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Science and Philosophy in The Classical Period of *Kalām*: An Analysis centered upon The *Daqīq* and *Laṭīf* Matters of *Kalām*

Klasik Dönem Kelâmında Bilim ve Felsefe: Kelâmın *Dakîk ve Latîf* Konuları Ekseninde Bir Değerlendirme

Mehmet BULGEN

Associate Professor Dr., Marmara University, Faculty of Theology, İstanbul/ Türkiye
mbulgen@hotmail.com | orcid.org/0000-0002-2372-471X | ror.org/02kswqa67

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Abstract

One of the important aspects of the classical *kalām* is that the philosophical topics related to physics and cosmology, namely *daqīq* or *laṭīf al-kalām*, have an important place in it. The reason for the involvement of the *kalām* scholars (*mutakallimūn*) in these kinds of issues is commonly regarded as an effort to defend Islamic beliefs against other religions and thought systems. However, when their studies are examined closely, the complexity of their concepts and theories, as well as the fact that they discussed these matters not only with opposing groups but also among themselves, show that *kalām* had a much deeper and integrated relationship with science and philosophy in the classical period. Their engagement with philosophical and scientific matters, such body (*jism*), substance/atom (*jawhar*), accident (*ʿaraḍ*), motion, space, time, and causality dates back to the mid-8th century and displays great diversity. Although the *mutakallimūn* probably were the first ones to deal with physics-related issues in Islamic thought, it cannot be said that they are given the importance they deserve in modern studies pertaining to the history of science and philosophy in Islamic thought. The fact that, in *kalām* works, physics-related questions were generally discussed along with theological matters has caused the scholarship of *mutakallimūn* to be regarded as an adjunct of apologetic discipline and has thereby led to a limited description of *kalām*'s relationship with science and philosophy in the classical period. This set of circumstances hinders a proper understanding of how science and philosophy emerged and evolved in Islamic thought. In the present article, I will attempt to present the place and role of physical topics, namely *daqīq* or *laṭīf al-kalām*, in classical *kalām*, between the 9th and 11th centuries. Firstly, I will show how the classical *mutakallimūn* divided *kalām* into two parts, namely 'major' (*jalīl*) matters, which are based on revelation, and 'subtle' (*daqīq*) or 'obscure' (*laṭīf*) matters, which mainly depend on reason. Matters surrounding *jalīl al-kalām* indicate the theological problems on which the *mutakallimūn* had a general agreement, such as God's oneness, revelation, prophethood, and eschatology. Questions discussed under the category of *daqīq* or *laṭīf al-kalām* mostly correspond to philosophical and scientific issues concerning epistemology, physics, and cosmology. Secondly, I will examine to what extent the *mutakallimūn* dealt with physical sciences and what kind of topics were primarily discussed in the field of *daqīq* or *laṭīf al-kalām*. The upshot of this will be that the claim that the *mutakallimūn* were interested in physics and cosmology merely for apologetic purposes is unsound; rather, in the 9th and 10th centuries, many Muslim theologians also concerned themselves with issues such as motion, void, body, and causality as truth seekers. That being the case, the *mutakallimūn* should be taken into consideration in studies related to the emergence and rise of science and philosophy in Islamic thought.

Keywords: *Kalām*, *Daqīq al-kalām*, *Laṭīf al-kalām, Jalīl al-kalām*, Cosmology, Atomism.

Öz

Klasik dönem (mütekaddimûn) kelâmının dikkat çekici özelliklerinden biri "dakîku'l-kelâm" ya da "latîfu'l-kelâm" diye isimlendirilen fizik ve kozmolojiye dair felsefî konuların önemli bir yer tutmasıdır. Kelâmcıların fiziğe dair konulara ilgi duymaya başlama sebebi, İslâm dininin itikadî esaslarını diğer din ve düşünce sistemlerine karşı savunma ihtiyacı şeklinde açıklanmaktadır. Hâlbuki onların çalışmalarına yakından bakıldığında, kelâmcıların kullandıkları kavram ve teorilerin gelişmişliği, ayrıca bu türden konuları sadece karşıt düşünce gruplarıyla değil, birbirleriyle de tartışmaları, klasik dönemde kelâm ilminin bilim ve felsefe ile çok daha derin ve entegrasyona dayalı bir ilişki yaşadığını göstermektedir. Kelamcıların cisim, cevher, araz, hareket, uzay, zaman, nedensellik gibi felsefi ve bilimsel konularla meşgul olmaya başlamaları 2./8. yüzyılın ortalarına kadar uzanmakta ve oldukça zengin bir karakter arz etmektedir. Kelamcılar İslam düşüncesinde muhtemelen fiziğe dair konularla ilk defa uğraşan grup olmakla birlikte İslam bilim ve felsefe tarihi araştırmalarında kendilerine hak ettikleri önemin verildiği söylenemez. Kelâm kitaplarında fiziğe dair konuların genelde teolojik meselelerle birlikte ele alınması onların çalışmalarının daha çok apolojetik bir görünüm kazanmasına ve kelâm ilminin klasik dönemde bilim ve felsefeyle ilişkisinin sınırlı bir şekilde tasvir edilmesine neden olmaktadır. Bu durum İslam düşüncesinde bilimlerin erken dönemden itibaren nasıl ortaya çıkıp gelişim gösterdiğinin gerçekte olduğu gibi anlaşılmasına engel olmaktadır. Bu makale, klasik dönemde "dakîku'l-kelâm" diye isimlendirilen fizik ve kozmolojiye dair konuların kelâmda ne tür bir yeri ve rolü olduğunu ortaya koymayı amaçlamaktadır. Bu bağlamda birinci bölümde klasik dönemde kelâm ilminin vahye dayalı "celîlü'l-kelâm" ile akla dayalı tartışmaları ihtiva eden "dakîkü'l-kelâm" olmak üzere iki temel kısma ayrıldığı ortaya konulacaktır. Bu ayrımda celil konular kelamcıların genel olarak üzerinde uzlaştıkları Allah'ın birliği, vahiy, nübüvvet ve ahiret inancı gibi teolojik konulara tekabül ederken, dakîk ya da latif başlıkları altında ele alınan konular ise daha çok fizik ve kozmolojiye dair felsefi ve bilimsel konulara karşılık gelmektedir. İkinci bölümde kelâmcıların fizik ve kozmolojiye dair konularla hangi ölçekte meşgul oldukları ve dakîku'l-kelâm başlığı altında daha çok ne tür meseleleri ele aldıkları konusu ele alınacaktır. Nihai olarak kelamcıların fizik ve kozmoloji meseleleriyle salt

