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Critical Realism of Al-Kindî on Aristotle's Theory of Creation

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Abstract:

This study aims to expose al-Kindi's theory of creation and his repudiation of Aristotle's equivalent theory. The theory of creation was one of the philosophical problems that originated in the Greco-Aristotle philosophy. In this tradition, "creation" refers to making or changing something from something else. In other words, this universe was created from pre-existing matters, materials, and substratum. This viewpoint ran counter to Muslim beliefs, including al-Kindi. For al-Kindi, creation entails creating something from nothing. This universe did not exist before. God's qudrah determined its existence, and his iradah created it from nothing. To defend his position, al-Kindi used both philosophical and theological arguments. Like mutakallimun, al-Kindi's theological argument is built on the Qur'anic term "kun," while his philosophical argument is based on the argument of limitations. This study is literature-based research using a descriptive critical analytical method. The data for this study were obtained from books, articles, and other written documents. The collected data is examined utilizing the critical analytical method. This research concludes that al-Kindi explained the concept of creation quite clearly, and succeeded in making an appropriate and directed critical response to Aristotle's theory of creation. Likewise, al-Kindi's idea of creation demonstrates his close position with theologians. It separates himself from the Peripatetic philosophers after him, even though al-Kindi is famous as a Muslim philosopher.

Keywords: Aristotle, Creation, Khalq, al-Kindi, Finite

Introduction

Al-Kindi was claimed to be sympathetic to Greek philosophical thought, especially Aristotle. (Jackson, 2014) His remark, in which he refers to Aristotle as the "leader of Greek philosophy (Al-Kindi, 1974) proves this. However, al-Kindi's appreciation of Greek philosophy did not imply that he would mindlessly follow and embrace it. Al-Kindi seeks to integrate Greek philosophical ideas with the Islamic worldview through a selection process, critical absorption, and

reconstruction.(Adamson, 2002) That is, al-Kindi follows Aristotle but is not the same as him, and therein lies al-Kindi's originality. (Reisman, 2007) Thus, the assumption that al-Kindi did not have his original philosophical thoughts so that he did not deserve to be called a philosopher or even only a translator, as alleged by some parties, is entirely unfounded.(Soleh, 2016)

One of the products of Greek philosophical thought that received a critical response from al-Kindi was the theory of creation. (Al-Kindi, 1950*)* This theory has indeed become a lively discourse in the tradition of ancient Greek thought.(Hitti, 1974) Among the central figures paying attention to this issue was Aristotle.(Fakhri, 1983) He initiated the theory that universe was created from existing; in a sense, creating is making something new based on what has been there before, either through motion or emanation.

In Greek philosophy, God is not an actual creator in creating something from nothing but rather a mover or manifestation of reality, moving reality from the realm of potentiality to the realm of actuality. As a result, because God's motion or emanation is *qadim*, infinite and eternal, the universe becomes *qadim*, infinite and eternal; a creation theory that no Muslim theologian will accept,(Atiyeh, 1983) including the philosopher al-Kindi. In other words, one of al-Kindi's most significant "deviations" from the ancient Greek philosophy was his opposition to the idea of creation *ex materia*.

That is why al-Kindi proposed the universe's creation theory from nothing.(Rawalpindi 19, n.d.) Al-Kindi said God is The Creator, not the first mover, as believed in the Greek philosophical tradition, especially Aristotle. God is not made up of matter and form, not a body. God is the Cause of all causes.(Zarkasyi, 1428) In other words, the finite actual world requires an Infinite First Cause, The One and Only, which point is not within the boundaries of Aristotle's philosophy. Thus, God brought the universe into being from nothing. Considering the preceding exposition, this paper will address these issues; al-Kindi's concept of the creation of the universe and his criticism of Aristotle's theory.

Literature Review

Discussions on al-Kindi's thought usually center on his rejection of the theory of creation that developed in the Greek philosophical tradition, notably Aristotle. Some believe that al-Kindi was wrong

in understanding Aristotle's theory of creation, so his criticism is considered inaccurate. Some argue that al-Kindi's critique of Aristotle's view of creation is simply a reiteration of the arguments told by John Philoponus. The tendency as mentioned above, can be seen in several researchers' works. For example, Herbert Davidson notes that John Philoponus, a Christian theologian, was the first to respond to the arguments for Aristotle's creation theory critically.

Philoponus's critique was continued, or imitated, by those after him, including al-Kindi. Al-Kindi's main argument in criticizing Aristotle was claimed to be a reiteration of the former. (Davidson, 1969) The same conclusion also came from Richard Walzer, according to him, Philoponus' works had already spread to the Muslim community then, so al-Kindi could borrow Philoponus's argument when criticizing Aristotle's theory of creation. In addition, there is a very similar argument between al-Kindi and Piholponus. From this, Walzer concludes that al-Kindi's argument is not something new but an imitation of Philoponus.

