



ANALYSIS OF SCIENCE ONTOLOGY CONSTRUCTION TO MUHAMMAD IQBAL'S PERSPECTIVE ISLAM

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Abstract:

Ontology examines various principal things. Muhammad Iqbal is one of the developers of ontology, so this research aims to track ontology indicators according to Muhammad Iqbal and then process them into basic instruments; in this way, researchers who have a philosophical interest in aspects of ontology have a reference for development instruments according to the ontology research context. Library research with an intellectual approach and content analysis of library sources are methods that are relied upon to achieve the objectives of this research. This research shows five leading indicators of the ontology of Islamic science: monotheism, knowledge, nature, humans, and the afterlife. Then, these indicators can be combined into questions according to the research context. In Islamic science, these are paradigm, orientation, and draft.

Keywords: *Construction Analysis, Ontology of Islamic Science, Muhammad Iqbal*

INTRODUCTION

Ontology as a philosophical study tool is intended to cover the study of the reality side of an object. However, suppose it is juxtaposed with a religious context. In that case, Islamic science ontology is interpreted as a study covering the fundamental, fundamental, essential, and conceptual matters of religion and divinity by relying on the following logic. Confronted with reality (Bakhtiar, 2014). Several developers of Islamic thought conducted studies of this scope, such as Alghazali in " Tahafut Falasifah " (Alghazali, 1972), then also discussed by Ibnu Rushd in " Tahafut Tahfut ", as well as Ibn Arabi in " Fushush Alhikam " (Arabi et al., 1946), there is also Syed Muhammad Naquib Alattas in the book " Islam and Secularism ", Muhammad Abed Aljabiri in " Alwujud Alislamiyyah: Dirasah fi Unthulujiyyah Islamiyyah " (Aljabiri, 1991), and also Muhammad Iqbal in " The Reconstruction of Religious Thought in Islam " (Iqbal, 2013).

The exciting thing in the description above is the character Muhammad Iqbal, who in his book shows a renewal of thinking related to religion in Islam so that the book of his thoughts contained in this book can explain the ontology of Islamic science. There are at least five sub-discussions in the book that prove that the reconstruction of Muhammad Iqbal's religious thought succeeded in producing the latest paradigm, principles, and orientation of Islam in the context of ontology, namely " the conceptions of god and the meaning of prayer " (Iqbal, 2013); " the knowledge and religious experience " (Iqbal, 2013); " the principle of movement in the structure of Islam " (Iqbal, 2013); " the human ego-his freedom and immortality " (Iqbal, 2013); and " is religion possible " (Iqbal, 2013). Each of these five sub-discussions is analyzed using the thoughts of previous figures and relevant previous research.

Several studies that are relevant to the focus of this research study are Mahmud Dayyani and Ramezan Mahdavi Azadboni with the research title " Ontology of "Word" in the Qur'an and Criticism of its non-Islamic Interpretations " (Dayyani & Azadboni, 2023), these two researchers have the aim of comparing the meaning of the word " كلمة "

in the Qur'an which is shown to explain the birth and presence of Isa As, with the meaning or interpretation that non-Muslims have believed. Making the Qur'an the object of research, specifically Surah Ali Imran verses 39 and 45, Annisa verse 171, Maryam verse 34, and Attahrim verse 12. By the title, which interprets and compares the results of the interpretation, Dayyana and Azadboni use library research as a research method. Then, based on his efforts, this research resulted in an interpretation of the word "كلمة," which shows that Isa As was God's creation, unlike what Jewish philosophers said was interpreted as "an uncreated creation," a kind of tool for God to communicate with His servants. While the Synoptic Gospels call him "the son of God," then in the early chapters of the Gospel of John, he calls him "the son of God." This research emphasizes the essence of "كلمة" as His "logos" which made Jesus As.

There is also research conducted by Ziba Zalaghi, Farajollah Barati, and Goodarz Shateri with the title "The Influence of Mulla Sadra Ontological Foundations in Some Teachings of Islam" (Zalaghi et al., 2023) due to awareness of Mulla Sadra's philosophy which tends to use hermeneutics and rational interpretation, these three researchers also used this thinking method to analyze the philosophical arguments of Mulla Sadra's orientation towards religious teachings. The two main arguments that are the focus of this research are world adaptation and the evolutionary movement of the soul. It is said that a perfect human has a high understanding of the world and the soul and understands the existence of a high God so that the world manifests His single existence. A high position and the world's limitations have united souls previously transformed into a scattered world. The singleness of the soul then leads humans to peak existence and the attainment of the esoteric truth of the great system. Of course, the results of this research also show that library research with descriptive analysis is relied upon to achieve these results. So, Mulla Sadra's ontological foundation greatly influenced the teachings of Tauhid, Kalam, and Aqidah.

Furthermore, there is also research on "Integration of Science Based on Philosophy Review," which explains that the review is based on aspects of ontology, epistemology, and axiology. This research was conducted by Nursri Hayati and Irwan Shaleh Dalimunthe (Hayati et al., 2022). Based on the results of reading the thoughts of reformers of Islamic science and awareness of the potential for development that God has given, Hayati and Dalimunthe decided to develop the concept of science integration based on philosophical reviews so that the aim was to find out and analyze the concept of science integration based on ontology, epistemology, and axiology. The results of this research found that the integration of knowledge based on ontology is everything related to the universe, both abstract and concrete, then based on epistemology; science comes from Allah both through verses of the Koran and hadith, as well as through the universe. Then, based on the axiology, the integration of knowledge seeks to create perfect human beings with a breadth of insight and as proof of rahmatan lil 'alamin.