apolojetik amaçlarla ilgilendiği iddiasının temelsiz olduğu; aksine 9. ve 10. yüzyıllarda birçok kelamcının hareket, boşluk, cisim ve nedensellik gibi konularla birer hakikat arayıcı olarak ilgilendikleri sonucuna ulaştım. Bu yüzden kelamcıların, İslam düşüncesinde bilim ve felsefenin ortaya çıkış ve gelişimine ilişkin çalışmalarda daha fazla yer bulmaları gerekmektedir.
Anahtar Kelimeler: Kelâm, Dakîku'l-kelâm, Latîfu'l-kelâm, Celîlü'l-kelâm, Kozmoloji, Atomculuk.

Introduction

One of the remarkable characteristics of the science of *kalām*, which was founded by Muʿtazilī theologians in the early 8th century, is that its scholars (*mutakallimūn*) not merely engaged in theological matters, but also in matters falling within the scope of science and philosophy. When their studies are examined closely, it is seen that they intensively discussed issues on the definition of knowledge, the classification of existing things, the structure of matter, properties of bodies, the nature of space, time, motion, and the problem of causation in addition to matters concerning God's existence, His oneness, His attributes, revelation, and prophethood.[1]

It is surprising that the *mutakallimūn* in the classical period of *kalām* actually dealt with questions pertaining to science and philosophy aside from dealing with determining, demonstrating, and defending Islam's revelation-based principles. This raises questions regarding *kalām*'s true nature and what kind of relationship it has built with science and philosophy. In fact, the discussions present in *kalām* books about such issues as knowledge (*ʿilm*), existent (*mawjūd*), nonexistence (*madūm*), substance (*jawhar*), accident (*ʿaraḍ*), atom (*al-juzʾ alladhī lā yatajazzaʾ*), void (*khalāʿ*), motion, space, time and causality are usually handled in an intertwined manner with theological matters. The *mutakallimūn* used these philosophical concepts and theories to expound on theological quesitons. This causes most of the researchers come to the conclusion that the *mutakallimūn* did not deal with the philosophical questions related to physics and cosmology as seekers of truth, but with the purpose of defending Islam's revelation-based principles (apologetically) or demonstrating these core principles based on reason instead. However, looking closely at their works, it is easily noticeable that the *mutakallimūn* coined original concepts and developed sophisticated theories about knowledge, existence, and the universe. Besides, they discussed these matters not only with proponents of opposing thought systems but also among themselves, and penned books dedicated to explicating certain questions of physics and cosmology. This has rendered the limited and superficial framework depicting *kalām*'s association with natural sciences insufficient and brought up the idea of a more comprehensive and integrative relation.

The fact that physics-related matters are studied together with theological matters in the *kalām* books has created confusion among researchers who have attempted to describe *kalām*'s relationship with science and philosophy. Therefore, while some researchers have described this

[1] The fact that *mutakallimūn* dealt with philosophical and scientific issues about the universe in addition to theological issues is also reflected in their definitions of *kalām*. Imāmu'l-Ḥaramayn Abu'l-Maʿālī al-Juwaynī (d. 478/1085), an Ashʿarite scholar, defines *kalām* as follows: "*Kalām* is a discipline that allows knowing the universe (*ʿālam*), its parts (*ʾaqsām)*, its realities (*ḥaqāiq*), its createdness (*ḥudūth*), the necessary and the impossible attributes of its creator (*muḥdith*), and prophets, differentiating prophets from dishonest ones based on miracles, what is impossible and possible among the general principles of religion (*sharīʿa*). al-Juwaynī, *al-Burhān fī uṣūl al-fiqh*, (ed. 'Abd al-'Azīm al-Dib) Doha: Jāmi'a Qatar, 1978, 1/84.