Similarly, Peter Adamson says that before al-Kindi, the first rejection of Aristotle's argument about the theory of creation came from Philoponus. Later, this Philoponus' argument was republished by al-Kindi in several of his treatises.(Adamson, 2003) Adamson specifically concluded that Philoponus' argument, especially his mathematical argument (*counting argument*), is an argument that al-Kindi borrowed. In addition, Adamson sees that the conflict or disagreement between al-Kindi and Aristotle about "*creating from something that did not exist before*" does not need to be heralded. Aristotle also believed in "*coming-to-be from non-being into being*." Adamson's explanation implies that al-Kindi is not quite right in understanding Aristotle's theory of creation. Kevin Staley also put forward a similar assumption to Adamson. Staley sees that Aristotle's view of creation is considered dangerous for Muslims because it is contrary to the teachings of the Koran. This led to several critical responses to Aristotle, including that of al-Kindi. Unfortunately, according to Staley, al-Kindi's criticism of Aristotle was deemed inappropriate, and the arguments he

built were considered weak.(Staley, 1989)

It is understood that the concept of creation has never been fully explained by researchers, according to al-Kindi and his critical arguments. However, as mentioned above, the existing studies discredit al-Kindi by calling it a misunderstanding of Aristotle's concept of creation and calling his argument a repetition of Philoponus.

Methodology

This research employs at least three methods. The first is the descriptive method. A descriptive method explains the state of a group of people, an object, a set of circumstances, a system of thought, or a series of events.(Ariola, 2006) In this study, the researcher will describe the thoughts of al-Kindi, to provide a complete picture of his thoughts and positions related to the research topic. The analytical method is a research activity designed to parse, distinguish, and sort out an object of study so that it can be regrouped according to specific criteria, look for the relationship, and then interpret its meaning.(Park, 2007)

In a series of activities to parse, distinguish, and sort out an object of research, the researcher will observe an object of research in detail by describing its constituent components or compiling these components for further study.(Sayre, 1969) This study will describe al-Kindi's thoughts based on the selected study framework. The third is the critical method. The critical method is that the researcher must first doubt what is obtained from the research sources. After strong evidence is received, the researchers establish a hypothesis or general conclusion.(McIntyre, 2020)

Findings and Discussion

Meaning of Creation *Ex Nihilo or Ex Materia*

Al-Kindî consistently supported the idea of creation from nothing (*creatio ex nihilo*). God is The Creator (*Badî'/al-Mubdi'*) who maintains what has been created from nothing.(*Al-Kindî, Rasâil Al-Kindî Al-Falsafiyyah, Ed Abu Ridah, p 162*, n.d.) He defined creation as God creating or bringing something that exists from nothing. The basis of al-Kindî's proposal in supporting the *creatio ex nihilo* is his understanding of the Islamic creed and the teaching of the Qur'an.

He agreed with the Islamic theological doctrine that God created the universe *ex nihilo*.(Joseph Kenny,, p 9, n.d.) Therefore, finite matter requires the "infinite" to materialize.

Although al-Kindî was claimed to be sympathetic to Greek philosophy, he often clashed with it if it was not in line with his understanding of the nature of God in Islam. Besides that, al-Kindî's idea of creation out of nothing is also part of his defense of the Qur'an. The theory of the creation of Aristotle is considered contradictory and does not follow the elucidation of the Qur'an. Meanwhile, simultaneously, al-Kindî maintained that the view of *creation ex nihilo* he advocated is in line with the teachings of the Qur'an. Because the Qur'an itself expressly affirms that Allah is The Creator of the universe from nothing.(Daiber, 2012) In this connection of the view of creation, al-Kindî then explained a verse from the Qur'an that becomes a fundamental basis in supporting his theory of creation out of nothing. Al-Kindî said of these verses in a reasonably lengthy statement:

> *"He makes fire from that which is not fire, or heat from that which is not heated. So, something must have resulted from the opposite. For if what becomes is not of its opposite substance, then there is no intermediary between the two contradictions—by "opposite," I mean "that" and "what is not" [huwa wa la huwa]—it must come from itself [min zatihi].*

Nevertheless, his essence [zat] is always constant, eternal, and without beginning. Therefore, if a fire did not come from non-fire, then the fire had to come from a fire so that that fire would come from fire, and fire [this] from [other] fire, and unavoidably there would be an endless and everlasting from fire and fire from fire. Consequently, fire will always exist, and a state will never exist without fire. So, there will never be fire after there is no fire. However, fire does exist after it does not exist and is demolished after it exists. So, the only option remains that fire is produced from non-fire, and everything that arises is produced from something other than itself.

Then, to explain the generation of something from its opposite, he [sc. The Prophet] said: ''Or did he who created the heavens and the earth not be able to create like them anymore?'' And then he said what should follow from this, ''Verily, He is the Creator, All-Knowing.'' Because in the heart, the disbelievers deny the creation of

the heavens because they have shaped an opinion about the length of time required for their creation based on an analogy with human actions—because, in the case of human activities, the greater the labor produced, the longer [time] is required, *so that for [humans] sensible things [i.e., the heavens] would take the longest time to produce—[God] said that He, His praises, did not require a period of [time] to originate. Furthermore, this is clear: He made "that" out of "that which is not." Therefore, he whose power is such that He can produce body from nobody, and bring forth that which is out of that which is not since He can do deeds without a material substrate, there is no need to produce in time. Thus, since man cannot act without a material substrate, He who needs not to act on a material substrate does not need to act in time.* (*Al-Kindî, Rasa'il, p 374–375*, n.d.)