There are still many other studies that are relevant and used as analytical material for this research, especially those that concretely apply ontological theory such as Syihabul Furqon and Neng Hannah on "Al-Kindi Metaphysics in Al-Falsafah Al-Ūla" (Furqon & Hannah, 2020), considered concrete because the discussion of metaphysics has the same characteristics as ontology, and even continues to coexist in revealing principles, basics, concepts and reality. By using philosophical hermeneutics, it is found in the text of Al-Kindi that doctrine and reason do not conflict like Islamic philosophy and doctrine, especially monotheism. Research was also found that revealed the ontology of Islamic education in the formulation of its goals, then the nature of humans as the basis for formulating the goals of Islamic education, namely "reconstruction of the goals of Islamic education" (Fajri & Khojir 2022), the results of this research show that humans have the task of being khalifatullah fil ard and abdullah, as well as all other needs to carry out these two tasks and roles, then we get five goals of Islamic education that are in line with maqashid sharia. Then, research was also carried out by Sumarno and his colleagues to analyze the implications of the ontology of Islamic education on the quality of madrasas in Indonesia (Sumarno et al., 2021). This research

shows the complex concept of Islamic education, starting from the objectives, concepts of teachers and students, methods, and environment of Islamic education.

All previous research considered relevant for preliminary research has similarities in the focus of ontology studies. There are also similarities in the use of research methods in the literature. However, all of these studies continue to use ontology as an approach to the study, so this is the value of the novelty and uniqueness of this research, namely in efforts to explore the construction of the ontology of Islamic science, which originates from the unification of western and Islamic theories, then identify indicators in the ontology of Islamic science from Muhammad Iqbal's perspective. The indicators are processed to become a reference for designing research instruments that focus on studying the ontology of Islamic science. Based on this novelty, this research aims to determine and analyze the construction of the ontology of Islamic science to track indicators and design research instruments for developing Islamic concepts.

Theoretical research can be a reference for knowledge related to ontological indicators of Islamic science and procedures for processing them into research instruments. Practically, this research contributes to the study of the development of Islamic science because, with this research, the fundamental concepts of Islam have been explained by bringing them closer to various fields of science. It is the same as developing Islamic science, such as using this research as a reference for developing curriculum, methods, evaluations, and other components that can be brought closer to the ontology of Islamic science. This research puts forward the process of natural creation, which harmonizes the construction of the ontology of Islamic science, namely taud, science, nature, humans, and the afterlife.

RESEARCH METHODS

This research uses library research methods (Zed, 2008) with a philosophical approach (Bakker & Zubair, 1990) on ontological aspects and uses content analysis (Krippendorff, 190); the data in this research is the aim of analyzing the ontological construction of science. Islam then initially studied the term ontology from various sources in the form of texts in the form of books, research, and the like, ontology introduced by Western figures such as Immanuel Kant in "Critique of Pure Reason" (Kant, 1966), Martin Heidegger in "Introduction of Metaphysics" (Heidegger, 2000), Francis Bacon "Novum Organum, "and others as also mentioned in the introduction. As for the context of Islamic science, we use reading sources from Osman Bakar in "The History and Philosophy of Islamic Science" (Bakar, 1999), as well as Syed Muhammad Naquib Alattas in "Islam and Secularism" (Al-Attas, 2011), Aljabiri in "Alwujud Alislamiyyah: Dirasah fi Unthulujiyyah Islamiyyah", and from classical figures such as Ibn Arabi, Alghazali, Ibn Rushd and others. Meanwhile, to assist analysis in designing Islamic science ontology research instruments, there are books related to qualitative and philosophical research methods, such as Fritz Allhoff and Eyal Mozes in "Research Methods in Philosophy" (Allhoff & Mozes, 2012). So, after taking an Islamic science approach to the scope of ontology, which produces Islamic science ontology indicators, a research instrument for developing Islamic science concepts was designed. The focus of this study, the primary data needed, is Muhammad Iqbal's book, "The Reconstruction of Religious Thought in Islam. " By focusing on the discussion chapter as mentioned previously.

RESULTS AND DISCUSSION

Biography of Muhammad Iqbal

Muhammad Iqbal, who died on April 21 1938 in Lahore, was in fact born on November 9 1873 in Sialkot, Punjab, Pakistan. His father was Sheikh Muhammad Noor and his mother was Imam Bibi. This means that since birth he has been Muslim, Brahmin-Kasymir (Meitre, 1982) . The first education he received was with his father, because his father was known as a hard worker devoted to his religion (Azzam, 1985) . During his education, it was discovered that he had a high interest in learning, and also

had the ability to memorize, so it was normal for him to have a spirit of change in the form of renewal of Islamic thought (Ramin, 2023) .

