

## The New Approach to The Source Of Kalām Atomism \*

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### ABSTRACT

'Kalām atomism' is one of the central subjects in the Mutakallimūn's doctrine of universe. The origin of this subject still remains to be explored. Moses b. Maymonides claims that kalām atomism was affected by Greek atomism. This claim also has been taken into account by various orientalist. In the XIX. Century, Schmöl- ders and Mabilieu claimed that Kalām atomism was effected by Indian atomism. Shlomo Pines in his *Beitrag zur Islamischen Atomenlehre* has acknowledged a resemblance between the certain aspects of Greek and Kalām atomism. Pines thought that the difference between Greek atomism and Kalām atomism were too great and therefore believed that the search for a source of Kalām atomism was inconclusive. Pines established some congruities between the doctrines and Kalām atomism. According to Alnoor Dhanani in *The Physical Theory of Kalām* (Brill 1994) Pines failed to find possible routes transmission from the former of the latter. Before Pines (ten years ago), Şemseddin (Günaltay), in his article called "Mütekellimūn ve Atom Nazariyesi" (*Daru'l-*

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*Funun İlahiyat Fakültesi Mecmuası*, 1925) acknowledged congruities between the doctrines of Indian atomism and Kalām atomism. This article claims that Kalām atomism was put forward by *mutekellimûn* in and the influence of Greek and Indian atomism on Kalām atomism was indirect. Therefore Kalām atomism can be treated as an original theory.

#### KEYWORDS

Kalām, Kalām Atomism, Indian Atomism, Greek Atomism, the Middle East/Mesopotamia, Democritus, Indian Philosopher Kanada.

## Kelâm Atomculuğunun Kaynağı Sorunu

### ÖZ

Kelâmcıların âlem telakkisi ile adeta özdeşleşmiş bulunan Kelâm atomculuğunun kaynağı konusu tam açıklığa kavuşamamıştır. Musa b. Meymûn tarafından Yunan orijinli olduğu iddiası uzun süre oryantalistleri etkilemiştir. 19. yüzyılda Kelâm atomculuğunun menşeinin Hint atomculuğu olabileceği iddiası ortaya atılmıştır. Bu iddiayı ilk defa Schmölders 1840’larda dillendirmiş, bundan elli yıl sonra Mabilieu bu iddiayı Kelâm atomculuğunun tamamının Hint düşüncesinden geldiği noktasına götürmüştür. Bu fikrin günümüzde en önemli savunucusu Shlomo Pines’tir (ö. 1990). Pines, 1936 yılında Berlin’de basılan *Beitrag zur Islamischen Atomenlehre* adlı kitabında bu düşünceyi savunur ve Kelâm atomculuğunun Yunan atomculuğundan çok Hint atomculuğuna yakın olduğuna ve aralarında esaslı benzerlikler bulunduğuna dikkat çeker. Alnoor Dhanani ise *The Physical Theory of Kalam* (Brill 1994) adlı çalışmasında Pines’in çabasını başarısız bulur. Türkiye de ise Pines’ten on yıl önce *Daru’l-Funun İlahiyat Fakültesi Mecmuası*’nda “Mütakellimûn ve Atom Nazariyesi” adlı makalesinde (1925) M. Şemseddin (Günaltay), Kelâm atom düşüncesinin menşeinin Yunan filozofu Demokritos’a götürülmesini, İbn Meymûn’un yanlış adres göstermesine ve müsteşriklerin bundan etkilenmesine bağlar. Ona göre Kelâmcıların atom nazariyesi Hint âlimi Kanada’nın atomculuğuna daha yakındır. Ancak bu iddiaların somut ve kesin delillerden çok benzerlikler yoluyla ortaya konulduğu görülmektedir. Bu durumda Kelâmcıların bu bilgileri doğrudan Yunan ve Hint düşüncesinden değil Ortadoğu bölge kültüründe bulunduğu şekliyle dolaylı yoldan elde etmiş olmaları daha bir ihtimal dahilinde görülmektedir. Bu da Kelâm atomculuğunun özgünlüğü anlamına gelir.

#### ANAHTAR KELİMELER

Kelâm, Kelâm Atomculuğu, Mezopotamya, Yunan Atomculuğu, Hind Atomculuğu, Demokritos, Hint Âlimi Kanada.

#### INTRODUCTION

The inclusion of the “Atom” concept in Islamic theology (Kalām) results from the tendency of Islamic theologians (Mutakallimûn) in developing a conception of universe. Encountering with new cultures and thoughts in parallel with the enlargement of the Islamic society forced Islamic thinkers to adopt new attitudes and new approaches towards these cultures and thoughts. To be able to put new attitudes and approaches, firstly it is crucial to be equipped with the necessary information and qualifications essential in

introducing yourself and also in having knowledge about others. In other words, firstly one should develop a thesis and then propose an anti-thesis against the thesis developed by the other. The way in which other defines itself or others can also serve as a sample model. To that end, theologians who can also be named as the “first Muslim thinkers” attempted to define and introduce their religion to other cultures by basing their references primarily on Islamic revelation; in other words, they tried to formulate rational explanation and expression of their religion. Considering the revelation as the basis formed these attempts into a religious thought and as a natural result placed “*God of the said religion*” into the centre of these beliefs and so, other issues were defined and explained around this. Since a definition requires firstly the development of a conception, thinkers started referring to the Qurʾān as the main source in the scope of the attempts to develop a conception which begins with Allah, the God of the religion.

The two attributes of Allah -*eternal (qadīm) and creator (hāliq)*- are quite frequently emphasized in the Qurʾān. Since according to the verse “There is no god but He: that is the witness of God. His angels and those endued with knowledge, standing firm on justice, witnessed that there is no god but He, the Exalted in Power, the Wise.”<sup>1</sup>; bearing witness that there is no god but Allah means accepting that He is the only creator of all beings, and is the first cause of any incident and the only everlasting being. Briefly, He is *eternal* with no beginning (*qadīm*) and no end (*abadī*). As a matter of fact, “Allah created both you and all the works you do”<sup>2</sup>, “Allah is the creator of everything”<sup>3</sup> and “Is the Creator the same as non-creator?”<sup>4</sup>, these verses particularly emphasizes that Allah’s main attribute is being the “creator”. In the light of these and such verses, the following judgments have been made: Allah has the attribute of being “*eternal*” which means that He has no beginning and He can not be placed at any point in “time” concept. Any being other than Him can not have such features and they exist only by the creation of Allah. Beings other than Allah constitute the “world”. This way, the “conception of the world” in Kalām is shaped on the basis of the conception of God. Unlike Allah’s feature of “having no beginning (*qadīm*)”, the features of the world such as “being originated (*hādith*)” and “being created (*mahlūq*)” are emphasized. The most important indicator showing that the world does not have the feature of “having no beginning (*qadīm*)” is that there is a beginning and ending point for the world and the beings within it. In addition, since the beings in the world are divided and separated into smaller components, this process must end at a specific point; otherwise, the thought of the “eternalness of material”, which is indeed invalid, can rise in the minds. At this point, where such division processes end, we encounter the “atom” which is the smallest indivisible component of any material. Theologians sometimes use the phrase “*al-juz alladhī lā yatacazzā*” which means “the smallest indivisible component” or the word “*jawhar*” which means “essence or core”.