relationship between *kalām* and natural sciences in a limited and superficial way, others have claimed that the *mutakallimūn*'s engagement in physical sciences is much more profound. For instance, the renowned orientalist Montgomery Watt (1909-2006) states that the early *mutakallimūn* found the relationship between words more compelling than the causal relationship between material objects; accordingly, they were more interested in grammar and logic than in natural sciences.[2] Sayyid Husain Nasr, in a similar vein, says that most of the Muʿtazilī *mutakallimūn* only engaged in issues regarding theology, political-theology, and ethics; and that the interest over issues such as physics and natural sciences remained limited to some *mutakallimūn* like Abū Hudhayl al-ʿAllāf (d. 235/849-50 [?]) and al-Naẓẓām (ö. 231/845).[3]

However, scholars such as Gerlof van Vloten (1866-1903), Georges Anawati (1905-1994), Anton M. Heinen, Joseph van Ess, Abdulhamid Ibrahim Sabra (1924-2013) Alnoor Dhanani, and Mohammad Basil Altaie depict the *kalām*-science relationship in a much deeper and comprehensive manner. For instance, van Vloten, in his book "*Arab Natural Science in 9th Century*", states that the word "*mutakallim*" indicates "natural scientist"[4]; similarly, Anawati points out that, in the early period, the scholars of *kalām* were sometimes called "physicist" (*al-mutakallimūn fī al-ṭabīʿiyyāt*).[5]

In that vein, Anton M. Heinen asserts in his article entitled "*Mutakallimūn* and Mathematicians" that approaches to portray *kalām* as Islam's scholastic theology and accentuating its apologetic side are not compatible with historical *kalām*. For, according to him, the *mutakallimūn* paid much more attention to physical problems than what would be expected of a theologian. Moreover, in his opinion some *mutakallimūn* – such as *al-Naẓẓām* and *al-Jāḥiẓ* – made invaluable contributions to the natural sciences through their experiments, observations and theories they developed in the period they lived. He also maintained that the critical approach of some noted Muslim scholars, like al-Bīrūnī, towards Aristotelian-Ptolemaic astronomy was affected by the *mutakallimūn*. Heinen suggests to those who find his expressions above exaggerated to glance through Abū al-Ḥasan al-Ashʿarī's *Maqālāt al-Islāmiyyīn*, a representative collection of the *mutakallimūn*'s views and theories. For this reason, according to Heinen, it is not possible for historians to comprehensively explain the development of physical and mathematical sciences in the history of Islam unless the books of the *mutakallimūn* are also taken into account.[6]

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2 W. Montgomery Watt, *Free will and Predestination in Early Islam*, (London: Luzac & Comany Ltd., 1948), 88.

3 Seyyed Hossein Nasr, *Islamic Philosophy from its Origin to the Present*, (New York: State University of New York Press 2006), 123.

4 Gerlof van Vloten, *Ein arabischer Naturphilosoph im 9. Jahrhundert el-Dschâhiz* (Stuttgart: 1918), 13.

4 Gerlof van Vloten describes the *mutakallimūn* as follows: "Even though *mutakallimūn*' works are essentially related to the dogmatic domain, their study methods required them to deal with physical problems extensively. There is hardly any scientific problem that they did not attempt to clarify. Greeks' teachings on atoms, natural qualities of elements, and the soul were also discussed by the *mutakallimūn*. Also, psychological matters were the focus of attention. Works were produced on self-knowledge and the nature of habits, original theories on the relationship of elements with each other were developed. It is noticed that occasionally the word "*mutakallim*" meant "naturalist" and "*kalām*" implied "philosophy." Gerlof van Vloten, *Ein arabischer Naturphilosoph im 9. Jahrhundert el-Dschâhiz* (Stuttgart: 1918), 13 etc. I first saw this quote in Anton M. Heinen's article "Mutakallimūn and Mathematicians", *Der Islam* 55/1 (1978), 59.

5 See. Georges C. Anawati, "Kalam" entry. *Encyclopedia of Religion* (second edition) (ed. Lindsay Jones) (USA: Macmillan, 2005, 8/5059.

6 Anton M. Heinen, "Mutakallimūn and Mathematicians", *Der Islam* 55/1 (1978), 57-73.

Joseph van Ess, who is one of the important researchers of the early *kalām* history, says that the main reason why the *mutakallimūn* engaged in natural sciences and cosmology was their desire to defend Islam against the religions and thought systems in the newly conquered areas. He also adds that the *mutakallimūn* later on turned this investigation into a pursuit of truth regarding the primary constituents of the universe and its way of functioning. According to him the empirical method for studying nature was used by some *mutakallimūn* in the Islamic world before the European Renaissance. Al-Naẓẓām's "experiments on the digestive system of ostriches" and discourses of the Basrian and Baghdadī branches of the Muʿtazila on the subject of void (*khalā*) are given as examples for this claim.[7]

Another remarkable researcher drawing attention to the *mutakallimūn*'s interest in scientific and philosophical matters is Abdulhamid I. Sabra, was a professor of the history of science at Harvard University. He defines *kalām* in his article "Science and Philosophy in Medieval Islamic Theology, The Evidence of The Fourteenth Century" as "an inquiry into God, and into the World as God's creation, and into man as the special creature placed by God in the World under obligation to his creator." According to Sabra, despite *kalām* being a theologically inspired and theologically oriented form of thinking, the widespread prejudice towards kalām that it is essentially apologetics and a sectarian polemic has hindered its proper understanding. This approach reduces the prestige of the science of *kalām* as a theoretical discipline and prevents understanding the results of its intense interaction, especially with philosophy and science. Presenting *kalām*'s great interest in philosophical and scientific matters through the example of the renowned Ashʿarite *mutakallim* al-Ījī's *al-Mawāqif*, Sabra reaches the following striking conclusion in his article: "It is not possible to describe, let alone explain, the outgrowth of philosophy and science in the Islamic world without considering their interaction with kalām."[8]