Apart from being known as a thinker or philosopher, Iqbal is also known as a poet. His talent for poetry was influenced by Maulana Mir Hasan, after which he continued his education to college in Lahore in 1885 and finished in 1897. Sir Thomas Arnold was his teacher at this time, so he received two sides of Islamic studies, Islamic culture was obtained from Mir Hasan and thoughts were obtained from Sir Thomas Arnold.

According to Khurram Ali Shafique in his book, when discussing the life and works of Iqbal, which greatly influenced the Indian independence movement and the development of Islamic philosophy, Shafique stated that Iqbal was influenced in thought by Rumi, Alghazali and Ibn Arabi (Shafique, 2013). Indeed, this statement is not detailed, but through the description of the intellectual background in Iqbal's discussion, it provides guidance on the alignment of thoughts towards the three figures. This is the reason the researcher focuses on analyzing Iqbal's thoughts with the works of these three figures, even adding comments made by Ibnu Rusyd and Aljabiri.

The doctorate he received was from the University of Munich, his dissertation was very interesting, namely " The Development of Metaphysics in Persia: A Contribution to the History of Muslim Philosophy ", in 1908 (Ramin, 2023) . Some of Muhammad Iqbal's works, such as " Asrar-i Khudi " 1915, " Rumuz-i Bekhudi " 1918, " Payam-i Masyriq " 1923, " Zaboore-i Ajam " 1927, " A Plea for Deeper Study of Muslim Scientists " 1929, " The Reconstruction of Religious Thought in Islam " 1934, " Zarb-i Kalim " 1936, " Armughan-i Hejaz " 1938, this book can be categorized as an Islamic topic, although there are touches on the poetry side, then " Bang-i Dara " 1924 , " Khusak Khan Kattaq " 1928, " Bal-i Jibril " 1935, " Matsnawi Musafir " 1936, a work in the poetry category, also Islamic, then " Islam as a Moral and Political Idea " 1909, " Presidential Address to the All- Indian Muslim League " 1930, and " Jaman Nama " 1932 were works that supported the Indian independence movement (Shafique, 2023).

" The Reconstruction of Religious Thought in Islam " is a book written based on Iqbal's concern about the intellectual crisis in Islamic circles. This crisis occurred due to political and cultural defeat, so that it spread to matters of intellectual backwardness. So this book becomes Iqbal's intermediary to provide a spark to the spirit of improving intellectual quality in modern times. So western philosophy, which currently dominates scholarship, has become one of the tools for advancing Islamic intellectuals (Iqbal, 2013). Concretely, this book is a form of Islamic reform movement, it is very necessary for this book to influence contemporary Islamic thought. In this research, the study of ontology is the runway for observers of Islamic studies to develop the sciences they are involved in. In this book there are 7 discussions, but after the researcher read it carefully, there are 5 discussions that have nuances of nature, concept, purpose and reality. Next, analyze the ontology construction.

Concept of Islamic Science

Islamic science, as has been explained, is different from the term Islamic science, in that Islamic science is more about discussing sciences that are born from Islamic teachings, this science does not just discuss things that are based on religious rituals or the relationship of individual humans to Allah, but Islamic science tends to wider. Sciences which are currently considered to be separate from religion, such as mathematics, biology, chemistry, physics, geography, sociology, psychology and others are also part of the manifestation of in-depth interpretation of Islamic teachings, this is what is meant by the use of the term Islamic sciences (suhermanto 2023).

Alghazali, when discussing the problem of an error regarding something which is not present, in essence, then gives various reviews and examples of a movement that is "no man's land", but in general the discussion touches a lot on Islamic scholarship which should occur through discussion of the reality of an object, so that on that occasion A lghazali expressed the concept of Islamic science which is based on revelation and piety, then becomes an accompaniment to reason, so that the learning process does not involve mixing, but rather balance and continuity (Alghzali, 1972).

Osman Bakar, through historical studies, found that the development of Islamic science developed based on the principles of religious teachings consisting of monotheism, caliphate and sunnah. He expressed this when reviewing the history of the development of Islamic science from its heyday and culture to the present. In essence, Bakar wanted to say that every person who develops science should adhere to a deep understanding of the main teachings of Islam, namely the Koran and Hadith as well as the development of thought. from Muslim figures or scholars during the heyday of this science.

As Islamic education thought developed, Muhammad Abed Aljabiri also expressed his thesis regarding the development of Islamic education in the ontological aspect, namely from the study of kalam ontology which agrees regarding entities that depend on Allah, so that they have similarities in nature, especially physically. Continuing Alghazali's statement that the slightest movement in this world is God's will, but cannot be achieved by humans in scientific proof, Aljabiri put forward the ontology of Sufism that humans only gain experience of divinity through metaphysical pathways.

In essence, Islamic knowledge means that the knowledge that exists or is held is not free of value, and that value is a product of religion, Islam as a religion with value (Chalik, 2015). This means that even though Islamic sciences, which are specialized or categorized, still carry a legacy of values presented in their parent science. The fielding and categorization of knowledge is also the object of study of Islamic values.

Indicator Construction Analysis Muhammad Iqbal's ontology of Islamic science

Analysis of the ontological construction of Islamic science from Muhammad Iqbal's perspective, as has been explained, the main object of this thought study refers to Iqbal's book entitled " The Reconstruction of Religious Thought in Islam ". With five ontological discussions, namely " the conceptions of god and the meaning of prayer " (Iqbal, 2013); " knowledge and religious experience "; " the principle of movement in the structure of Islam "; (Iqbal, 2013) " the human ego-his freedom and immortality "; and " is religion possible " (Iqbal, 2013).