The dictionary definition of the word “*jawhar*” used as the rendering of “atom” is referred to “any kind of stone from which valuable elements can be extracted”. Moreover, it is suggested that the statement “*jawhar* of x” means “the essence or core of x”. It is widely believed that the Arabic word “*jawhar*” etymologically is the transliteration of the word “*gawhar/gohar*” in Persian; however, some Arabic dictionary

<sup>1</sup> Āl Imrān 3/18.

<sup>2</sup> al-Şaffāt 37/96.

<sup>3</sup> al-Zumar 39/62.

<sup>4</sup> al-Nakhl 16/17.

authors suggest that this word comes from the Arabic root (j-h-r) which means “to come out/appear”<sup>5</sup>. In the light of the above meanings, the concept “*jawhar*” used as a term in philosophy and theology disciplines has a meaning which reflects the disagreement between these two disciplines. Philosophy prefers the meaning of “self-existing, self-being and entity that is not in a subject” while Kalām accepts the explanation of “a being which takes up space in itself and is the opposite of the accident (‘*Araḍ*)”. In the beginning and within the scope of Islamic theology, the concept of “*jawhar*” was used for both the body (*jism*) and a part of it and then for both the material and the essence, and finally it was termed “the smallest indivisible component”<sup>6</sup>

After this introduction, we can focus on “the source of the atom thought in Kalām”, which is the main subject of this article. Being one of the basic questions asked in the scope of Kalām, there is no clear-cut information on this issue. However, three arguments have been developed on the basis of the similarities between various thoughts and some evidences, each of which will be elaborated in this article. The three basic arguments suggested to date are as follows:

The thought of atomism comes from

- the main sources of Islam,
- the Greek philosophy,
- the Indian philosophy.

We believe that Kalām atomism comes from the culture of the region where this discipline initially emerged. This argument will be dealt with in this article as the fourth argument which suggests that “the thought of atomism comes from the culture of the region where Kalām atomism has emerged”.

### 1. BASIC SOURCES OF ISLAM

The argument that Kalām atomism comes from the basic sources of Islam has not been widely accepted; since, the basic sources, the Qur’ān and Hadith, do not include any clear expression which can serve as a basis for this argument. On the other hand, Traditionists (Ahl al-Hadith) who are famous for their strict dependence on the Qur’ān and Hadith prefer to be distant from the terms used by Kalām atomists and even react to the use of these terms, which shows that the first argument has no strong grounds<sup>7</sup>. For instance, as Abū Ḥāmid al-Ghazālī (d. 505/1111) related, Traditionists condemned theologians for using terms such as “substance (*jawhar*)” and “accident (‘*Araḍ*)” that had not existed in the time of Companions (Sahaba). Similarly, Ibn al-Ṣalāh (d. 643/1245), famous Hadith expert, strongly criticized the use of philosophical and logic

<sup>5</sup> Jamāl al-Dīn Abū l-Faḍl Muḥammad b. Mukarram Ibn Manzūr, *Lisān al-‘Arab* (Beirut: Dār Sadr, nd.), 4/152-153; Abū al-Tāhir al-Firūzābādī, *al-Qāmūs al-muḥīt* (Beirut 1407/1987,472; Murtaḍā al-Zabīdī, *Tāj al-‘arūs* (Beirut: Dār al-Sadr, nd.), 3/115; Mutercim Aḥmad ‘Aşim, *Kamus Tercumesi* (Istanbul 1305), 2/233.

<sup>6</sup> Abū l-Ḥasan ‘Alī b. Ismā‘īl al-Ash‘arī, *Maqālāt al-islāmiyyīn wa ikhtilāf al-muṣallīn*, ed. Helmut Ritter (Wiesbaden 1980, 301-306; Muṭahhar ibn Ṭāhir al-Maqdisī, *Kitāb al-baḍ’ wa-l-ta’rīkh*, ed. and trans. Clément Huart (Paris 1899–1919),1/43; Abū l-Ma‘ālī al-Juwaynī, *Lum‘a al-adilla*, ed. Fawkiyya Husein Mahmud (Beirut 1987),77; Shlomo Pines *Madhhab al-zarra inda al-Muslimin*, Trans. Muhammed Abd al-Hadi Abu Rida (Cairo 1365/1946),4; Muna Ahmad Abu Zayd, *al-Tasawwur al-zarri* (Beirut 1414/1994), 26.

<sup>7</sup> Abū Ḥāmid al-Ghazālī, *Iḥyā’ ‘ulūm al-dīn* (Beirut: Dar al-Kutub al-Arabi, nd.), 1/165.

terms in Islamic sciences<sup>8</sup>. One of the leading traditionists, Ibn Taymiyya (d. 728/1325) objected to the use of terms such as “body (*jism*) and substance (*jawhar*)” in the scope of studies on Allah and other religious areas. According to him, there is no difference in terms of violation of religious rules (*bid'a*) between saying “Allah is a body” and “Allah is not a body”. Besides being never mentioned in Hadith and the Qur'an, these words are not uttered by previous scholars (*salaf*) as well. Therefore, he finds it unnecessary and groundless for theologians to make substance (*jawhar*) and body-oriented discussions<sup>9</sup>.

## 2. GREEK PHILOSOPHY AS THE SOURCE OF KALĀM ATOMISM

The argument that theological atomism comes from the Greek philosophy was suggested by Ibn Maimūn (Maimonades) (d. 601/1204), Andalusian Jewish scholar<sup>10</sup>, and supported by modern researchers Brockelmann, De Boer and Zuhdī Hasan Jārullah<sup>11</sup>. The similarity between Kalām atomism and the atom theory suggested by Leukippos and developed by his student Democritus is proposed as the strongest evidence of this argument. It is easy to make an analogy between the statement “beings are composed of indivisible components” belonging to these two philosophers and the statement “the smallest indivisible component” (*al-juz alladhī lā yatacazzā*) belonging to Muslim theologians<sup>12</sup>. Taking into account the fact that Greek classics were translated into Arabic in the quite early times, it is natural for Mu'tazila, since they had a rational approach and gave priority to the reason rather than traditional scholars, to be affected by this thought. Moreover, it is quite normal for the Islamic theologians to benefit from the existing Greek culture and philosophy which they found it present to develop new methods and terms and a conception of God and Universe by using such methods and terms. However, it is not so easy to consider the atomism of Democritus in a materialist manner compatible with the Islamic belief which is based on an “eternal creator” God. Indeed, no concrete evidence has been revealed reflecting a direct relation between the first era of Islamic theologians and Greek philosophy<sup>13</sup>.

Beyond the mentality difference between Kalām atomism and Greek atomism, there are both qualitative and quantitative differences between both of them as well. According to Leukippos and Democritus, there are three characteristics of atoms: hardness, form and size. Hardness is the unique characteristic that prevents division of atoms. Rather than theoretical division, Democritus finds actual division impossible due to the hardness characteristic. On the other hand, Islamic theologians associate indivisibility with “being

<sup>8</sup> Ibn al-Şalāh, *al-Fatawa* (Diyarbakir nd.), 35.

<sup>9</sup> Ibn Taymiyya, *Minhaj al-sunna* (Beirut: Dar al-Kutub al-İlmiyya, nd.), 1/180-181.

<sup>10</sup> Abū 'Imrān Mūsā b. Maimūn b. 'Abd Allāh al-Ķurṭubī Ibn Maimūn, *Dalālat al-ḥā'irīn*, ed. Hüseyin Atay (Ankara 1974), 189.