In his doctoral dissertation titled *Kalām and Hellenistic Cosmology: Minimal Parts in Basrian Muʿtazilī Atomism*[9] written under the supervision of Abdulhamid I. Sabra, Alnoor Dhanani, shows how the role of the physical theories in the thought system of the *mutakallimūn* formed a foundation for demonstrating and defending Islamic principles.[10] Additionally, just as Josef van Ess did, Dhanani draws attention to the fact that cosmology occupied a central position in the *mutakallimūn*'s debates with other religions and thought systems.[11] However, according to him, an approach merely reducing the *mutakallimūn*'s interest in natural phenomena to theological and apologetic debates doesn't do justice to their activities in this field. In his opinion, the *mutakallimūn* engaged

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7 Josef van Ess, *Theology and Science: The Case of Abū Isḥaq al-Naẓẓām,* Ann Arbor: Center for Near Eastern and North African Studies, University of Michigan, 1978; also see, Ahmet Mekin Kandemir, "The Hand Extending Beyond the Cosmos: Discussions on the Khalā' [Void] Between the Baṣran and Baghdād Schools of Mu'tazila", *Nazariyat* 7/1 (May 2021), 1-36.

8 Abdelhamid I. Sabra, "Science and Philosophy in Medieval Islamic Theology: The Evidence of the Fourteenth Century". *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften / Majallat Tārīkh al-ʿUlūm al-ʿArabīya wa 'l-Islāmīya* 9 (1994), 1-42.

9 Alnoor Dhanani published this work as *The Physical Theory of Kalām: Atoms, Space, and Void in Basrian Mu'tazilī Cosmology* (Leiden: Brill E. J. Brill, 1994).

10 Alnoor Dhanani, "Kalām and Hellenistic Cosmology: Minimal Parts in Basrian Mu'tazili Atomism", (Dissertation, Harvard University, 1991), 31 etc.

11 Dhanani, *Kalām and Hellenistic Cosmology*, 46.

in the natural sciences not only to reach theological conclusions but also to address physical problems as seekers of truth. Dhanani attempts to show the validity of this claim in the physics and cosmology-related discussions that the *mutakallimūn* deal with in their works in the sections called *laṭīf* (delicate), *daqīq* (subtle) or *ghāmiḍ* (*abstruse*).[12] According to him, if the *mutakallimūn*'s only purpose was to defend Islam, they would not have developed opposing theories against other members of the same theological schools on physics-related matters; or tried to solve the physical problems unrelated to theology, and most importantly they would not have established such a complex and comprehensive cosmology.[13] In conclusion, Dhanani argued that descriptions of *kalām*'s inquiries into scientific and philosophical issues – in particular by Peripatetic philosophers (*falāsifa*) – as a mere apologetic science cannot be tenable.[14]

It must be noted that there are also some researchers suggesting a middle way regarding the *mutakallimūn*'s interest in philosophical and scientific matters. In his article titled "The Scientific Value of *Daqīq al-Kalām*" where he analyses the physical theories of the *mutakallimūn* with reference to modern science, Muhammad Bāsil al-Tāī, known for his studies on *kalām*-cosmology relationship, asserts that *kalām* is divided into two parts: "*Jalīl al-Kalām*" under which matters such as God's existence, His attributes, revelation, prophethood, and afterlife are discussed, and "*Daqīq al-Kalām*" under which nature, its structure, and its way of functioning are examined. While *Jalīl al-Kalām* represents the revelation-based aspect of kalām, we find that the *mutakallimūn* engaged in matters related to natural philosophy in sections on *Daqīq al-Kalām*. However, according to Tāī, the mutakallimūn did not have the same approach to examining the natural phenomena as did philosophers. They did not speak about God only based on nature or reason, but they considered the Qurʾān too, and thus they tried to understand nature in conformity with revelation. Moreover, in Tai's opinion, the aspect of the kalām examining nature started to be put aside over time; in contrast, the theology-related part of *kalām* began to be emphasized more. Hence, neglecting *Daqīq al-kalām* and focusing on *Jalīl al-kalām* have resulted in lessening *kalām*'s academic value and weakening its deep theoretical roots in the long run.[15]

1. The Disctinction Between *Jalīl* and *Daqīq/Laṭīf* Matters in the Classical Period of Kalām

Although the analyses, as provided above, by contemporary scholars supply a general understanding of *kalām*'s relationship with science and philosophy, the most effective manner to approach the matter is a direct study of the available classical sources themselves. However, as

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12 Alnoor Dhanani states that "The *mutakallimūn* distinguished between two aspects of *kalām*. The first of these, which was based solely on reason, deals with 'obscure', 'subtle', or 'difficult' (*laṭīf/daqīq/ghāmiḍ*) questions while the second deals with 'major' (*jalīl*) questions [which depend on revelation]. (...) The topics covered by the 'subtle' questions deal mostly with cosmological concerns which, broadly speaking, consist of the problem of the nature and attributes of the things which constitute the world, the problem of the nature of man, and the problem of causation." See Dhanani, *The Physical Theory of Kalām*, 3-4.