The discussion regarding " the conceptions of god and the meaning of prayer " is presented in 25 pages, reviewing the concept of God and the meaning of prayer. After he showed oneness in surah Alikhlis, which is indeed considered extreme, because Allah is an enemy to humans, but is still mentioned in every prayer, so that human helplessness is the result of the hostility of individual power, so Iqbal neutralizes it in a sentence that awakens the reader:

" The other important elements in the Qur'anic conception of god, from a purely intellectual point of view, are Creativeness, Knowledge, Omnipotence, and Eternity. ... In fact, the verdict of modern science is exactly the same as that of the Ash'arites; for recent discoveries in physics regarding the nature of time assume the discontinuity of matter The course of evolution, as revealed by modern science, involves almost universal suffering and wrongdoing. No doubt, wrongdoing is confined to men only The truth is that all search for knowledge is essentially a form of prayer. The scientific observer of nature is a kind of mystical seeker in the act of prayer. ... This line will add to his power over nature and give him that vision of the total infinite which philosophy seeks but cannot find. " (Iqbal, 2013).

Based on the quote above, this chapter shows that there is a starting point for everything in the world that has an attraction to a nature that is the opposite of the one who created it, namely God. Creation, knowledge, omnipotence and eternity are concepts that are explained consistently in the Qur'an. This is in order to explain about God. This means that knowledge can be obtained in various ways, but it still has the nature of dependence on these five elements, and even depends on humans, namely those who process knowledge. In other words, for Him knowledge is held after God, but for humans, the position of knowledge is after nature, even though nature was created using knowledge. Humans as recipients of knowledge start from awareness of the reality of nature, only then do they gain knowledge.

This is what is meant by human weakness, so that mistakes often occur in the experience of practicing knowledge. In this discussion, Iqbal emphasizes human limitations and the infinity of God, but humans also have infinity when they find something they are looking for. Note that this is an incident that is only temporary, and is something you just want to look for.

After Muhammad Iqbal conceptualized Islamic science and its state structure, there were indeed several successors, such as Abdul Ali Jinnah at Pakistan's independence, then perfected by Abul A'la Maududi, then also developed by Ismail Raji Alfaruqi. It would be too naive if researchers used ideas that certainly have similarities in political struggles and pressures. So it is necessary to search the context of Islamic scientific ontology based on the ideas of Muhammad Abed Aljabiri. That the attainment of knowledge towards spiritual goals in human life is the most basic direction and principle, this is due to the existence of the One God who is the only essential world view. Mrs. Arabi, when discussing the wisdom of the wise and great words in all the events of the Prophet Hud As, showed that human existence is the basis for understanding the existence of Allah, and vice versa, when understanding the existence of Allah it is also meant to understand human existence.

Alghazali actually had this view earlier, that when discussing the essence of pluralism, as a basis for categorizing knowledge which is based on Oneness, namely accepted division, division not based on quantity, plurality of characteristics and rational plurality, as well as plurality of assumptions. Furthermore, Alghazali also said that scattered beauty can be united to obtain the highest beauty, namely Tawhid.

مال و God willing كونه فاعلا على الوجه الذى قررناه, وهو أن وجوده وجود تقيض عنه المقدر ... ".
الحسن".

This strengthens that the development of thought since Alghazali, Ibn Arabi, Iqbal, and Aljabiri, has had a continuous understanding of the nature of Islamic science. The context of these sentences is in order to refute the categorization of science since the beginning of the creation event. Upholding the paradigm of monotheism in the ontology of Islamic science is an antidote to disease or science pollution. Similar to Dayyani and Azadboni, who emphasized that in the case of the Prophet Isa As, the divine side was the only main logic of the incident, not only avoiding doubts about the incident, but strengthening the belief in the existence of the deepest and highest side of science. In the context of Islamic science it should be analogous to this.

It has also been explained that Mulla Sadra is also a source of thought that upholds the divine side, because the existence of humans and the universe are the scattered existence of God. Philosophical studies as a whole indeed place the study of Tawhid in the study of epistemology, but in more detail they reveal more about the sources of Islamic knowledge, thus making the ontology side have breadth and depth of meaning.

At this point, it is understood that ontologically in Islamic science, Tawhid is a paradigm that must exist. If we draw on the study of Islamic education, the construction of the monotheism paradigm is also included in the objectives, curriculum and the process of categorizing knowledge (Komaruddin, 2021). This finding was revealed when Sassi revealed the basic construction of the ontology of Islamic education in the Tawhid paradigm. The source of Sassi's thought was certainly in accordance with the figure whose thoughts he was researching, namely Syed Muhammad Naquib Alattas. The integral aspects of every science born of Islam are three reasons, including, fulfillment of the duties of the caliphate, recognition of God's absoluteness, and foundation in the Islamic worldview. In general, in this Tawheed paradigm, success is closer to the process of habituating affection, as well as its hierarchy, accepting it because of the character of God, obedience to His absolutes in God, and finally humans also have a view of the world based on Islam, including in creating knowledge. This is one of the meanings of Islamic science.