<sup>11</sup> İrfan Abdulhamid, *Dirasat fi al-firaq wa al-aqaid al-İslamiyya* (Beirut 1404/1984), 153-154; Abu Zayd, *al-Tasawwur al-zarri*, 24.

<sup>12</sup> See; Eduard Zeller, *A History of Greek Philosophy*, trans. S.F. Alleyne (London 1881), 2/27-253; Kamıran Birand, *İlkçağ Felsefesi Tarihi [History of First Era Philosophy]* (Ankara 1956); Cağfer Karadaş, “Atomculuk” [*Atomism*], *Felsefe Ansiklopedisi*, ed. Ahmet Cevizci (Istanbul 2003), 1/700-704.

<sup>13</sup> See Otto Pretzl, “Madhhab jawhar al-fard inda al-mutakallimun fi al-İslam”, *Madhhab al-zarra inda al-Muslimin*, ed. Shlomo Pines [al-Qahirah: Maktabat al-Nahḍah al-Mişriyah, 1946], 131, 147.

the smallest component” and find both physical and theoretical division impossible.<sup>14</sup> There are also differences in terms of the second characteristic; namely, form. Democritus suggests that atoms can be in round, ribbed, hollowed and etc. forms in line with the differences in the world while theologians suggest that there is only one single form for any atom. According to theologians, form differences observed in atoms result from accidents<sup>15</sup>. Thirdly, the theory that atoms have different sizes contradicts the thesis of theologians that atoms are of the same size. According to them, there is no difference between the sizes of the atoms forming a mountain and the atoms forming a seed.<sup>16</sup> In addition, theologians regard the characteristics like “hardness, weight, heat and coldness” as the accidents occurring and existing for a period in substances (*jawhar*) and bodies while Democritus regard them as basic and endless characteristics of atoms<sup>17</sup>.

Although there are important similarities between Greek and Kalām atomism such as “indivisibility of atoms” and “that they exist in a vacuum (*hala*)”, there is a fundamental difference: Greek philosophy suggests that material has no beginning and no end and that there is a compulsory cause-effect relation between movement and existence as a consequence of the determinist thought. Theology suggests that material is created from “nothing” and that movement and existence come out only with the intervention of Allah, which invalidates mechanism and determinism since the orderliness of the object comes from the Creator not the object itself.<sup>18</sup> In addition, some Islamic sources mention about the atom philosophy of Democritus but do not mention any relation between this philosophy and Kalām atomism, which strengthens the doubts against the thesis that Kalām atomism is affected by the Greek philosophy. For instance, Sa‘id b. Ahmad, al-Andalusī suggested that Abū al-Hudhayl al-Allāf (d. 235/850) –who have been considered as the founder of Kalām atomism- had some arguments in line with the characters thought of Empedocles on attributes; however, he did not mention any relation between Democritus’ atomism and Kalām atomism<sup>19</sup>. al-Shahristānī allocating the biggest place for Democritus and his atomism, did not make any connection or find any similarity between Kalām atomism and Greek atomism as well<sup>20</sup>.

<sup>14</sup> al-Ash‘arī, *Maqālāt al-islāmiyyin*, 314; Abū Bakr Muḥammad Ibn Fūrak, *Mujarrad maqālāt al-shaykh Abī l-Ḥasan al-Ash‘arī*, ed. Daniel Gimaret (Beirut 1987), 203-211; Irfan Abdulhamid, *Dirasat*, 154.

<sup>15</sup> Abū Rashid al-Nīsābūrī, *al-Masāil fī al-khilāf* (Beirut 1979), 29; Ibn Fūrak, *Mujarrad maqālāt*, 203-211 ‘Abd al-Qādir al-Baghdādī, *Usūl al-dīn* (Istanbul 1346/1946), 35; A. Weber, *History of Philosophy*, trans. Frank Thilly [New York 1905], 56; Hilmi Ziya Ülken, *Varlık ve Oluş [Being and Existence]* (Ankara 1968) 191; Kamıran Birand, *İlkçağ Felsefesi Tarihi [History of First Era Philosophy]*, 28-29.

<sup>16</sup> al-Bāqillānī, *Kitāb al-Tamhīd*, ed. Imaduddin Ahmed Haydar (Beyrut 1407/1987), 37; al-Baghdādī, *Usūl al-dīn*, 36; Pines, *Madhhab al-zarra*, 13-14

<sup>17</sup> al-Bāqillānī, *Kitāb al-Tamhīd*, 38, 56-60; Pines, *Madhhab al-zarra*, 8.

<sup>18</sup> See Ḥusām Muḥyī al-Dīn Ālūsī, *The Problem of Creation in Islamic Thought* (Cambridge 1965), 272; A. Weber, *History of Philosophy*, 56; M. Şemseddin, “Mütেকellimin ve Atom Nazariyesi [Theologians and Atom Theory]”, 101.

<sup>19</sup> Sa‘id b. Ahmad, al-Andalusī, *Tabaqat al-umam* (Beirut 1985), 73, 82.

<sup>20</sup> Muḥammad ibn ‘Abd al-Karīm al-Shahristānī, *al-Milal wa-l-nihal* (Beirut 1410/1990), 399, 422, 435.

### 3. INDIAN THOUGHT AS THE SOURCE OF KALĀM ATOMISM

This idea has been developed on the basis of the suggestion that Kalām atomism is similar to Indian atomism rather than Democritus atomism. In the Vaisheshika System developed by the famous Indian philosopher Kanada in III century BC in the scope of Indian thought, it is believed that God created the world from eternal atoms<sup>21</sup>, a statement close to and with more similarity to Kalām atomism when compared to Greek atomism. This theory was for the first time suggested by Schmölders in 1840’s. Fifty years later, Mabilieu developed this hypothesis to the point that Kalām atomism completely evolved from the Indian thought<sup>22</sup>. The biggest defender of this philosophy today was Shlomo Pines (d. 1990)<sup>23</sup>. In his article published in 1936 in Berlin under the title “*Beitrag zur Islamischen Atomenlehre*”, Shlomo Pines defended this hypothesis and emphasized the basic similarities between Indian atomism and Kalām atomism. According to Pines, the differences between Democritus atomism and Kalām atomism are not only limited with details; there are many fundamental differences as well. For instance, according to Democritus, atoms constituting the materials have some determined essential characteristics. On the other hand, according to theologians from Abū al-Hudhayl to Ash’arites, accidents are a kind of being and different from *jawhars*.<sup>24</sup> In his article titled “*Mütekelimîn ve Atom Nazariyesi*” (*Islamic Theologians and Atom Thought*) published in the *The Journal of Istanbul Dar al-Funun Faculty of Divinity* (1925) ten years before Pines’ study, M. Şemseddin suggested that basing Kalām atomism on Greek philosopher Democritus results from the misleading of Ibn Maimūn and the effects of this misleading on Orientalists. According to him, the atom theory of theologians is closer to the atomism of Kanada, Indian philosopher<sup>25</sup>. In the Vaisheshika system developed by Kanada, natural philosophy and metaphysics are given importance in explaining the world. “Vaisheshika” which literally means “difference” is a system that enables finding the truth by using differences and similarities between beings. This natural philosophy is based on a kind of atom discipline. According to this system, cosmos is composed of indivisible particles. These particles are endless separately but finite when combined. Change in the cosmos takes place when these particles combine with and separate from each other<sup>26</sup>. God builds the world by using these endless atoms. Cosmos starts with the combination of these atoms and ends with the separation of them. These atoms do not move by themselves. God creates the world in compliance with “Karma Laws” and by using the atoms under His order<sup>27</sup>. Although acceptance of the atoms as “eternal” components through this system contradicts Kalām atomism, the hypothesis that atoms move not due to mechanical reasons but God’s intervention is an important similarity. The school of Jainism located in the Indian region disagrees with the idea of “a first cause” and also gives place to the thought of atomism. According to this thought system, in the final analysis, material is an atomic structure. The smallest part of the material is an

<sup>21</sup> Kemal Çağdaş, *Eski Hint Çağ Kültür Tarihine Giriş* [Introduction to History of Ancient Indian Era] (Ankara 1974), 38, 42.

