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Kitap Değerlendirmesi / Book Review

**Review of *Criticisms of Atomism in Classical Islamic Thought* by Mehmet Bulğen (İstanbul: İFAV Publications, 2017)**

***Klasik İslâm Düşüncesinde Atomculuk Eleştirileri*, yazar Mehmet Bulğen (İstanbul: İFAV Yayınları, 2017)**

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**Abstract:** Mehmet Bulğen *Criticisms of Atomism in Classical Islamic Thought* presents the criticisms of kalām atomism, which were proposed by significant thinkers from the kalām, falsafa, and Zahirîyya traditions in the Islamic Intellectual history. The book also touches upon the atomists' responses to those criticisms. The presentation of these ideas relies upon a remarkable use of the primary and secondary sources. Although the author presents the discussions on the critique of atomism in great detail, he does not take a definite position on identifying the most plausible view.

**Keywords:** Kalām, Atomism, al-Kindî, İbn Sînâ, al-Nazzâm, İbn Hâzım, Mehmet Bulğen.

**Öz:** Mehmet Bulğen'in *Klasik İslâm Düşüncesinde Atomculuk Eleştirileri* adlı eseri kelam, felsefe, zahirîlik gibi İslam düşünce tarihinde derin etki bırakmış entelektüel geleneklere mensup düşünürlerin kelam atomculuğuna getirdikleri eleştirileri konu edinmektedir. Eser bu eleştirileri birincil ve ikincil kaynakları çok iyi kullanarak sunmakta yer yer atomcu görüşlerin bu eleştirilere getirdiği ve getirebileceği cevaplara da işaret etmektedir. Yazar atomculuk eleştirileri bağlamında ortaya çıkan tartışmaları iyi sunmakla beraber tartışılan görüşler arasında hangisinin daha iyi savunulduğu konusunda tam bir görüş serdetmemektedir.

**Anahtar Kelimeler:** Kelam, Atomculuk, el-Kindî, İbn Sina, Nazzam, İbn Hâzım, Mehmet Bulğen.

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*Klasik İslam Düşüncesinde Atomculuk Eleştirileri*, which is written in Turkish and could be translated into English as *Criticisms of Atomism in Classical Islamic Thought*, is the result of Mehmet Bulğen's (Associate Professor at the Kalām Branch of the College of Theology at Marmara University, Istanbul) post-doctoral research he did under the supervision of Robert Wisnovsky at the Institute of Islamic Studies at McGill University. It is also a continuation of Bulğen's previous book entitled *Kelam Atomculuğu ve Modern Kozmoloji (Kalām Atomism and Modern Cosmology, forthcoming in English from Kalam Research and Media)* in which he examined kalām atomism and compared it with contemporary scientific theories, especially with Quantum Mechanics. In *Criticisms of Atomism*, he presents a detailed study of the criticisms of atomism that were put forward in the Islamic Intellectual history. Both of his books illuminate some understudied aspects of Islamic intellectual history and attempt to indicate their contemporary relevance. These books together can be considered to propose the most recent and detailed survey of Islamic atomism. Although Bulğen benefits much from Alnoor Dhanani's seminal work *The Physical Theory of Kalām: Atoms, Space and, Void in Basrian Mu'tazilī Cosmology* (1994), he extends Dhanani's findings on kalām atomism and presents a more comprehensive and detailed picture about Muslim intellectuals' positions on atomism.

*Criticisms of Atomism* shows how vibrant the philosophical discussions on atomism were in the Islamic world. According to Bulğen's study, proponents of all important intellectual traditions in the Islamic history (kalām, falsafa, and zahiriyya) participated in this discussion. Whereas almost all the mutakallimūn from the all main schools of the kalām tradition (Mu'tazila, Ash'ariyya and Maturidiyya) embraced atomism –with some exceptions, of course, such as al-Nazzām-, Ibn Ḥazm from the Zahiriyya, al-Kindī and Ibn Sīnā from the falāsifa tradition rejected and criticized this doctrine. Concerning the structure of the book, the first chapter gives the historical background of the Islamic atomism. It mainly focuses on the arguments for and counter-arguments against atomism among the Greeks. The second chapter is confined to Maimonides's presentation of the kalām atomism in twelve propositions and critique of them. This chapter gives a brief but a general picture of what the basic theses of the kalām atomism are. The third chapter describes al-Nazzām's criticisms of atomism and his theory of leaps. Since al-Nazzām is a Mu'tazilite thinker, this chapter presents a critique of atomism from within the kalām. The next two chapters pertain to the criticisms from the falāsifa tradition. Bulğen introduces al-Kindī's criticisms first and Ibn Sīnā's second. These two chapters also show why an Aristotelean cannot accept atomism. The sixth chapter is reserved for the Zahirite thinker Ibn Ḥazm's view of created reality and his arguments against atomism. In the seventh chapter, Bulğen goes back to the kalām tradition and presents Ibn Mattawayh's responses to some of the criticisms directed against atomism. The book ends with a chapter that discusses whether al-Ghazālī was an atomist and a general conclusion. The presentation of the views and arguments in the book are supported with diagrams and figures, and thus provides a better understanding of the content. The author has benefited from almost all available sources on the topic, both primary and secondary.