13 Dhanani, *Kalām and Hellenistic Cosmology*, 36, 41, 43 etc.

14 Also see. Alnoor Dhanani, "Problems in Eleventh-Century Kalām Physics", *Bulletin of the Royal Institute for Inter-Faith Studies*, 4/1 (2002), 73-96. In this article, Dhanani calls historians of Islamic science also to take classical *kalām* books into consideration.

15 Muhammad Bāsil Al-Tāī, "The Scienti-fic Value of Daqîq al-Kalām", *Islamic Thought and Scientific Creativity* V/2 (1994), 7-18.

also noted in the beginning, there are very few extant works from the early period of kalām, namely the 8th-9th centuries. Therefore, the study of this period depends upon the genre of *maqālāt* literature, in which the views of earlier mutakallimūn are preserved fragmentarily in the form of certain subject headings.[16]

One of the earliest extant sources preserving information about the interest of the *mutakallimūn* in science and philosophy is the famous Muʿtazilī scholar Abū ʿUthmān al-Jāḥiẓ' (d. 255/869) *Kitāb al-Ḥayawān*. Jāḥiẓ' work is an encyclopedic text that attempts to explain the effects of the environment and climate on the different categories of zoology and the evolution of different types of animals.[17] In the section titled "The Characteristics (*awṣaf*) of the *Mutakallimūn*," Jāḥiẓ says as follows:

> "A *mutakallim* will not be able to master the complete scope of kalām as long as his proficiency in religion (*kalām al-dīn*) is not on the same level as his proficiency in philosophy (*kalām al-falsafa*), and he will not succeed in acquiring the qualities needed for becoming an expert or reaching the level of a master (*raʾīs*) in this discipline. In our view, a scholar (*ʿālim*) is the one who can synthesize both in his person".[18]

It is remarkable to see a division of *kalām* subjects into religious and philosophical by al-Jāḥiẓ in a period that could be considered a relatively early period of *kalām*, and his stipulation of becoming an expert in both in order to be a *mutakallim*. The text further indicates that by "philosophical theology" (*kalām al-falsafa*) al-Jāḥiẓ refers to natural philosophy. According to al-Jāḥiẓ, those who believe that they can establish the oneness of God (*tawḥīd*) through rejecting natures (*ṭabāʾiʿ*) or excessively emphasizing the creator and disregarding the importance of creation, unwittingly weaken their understanding of *tawḥīd*. This is because the most powerful signs demonstrating God and His oneness are found in natures. Therefore, to remove the proofs is also to remove what they point to (*madlūl*).[19]

Another example for the use of the term "*al-kalām al-falsafa*" can be found in Ibn al-Nadīm's (d. 385/995 [?]) *al-Fihrist*. While citing the names of the books written by al-Naẓẓām, al-Jāḥiẓ's teacher, Ibn al-Nadīm states that al-Naẓẓām follows the path of *al-kalām al-falsafa* in his poems. Ibn al-Nadīm also quoted a passage from a poem that Abū al-Nuwās (d. 198/813 [?]) wrote to criticize Naẓẓām's interest and involvement in philosophy. In that passage, Abū al-Nuwās suggests that even though al-Naẓẓām was knowledgable in philosophy, he was not proficient enough in it.[20] Ibn

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16 Imām Abū al-Ḥasan al-Ashʿarī's (d. 324/935) *Maqālât al-Islāmiyyīn;* ʿAbd al-Qāhir al-Baghdādī's (d. 429/1037) *al-Farq bayn al-firaq*; Shahristānī's (d. 548/1153) *al-Milal wa al-nihāl*, and Ibn Hazm's (d. 456/1064) *al-Fasl fī al-milal wa al-ahwā wa al-nihāl* can be listed.

17 This book is noteworthy in showing that a *kalām* scholar's interest was not limited to theological issues and covered scientific matters as well. For detailed information on al-Jāḥiẓ, see. Yusuf Şevki Yavuz, "Cahız", *TDV İslâm Ansiklopedisi* (*DİA)*, 7/24.

18 al-Jāḥiẓ, *Kitāb al-Ḥayawān*, ed. Abd al-Salām Muḥammad Hārūn (Beirut: Dār Iḥyā al-Turāth al-ʻArabī, 1388/1969), 2/134.

19 al-Jāḥiẓ, *Kitāb al-Ḥayawān*, 2/135.

20 Ibn al-Nadīm, *al-Fihrist*, ed. Rizā Tajaddud (Tahran, 1971), 538-539. This passage can be translated as follows: "Tell the one who claims the knowledge of philosophy, you said something but also left out many."

al-Nadīm's reference to "*al-kalām al-falsafa*" when introducing al-Naẓẓām demonstrates the widespread use of this expression at that period to describe *kalām*'s interest in philosophy.[21]

The other term used in the 9th and 10th centuries in order to explain the *mutakallimūn*'s interest in philosophical and scientific matters beside *al-kalām al-falsafa* is *daqīq al-kalām* or *laṭīf al-kalām*.