<sup>22</sup> Syed Nomanul Haq, “The Indian and Persian Background”, *History of Islamic Philosophy*, ed. Seyyed Hossein Nasr and Oliver Leaman (London and New York 1996), 1/54.

<sup>23</sup> Irfan Abdulhamid, *Dirasat*, 154; Abu Zayd, *al-Tasawwur al-zarri*, 21-22.

<sup>24</sup> Pines, *Madhhab al-zarra inda al-Muslimin*, 8, 91-121.

<sup>25</sup> M. Şemseddin, “Mütekelimîn ve Atom Nazariyesi [Theologians and Atom Theory]”, 91.

<sup>26</sup> Qadir, “Pre-Islamic Indian Thought”, M.M. Sharif, *A History of Muslim Philosophy* (Wiesbaden 1963) 1/42-43.

<sup>27</sup> Çağdaş, *Eski Hint Çağ Kültür Tarihine Giriş* [Introduction to Cultural History of Ancient Indian Era], 42.

atom-like particle and this particle has some characteristics such as color, taste, smell and sense of touch. They believe that the whole cosmos is alive and all atomic particles have souls. Time means eternity and the world has neither a beginning nor an end<sup>28</sup>. This system is much closer to Democritus atomism rather than Kalām atomism since it does not accept a first cause and suggests that material and cosmos are eternal.

Considering the fact that the transfer of Persian and Indian sciences into the Islamic world took place before the Greek philosophy can also be seen as an important reason behind the Indian effect<sup>29</sup>. While no contact was established with Syrian translators in the era of Harun al-Rashid (170-193/786-809), Indians were quite well-known in the Islamic world. For instance, in 249/863 Ibn al-Nadim made the following statements about a book being prepared on Indian religions: “Yahya b. Khālīd al-Barmakī the Wazīr (d. 190/805) sent someone to bring some medicines from India and collect data about the religions of Indians so as to write a book.”<sup>30</sup>.

Important evidence suggesting that Kalām atomism comes from Indian thought is that Abū Bakr Zakariya al-Rāzī (d. 313/925), a philosopher strongly defending atomism, was a close friend of Iranshahrī who had enormous knowledge about Indian beliefs and culture and that it was quite a high possibility for al-Rāzī to transfer atomism from India via Iranshahrī<sup>31</sup>. On the other hand, Abū Rayḥān Muḥammad b. Aḥmad al-Bīrūnī (d. 453/1061) -a specialist on Indian beliefs and thoughts- stated that he benefited from the works of Iranshahrī on Indian beliefs and culture<sup>32</sup>.

In the light of these facts, we can conclude that Kalām atomism is similar to Indian atomism rather than Greek atomism in terms of God-Universe relations due to the fact that Greek philosophy is solely a philosophy while Indian thought is a religious belief. Democritus is a materialist philosopher and makes a conception of the world in line with this thought. Subsequently it can not be expected from him to develop a conception of God and the cosmos as a theologian who has religious concerns do. Therefore, it is natural for the Kalām atomism theory to be closer to and have more similar features with the Indian atomism theory which has a God and cosmos conception. However, in addition to the acceptance of material as being eternal<sup>33</sup>, the absence of the idea of “vacuum” in the Indian thought, which is an important component of Kalām as Şemseddin Günaltay<sup>34</sup> underlines, it is also an important difference between these two thoughts. Another important problem is the question of “How did the atomism thought -which remained quite marginal in the Indian philosophy- succeed to influence the area where Kalām developed?”. As a matter of fact, there is no clear information in Islamic sources about Indian atomism.

<sup>28</sup> Haq, “The Indian and Persian Background”, 1/54; Qadir, “Pre-Islamic Indian Thought”, 1/29-30.

<sup>29</sup> Ibn al-Nadīm, *al-Fihrist*, 305, 360; Hilmi Ziya Ülken, *Uyanış Devrinde Tercümenin Rolü [The Role of Translation in Renaissance Era]*, Istanbul 1997.

<sup>30</sup> Ibn al-Nadīm, *al-Fihrist*, 409.

<sup>31</sup> Pines, *Madhab al-zarra*, 36, 72.

<sup>32</sup> Abū Rayḥān Muḥammad al-Bīrūnī, *al-Āthār al-bāqīya ‘an al-qurūn al-khāliya*, ed. Parviz Azka’i (Tahran 2001), 16.

<sup>33</sup> al-Bīrūnī, *al-Āthār al-bāqīya*, 244; al-Andalusī, *Tabaqat al-umam*, 52-54.

<sup>34</sup> M. Şemseddin, “Mütekelimîn ve Atom Nazariyesi [Theologians and Atom Theory]”, 103.



#### 4. THE CULTURE OF THE REGION WHERE KALĀM ATOMISM EMERGED

Theologians are neither physicians nor just philosophers; their main aim is to prove that Allah is the Creator. In other words, they do not aim at developing a theory or making additions to or eliminations from an existing theory, rather, they aim at strengthening and explaining further their religious thoughts with the help of the data they collect. As a matter of fact, according to Sa‘d al-Dīn al-Taftāzānī the reason why theologians prefer the atomism thought is because philosophers who accept matter (*hayula*) and form (*su-rah*) as world components suggest that these two components are eternal<sup>35</sup>. Because, accepting “eternal” materials and forms means accepting an “eternal” world. Thus, theologians have stayed away from such ideas as they can damage the thought that it is only Allah who is “eternal” and turned towards the atomism thought. Taking the *concern* mentioned by al-Taftāzānī, as a basis it does not seem logical for theologians to adopt the atomism thought of materialist Democritus. Even if we foresee that theologians have re-arranged this thought in line with the Islamic thought, it won’t be logical for theologians to prefer a more materialist atomism rather than a “material and form” thought which foresees the idea of an *first cause*. On the contrary, while evading from the eternity of material, it would be contradictory for theologians to adopt a materialist thought that does not foresee an “first cause”<sup>36</sup>. So in this situation either theologians benefited from Indian atomism which includes the thought of God or that Greek and Indian atomism had mixed into each other in this region and turned into a structure acceptable for theologians. In a sense, it means that theologians have developed an eclectic theory by synthesizing Greek and Indian atomism. In that case, the following questions will have to be answered: Were these two theories on atomism already present in the Iraq region where theology initially developed? Do the religions and cultures in the region include the atomism thought? In more general terms, were Indian and Greek philosophies known in the Iraq region? If yes, to which extent? It is a priority to know the ethnical, religious and cultural structure of the region to be able to answer these questions.

