*, 25(1). <https://doi.org/10.2307/3250961>
- Aziz, R. M. (2018). Hahslm Islamic Economics Methodology. *ICoSEC (International Conference In Social, Economic and Culture)*.
- Barton, G., Yilmaz, I., & Morieson, N. (2021). Authoritarianism, democracy, islamic movements and contestations of islamic religious ideas in Indonesia. *Religions*, 12(8). <https://doi.org/10.3390/rel12080641>
- Buckels, C. (2020). Compulsion to Rule in Plato's Republic. *Apeiron*, 46(1). <https://doi.org/10.1515/apeiron-2012-0013>
- Chirimuuta, M. (2020). Philosophy of science. In *The Routledge Handbook of Philosophy of Colour*. <https://doi.org/10.4324/9781351048521-5>
- De Haro, S. (2020). Science and Philosophy: A Love–Hate Relationship. *Foundations of Science*, 25(2). <https://doi.org/10.1007/s10699-019-09619-2>
- Fadholi, M., Nurhayati, S., Hakim, A., Karimah, M. A., & Wirawan, A. (2020). *Exploring Factor's Affecting Consumer's Purchase Intention Of Halal Food Products For Indonesian Millennials Consumers*. 07(08), 4320–4338.
- Hafidz, A. M. (2021). Factors Affecting Health Worker Performance: A Management Evidence from Midwife Sharia Hospital X in Central Java Indonesia. *KJFHC*, 7(3), 13–23.
- Hasan, A. (2019). Prespective Review Of Islamic Study Towards Qaryah Mubarakahâh (The Blessed Village) Values In The Tourism Village. *Social Sciences and Education Research Review*, 6(2), 63–88.
- Ivlev, V. Y., Ivlev, Y. V., & Ivleva, M. L. (2019). Logical Methodology. *RUDN Journal of Philosophy*, 23(4). <https://doi.org/10.22363/2313-2302-2019-23-4-499-507>
- Jang, M. (2018). The Concept of Mental Disease in Plato. *Journal of The Society of Philosophical Studies*, 121. <https://doi.org/10.23908/jsps.2018.6.121.1>
- Leaman, O. (2020). Islamic Philosophy: An Introduction. In *Bloomsbury Encyclopedia of Philosophers Bibliographic Guides*. <https://doi.org/10.5040/9781350994980-002>
- Lestari, L. R. P., Sopiha, & Adinugraha, H. H. (2021). Integration Of Islamic Education Values Towards The “Yatiman” Tradition In The Month Of Suro In Pekalongan. *Zawiyah*, 7(1), 1–25.
- Maulana, A. S., & Adinugraha, H. H. (2020). Progressive Education in Indonesia: Insight from Soedjatmoko Thought. *Tarbawy*, 7(2), 113–121. <https://doi.org/10.32923/tarbawy.v7i2.1410>
- Miftakhuddin, M., Lestari, K. T., Aniroh, A., & Adinugraha, H. H. (2021). *Pendayagunaan Wakaf Di Tengah Pandemi Covid-19 Dalam Perspektif Maqashid Al-Syariah*. 10(1), 76–90.
- Muh. Subhan Ashari. (2020). Teologi Islam Persepektif Harun Nasution. *AN NUR: Jurnal Studi Islam*, 12(1). <https://doi.org/10.37252/an-nur.v12i1.82>

- Musthofiyah, L., Sopiah, & Adinugraha, H. H. (2021). The Implementation of Distance Learning on Early Childhood Education During New Normal Era of Covid-19. *EDUCATIVE*, 6(1).
- Nagatsu, M., Davis, T., DesRoches, C. T., Koskinen, I., MacLeod, M., Stojanovic, M., & Thorén, H. (2020). Philosophy of science for sustainability science. *Sustainability Science*, 15(6). <https://doi.org/10.1007/s11625-020-00832-8>
- Nugroho, B. S., El Widdah, M., Hakim, L., Nashirudin, M., Nurlaeli, A., Purnomo, J. H., Aziz, M., Adinugraha, H. H., Sartika, M., Fikri, M. K., Mufid, A., Purwanto, A., & Fahlevi, M. (2020). Effect of organizational citizenship behavior, work satisfaction and organizational commitment toward Indonesian school performance. *Systematic Reviews in Pharmacy*, 11(9), 962–971. <https://doi.org/10.31838/srp.2020.9.140>
- Pomerleau, W. P. (2013). Western Theories of Justice. *Internet Encyclopedia of Philosophy*.
- Popov, E. A. (2019). Grounds for Conceptualization of the Philosophy of Branches of Law. *Russian Journal of Legal Studies*, 6(2). <https://doi.org/10.17816/rjls18471>
- Pratama, F. (2018). The History Of Thought: Philosophy In The View Of Muslim Philosophers Of The Middle Ages. *ISTORIA: Jurnal Pendidikan Dan Ilmu Sejarah*, 14(2). <https://doi.org/10.21831/istoria.v14i2.22254>
- Purwanto, H., Fauzi, M., Wijayanti, R., Al Awwaly, K. U., Jayanto, I., Mahyuddin, Purwanto, A., Fahlevi, M., Adinugraha, H. H., Syamsudin, R. A., Pratama, A., Ariyanto, N., Sunarsi, D., Hartuti, E. T. K., & Jasmani. (2020). Developing model of halal food purchase intention among Indonesian non-muslim consumers: An explanatory sequential mixed methods research. *Systematic Reviews in Pharmacy*, 11(10), 396–407. <https://doi.org/10.31838/srp.2020.10.63>
- Rofiq, A., Hasan, A., & Ari, A. S. Y. (2019). Relationship Between Management, Service Management And Stakeholders: A Theoretical Framework. *Annals of the University of Craiova for Journalism, Communication and Management*, 5(1), 5–15.
- Setiya, K. (2021). What is morality? *Philosophical Studies*. <https://doi.org/10.1007/s11098-021-01689-y>
- Sholehuddin, M. S., Munjin, M., & Adinugraha, H. H. (2021). Islamic Tradition and Religious Culture in Halal Tourism: Empirical Evidence from Indonesia. *IBDA` : Jurnal Kajian Islam Dan Budaya*, 19(1), 79–100. <https://doi.org/10.24090/ibda.v19i1.4470>
- Siebers, J. (2020). Philosophy as communication theory. *Sign Systems Studies*, 48(1). <https://doi.org/10.12697/SSS.2020.48.1.08>
- Spears, L. (1996). Reflections on Robert K. Greenleaf and servant-leadership. *Leadership & Organization Development Journal*. <https://doi.org/10.1108/01437739610148367>
- Still, J. (2012). Derrida and hospitality: Theory and practice. In *Derrida and Hospitality: Theory and Practice*. <https://doi.org/10.1093/fs/kns202>
- Wu, K. (1986). Sufism and Taoism: A Comparative Study of Key Philosophical Concepts . Toshihiko Izutsu . *The Journal of Religion*, 66(3). <https://doi.org/10.1086/487422>