Despite the detailed analysis provided to the public, Kant did not agree with this, because in his opinion, an attitude based on transcendentalism was guaranteed to

result in confusion. Likewise with Heidegger's explanation, but in fact he created a failure in covering up his mistake in rejecting the divine side, because metaphysical studies are always in contact with stopping at the answer to the One. What's more, Bacon expressed that, as a philosopher who popularized the word ontology, he was also unable to contain God's power in every science, because God's enlightenment was the cause of the creation of the universe, then in human terms, this universe became the source of the third layer for humans to obtain knowledge from God.

The description above actually shows that Tawhid is one of the ontology paradigms, then this paradigm can become an indicator which can then be developed into research instruments. If Tawhid has become an indicator of ontology, then of course it requires other tools that can logicalize the gaps in understanding in Tawhid, such as Iqbal's statement which also emphasizes awareness of the reality of God's will which contains knowledge.

" Thus, in the evaluation of religion, philosophy must recognize the central position of religion and has no other alternative but to admit it as something focal in the process of reflective synthesis. Nor is there any reason to suppose that thought and intuition are essentially opposed to each other. They spring up from the same root and complement each other ”.

The researcher got this quote from the discussion of religious knowledge and experience, namely in the first discussion of Iqbal's book, that religion is the most central side, and there is no other way when risking the truth of something, this is because when Allah has believed in His oneness, then in sequence regarding the creation of the universe, Allah created knowledge before the universe, but more often it is said to be God's power and wisdom, even though knowledge is attached to both. This is where Iqbal's thinking is unique, it is usually said that knowledge is based on precision and accuracy in observing and paying attention to the universe. This is also not to blame if it is on the human side, but on the side of Allah, knowledge existed first, in other words, based on this description, Islamic knowledge has a second ontological side, namely science. This means that all the characteristics that have been determined in science should be contained in the sciences that were born in the study of Islamic science.

Of course, this provides scientific opportunities, including something that is considered myth. The effort to change myth into logos is to ensure that the object of study contains knowledge. Indeed, this statement contains a slant of thought. The certainty that there is scientific content regarding everything that researchers still consider to be mainstream , while deeper matters have not been touched upon. Alghazali provides reinforcement for this idea, that Allah involves His knowledge in the creation of nature. This sentence shows that God's knowledge existed beforehand, then his will, one of his wills was to create the universe and the events in it.

This expression was conveyed when Alghazali denied the words of philosophers who know others, various species and genera universally. This means that Alghazali stated that Allah created with knowledge, but did not know the specific things about His creation. This was Alghazali's state of mind at that time, which led Ibn Rushd to comment that if Allah does not know the details, then that is a sign that Allah does not meet the criteria for His divinity. This discussion is in more detail on the ontological paradigm of Islamic science. This is his rebuttal to anyone who is not qualified to argue for the existence of God's knowledge of nature. Aljabiri also did the same thing in his review of knowledge in Islamic thought. The basis for thinking about science to gain knowledge is God, even through natural manifestations. Ibn Arabi revealed a simple method to realize that science has become a paradigm after Tawhid, as is common for humans to gain true awareness, is to seek knowledge by observing nature. Like Prophet Musa As, who gained the height of knowledge from every incident he experienced while studying with Prophet Khidir As.

Iqbal's thoughts this time, apart from receiving historical reinforcement from his predecessors, were also proven by Nursri and Dalimunthe, that it is very possible for knowledge to be discovered in depth, because Allah has equipped humans with

potential, so that the objects of study, study tools, even analytical knives come from God, this is what is meant by the depth of the results. It is hoped that science as an indicator in Islamic ontology can then become the basis for designing research instruments, so that everything that contains knowledge can provide benefits to individual life, society and the needs of cultural life (Salminawati, 2022).

The discovery of the relevance of Iqbal's thoughts to previous figures and some of the results of this research, from the perspective of Western thinkers, such as Kant, do not provide support for a scientific paradigm that fulfills its content in the study of ontology, but philosophy requires science to explain things that it experiences, this is it can indeed be done using (a priori). An assumption is the first thing that needs to be expressed, this statement is what makes science as a whole have no position in ontology according to him. Revealing the details of the thought process in ontology is not a determining dimension for creating knowledge, it is Heidegger who reveals the limitations of being, including in terms of thinking (being and thinking). So he differentiates between existence and thinking, this emphasis on compartmentalizing ontological indicators on the metaphysical side is very detrimental to observers of philosophy, because it makes both of them independent of conclusions, including a priori .

Likewise with Bacon, who rejected knowledge inherent in every object, even though he himself expressed historically, that the existence or absence of ancient knowledge, does not have the effect of progress, only change, due to the past which has not been established in the discipline of science. After understanding the various ambiguous supports and rejections of Iqbal's thoughts, it is certain that science is an indicator of existing ontology that must be present in every ontology study, especially in the context of Islamic science studies. So after monotheism, knowledge becomes a requirement for the study of ontology in Islam. Oneness and object knowledge have been fulfilled, but both have a close connection with nature, as proof that both have been present in the expression of experience which becomes knowledge.