Al-Kindî's statement, derived from the Qur'an, can be drawn to at least four conclusions. First, God created without a material substrate. The universe was created without any pre-existing material but rather something completely new. Second, God created without time passing during His act of creation. Third, God created something into existence. On the other hand, if God destroys something, He ''turns it back into the complete non-being from which it was also''. Fourth, everything that happens in the universe, including creation, occurs by the grace of God.

These four conclusions of al-Kindî are almost similar to the understanding of *Mutakallimûn*. The standard doctrine held by Muslim theologians asserts that the universe, which means the physical world of matter, did have a beginning in time. Second, a definite moment in the past where it came was created. Third, the Creator is one, namely The Transcendent, Eternal God. The actions of Allah's creation are voluntary according to His will or pleasure; in that sense, coercion is unnecessary. Fourth, Allah created all this not from a pre-existing but from nothing (*lâ min shay'*), which means that its origin was preceded in time by nothing (*'adam*).(Arif, 2012)

Likewise, al-Kindî's argument derived from the Qur'an (*kun fa yakun*) is a proposition also used by theologians; *Mu'tazila, Ashâ'ira*, and *Maturidiya*. Like the theologians, al-Kindî also uses this "*kun*" argument to support creation from nothing. The difference is that al-Kindî seems closer to the *Mu'tazila* in believing that the Qur'an (including *kun*) is *hadis* (new). Meanwhile, *Ashâ'ira* and *Maturidiya* believe that the Qur'an (including *kun*) is *qadîm*. However, despite these differences, they agree that the *kun fa yakun* is a clue to the idea

of creation from nothing.

Al-Kindî's conclusion is also in line with al-Ghazâli. For al-Ghazâli, the universe, which means "everything other than God," was created from nothing by Him through creation.(Al-Ghazâli, p 29, n.d.) The starting point for the idea of creation, according to al-Ghazâli, is that the universe had a beginning in time. In *al-Iqtisâd,* he packs his thinking in the form of a firm syllogism which also functions as an argument for the existence of God: "Every creature had a cause in the beginning. The world is a creature. Therefore, it must have an initial cause.(Al-Ghazâli, p 29, n.d.) Al-Ghazâli repeats a similar argument: "the world began in time, and they understand with rational certainty that nothing that originates from time originates by itself, and so needs a creator."(Hamid Fahmy Zarkasyi, 2018)

He even called it the axiom of the mind, namely that everything that begins must begin at a specific time. The limitation in time, the difference between what precedes and what replaces in existence, will naturally necessitate a cause to choose the time for its emergence. (Hamid Fahmy Zarkasyi, 128, n.d.) At the same time, in *Tahâfut,* al-Ghazâli's argument can be reduced to three premises, and one inference in this way; There are temporal events in the world; Temporal events have causes; The temporal sequence of events cannot be reversed indefinitely.(Al-Ghazali, 2000)

Conversely, the view of the creation of al-Kindî is different from Aristotle's. Aristotle also talked about being from nothing to being which is to be in the absolute sense. In an absolute sense, Aristotle defines corruption as a change from being to nothing. Likewise, the Aristotelian notion, al-Kindî emphasized in particular, is that all that will exist is from "something contrary." Aristotle said every change is from emanation. Aristotle established this principle in *Physics* V.1, where he also identified existence and non-existence as "contrary" in a sense that is required when the change in question is a generation or corruption. Aristotle even allowed instantaneous change in some changes, including those considered generations and corruption. A person is resurrected, there is a moment when he begins to become. The process is not gradual. It is extended over a certain period. Thus, Aristotle rejected the idea of something emerging from nothing at all. He agrees that man could arise from something that is not human but denies that man can arise from a complete lack of nothingness.

However, unlike Aristotle, al-Kindî believes God can create without a pre-existing substrate. He said that just as "man is produced

from a non-human," "house from non-house, fire from non-fire, and body from non-body, the world itself is produced from "non-world." Furthermore, while Aristotle said that, on such a hypothesis, the world would need a pre-existing substrate, al-Kindî believed that no such substrate was needed in the special case of divine creation. Al-Kindî was adamant about it because, in his argument regarding the world's eternity, Aristotle claimed that every movement or change required a prior substrate. This item could be relocated or altered. For al-Kindî, God's aptitude to create matter and form demonstrates His *qudrah* or superiority over nature. A "supernatural change" occurs when God creates something, transitioning from total privacy, or absolute nothingness, to the created thing.