##### 4.1. The Ethnic and Cultural Structure of the Region

When the Muslims started to rule over the Mesopotamia region where Kalām atomism developed, there were many religions, sects and ethnic groups in the region. Jews and Syrians; the Christian population composed of Nestorians, Melkites and Armenians; Persians to have adopted Mazdaism, Manihaim and Zoroastrianism; Assyrians; Kildanians; Nabtians; Zots immigrated from Sind Basin; Kharranians mentioned as Sabians in Islamic sources and; Arabians a part of whom were Christians and the other parts being Pagans. Although Greeks are mentioned in Islamic sources, it is quite clear that these are indeed Christian groups under the control of Byzantium. As a matter of fact, Anatolia is mentioned as Greek region (Ard-Rum) in Arabic sources and Sa‘id al-Andalusī talks about Latin and Byzantium people under the title of “Greeks”<sup>37</sup>.

Kharran located in the north of Mesopotamia and the surrounding area where the Kalām developed was conquered by Alexander the Great in 4<sup>th</sup> century BC and then the region was colonized by Greece and

<sup>35</sup> Sa‘d al-Dīn al-Taftāzānī, *Sharh al-Aqāid*, ed. Mahmud Adnan Darwish (Dimashq, nd.), 78.

<sup>36</sup> See Ḥusām Muḥyī al-Dīn Ālūsī, *The Problem of Creation in Islamic Thought*, 273-277

<sup>37</sup> al-Andalusī, *Tabaqat al-umam*, 96, 101, 200. Çağfer Karadaş, *Bakillanî’ye Göre Allah ve Alem Tasavvuru [Allah and World Conception According to Baqillani]* (Bursa 2003), 65-75.

Rome. First Qādī of Abbasians, Abu Yusuf (d. 182/798) stated that the people living in this region were composed of Nabtians and Greeks<sup>38</sup>. In the light of this data, it can be concluded that the population there was in contact with the Greek and Byzantium culture. With the beginning of Islamic sovereignty, academic activities in the region were not intervened in and remained intact for a long period of time. As a matter of fact, that Abu Yusuf stated that taxes was collected parallel to the income levels of the population in accordance with Muadh b. Jabal (d. 18/639)’s view and that he didn’t mentioned any social or other type of implementation towards them verify the above-given statement<sup>39</sup>. Succeeding Muslim caliphs and sultans attached great importance to the region, even, the Kharran city served as the capital of the Umayyad state for some time<sup>40</sup>. Thābit ibn Qurrah al-Kharranī (d. 288/901) coming from Kharran settled in Baghdad in the time of Caliph Muqtadir and wrote many books on logic, mathematics, geometry and astronomy sciences<sup>41</sup>. In the light of valid data, it is considered that the people living in this region had an important role on the transfer of Greek philosophy and culture to Islamic world. Kharranians<sup>42</sup> accepted by Islamic heresiographers as Sabians used philosophic concepts such as “atom”, “vacuum” and “material”. Kharranians believed in five eternal beings; two active, one passive and the remaining two where considered neither active nor passive. Among these five eternal beings, God and the soul are active, material is passive and time and vacuum are neither active nor passive<sup>43</sup>. According to the data given by Ibn al-Nadīm, they used the concepts “material, element, form, nonexistence, time and place” to refer to the meanings attributed by Aristotle as well. As a matter of fact, ‘Abd al-Qādir al-Baghdādī (d. 429/1037) suggested that there is a similarity between the “materialist” thought of Kharranians and the “materialist” thought of materialist philosophers<sup>44</sup>. Their “five eternal beings” thought is also close to the “five eternal beings” thought of the atomism philosopher Zakariya al-Rāzī<sup>45</sup>.

The era of Nushirawan, one of the Persian sultans, was the golden era of the Persian culture in traditional sense. In this era, Hellenistic culture revived in the Jundishapur city located in the southeast of Mesopotamia. Closure of Athens schools by Byzantium emperor Justinianus (529) resulted in the migration of Greek philosophers to this area. Greek science and philosophy was highly respected by Mazdak bishops, however, Indian thought had a more dominant role. Indians made considerable improvement in mathematics and particularly developed architecture more than the Babels and Greeks did. The case was similar as

<sup>38</sup> Abū Yūsuf, *Kitab al-Kharaj* (Cairo 1396), 42.

<sup>39</sup> Abū Yūsuf, *Kitab al-Kharaj*, 42-45.

<sup>40</sup> Şinasi Gündüz, *Mitoloji ile İnanç Arasında [Between Mythology and Belief]*, Samsun 1998, 169-170.

<sup>41</sup> Ibn Juljul, *Ṭabaqāt al-aṭibbā’ wa-l ḥukamā’*, ed. Fu’ād Sayyid, (Cairo 1955), 75.

<sup>42</sup> See for Kharranians, Ibn al-Nadīm, *al-Fihrist*, 383-386; al-Bīrūnī, *al-Āthār al-bāqiyā*, 243-245; Muḥammad ibn ‘Abd al-Karīm al-Shahrastānī, *al-Milal wa-l-niḥal* (Beirut 1410/1990), 2/365-368; Abū l-Faraj Ibn al-‘Ibrī, *Tārīkh al-Zamān*, trans. from Syrian to Arabic Ishaq Armala (Beirut 1986), 23, 48.

<sup>43</sup> Ibn al-Nadīm, *al-Fihrist*, 384; Pines, *Madhab al-zarra*, 60-66.

<sup>44</sup> Ibn al-Nadīm, *al-Fihrist*, 384; ‘Abd al-Qādir al-Baghdādī, *al-Farq bayn al-firaq*, ed. Muhammad Muhyiddin Abdulhamid (Beirut 1411/1990), 355.

<sup>45</sup> T.J. de Boer, *The History of Philosophy in Islam*, trans. Edward R. Jones (New York 1903), 77-80.

well in the area of the science of medicine<sup>46</sup>. Persians that were interested in Indian science and philosophy collected information from the Indian scientists they invited to Jundishapur school concerning astronomy, mathematics and mythology<sup>47</sup>. As a result of this interaction, many works of Indian's were translated into Middle Persian (Pahlawī), the language of Persians at that time. Among these works *Kalila ve Dimna*<sup>48</sup>, the work of the Indian scholar Beydeba, which was translated into Arabic in the following years by Ibn al-Muqaffa is an example of the translation efforts. After the conquest of Persia by Arabs, Muslims learned the science of astronomy by translating Siddhanta's middle Persian translated work into Arabic, when they were not aware of the *Almagest* of Ptolemy. This book was translated by Abū Ishāq al-Fazarī, the first Muslim to work on astrolabe and was known as *Kitab al-Sind-hind* or shortly *Sindhind* amongst the Muslims<sup>49</sup>. The aim behind the establishment of Urfa (Edessa/Ruha) School, another philosophy school established by Persians, was firstly to increase the religious knowledge of Persians who adopted the Jacobite sect of Christianity and secondly to teach Greek science and philosophy to Persians<sup>50</sup>. Thus, Persians had brought both the Greek and Indian cultures and sciences into the region on account of the philosophy schools they had established before the arrival of Muslims.