“ As a cultural movement Islam rejects the old static view of the universe, and reaches a dynamic view. ... And since God is the ultimate spiritual basis for all life, loyalty to God virtually amounts to a man's loyalty to his own ideal nature. The ultimate spiritual basis of all life, as conceived by Islam, is eternal and reveals itself in variety and change. ... The greatest service that modern thought has rendered to Islam, and as a matter of fact to all religions, consists in its criticism of what we call material or natural - a criticism which discloses that the mere material has no substance until we discover it is rooted in the spiritual. There is no such thing as a profane world. All this immensity of matter constitutes a scope for the self-realization of spirit. All is holy ground. As the Prophet so beautifully puts it: 'The people of this earth are a mosque. The state, according to Islam, is only an effort to realize the spiritual in a human organization. But in this sense all states, not based on mere domination and aiming at the realization of ideal principles, are theocratic. ”

Iqbal really understands that the culture of movement in Islam is not static, meaning that the dynamic culture of thought in Islamic circles is a manifestation of nature which is also dynamic, this is what should be the point of view in every scientific study. Furthermore, he reinforced that Allah is the highest basis for expressing the spiritual side of science. Reflecting on humans' desire to control the universe, knowledge is needed that comes from matter or nature itself. Thus, the dynamic meaning of the nature of science is another form of spiritual awareness, namely related to the diversity and change of self and nature. Likewise, the segment of thought that produces the results of scientific development. Criticizing nature is the best path to take in this context. This is in line with the expression of human temporal infinity. However, on this occasion, Iqbal sought to raise awareness of science as a proper discipline by discovering the spiritual side of that science. Iqbal openly stated that theocraticism was the main support of this Islamic science movement. So, nature or matter is part of the ontological indicator of Islamic science, provided that it fulfills the spiritual and scientific side of natural reality itself.

Discussing nature as an indicator of ontology is the most controversial topic for ontology scholars, such as Kant, who strongly stated the impossibility of science to reach the highest level through experience, because reality does not require physical material. He thinks that it is spiritual myth that conveys understanding of experience to the highest level, even though he clearly differentiates spiritual discussion. Bacon also did not share Iqbal's thoughts regarding nature as an ontological requirement for every science. Separately, it seems like rejection, even though Bacon wants to convey that nature is not the only side of ontology, so that depth of understanding requires spiritual strength. Researchers think that Kant also had this opinion, regarding the position of nature as an object and tool, not just a tool in science, because Heidegger openly gave his approval, because he also had the same opinion as Nietzsche, with extra morals, the five senses that perceive Natural events will provide a framework regarding how nature should be treated, as well as ways to fulfill these keys.

“ The Quran in its simple, forceful manner emphasizes the individuality and uniqueness of man, and has, I think, a definite view of this destiny as a unity of life. ... The finite center of experience, therefore, is real, even though its reality is too profound to be intellectualized. ... If all mankind happens to desire the same thing, the satisfaction of their desire will not mean the satisfaction of my desire when I do not get the thing I desire. ... Observation reveals experience to be particular acts of reference, and as such they possess a specific being of their own. ... It organizes itself in time, and is formed and disciplined by its own experience ”.

Starting from the recognition of God in His book, the experience of reality, special existence, to freedom that is limited by time and discipline. This is the main discussion in relation to humans from the perspective of the human ego. So in this discussion, humans in the context of ego problems have a beginning of time, they do not have the opportunity to return, but these two things are not an obstacle, on the contrary, they are a way to achieve victory. Of course, use freedom within the specified corridors too. Death or life after life is part of the ontology of Islamic science which is based on humans. So that humans are also part of the ontology of Islamic science, that science is developed, taught, practiced and so on based on the existence of humans.

Human potential, which was mentioned previously, is a key word that is also emphasized by Alghazali. He places this potential in the ability to know reality, so that he knows truth and falsehood, the choice of both greatly influences the final results of all efforts made. This is the reader's understanding when digesting Alghazali's explanation which describes the devices that exist within humans. Animalism and humanity are two of these tools, so there is a division into two faculties, namely animal and human faculties. Then the animal faculty is divided into motive (محرركة) and perceptive (مدركة), then perceptive is further divided into two, namely external (ظاهرة) and internal (باطنة), meant by external as meaning that comes from the outside of humans, namely the five senses, while Internal are imaginative (القوة الخيالية), estimative (القوة الوهمية), and sensitive imaginative (متخيلة/مفكرة). There are two motive faculties, namely erotic/sensual (شهوانية) and anger (غضابية). Next is the human side, there are two faculties, namely the theoretical faculty (العاملة) or you could say speculative (النظرية), which is the angelic side which can absorb the essence of knowledge; and the practical faculty (العاملة) is a body arrangement that produces moral judgment, and it is this last faculty that shows the results of choices in the form of low or high levels of morality.

Iqbal and Alghazali's explanation forms an established theoretical unit, that humans are indeed a condition for the recognition of science, if knowledge is born from thought or experience, then it should also be shown to be useful and empowered by humans. This same understanding was also expressed by Ibn Arabi, that the potential possessed by humans guarantees humans to gain knowledge about God through other knowledge. This conveys the wisdom of the protection given to Prophet Ibrahim As, starting from his dealing with the destroyed idol, to the tragedy of his burning. This means that his search for God has a long journey, his appreciation of nature, the change

of day and night, the rising and setting of the sun and the moon, are intermediaries in his understanding of God.