On the other hand, natural change is modifying something that already exists. When there is a significant change, the substrate takes on a tangible form (for example, the blood becomes a person), or the substance is destroyed, and the substrate remains (e.g., a person dies and leaves a corpse). In an unintentional change, the already formed substance loses one property in exchange for another (for example, a person changes from not white to white). That is, something endures despite the change. In addition to being different from Aristotle, al-Kindî also seems different from the peripatetic philosophers after him, such as al-Farabi, Ibn Sina, and Ibn Rushd. Al-Farabi, for example, maintained that the creation of this world begins with a form that must exist (*wajib al-wujud*), namely God, then overflows or emanates to produce something (*mumkin al-wujūd*).

Thus, the creation in the view of al-Kindî is somewhat similar to *Mutakallimûn*, God creates this universe from nothing. At the same time, it shows that al-Kindî differs from Aristotle's and Aristotelian's theory of creation, which says that creation means "making" something from something. In other words, al-Kindî's most significant deviation from Aristotle and the Peripatetic tradition was his rejection of the immortality of nature. Al-Kindî broke away from the thought of later philosophers and adhered to Islamic theology, believing in creation from nothing rather than emanation. Al-Kindî contradicted the neo-platonic view, depicting God's creation emanating from him because the creation theory asserts the universe's beginning as God's creation. In contrast, the theory of emanation raises the opinion that God did not create the universe.

Terms of Creation

Al-Kindî formulated his view of creation out of nothing by using terminology he seems to have created himself, giving special meaning to the words *ibdâ'*. He wrote that *ibdâ'* embodies something from nothing (*izhâr shay' 'an laysa*).(Al-Kindî, Rasâil, p 165) God is the One Who is Single, innumerable, and multiple; He is the First Cause without a cause, the Agent without an agent, the Complementary without a compliment, and He is the One who gave rise to everything from nothing. The word "*ibdâ'*" used by al-Kindî for creation seems to align with what is mentioned in the Qur'an. Because as stated by the Arabic linguist Ibn Faris, the term *bada'a/ibdâ'* has the basic meaning of starting something and making it not based on the previous example. The word *bada'a* is written three times in the Qur'an, twice which is supported on the *samâwât lafazh* using "بديع» (*badī*) and once «بدعا» which means the first; there is no which precedes. (Muḥammmad Fu'ād 'Abd Al-Bāqī, 1991)

Several commentators gave further explanations related to the word *'ibdâ.'* Al-Asfahâni, for example, mentions that when this word of *ibdâ'* is attributed to Allah, it means He who makes things without tools, without *māddah*, without time, and place as in Q.S. al-Baqarah (2): 117, which this verse is the basis of rebuttal against those who say that this world is created from existing. The word *bid'ah* means: saying or doing something that did not exist before. In addition, the Qur'an also states that creation has a beginning. In other words, according to al-Alusi, it is asserted that only Allah is the Creator of all things without the need for tools, *māddah*, time, and place.

Slightly different from al-Kindî, Muslim theologians used the term "*takwîn*," taken from the word "*kun*," to denote creation from nothing. *Maturidiyah*, for example, said that the word "*kun*" is the process of creation, and "*yakûnu*" is the result of that process. Suppose the process of creating (*takwîn*) is the same as creation (*mukawwan*). In that case, God does not need to use the word "*kun*" when He creates. (Al-Maturidi, 1971) The impression emerged from their opinion was the presence of *mukawwan* meant that the *qadîm* had to change or the *mukawwan* who came from *qadîm* was also the *qadîm*. The *Maturidian*s say Allah has the nature of deeds, and His actions are *qadîm*. From the actions of *qadîm*, a *mukawwan* is created according to the will of Allah. Because the *mukawwan* is embodied in time, the *Maturidian'*s view it as new.(*Al-Bazdawi, p. 73*, n.d.)

In line with *Maturidiyah*, *Asha'irah* also uses the term "*takwîn*" to denote creation from nothing. For *Asha'irah*, the word "*kun*" will give birth to a result or an action. Action is closely related to creating a new one and takes time. Therefore, God's actions are new. For the *Ash'ariyah*, God's creation is primarily determined by the nature of *'ilm*, *qudrah*, and *irâdah*. His *'ilm* causes God's creation to be beautiful and orderly. His *qudrah* causes everything to exist. His *irâdah* causes everything to exist through time, i.e., something that immediately manifests, and there is also what is manifested through a process. Thus, the nature of *qadîm* will not change even though it has been manifested in material form.(Al-Syahrastani, Al-Milal Wa Al-Nihal, I, p. 94, n.d.) Therefore, the creation process originating from God *qadîm* is a time requirement.

In addition to the terms *ibdâ* and *takwîn*, the word *al-fayd* is also used to indicate creation. The term *al-fayd* can be interpreted as an emanation that occurs in a single and stratified form in a mechanical-determinist manner, eventually giving birth to a diverse nature. The second singular is born as a unit from the first single, and the first is intellect. The "creation" of this *fayd* model is increasingly recognized in the Islamic philosophical tradition through al-Fârabî. For him, the creation of this universe begins with all of these natures originating from a single form that must exist (*wajib al-wujūd*), namely God, then abundantly produces (*mumkin al-wujūd*).(Al-Farâbi, p 21, n.d.) This shows that universe did not occur by chance but from a single and abundant form in such a way. The emanation of all forms comes from one form and produces another, starting with God as the "First Being" and "Pure Intellect."