The Kitāb al-Intiṣār by al-Ḥusayn al-Khayyāṭ (d. 300/913 [?]), who was one of the leaders of the Baghdadī Muʿtazilite school, is one of the earliest surviving books in which this terminology is mentioned. This work is a refutation and rebuttal of Ibn al-Rāwandī's (d. 301/913-14 [?]), *Faḍiḥat al-Muʿtazila* which he wrote against the Muʿtazila in general, and against al-Naẓẓām in particular."[22] It is significant that a large part of al-Khayyāṭ's response to Ibn al-Rāwandī's defamations and criticisms against the Muʿtazila and al-Naẓẓām involves philosophical and scientific subjects. In one of these criticisms, Ibn al-Rāwandī accuses the Muʿtazilites of being inconisistent and of upholding contradictory views and constantly debating each other. In his response to al-Khayyāṭ indicates that the Muʿtazilites argued mainly over *tālī* or *far'* (subsidiary) topics, and that it would be understandable for there to be no consensus in such topics. However, on major/fundamental (*jalīl*) topics such as *tawḥīd*, justice, prophethood, and revelation they would be in agreement.[23] According to al-Khayyāṭ, these *tālī* matters are of the complex and recondite subjects of *kalām* (*min ghāmiḍi al-kalāmi wa laṭīfihi*). Some of them are e.g. the continuation and obliteration of entities; the *ma'nā* theory that was developed to explain resting bodies and moving bodies; the categorisation of objects (*mujānasa*); the question whether objects interpenetrate (*mudākhala*); and the acquisition of knowledge and the nature of man.[24] Non-Muʿtazilites would not be on the necessary level to understand or discuss these subjects unless by way of plagiarizing from the Muʿtazila. Therefore, other schools were not able to state opinions pertaining to these subjects, so the Muʿtazilites could not actually dispute with them. In these issues, the Muʿtazilite scholars would be their only opponents and for this reason, they enter into debate with one another.[25] In the proceeding sections of the book, al-Khayyāṭ asserts his views

21 Also, it is noteworthy that Ibn al-Nadīm used the term "*Faylasūf al-'Arab*" when referring to al-Kindī, a contemporary of al-Naẓẓām, while he used the expression "*kalām al-falsafa*" for al-Naẓẓām. As a result, al-Naẓẓām can be considered to be someone who engaged philosophy in *kalām*. See. *al-Fihrist*, 828.

22 For information on Abū al-Ḥusayn al-Khayyāṭ, see. Şerafettin Gölcük, "Hayyât", *DİA*, 17/103.

23 Abū al-Ḥusayn al-Khayyāṭ, *Kitāb al-Intiṣār*, ed. Albert Nasri Nader (Beyrut 1957), 137.

24 al-Khayyāṭ says in a different place as follows: "Have you said that disagreements among them (al-Jāḥiẓ and his friends) are only on annihilation and persistence of the things, the *ma'nā* theory, known and unknown things, the one who is hindered and the one who achieve, impossibility of enduring injustice, and indirect origination (*tawallud*)? These issues are *kalām*'s fine and profound/complicated issues (*laṭīf al-kalām/daqīq al-kalām*), and these types of issues sometimes lead scholars to doubt. Ibid. 106.

25 al-Khayyāṭ, *Kitāb al-Intiṣār,* 14. "These issues mentioned before are among the *daqīq* and *laṭīf* issues of *kalām*, which Rāfidites cannot fathom. Indeed, the fact that only a Mu'tazilī opposed to another Mu'tazilī in these matters you mentioned one by one, is proof of this. You realize that the attempts of non-Mu'tazilīs in [dealing with] these matters are nothing but stealing the Mu'tazilī teaching and adapting it themselves." Also, al-Khayyāṭ stated that major conflicts arose among people concerning *daqīq* and *jalīl* issues and found this normal: "Know that -may Allah guide you to goodness- regarding the annihilation of something, the questions whether or not annihilation is other than this thing or whether it inheres in this thing, or another thing are among *daqīq* and *latīf* issues of *kalām*. There has been great disagreement among people about these issues." See. Ibid, 19. "A mistake of any Mu'tazilī is related to the detail of *laṭīf/daqīq* issues of *kalām*. Did not you report some of their mistakes about annihilation or persistence

with growing clarity. For example, in responding to Ibn al-Rāwandī's criticism of al-Naẓẓām's views on the interpenetration of sounds, al-Khayyāṭ writes the following:

> "The nature of sounds and the question of how hearing is achieved is one of the delicate and difficult subjects of *kalām* (*min al-kalāmi wa-ghāmiḍihi*). On this subject, there are no views other than those of the Muʿtazilites. Only the Muʿtazilites can discuss these subjects because they have achieved a level of mastery in kalam first in the major and explicit subjects of *kalām* and also in the delicate and difficult subjects (*bi-daqīq al-kalāmi ve ghāmiḍihi*)".[26]

Here, we see that while al-Khayyāṭ defines the subjects that are the essentials of religion and with which the Muʿtazilites are in agreement as "*jalīl al-kalām*," he denotes "*daqīq/laṭīf/ghāmiḍ al-kalām*", i.e. the subjects pertaining to physics, such as the nature of sounds and how hearing is achieved, and where there is disagreement between the Muʿtazilites, as subsidiary (*tālī*) topics.[27] This is showing that the distinction between *jalīl al-kalām* and *daqīq al-kalām* in the science of *kalām* goes back at least to the 3rd/9th century.