According to Greek approach Hippodamos (checker board), Alexandria was established with the order of Alexander the Great, and is one of the important entrances of the Greek culture. Although it lost its glory due to the immense damage caused during the Byzantium-Sasani battles in the first years of Muslim sovereignty, it still retained the traces of those days with its general view and long history<sup>51</sup>. It is known that translation activities playing an important role in cultural interaction and communication were carried out in Alexandria, particularly by Jewish scholars. For instance, the Jewish philosopher Philon established a unique philosophical school in Alexandria by compromising Old Testament texts with philosophical texts. Old Testament interpretations he made by benefiting from philosophical texts had esoteric characteristics<sup>52</sup>. Another important feature of Alexandria was highly developed *alchemy*. Muslims benefited from alchemists such as Bolos Democritus, Zosimos, Apollonius of Tyana, Teukros and Stephanos from Alexandria in this sense and made references to them in their works. Particularly *The Secret of Creation (Sirr al-haqiqa)* work of Apollonios was widely known by Muslims<sup>53</sup>. Alchemy which suggests two dimensions for material (one visible and one concealed) subjects beings to a down-to-top classification. At the bottom of the classification atom or *materia prima* lays and no change is observed in the *essence* in any level of the classification. For

<sup>46</sup> W. Barthold, *İslam Medeniyeti Tarihi [History of Islamic Civilization]*, trans. Fuat Köprülü (Ankara 1977), 11-12.

<sup>47</sup> Syed Nomanul Haq, "The Indian and Persian Background", 1/53; Mehmet Bayraktar, *İslam Felsefesine Giriş [Introduction to Islamic Philosophy]* (Ankara 1988), 78-79.

<sup>48</sup> Ibn al-Nadīm, *al-Fihrist*, 364-365; al-Andalusī, *Tabaqat al-umam*, 57.

<sup>49</sup> Ibn al-Nadīm, *al-Fihrist*, 332; Bayraktar, *İslam Felsefesi [Islamic Philosophy]*, 78-79.

<sup>50</sup> Barthold, *İslam Medeniyeti [Islamic Civilization]*, 10; Bayraktar, *İslam Felsefesi [Islamic Philosophy]*, 78.

<sup>51</sup> Fuād al-Sayyid Ayman, "İskenderiye (Alexandria)", *Türkiye Diyanet Vakfı İslam Ansiklopedisi [TDV Encyclopedia of Islam]* (Istanbul: Turkish Religious Foundation), 22/574.

<sup>52</sup> Hugh Goddard, *A History of Christian-Muslim Relations* (Chicago 2000), 14; Ralph Marcus, "Hellenistic Jewish Literature", *The Jews Their History, Culture and Religion*, edit. Louis Finkelstein (New York 1960), 2/1080.

<sup>53</sup> Ibn al-Nadīm, *al-Fihrist*, 417-420; Abd al-Rahmān Badawī, *al-Ilhād fi'l-Islām* (Cairo 1945), 196.

instance, according to Alchemist Jabir ibn Hayyan, there are universal laws in the nature and each combination and composition takes place in the scope of these laws. Beings are divided into two: simple beings and compound beings. Compound beings appear when the single beings combine in line with these universal rules<sup>54</sup>. In the light of this suggestion, it is possible to make an analogy between Kalām atomism and the thought of Alchemist Jabir. Zakariya al-Rāzī, accepted as one of the most important names of both alchemy and chemistry, also dealt with nature and atomism, which makes it possible to mention a high level of interaction between alchemy and atomism.

One of the groups that used to live in the region before Islamic era was Christians. According to the data obtained from Islamic sources, Christians used the concept “substance” (*jawhar*) with a meaning close to the one in Kalām. al-Ash‘arī (d. 324/925) referred to the definition of Christians: “substance (*jawhar*) is what stands alone and what stands alone is substance”<sup>55</sup>. On the basis of this definition, Christians came to the conclusion that God is *substance*<sup>56</sup> and accepted *jawhar* as the never changing substance of God. According to Christians, *substance* is unique and there are three *elements*. Elements do not exist alone and they are different states of this unique essence<sup>57</sup>.

It is worth mentioning that the most amongst these Christian groups in the region was Syrians with their philosophical experience and translation activities. Besides being a trade channel between East and West like the Jews, they also played a role in the transfer of culture and civilization. According to De Boer, it was the Syrians who brought the Greek Culture they adopted from Alexandria and Antioch (Antakya) to Urfa, Nusaybin, Jundishapur and Kharran schools. Due to this outcome, the Syrian language was used as the common language in the churches of the East and West for some time. The works of Greek philosophy started to be translated into the Syrian language in IV century BC. Doctor and bishop Probus, born in Antakya and died in Istanbul in 536 AC, translated not only Aristotle’s works related with logic but also many works in the area of theology, ethics, mysticism, physics, medicine and philosophy into the Syrian language. Such translation activities of Syrians continued after Islamic sovereignty<sup>58</sup>. These data show that there was a huge philosophical experience in the Iraq region. However, it has to be explained whether this experience preserves its originality.

#### 4.2. Originality of Philosophic Experience in the Region

As seen in the previous part, Greek and Indian culture and experience in the region was directed either by Christians such as Syrians and Nestorians or Kharranī Sabians and alchemist Gnostiks or Persians. These groups re-shaped and attributed new meanings to the cultural and scientific experiences which they

<sup>54</sup> Badawī, *al-Ilhād fi’l-Islām*, 194-195; Ülken, *İslam Düşüncesi İslam Felsefesi Tarihi [Islamic Thought: The History of Islamic Philosophy]*, 2/69.

<sup>55</sup> al-Ash‘arī, *Maqālāt al-islāmiyīn*, 306.

<sup>56</sup> al-Bāqillānī, *Kitāb al-Tamhīd*, 93-94; Alnoor Dhanani, *The Physical Theory of Kalām* (Leiden 1994), 56-57.

<sup>57</sup> Nāshi? al-Akbar, *Masā’il al-imāma and Muktatafat min al-Kitāb al-Awsa? fi al-maqalāt*. Frühe mu‘tazilitische Häresiographie, ed. Josef van Ess (Beirut 1971),76; Juwaynī, *al-Irshad*, 47-48; al-Baghdādī, *al-Farq bayn al-firaq*, 216.

<sup>58</sup> T.J. de Boer, *The History of Philosophy in Islam*, trans. Edward R. Jones (New York 1903), 14-15.

exposed to a kind of selection, in line with their beliefs and attitudes. In other words, cultural elements lost their originality and were re-shaped. This is proved with the following statement of Ibn Maimūn:

“All of the theories suggested by Mu‘tazila and Ash‘arites about these meanings are based on some preliminaries. These preliminaries are taken from the works of Greeks and Syrians who objected to the thoughts of philosophers and invalidated their suggestions. The reason behind this situation is that Christianity was extending by incorporating other religions which included philosophic approaches. Believers of this religion developed a philosophy and among them there was kings who preserved their religion. Greek and Syrian scholars of that period saw that there were huge conflicts between their own religious ideas and philosophy. Then, they developed the science of theology and re-arranged philosophic preliminaries in a possible-to-benefit way. They rejected any philosophical thought that could damage the basic principles of their religion.”<sup>59</sup>

A modern researcher, Barthold confirms such statement and explains the reason why Christians interacted with philosophy:

“In the fight against gnosticism and paganism philosophy, Christian clerics had to use philosophic evidences as well. Various religious and philosophic sects developed with the biggest ones in Alexandria and Antakya. The biggest sect was based on Plato while the second biggest one on Aristotle.”<sup>60</sup>