This *fayd* (emanation) model was later developed by Ibn Sîna. Ibn Sîna stated that God created the universe through emanation. The emanation course begins with God's being, *Wâjib al-Wujūd*, and *'Aql al-Kulli*. The first *'aql* itself functions as an intermediary between God and others. Because God is one, He cannot interact and relate to those who are not. This first sense can prevent both from direct interaction.(Sirajuddin Zar, p 76., n.d.)

Apart from *ibdâ'*, *takwîn*, and *fayd*, the term *îjâd* is also used to express the creation. Ibn Rushd used the term *îjâd*. Ibn Rushd argued that some of the others damage every part of all that exists. However, the breakdown of each piece is simultaneously the cause of another part. If not, then something could not come from something else. The meaning of creation (*takawwun*) is to change something potential into

actual. So, something that does not exist (*'adam al-shay'*) is impossible to come into existence (*al-kawn*). Therefore, Ibn Rushd felt the need to compare the understanding of philosophers and theologians about the act of realizing (*al- îjâd*) or creating (*al-khalq*) in his statement as follows:

> *The act of fa'il (according to theologians) is closely related to absolute creation, namely creating something that did not exist before, neither with potential nor creating something possibly from potentiality to actuality. As for the act of fa'il, in the view of philosophers, it is nothing but removing something from potentiality to actuality. According to them, this is related to the existence of existence from two sides (îjâd and i'dam). Suppose ijad is interpreted by negating something from its potential to the actual form so that its 'adam' disappears. In that case, i'dam is to deny the basic structure to its potential form so that its 'adam' occurs.*

From this, it can be understood that creation for Ibn Rushd was not something out of nothing (*creatio ex nihilo*), as *Mutakallimûn* has faith in. Instead, creation is the conversion of something from what was initially potential to actual. That is, everything that exists must undergo change, which requires the existence of original material existence. Therefore, creation, for Ibn Rushd, does not mean *ibdâ'*, whose connotation is a creation from nothing (*creatio ex nihilo*), but rather, creation means *îjâd* and *takwîn*, which means that creation occurs from something that has existed since the beginning. So, this nature has constantly been forming form since the age did not begin in the sense that this nature was not created all at once from something that did not exist before.

Thus, using the term *ibdâ'* chosen by al-Kindî is the right choice. Because apart from being in line with what is meant by the Qur'an. In the view of the Arabic linguist, it is also because among the words or terms that refer to the meaning of creation, only the word *ibdâ'* explicitly indicates the meaning of creation from something that has no previous example or from nothing. Moreover, this is what al-Kindî meant in his choice of the word *ibdâ'*, that the universe was created from something that does not exist.

Besides that, although the term *ibdâ'* used by al-Kindî is slightly diverse from the theologians, who choose the word "*takwîn*" in terms of meaning, the term *ibdâ'* is in harmony with "*takwîn*" because "*takwîn*" in the theologian's view is to create from previously nothing

to exist, same as *ibdâ.'* In addition, apart from the differences in the use of words between al-Kindî and Aristotelian philosophers, such as the terms *fayd*, *îjâd*, and *takawwun*, the difference is also seen in terms of meaning, where *fayd*, *îjâd* and *takawwun* refer to the meaning of "creating" or "making" from pre-existing materials.

Meaning of 'Ālam

In Arabic, the word 'Ālam' is rooted in the word *'alima*, which has the basic meaning of a trace or sign of something that distinguishes it from others. Zakarīya, Mu'jam Maqāyīs al-Lugah, p 663. The scholars provide a definition that is not much different from the meaning of this etymology. Al-Rāgib al-Asfahānīy provides a limitation that "*al-'ālam*" is the name of the orbit and what it collects from *jauhar* (substance) and *'araḍ* (accident), the basic meaning of which is a name assigned to something known. *Al-'ālam* is a tool for giving instructions to find out the maker. Al-Jurjāni also conveys almost the same meaning: "*ālam*" is "everything that exists other than Allah. It is because everything that exists is proof of His existence.

Likewise, in his treatise *Fî al-Falsafah al-Ûla*, al-Kindî uses the term "nature" in two different senses. The first means the number of physical and material objects. So, whatever is material is natural. Second, nature means the primary principles of motion and rest. All simple elements exhibit a natural motion with an end where the elements cease.(*Al-Kindî, p 111*, n.d.) In this second sense, the notion of nature looks similar to that of Greek-Aristotle physics, an immanent force that exists alone in objects that make them move to achieve their natural form or purpose. However, al-Kindî cannot accept that which exists by itself. Instead, God created nature, which determines the created universe and makes it function in a sound system.