KALĀM'S *JALĪL* AND *DAQĪQ/LAṬĪF* MATTERS ACCORDING TO AL-ḤAYYĀT	
JALĪL MATTERS	*DAQĪQ/LAṬĪF* MATTERS
-Divine oneness (*Tawḥīd*) -Divine justice (*ʿAdl*) -Prophethood (*Risāla*) -Revelation (*Waḥy*)	-The annihilation (*fanāʾ*) or continuation (*baqāʾ*) of things (*ashyāʾ*) -The theory of knowledge (what is known(*maʿlūm*) and what is not known (*majhūl*)) -The theory of secondary causation (*tawallud*) -The categorisation of the objects in the World (*mujānasa*) -The discussion of the whole and the part, the finite and the infinite. -The nature of man and of knowledge.

The chart above shows that by major issues al-Khayyāṭ, refers to revelation-based theological questions over which there is general agreement; whereas by delicate matters, he means reason-based questions over which they differ. In addition, it is also remarkable in terms of indicating the degree to which the *mutakallimūn* were involved in scientific and philosophical studies that al-Khayyāṭ proudly asserts that only the Muʿtazilite *mutakallimūn* dealt with *laṭīf* and *daqīq* matters at a period in which Muslim Peripatetic philosophy had not yet emerged. On the other hand, writing about *daqīq* and *laṭīf* subjects of *kalām* as subsidiary matters (*farʿ*) does not mean that these subjects were unimportant. Indeed, according to al-Khayyāṭ, the *mutakallimūn* used their discussions on the relationship between the part and the whole, and between continuity and discontinuity as a means to support *tawḥīd* and refute the deniers.[28] Therefore, here, al-Khayyāṭ

of things, known and unknown, secondary causation (*tawallud*), and [Mu'ammar's] *ma'na* theory when you tried to reveal the Muʿtazila's faults? Rāfidites already do not understand these matters."

26 al-Khayyāṭ, *Kitāb al-Intiṣār,* 43.

27 al-Khayyāṭ also uses terms *daqīq* and *jalīl* in place of *particular* and *main* issues. When answering Ibn al-Rāwandī, he claims that God eternally knows the reality of *daqīq* and *laṭīf* matters through His essence, not with a type of knowledge outside Himself. Ibid. 112.

28 al-Khayyāṭ, *Kitāb al-Intiṣār,* 15. "This view is a significant issue that is the essence of *tawḥīd*. That is related to what has been and what will be, finite and infinite, the whole (*kull*) and part (*juz'*). Those who are concerned about *tawḥīd* and rebuttal of unbelievers deal with these issues." Al-Khayyāṭ stated that famous Mu'tazilī scholar al-Naẓẓām also

offers an integrative method that requires expertise in both theological and scientific matters, which was, before him, pointed at by al-Jāḥiẓ when talking about *kalām al-dīn* and *kalām al-falsafa*. Another text through which we may acquire a better understanding of the distinction between matters of *jalīl al-kalām* and *daqīq al-kalām* is Imām al-Ashʿarī's *Maqālāt al-Islāmiyyīn wa ikhtilāf al-muṣallīn* (*Doctrines and Differences Among Muslims and Adherents*). This work is of unparalleled significance for the study of the thought of the early *mutakallimūn* whose works have not survived. Moreover, the classification undertaken by al-Ashʿarī in this book in relating the thoughts of the *mutakallimūn* regarding faith and the universe is of particular importance. al-Ashʿarī concludes the section of his book dedicated to those views that led Muslims to form different sects with the statement "This is the end of the discussion on the major subjects (*hādhā ākhir al-kalām fī al-jalīl*)"; while the section dealing with subsidiary matters that have not led to division within the Muslim community commences as follows, "this is the beginning of the discussion of the delicate/deep (*daqīq*) subjects (*hādhā dhikr ikhtilāf al-nās fī al-daqīq*)". We see in the section about *jalīl al-kalām* that it contains "theological" matters such as God's attributes, Him essence, prophethood, and revelation; in the section on *daqīq al-kalām* we see different views on cosmological issues including the atom, bodies, accidents, motion, causality.[29]

Imām al-Ashʿarī's systemisation of *jalīl* and *daqīq* matters in his book and the content in the section of *daqīq al-kalām* are in apparent conformity with al-Khayyāṭ's previously described approach. Hence, the science of *kalām* includes matters it deems to be Islam's foundations, which are called *jalīl*; and it also includes subsidiary issues named "*daqīq/laṭīf*" that are not part of the foundational principles of Islām. While aspects that classify as *jalīl* matters are faith-related and mostly based upon the revelation, *daqīq* matters deal with reason-based epistemological, ontological, and cosmological issues. Therefore, having different opinions in *jalīl* matters leads to sectarian divisions, while differing in *daqīq* matters, conversely, does not have such a consequence.[30]