The explanation above is still in allusion to the human process of gaining knowledge, while this research reveals the process of something being said to be science from an ontological aspect, the explanation above actually also provides reinforcement, that human content indicators are elements that must also be present in science. Aljabiri, when expressing the views of knowledge from the thoughts of Alghzali and Mulla Sadra, indirectly through his presentation, that humans as part of nature have the same position as nature, namely objects and subjects in ontology. Alghazali with an understanding of the categorization of knowledge and its levels, while Sadra with the depth of knowledge up to scientific degrees which encourages the level of human beings who study science. If previously it was said that nature is God's scattered soul, then humans are also the same thing, and God's soul is not God, it can be interpreted with will and knowledge (Zalaghi, et al., 2023), meaning that previous thoughts up to Iqbal have the same understanding, researchers even consider these findings as the agreement of thinkers across time.

This relationship between God and humans needs to be given a way to reconcile them, so Iqbal and other figures say that spiritual experience is an important requirement in this effort. Communication relationships, position relationships and ethical relationships are also revealed through reading the Koran, this is a gift from Allah to be maintained, because it becomes a bridge for these relationships (Mayasari, 2023). Heidegger, with his philosophy of existence, makes understanding related to getting, not related to elements of knowledge. Heidegger's ontology ensures that knowledge does not exist by itself, but is the result of human ability to process information, then a validity test is carried out which ensures the usefulness of humans who are the source of knowledge. This process is still mysterious at the beginning of his discussion of basic metaphysics. However, after he had the ambition to elevate the tendencies of human existence, he discovered the metaphysical side of humans as well (Heidegger, 2000).

Human beings think is one of Kant's studies in providing evidence of the inevitability of the human side, because its function is to produce intersubjective meaning of thoughts and experiences (Kant, 1966). Even though he places it on conjecture, it is still part of the process of scientific discipline. Bacon is more careful in saying that it is an understanding that functions as a justification for the understanding obtained. Francis Bacon stated that in imaging a science through two paths, firstly creating axioms from an experiment or secondly creating new experiments from an axiom. The first path has three subdivisions or sub-paths that must be taken, namely to the five senses, memory, and thought or reason. Meanwhile, the second path is a process of deduction from axioms that have been tested, then using the latest experiments as an extrapolation of logic and assumptions. This continues to be processed, these two paths are said to mutually fill the silence of their sub-paths.

So, humans are the fourth indicator that researchers found in the ontology of Islamic science. This is very often found in the objectives of Islamic education, as an effort to fulfill primary human needs throughout life. On the other hand, humans are said to play their role as objects and subjects at the same time, so human truth in science is also a primary need. Furthermore, to ensure that human life span is temporary, or limited, indicators are also needed that reveal these limitations.

“ It may fairly be argued that in view of the more recent developments of science, such as the nature of matter as 'bottled-up light waves', the idea of the universe as an act of thought, the finiteness of space and time ... insists on the plurality of space-orders and time-orders and speaks if a Divine Time and a Divine Space. It may be that what we call the external world is only an intellectual construction, ... perhaps the most hopeless idea of immortality ever formed by man. This eternal repetition is not eternal 'becoming; it is the same old idea of 'being' masquerading as 'becoming' . ”

In the middle of the language regarding the limitations of space and time, Iqbal emphasized that the idea of science is not to classify facts and find causes. Because of

the limitations of speech and time, the orientation of thought in Islam is closely related to life and movement, thus creating new patterns in human behavior. This makes us aware of the importance of achieving the highest goal, the highest spiritual experience, understanding the highest reality, and the disclosure of the highest knowledge.

Bacon, who has openness in his thinking, has acknowledged the limitations in the results of understanding obtained by humans, " what she will do when her whole store is thrown open, and after the discovery of forms, processes, and confirmation, will appear hereafter ", so all The stages carried out in obtaining meaning will be obtained at each repetition of the stage process. It was as if he was saying that the more often you do it, the deeper your understanding will be. In contrast to Heidegger, from the start he has trumpeted the excessiveness of human reality, the existence of which he understands and proclaims, making him forget the limitations of space and time on the other side of human existence. Until now, it turns out that the waiting time has arrived, that humans and nature are not unique, only data for technology created by humans themselves (Aenulguri & Hambali, 2023) .

Values and norms are once again the center of attention, namely human essentialism is very popular. In another opportunity to obtain the highest reality, the limitations of human subjectivity and the role of language become urgent when building the construction of this higher reality (Heidegger, 2000). Researchers think that respect for the thoughts also expressed by Kant is important, when the exposition of the divine relationship regarding the concept of time is a change of place, and change is a form of recognition of limitations, because if he remains, God remains, so he is eternal, but nature, including humans, has change, meaning that both are always haunted by the limitations of place and time (Kant, 1966).