Al-Kindî's other explanation of nature is contained in the treatise *Fî Hudûd al-Asy ya'*, al-Kindî defines the universe as an element that can be described, so it is not *azali.'*(*Al-Kindî, Fî Hudûd Al-Asy Ya', p 169*, n.d.) As for what is meant by *azali* al-Kindî is a form that does not need anything else. In contrast, nothing causes "*'illah*" for something that does not need anything else. Furthermore, "something" that does not need a cause is eternal. That "something" that does not need a cause is God.(*Al-Kindî, p 169*, n.d.) This definition of al-Kindî becomes the fundamental premise in providing conclusions regarding the newness of the universe and the end of time and place, it can be understood that the universe, for al-Kindî, is new, not eternal, has a

beginning and end, and was created by God.

This view of al-Kindî is somewhat similar to *Mutakallimûn*. For example, in the opinion of *Mu'tazila*, God is *qadîm*, while besides Him, no one is *qadîm*. The only attribute of God that does not exist in others is the attribute of *qadîm*. (Abdul Jabbâr, 1965) A *mukawwan* is created according to the time Allah wills. Because the *mukawwan* is embodied in time, the *Maturidian*s view it as new. *Asya'ira* says the same. God is *qadîm*, and the universe is new, and something new must have been created, and what makes it must not be of a new type but must be *qadîm* (eternal), namely God. (Al-Baqillâni, 1986)

The same explanation with al-Kindî related to the meaning of the universe comes from al-Ghazâli. According to him, nature is not only a collection of earth, sky, body, growth, etc. but nature which he calls God's creation.(*Al-Ghazâli, p 10*, n.d.) God is also described as the creator of the transcendent universe. He is the first and never ends. Here, al-Ghazâli's argument implies the thesis that nature cannot occur by itself, but rather it is God's creation.(*Al-Ghazâli, p 10*, n.d.) In other words, al-Ghazâli's assertion suggests that the question of cosmology and the occurrence of secondary causes in the order of the universe must also viewed as entities and events created by God. (*Hamid Fahmy Zarkasyi, P 127*, n.d.)

Furthermore, according to al-Ghazâli, the universe does not exist simultaneously with God, both in essence and in time. Nature can exist or not; it all depends on the will of Allah. His will makes the absence of nature continue to the point where the will to make it happen begins. Thus, the form of nature before the will manifests until a particular point in time is outside the will. Therefore, nature does not manifest concretely.(Al-Ghazālī, p 96., n.d.) In more straightforward language, God differs from nature in position and character.

The difference gets more significant when we try to measure it. Allah is the creator who is *qadîm* who does not need to be created. At the same time, nature is a new creation that needs to be created. Al-Ghazâli continued that if nature is said to be *qadîm*, it is impossible to imagine that God created nature. So, understanding nature's *qadîm* leads to the conclusion that nature exists by itself, not created by God. This means that it is contrary to the teachings of the Qur'an, which undoubtedly states that God created the whole universe.

In contrast, Aristotle argued that the universe is eternal and had no beginning in time. He reasoned that it was impossible for a motion to originate in itself. God is the first mover, but the movement itself is eternal. Besides, the universe cannot exist by itself because there is no absolute being. Everything that becomes comes from something.(A. E. Taylor, et al., p 56-57, n.d.) This statement by Aristotle indicates that the universe is eternal and has no beginning in time. Ibn Rushd says the same as Aristotle. The universe, for Ibn Rushd, as God's creation, when seen as a result of His actions, is *qadîm*. On the other hand, if it is seen from the point of view that it has *'illah*, namely Allah, then this world is new. As a result, from another perspective like this, it is possible to state that this world was created from the beginning or is new but *qadîm* in terms of its creation.(*Ibn Rushd, Faṣl Al-Maqâl, p. 42*, n.d.) This novelty of nature must be seen in that it is continuously created from the beginning, not intermittently. From this understanding, Ibn Rushd differed from the view that had been believed by *Mutakallimûn*, especially *Asya'ira*, regarding the aspect of eternal creation. Ibn Rushd assumes that the meaning of iḥdâth must occur from the beginning and continuously, while *Mutakallimûn* means it intermittently and not from the beginning (*'azali*).(Ibn Rushd, p. 42, n.d.)

Thus, al-Kindî's understanding of the universe aligns with what theologians believe it is new, not *'azali*, has a beginning and end, and is created by God. In contrast, al-Kindî's view of the universe contradicts Aristotle and the Aristotelian philosophers. They believe that the universe is *qadîm* and did not begin in time. Thus, al-Kindî's understanding of the universe aligns with what theologians believe it is new, not *'azali*, has a beginning and end, and is created by God. Al-Kindî's view of the universe, on the other hand, contradicts Aristotle and the Aristotelian philosophers. They believe that the universe is *qadîm* and did not begin in time.