It is possible to observe a similar approach in Jews as well. Non-created “ideas” of Plato’s philosophy turn into the creatures of God “who created everything from nothing” in the philosophy of the Jewish philosopher Philon, in other words in the interpretations of Old Testament. Thus, the idea of “a creator God” is compromised with the theory of “ideas”. This method and approach to have been adopted by Philon had huge impacts on successive Christian philosophers.<sup>61</sup>

On the other hand, Greek philosophers were attributed alchemist characteristic by the alchemists of Alexandria. According to Ibn al-Nadim, Naturalist philosopher Zakariya al-Rāzī included Pythagoras, Democritus, Plato, Aristotle and Galen in the category of the philosophers dealing with alchemy.<sup>62</sup> Shahrastānī placed Democritus into the group of Pythagoras’ successors.<sup>63</sup>

The Arabic translation of Plato’s work named *Timaios*- was widely known among Muslims and written in the form of statements made by Galenus- that begins as “Galenus says...” and is virtually a work of conversion. In this translation, *God The Maker* in Plato changes into *God The Creator*; second degree Greek gods turn into *angels*; and *transmigration of soul* into *good and evil states of human being*.<sup>64</sup> These conversions were

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<sup>59</sup> Ibn Maimūn, *Dalālat al-ḥāʾirīn*, 184-185.

<sup>60</sup> Barthold, *İslam Medeniyeti [Islamic Civilization]*, 11.

<sup>61</sup> Ralph Marcus, “Hellenistic Jewish Literature”, *The Jews Their History, Culture and Religion*, ed. Louis Finkelstein (New York 1960), 2/1079, 1107-1114.

<sup>62</sup> Ibn al-Nadīm, *al-Fihrist*, 417.

<sup>63</sup> al-Shahrastānī, *al-Milal wa-l-niḥal*, 2/399.

<sup>64</sup> Fahrettin Olguner, *Batı ve İslam Dünyasında Eflatun’un Timaios’u [Timaios of Eflatun in the Western and Islamic World]* (Konya 1990), 9,10, 11, 12 (See; 5a-5b for the text in Arabic).

quite possibly made by Christian translators and then this conversed text was directly translated into Arabic. As a matter of fact the monotheist trend of Galen was effective on Christians before Islam and a group of religious men in Anatolia tried to compromise Christian theology and philosophy under such effect.<sup>65</sup>

Indian thought was also subject to some changes and could not preserve its originality. It reached the Muslims through the Pagan Kharran school, Mazdak’s and Maniheist Persians. This situation was strengthened with the proof that the Kharran school was effective on the rejection of prophecy by Zakariya al-Rāzī and his trend towards the thought of “five beings with no beginning”. Indeed, al-Rāzī established his system by adding “soul” and “material” that he took from the Greek philosophy to the principle of four beings with no beginning “vacuum, light, time and darkness” in Zoroastrianism. We should also take into consideration the Persian identity of Ibn Muqaffa who was known as the translator of Manihaism and was one of the most important names translating Indian and Persian sources into Arabic.<sup>66</sup>

### 4.3. Interest of Muslims in Regional Culture and Atomism

The Mesopotamia region where Kalām atomism developed was included in the Islamic borders in the era of the Caliph Omar ibn Khattab. Not only the military but also the cultural and constructional activities were heavily performed in the region. Particularly, Basra and Kufa established with the order of Omar and Wasit established by Hajjāj, the governor of Umayyads, turned into cultural centers in a short time although they were designed as military basis in the beginning.<sup>67</sup> In addition to religious sciences such as Islamic Law and Theology, important works on the Arabic language were studied in these cities and the Basra and Kufa language schools were established. The Islamic Law-Theological schools established by Hasan al-Basrī (d. 110/728) in Basra and by Abū Ḥanīfa (d. 150/767) in Kufa gradually became famous and resulted in the development of the two major and important sects: Mu‘tazila and Ḥanafism. Scholars educated in these schools traveled to different parts of the country to play significant roles in spreading Islam and in interacting with other cultures.

Wasil b. Ata (d. 131/748), the student of Hasan al-Basrī and the leader of Mu‘tazila, sent his students to Ma‘rib (West of Northern Africa), Khorasan, Yemen, Armenia and Jazira (the area between Euphrates and Tigris) so as to defend and strengthen Islam. After staying in these destinations for some time, they turned back to Basra with new ideas. At that time this enabled the development of a huge culture, with an environment of interaction and communication. As a matter of fact, Jahm b. Safwān (d. 128/745) met the believers of Buddhism (Sumaniyya), an Indian sect, and asked help from Wasil b. Ata for the points he had difficulty in explaining.<sup>68</sup>

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<sup>65</sup> Kutluer, “Calinus”, 33.

<sup>66</sup> Ülken, *İslam Düşüncesi İslam Felsefesi Tarihi [Islamic Thought: The History of Islamic Philosophy]*, 11-12, 35; Fakhri, *İslam Felsefesi Tarihi [History of Islamic Philosophy]*, 32.

<sup>67</sup> See al-Balādhurī, *Kitāb Futūḥ al-buldān* (Beirut 1407/1987), 236, 387, 407.

<sup>68</sup> Ibn al-Murtaḍa, *Ṭabaqāt al-Mu‘tazila* (Beirut 1380/1961), 32-34.

When we consider the objections such as *Kitab ala al-Sufistaiyya*, *Kitab ala al-Mejus*, *Kitāb ala al-Yahūd*<sup>69</sup> written by Abu'l-Hudhayl al-Allaf, the founder of Kalām atomism, and his discussions with the Jews, Christians and Parsees, we can easily see that he had the required qualifications and knowledge to examine and evaluate the philosophic groups and the religions other than Islam. Due to this fact, Abū l-Muẓaffar al-Isfarāyīnī and al-Baghdādī criticizes Abū al-Hudhayl with the statement: “His thoughts are in line with the thoughts of materialists”.<sup>70</sup>

Musa b. Shākir and his sons Muhammad, Ahmad and Husain<sup>71</sup> (Benu Musa) are defined by Said al-Andalusi as scholars widely known in philosophy and science. Ibn al-Nadim says that Muhammad (d. 259) wrote *Risālā fi al-Juzz* (Booklet on Atom) and *Risālā fi al-awwaliyyat al-alam* (Booklet on the Beginning of World). In addition, we learn from Ibn al-Nadim that Mu'tezilite al-Nazzam who rejects atomism wrote *Kitāb al-Juzz* (The Book of Atom) and that Muammar al-Sulamī (d. 215), who is known to have had discussions with Nazzam due to differences in their thoughts, wrote *Kitāb al-Juzz alladhī la yatacazza* (The Book of Atom: The Smallest Indivisible Component).<sup>72</sup> This data is of great importance as it shows that not only the theologians but also other scholars in the region were interested in the issue of atom.

Galen, who became famous particularly for his school in Alexandria became well-known in the Middle East on account of the Christian theologians and was widely-known by also Muslims in the early times. His work on philosophy and medicine were not translated into Arabic in the early times, however, it was quite possible for Muslims to learn about these works through the translations into other languages and via non-Muslim scholars. That Zakariya al-Rāzī referred to Galen in his works and wrote an objection to his medicinal study proves it.<sup>73</sup> Moreover, the Arabic translation of *Timaios*, a work of Plato widely-known among Muslims, starts with “Galen says...”<sup>74</sup>, which shows that this work was written by Galen's supporters in the region and that then translated into Arabic. The “Indivisible substance” (al-jawhar alladhī la yanqasim)<sup>75</sup> statement in this work is important as it shows that the idea of “indivisible component” is wide spread in the region.