Some of the salient points of the book that improve our understanding of the atomist and non-atomist ontologies in the Islamic Intellectual history are as follows. On many occasions, Bulğen draws attention to Maimonides's comment on the kalām atomism that the mutakallimūn were probably aware of Aristotle's analysis of time, distance, and motion. In Physics VI (231a29-231b6), Aristotle argues that time, distance, and motion are interrelated in a way that if one of them is continuous, then all of them are so; if one of them is discrete then again all of them are so. This is why the mutakallimūn who accepted indivisible particles also held that time is atomic and space is discrete. Due to this aspect of their theory, we cannot appeal to continuous geometry in evaluating kalām atomism. However, as Bulğen shows, quite many criticisms directed to the kalām atomism presuppose the validity of continuous geometry. Following Alnoor Dhanani's suggestion, Bulğen thinks that discrete geometry would be a much more plausible theoretical frame to make sense of the kalām atomism. Once we pass from continuous to discrete geometry, many criticisms directed against atomism would disappear.

Second, the distinction between actual infinity and potential infinity also plays a central role in some arguments for and against the kalām atomism. One famous argument of the mutakallimūn goes as follows. There are bigger and smaller objects around. If all of them were divisible ad infinitum, then they would have infinitely many parts. However, both a small and big object cannot have infinitely many parts because there is a clear difference in their size which cannot be explained by the same number of particles. Al-Kindi criticizes this sort of arguments by making a distinction between actual infinity and potential infinity. According to al-Kindi, any finite object could be divided ad infinitum, but this does not mean that the object in question has actually infinitely many parts. That something could be divided without stopping refers to a potentiality, and at each stage of the division we always have a finite number of parts. Therefore, divisibility ad infinitum does not presuppose an actual and real totality of infinitely many particles. In conclusion, to al-Kindi, the mutakallimūn confused actual infinity and potential infinity concerning the divisibility of matter. By sticking to this distinction, he adopts Aristotle's hylomorphism and argues that matter could be divisible ad infinitum though it is a continuous entity that is not made up of indivisible particles. However, unlike Aristotle, al-Kindi does not think that matter is pre-eternal because going back ad infinitum past in time requires accepting an actually infinite totality. Thus, matter has to be created out of nothing some finite time ago though the future is open and can extend ad infinitum. In short, al-Kindi considers a pre-eternal universe to be an example of actual infinity and finds it absurd to accept. However, he holds that ascribing eternity to the future of the universe only commits one to potential infinity, which is not absurd, and so he accepts it.

According to Bulğen, al-Kindi transformed Aristotle's hylomorphism into a system that is compatible with the doctrine of creation ex nihilo as the mutakallimūn transformed Ancient atomism (p. 131). The main difference between these two doctrines seems to lie in evaluating the concept of infinity. Bulğen indicates that the early mutakallimūn seemed to be aware of the distinction between actual infinity and potential infinity. For instance, Ibn Fūrak ascribes to al-Ash'arī the idea that there is a limit in decreasing a certain amount of quantity, but there

is no limit in increasing the quantity (p. 141). Similarly, al-Ash'arī held that the world has a beginning in time but the future is eternal. It seems that al-Ash'arī was aware of the distinction between actual infinity and potential infinity but considered that the divisibility of matter *ad infinitum* led to accepting an actually infinite multitude. This is a significant thesis if my interpretation is correct, and it challenges the intuitive idea, as held by al-Kindī, that divisibility *ad infinitum* leads to potential infinity only. It surely needs proper attention and assessment in detail.

As a final point, Bulğen points out that the early atomists such as Abū al-Hudhayl al-ʿAllāf considers an individual atom that is separate from others to be non-extended and to have no dimensions. However, this leads to a problem as to how an extended body comes to exist from non-extended atoms. Later atomists beginning with Abū Hāshim al-Jubbāʿī considered atoms to be extended and having some volume. Nonetheless, they retained the idea that atoms are dimensionless. This later view seems to be a contradiction in terms if any extension or volume is regarded to have dimensions. Bulğen notes that the later *mutakallimūn* insisted on holding that an atom is both extended and dimensionless without much explanation. Bulğen refers here to the possible significance of discrete geometry for interpreting the *kalām* atomism (p. 263) and relates this view to the contemporary descriptions of sub-atomic particles such as an electron (p. 299). In Quantum mechanics, he says, electrons are considered to be point-like particles without any dimension but they are regarded as having some physical properties such as having a minimum mass, negative electrical charge and spin. The analogy between the *kalām* atoms and the fundamental particles of modern physics deserves certainly more elaboration.

To conclude, I suggest the author to consider translating this book into English as well. Nonetheless, I would like to offer some constructive criticisms. First, I was not able to identify a definite thesis the author defends in this book. He presents the criticisms of atomism in great detail. In the chapter confined to Ibn Mattawayh, he presents Ibn Mattawayh's responses to those criticisms though many criticisms left unresponded. From time to time, mostly in footnotes, Bulğen states how the *mutakallimūn* could respond to some criticisms. In the concluding section of the book, he inclines to defend atomism by making use of discrete geometry and some ideas from Quantum Mechanics but neither does he explicitly says this nor does he attempt to evaluate and respond to all criticisms. If he thinks the *kalām* atomism can handle all the criticisms described in the book, he should explicitly state his main thesis and coherently defend the *kalām* atomism against all of those criticisms. Second, atomism is not discussed only among the Muslim intellectuals. Another vibrant discussion on atomism took place in the early modern Europe: among Gassendi, Descartes, Cordemoy, Leibniz, etc. All these philosophers took a side in that discussion. The author may consider adding another chapter to discuss whether the discussions on atomism in the Islamic context may be historically linked to those in modern Europe. Maimonides, Averroes or some orientalist such as Jacob Golius could be possible links. This question could be investigated in a separate chapter, and the results of this research may be illuminating regarding the history of modern philosophy as well.