Al-Kindi's Critique of Aristotle's Theory of Creation

Aristotle argued that the universe was eternal and had no beginning in time. He reasoned that motion could not originate in itself. God is the first mover, but the movement itself is eternal. Of the various arguments used by Aristotle to prove the eternity of the universe, two of them are of particular importance and significance. The first argument is founded on the eternity of time and motion. God does not usually exist before time because understanding before

implies time. To think of time having a beginning is the same as imagining a time before time, and so on. Since time is the measure of motion, and we cannot think of a time without thinking of motion, the motion must be eternal. The second argument, related to the first argument, is based on his dictum that what has no beginning has no end. "Every baby must have a father, but the father must have been a baby before adulthood. Therefore, the invariable perpetuation of the species is certain without beginning and end."(*A. E. Taylor, p 56-57*, n.d.) Thus, the theory of creation in the view of Aristotle is based on his argument of the infinitude of time, which means that this universe was created from pre-existing matter and has no beginning and end. This view of Aristotle is responded to critically by al-Kindi. Al-Kindi begins his response with a mathematical demonstration that all bodies.

Al-Kindî advanced the "finitude" argument as one of his main arguments. Al-Kindî proved the impossibility of the infinite body employing *reductio ad absurdum*. By this process of *reductio ad absurdum*, the proposition that an object can be eternally infinite proves untenable, just as an attribute of a quantity category, such as space, time, and motion, proves infinite. Now the universe and motion are concurrent, for the notion that the universe or its body, as al-Kindî put it, initially does not move and then moves is absurd. Furthermore, whether we consider the universe to have been created ex nihilo or to have existed long ago, the same conclusion will follow: namely, that motion and the universe are inseparable—in the first case, because the act of creating the universe into existence from nothing is a form of change or motion; in the second case, because the universe, which was thought to have always existed, must have always been at rest or in motion, for the eternal is not bound by change or motion (as has been pointed out), and the universe is known to be in motion. Therefore, its existence must be in perpetual motion if it is eternal.

The same can be said of time to the body. Time as a measure of motion, it is impossible that one precedes the other; consequently, both of them cannot precede the "body" of the universe." From this, it follows that the "body of the universe" is finite. That motion and time, as requisite companions, will also be finite. Thus, al-Kindî proved that time could not be truly infinite. Suppose that time will continue, then each period will be preceded by another period, and so on, so we never arrive at the first period. And if it never comes

to the first period from which the reckoning of time can begin, then there will be no definite period, like the present, where the time series stops because an infinite series cannot be traversed.

It would not be possible for al-Kindî if we consider the existence of an infinity of time. This is because traverse a time series that juts into the future, in that way, to get to the end of time. However, at some point in time, say the present, we have crossed that chain, which cannot, on that account, be said to be infinite. Moreover, if we keep adding to the present and the next some finite period, then the result is a certain finite continuity and not infinite time. Therefore, considering its beginning and end, the actual time series can be limited and is finite or determined.

Al-Kindî's outpouring of infinity, as applied to time, motion, and size in general, is relatively proportional. However, his attention was not motivated by empty theoretical considerations; but instead arose from his theological attention to critical issues such as demonstrating the existence of God, the possibility of the end of creation, or the eventual destruction of the world at the command of God and so on, all of which, in his opinion, must be based on the thesis of the impossibility of a truly time-series true unlimited.

There are two principles of Aristotle utilized by al-Kindî:

(1) that something infinite cannot turn into a finite that is tangible in its actual form.

(2) that matter, time, and motion appear simultaneously.

These two principles by al-Kindî were later developed into nine statements:

1. If one is not greater than the other, two equal quantities mean they are the same.
2. If one quantity is added to one of the two equal quantities, they are not the same.
3. If a quantity is reduced, the remainder is smaller than the original quantity.
4. The result will be the same if part of a quantity is taken and part is returned.
5. A finite quantity cannot be transformed into an infinite, and vice versa.
6. The sum of the exact two quantities is finite if each is finite.
7. The natural quantity of actuality is the same as that of poten-

tiality.

8. Two infinite quantities cannot be smaller than the other.
9. What is referred to as more significant is the more minor part, and what is referred to as smaller is the larger.

Based on the two principles and nine statements above, al-Kindî then proved the truth of his opinions. First, if we claim that the universe is infinite, then we should also state that the actual existence of this universe is also infinite. Nevertheless, this contradicts Aristotle's first principle, which states that real existence is finite. Second, if we take a part of the universe that is assumed to be infinite, the rest can be either an unlimited form or finite.

However, if it is said to be infinite, then it means that two things are equally infinite, and that implies that the whole is equal to the part, and that does not make sense; if it is said to be a finite being, then it is contrary to the statement that the infinite cannot give birth to the finite. Third, if we return some of what we took earlier, the result will be as before. However, this implies that something infinite (the whole) is greater than the other infinite something that does not make sense. Based on these logical contradictions, according to al-Kindî, the universe that exists in this actuality cannot but be finite. Because it is limited, this universe means it is not eternal, not *qadîm*, and created from nothing.