## 5. EVALUATION AND CONCLUSION

When the history of Kalām is considered, we see that the “science of Kalām” started to develop in the second half of the first century (Moslem calendar) and completed its development to a large extent in the first quarter of the second century. As a matter of fact, many schools were established in the said period in Basra and Kufa on Theology, Islamic Law and Philology and many intellectual formations took place around

<sup>69</sup> Ibn al-Nadīm, *al-Fihrist*, 204; Metin Yurdağür, “Ebu'l-Huzeyl Allaf”, *Türkiye Diyanet Vakfı İslam Ansiklopedisi [TDV Encyclopedia of Islam]* (Istanbul: Turkish Religious Foundation, 1994), 10/332.

<sup>70</sup> Abū l-Muẓaffar al-Isfarāyīnī, *al-Ṭabşīr fi l-dīn* (Beirut 1403/1983); al-Baghdādī, *al-Farq bayn al-fıraq*, 122.

<sup>71</sup> al-Andalusī, *Tabaqat al-umam*, 141-142.

<sup>72</sup> Ibn al-Nadīm, *al-Fihrist*, 206-207, 331.

<sup>73</sup> Ibn al-Nadīm, *al-Fihrist*, 417; Kutluer, “Calinus”, 33.

<sup>74</sup> Olguner, *Batı ve İslam Dünyasında Eflatun [Eflatun in Western and Islamic World]*, 1b (Arabic Text), 1 (Turkish Translation).

<sup>75</sup> Olguner, *Batı ve İslam Dünyasında Eflatun [Eflatun in Western and Islamic World]*, 3b (Arabic Text), 7 (Translation from Arabic to Turkish), 8 (Translation from French to Turkish).

eminent names such as Hasan al-Basrī and Abū Ḥanīfa in the fields of Islamic Law and Theology. Wasil b. Ata and Amr b. Ubayd al-Basrī (d. 144/761) who directed the thought of Hasan al-Basrī to more logic-oriented points laid the foundation of Mu'tazilite school. Regarding this period, there is no information showing any direct relation with Greek or Indian philosophy; any heavy translation effort; or any study made by first theologians on Greek or Indian philosophical books translated into any language other than Arabic. Otta Pretzl also thinks that we can not mention any direct relation between first theologians and Greek philosophy.<sup>76</sup> Since the Greek and Indian cultures in the region were subjected to change before Islamic sovereignty, it is possible only to mention an indirect interaction. In general, three elements should be considered in the development of theology, particularly Kalām atomism.

### 5.1. Historical Continuity

Historical continuity is a reality accepted by most of the historians today. As well as the fact that the events taking place throughout history do not start at one point and end immediately at another point, no event is independent from the former and comes out from zero point without any background or plan. Time naturally brings together continuity and requires continuous change. Continuity of time enables a natural interaction between cultures and civilizations while change creates differences in this continuity. Each culture and civilization that has developed throughout time is a successor of a previous one. The difference results from exposing the heritage to a “selection” process and providing previous cultural elements with “new forms” and “meanings”.

Ethnical groups that have been included in boundaries of Islam gradually, such as the Persians, Syrians, Greeks and Indians brought with them their previous cultural and civilization heritages as well. They exposed their material and spiritual elements to a *selection* process; either *changed* them or interpreted the beliefs they adopted to legitimate their cultural elements. For instance, theologians changed the atomism thought they encountered according to their own beliefs and interpreted their beliefs in line with the atomism thought so as to create a new synthesis. The Hadith “Go and find wisdom even if it is in China, Because, learning wisdom is a religious duty for all Muslims”<sup>77</sup> was widely implemented in the early periods by the Islamic society. Even if there are some allegations that this Hadith is *weak* or *fake*, it is considerably meaningful as it reflects the attitude of first era Islamic society towards science and foreign cultures. This statement reflects the profile of a society which gives priority to benefiting from previous and other cultures and civilizations.

### 5.2. Regional Conditions

Taking into consideration the density and variety of the cultural experience and knowledge in the region, it is not surprising for Kalām atomism to emerge and develop in such a short time. As a matter of fact, this region can be included in the borders of both the Greek and Indian culture basins from both land and sea. This region served as a threshold for the Mesopotamian civilization and is a neighbor of Egypt culture which had impacts on Greek philosophy. Moreover, the Persian philosophy in the region carried Indian culture to the west. The establishment of the philosophy schools in Kharran, Urfa and Jundishapur

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<sup>76</sup> Otto Pretzl, “Madhab jawhar al-fard inde al-mutakallimin fi'l-Islam”, 131.

<sup>77</sup> See. Ismāil b. Muḥammad Aclūnī, *Kashf al-khafā* (Beyrut 1351), 1: 138.



is of great importance for the region as well. These all show that in the establishment phase of Kalām, the region had a strong civilization and cultural background created by important civilizations. However, such knowledge and background reached the area after being subjected to some changes and selection as mentioned by Ibn Maimūn. When we consider that the Greek and Indian cultural experience and knowledge reached Muslims through the Christians, Persians and Gnostics, we can easily reveal the fact that the knowledge we encounter had already been subjected to change and selection before reaching us. This is, in fact, a natural development taking place when a civilization or a culture is handed over by another society. A society can neither completely leave behind its original cultural knowledge and civilization perspective to adopt a completely new culture and civilization nor can a nation act as an antiquarian to preserve its knowledge and experience completely so as to transfer it to another society.

### 5. 3. Religious Concerns

Theologians have two objectives: First is to express their own religion to people from different cultures and second is to present evidences against the rejections made against their own religion. These two activities were carried out simultaneously; in other words, theologians suggested a thesis on one hand and proposed an anti-thesis on the other. The basic thesis of Islam is that *God is one and others are created by Him*. While defending this thesis of Islam, theologian tried to invalidate the counter-evidences that try to invalidate the thesis they suggested. For instance, in addition to suggesting "*Uniqueness of Allah and creation of the World*" while developing the atom thought, an anti-thesis is developed against *eternity of materials* on the basis of the *finite structure of atoms*.

It is natural for theologians to benefit from experiences and knowledge present while developing a *concept of universe*. As a matter of fact, the Qur'an is neither a physics book nor is the Prophet Mohammad a physician. Allah has created people with qualifications required to produce information on this issue. First era theologians naturally benefited from the experience and knowledge created and conveyed in some way, on the basis of this fact. However, on the basis of the basic and decisive principles of Islam such as *eternity of Allah and creation of the world*, this act of theologians brought the conclusion that "*the world which means anything other than Allah is created later and has a beginning*". For a beginning point, an ending point for the world and all the things constituting the world must be defined. In logical terms, this point is the *final point* reached when the material is divided. This "final point" is the smallest building block of materials; namely atom (al-jawhar al-fard / al-juzz allazi la yatacazza).

As a conclusion, that Democritus atomism has a materialist character, Indian atomism accepts material as an "eternal" being and no idea similar to Kalām atomism is encountered in Mesopotamia or its surroundings where Kalām developed makes us think that Kalām atomism is an original thought developed by theologians that benefited from the regional culture so as to strengthen the Islamic belief and to create a conception of Allah and universe.

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