Of course, it is known that Iqbal's thoughts in the Islamic world, due to limitations of place and time, then also lead to the end of the day, which has been agreed for a long time, Alghazali in particular also gave a rebuttal to philosophers who had more extreme thoughts than Heidegger, Aristotle, who stated that nature is immortal, indirectly stating that humans are immortal, and themselves are immortal. Because, said Iqbal, nature is the result of God's thoughts, so does Alghazali, that nature depends on its creator Alghazali (Alghazali , 1972) . The philosophy of essentialism is indeed relevant for this discussion, not only as an antidote to technological developments, but also as a process of meaningful adaptation by humans to changing times, meaning including limited time. So values, character and morals are a guarantee of human contribution to God and other humans (Khoiro et al., 2023). At this point, it can be understood that the afterlife as a symbol of the limitations of place and time is also the peak of the recognition of knowledge. So, science in Islam has a changing awareness of these limitations.

Based on the description above, it is found that Iqbal has provisions in Islamic knowledge, namely monotheism, knowledge, nature, humans and the afterlife. Islamic science essentially has an obligation to develop and develop these five paradigms, this applies to all sciences that are born, as has been emphasized that the five function as objects and subjects at the same time. If a science does not contain this paradigm, then it is certain that there will be unclear truth, goodness, beauty and happiness for those who use and enjoy the fruits of that knowledge in full. The findings of Iqbal's thoughts can become the subject of philosophical studies in certain contexts.

Research Instrumentation for the Development of Islamic Science Concepts: Overview of the Ontology of Islamic Science

Ontologically Islamic science is all knowledge that originates from God (tawhid), has a scientific nature (ilmu), is conceptualized in the form of the universe (nature) as a metaphorical source, namely God, then can be given, accepted, practiced and utilized by every creature (human), not only humans, but also brings the long-awaited values of truth, goodness, beauty and eternal happiness (the afterlife).

After obtaining the ontological paradigm of Islamic science, then finding the formulation of the meaning of Islamic science above, then as a theory, analysis needs to be carried out to find a way to extract ontological data from the context of Islamic

science. It could also be said as an indexation that knowledge meets Islamic requirements. This is because Islamic knowledge is understood as all knowledge that comes from God, meaning that all existing knowledge is Islamic in nature, because this understanding is fully understood. As has been mentioned, one of the aims of this research is to formulate ontology research instruments through the findings of ontology indicators.

On this basis, this discussion not only reveals the presence of the five paradigms in science, but also confirms their role in science. In philosophical research methods, according to Bakker and Zubair there are 9 models in philosophical research, (1) historical factual about figures; (2) factual history regarding the manuscript or book; (3) factual history regarding the pure text of the manuscript; (4) concepts throughout history; (5) comparative; (6) philosophical views in the field; (7) systematic-reflective; (8) actual problems; and (9) regarding scientific theories. These nine models, in this research, have almost accommodated everything, but what is interesting for researchers is the sixth model related to philosophical views in the field, because it is said that there is still little interest in it, most of it is more about the thoughts of figures (Harahap, 2014) , comparative thoughts (Furchan & Maimun, 2014), concepts, philosophical meaning of the text (Zed, 2008) and others.

Meanwhile, in the book *The Oxford Handbook of Philosophical Methodology* , there are many choices of philosophical research models, such as Daniel Nolan who describes methods in metaphysical analysis, then presents several stages, starting from linguistic and conceptual analysis; empowering intuition; science assistance; accept other opinions; application of theoretical values; and tested in other contexts or topics, such as related science approaches (Nolan, 2016). This means that the choice of model and analysis technique requires research instrumentation, through indexation that has been found.

The researcher's intention is that this research on philosophical views is related to educational institutions that have philosophical requirements, especially in terms of their development. In accordance with the context of this research, it is related to Islamic science. Field research related to this concept is of course descriptive in nature, falling into the qualitative category. With this analysis technique, it was found that there was assistance from science and acceptance of other opinions. Both contain content in this Islamic science research instrument.

The following is the design of ontology research instrumentation in the context of Islamic science: (1) The monotheism paradigm can question a person's understanding of the Oneness when looking at reality or essence, it can also provide an opportunity to explore deeper information in the form of Islamic science concepts regarding this understanding. (2) Science paradigm, on this occasion an attempt is made to obtain information related to one's reading regarding the role of science in obtaining a holistic understanding of reality, then deepened with information about the influence of this understanding in the process of developing Islamic science. (3) The natural paradigm, because it is included in the third layer of scientific recognition, then in this case it is related to the connection between humans, nature and the reality that is understood, furthermore, because nature has certain conditions and situations, then nature becomes an object for Islamic science to knowing its contribution to helping strengthen the connection of these three elements. (4) The human paradigm is more about extracting data about understanding the role of humans and their reality, then deepening it with the role of Islamic science in providing a more holistic understanding of reality. (5) The afterlife paradigm actually focuses on the limitations of time and place, so that it emphasizes information on the relationship between perfection of understanding and the potential for changes in meaning, then explores the role of Islamic knowledge in providing preparation for these problems.

CONCLUSION

Based on reading Muhammad Iqbal's thoughts in his book " The Reconstruction of Religious Thought in Islam " , five ontological paradigms of Islamic science were

found, which then became indicators or indices of the results of the development of Islamic science, these five are monotheism, science, nature, humans and the afterlife. Each of these indicators provides an understanding that research in the context of Islamic science can be broken down into several questions for interviews which function to fulfill metaphysical analysis techniques in Islamic science. Each of the scientific confirmation indices refers to the characteristics of ontological studies which have a scope in the form of essence or reality, development, connectedness and limited freedom.

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