Al-Kindî's concept of the finite, not *qadîm*, and impermanent is related to the universe's existence and to matters of time and motion, two things that, in the perspective of Aristotle's metaphysics, are considered eternal. In al-Kindî's view, time is not the same as motion; instead, time is a number that measures motion. There are two kinds of numbers: singular and continuous. Time is not a separate number but is continuous because time is the sum of the previous and subsequent numbers.(Fuad Ahwani, 24., n.d.)

If time is *qadîm*, without beginning, as Aristotle understood it, then time means infinite. If time is infinite, there is no "past time" and "present time" because this indicates that time has entered the realm of finite actuality, whereas something infinite cannot turn out to be finite. Based on this, we cannot imagine a time without a beginning, *qadîm*, and unlimited; on the other hand, time must have a beginning and is finite. The same thing happens with motion. In conclusion, if time and motion have a limited beginning, they are created from "something" that did not exist before.

Al-Kindî then connects his conclusions regarding the creation of time and motion with the "body." According to him, time is the length of the body; motion is a measure of the size of the body. Now, if the body of universe is finite, and motion needs to go along with that body as a measure of duration, then the conclusion is that where there is a body, there is motion. This, in turn, shows that where there is motion, there is creation in time. Thus, all three, body, time, and motion, are created.(Atiyeh, 1983)

Al-Kindî confronted the creation problem in time with an argument based on motion. According to al-Kindî, one must choose whether to believe the cosmic body is created or eternal. If it is created, there is a movement, then the process of its birth from nothing. Now, if creation is motion, while motion is impermanent but created as previously explained, then the body of universe has been created in time and from nothing. Conversely, if the body of the universe is still at rest (*sâkin*) and then moves, then motion is a change. This means that what is eternal has passed from rest to a state of motion, which is implausible because what is eternal does not change. Therefore, the universe was created in time.(Atiyeh, 1983)

This means that al-Kindî has his concept, which is not the same as Aristotle, who states that the universe is limited in space (matter) but not in time and motion. Likewise, al-Kindî is not following Plato, who says that the universe is finite in time but not limited to matter (space). Because, for al-Kindî, space (matter), time, and motion are both limited and created. Nevertheless, al-Kindî agrees with Plato on the relationship between motion and time. According to both, time appears along with motion and change, where there is motion and change means there is time, and vice versa. Being unchanging, God is not related to time; therefore, He has no beginning (*qadîm*) and is eternal.

Before al-Kindî, theologians had supported the idea of creation in time. For them, the universe is made up of atoms and the void, which are events or accidents without existence. The atoms cannot survive for two moments because they constantly re-create. According to them, a body cannot be separated from its events (*al-'ardl*) and does not precede those events. Therefore, whatever is inseparable from its occurrences and does not precede them is created in time. As a result, the body of the universe was created in time.

As a result, after demonstrating that the universe was created in time, al-Kindî wishes to show that the universe has a Creator. As

previously stated, this is founded on the notion that the universe was created in time. It has been demonstrated that the universe is finite regarding the body, time, and motion, implying that the universe must have been created. Everything created must have a creator following the law of cause and effect. As a result, God is the creator, and He exists. Al-Kindî also employs the principle of logical relations to demonstrate the same point. This principle requires a connection between cause and effect or between creator and created if it has been established that universe was created.

Conclusion

Several conclusions can be drawn from the explanations exposed in the previous sections. *First*, the creation in the view of al-Kindî is somewhat similar to the *Mutakallimûn*, that God creates this universe from nothing. At the same time, it shows that al-Kindî differs from Aristotle's and Aristotelian's theory of creation, which says that creation means making something from something. *Second*, al-Kindî uses the term *ibdâ'* to denote creation in time, out of nothing, or *creatio ex nihilo*. Using the term *ibdâ'* chosen by al-Kindî is the right choice. Because apart from being in line with what is meant by the Qur'an, it is also, in the view of the Arabic linguist, because among the words or terms that refer to the meaning of creation, only the word *ibdâ'* explicitly indicates the meaning of creation from something that has no previous example or from nothing. Besides that, although the term *ibdâ'* used by al-Kindî is slightly diverse from the theologians, who choose the word "*takwîn*" in terms of meaning, the term *ibdâ'* is in harmony with "*takwîn*" because "*takwîn*" in the theologian's view is to create from previously nothing to exist, same as *ibdâ*. *Third*, al-Kindî's understanding of the universe aligns with what theologians believe is new, not *azali* has a beginning and end and is created by God.

In contrast, al-Kindî's view of the universe contradicts Aristotle and the Aristotelian philosophers. They believe that the universe is *qadîm* and did not begin in time. *Fourth*, differences in opinions with Aristotle related to the theory of creation made al-Kindi deliver a critical response to him.

Aristotle's argument in supporting his idea of creation is based on the infinitude of time, meaning that the universe is eternal and has no beginning and end. Al-Kindî also responded critically to

Aristotle's point of view. The former demonstrated that the universe was created in time to demonstrate that it was created from nothing and has a Creator. Furthermore, because the universe was created in time, it has been shown that it is finite in body, time, and motion, implying that the universe must have been created from nothing.

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