An approach that is similar to al-Ashʿarī's can be seen in the *Maqālāt* of his contemporary Abū al-Qāsim al-Balkhī al-Kaʿbī (d. 319/931), who is an important representative of the Baghdadī school. The first section of al-Kaʿbī's work deals more with theological matters such as God's essence, His attributes, the *Qurʾān*'s characteristics, and prophethood. Later on the heading "*bāb al-qawl fī al-laṭīf*" (chapter on *laṭīf* matters) includes more philosophical and scientific issues like the essence

said in his deathbed that he has engaged with *daqīq/laṭīf* matters to defend *tawḥīd* and prayed as follows: "Shame on Ibn al-Rāwandī! While people of the world were immersed in pleasures and chasing after worldly blessings, al-Naẓẓām and Muslim scholars like him devoted themselves to *tawḥīd* and endeavored to defend it. They tried to protect *tawḥīd* against the attacks of unbelievers. They made efforts in answering apostates (*mulḥids*) and produced works against them. Many of our friends told me that al-Naẓẓām entrancedly prayed as follows: "My God! You know that I did not refrain from anything to prove Your oneness (*tawḥīd*), and I only acknowledged *laṭīf/daqīq* issues of *kalām* to reinforce *tawḥīd* and tried to stay away from those opposing *tawḥīd*. My God! Since you know me as I have described, then forgive my sins, [42] and ease death for me." My friends told me that al-Naẓẓām passed away during this prayer. Departing this life in this manner is for those who know and fear Allah. God is the One who rewards those who are grateful like this. See. Ibid. 41.

29 al-Ashʿarī, Abū al-Ḥasan, *Maqālāt al-Islāmiyyīn wa ikhtilāf al-muṣallīn,* ed. Hellmut Ritter (Wiesbaden:1963), 181-182.

30 It is known that Imām al-Ashʿarī wrote a non-surviving book named *Kitāb al-nawādir fī daqāʿiq al-kalām*, where he discussed issues such as bodies, atoms, human nature, space, accidents, and motion. See. Dhanani, *Kalām and Hellenistic Cosmology*, 28-29.

of bodies and the question whether it is composed of the smallest particles or not, the properties of accidents, the essence of the human, natural actions, cognition, time, place, etc.[31]

The approach of discussing scientific and philosophical subjects under the heading "*laṭīf al-kalām*" is also present in the *Awā'il al-maqālāt* of the Shiite intellectual Shaykh al-Mufīd (d. 413/1022). Al-Mufīd presents subjects like substances, accidents, bodies, non-existent, the nature of the universe, fate, the shape of the earth, void and fullness, place, time, nature, and engenderment/generation (*tawlīd*) under this heading.[32] As such, if we consider all three *Maqālāt* works together, we see that the *mutakallimūn* treat rational and scientific subjects under the terminology of *laṭīf al-kalām* and *daqīq al-kalām*. Furthermore, these works clearly demonstrate that the *mutakallimūn* were deeply interested in scientific and philosophical subjects alongside of theological and religious subjects.

Another classical work showing the correlation between *laṭīf/daqīq* matters to philosophical and scientific issues is Ibn Fūrak's (d. 406/1015) *Mujarrad maqālāt al-Shaykh Abī al-Ḥasan al-Ash'arī* (*The pure doctrines of al-Ash'ari*). This text is vital in elaborating Imām al-Ashᶜarī's views. Indeed, although Imām al-Ashᶜarī's narrates the views of many of his contemporaries and predecessors in his own *Maqālāt*, he does not, out of the principle of impartiality, express therein his own thoughts. Also, al-Ashᶜarī does not comment on regarding the theological background of the philosophical and scientific concepts defended by the *mutakallimūn* mentioned in his work. However, the 37th section of Ibn Fūrak's work "The other inquiry regarding the clarification of the views of al-Ashᶜarī on *laṭīf* and *daqīq* subjects" is entirely concerned with expounding al-Ashᶜarī's views on essences of substances and accidents. Here, we see that Imām al-Ashᶜarī endorsed atomism, accepted the existence of the void, adopted the notion of God's custom (*ᶜāda Allāh*) on the functioning of the universe, and thus denied necessary causality. In addition, Ibn Fūrak provides here the theological backdrop to the cosmological views defended by Imām al-Ashᶜarī. According to Ibn Fûrek, Imām al-Ashᶜarī defined terms such as substance, accident, and body in a theistic framework and explained the concept of "*al-jawhar al-fard*" by connecting it to the principle of *tawḥīd*, i.e the oneness of God.[33]

The most explicit statements regarding the role and place of daqīq subjects in kalām and their relationship with theological matters are found in *al-Muḥīṭ bil-taklīf* of al-Qāḍī ᶜAbd al-Jabbār (d. 415/1025), the famous *mutakallim* of the Basrian Muᶜtazila. Here, ᶜAbd al-Jabbār indicates that there are five fundamentals (*uṣūl*) that a *mukallaf* (religiously accountable person) must know in relation to God's existence and His oneness, and he explains it as follows:

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31 Abu'l-Qāsim al-Balkhī al-Kaᶜbī, *Kitāb al-Maqālāt wa ma'ahu ᶜUyūn al-masā'il wa al-jawābāt,* ed. Hüseyin Hansu - Rājih Abdulhamīd Kurdī (Istanbul, Amman: KURAMER, Dār al-Fath 2018), 441 etc.

32 See. Shaykh al-Mufīd, *Awā'il al-maqālāt*, ed. Mehdī Muhaqqiq (Tahran: Dānishgāh-e Tahrān, 1372/1993), 40 etc. Shaykh al-Mufīd, who was clearly influenced by the Baghdadī Muᶜtazila, despite accepting atom's existence (*jawhar al-fard*), associated cosmological matters with "*tawḥīd*," for instance, regarded deniers of atom's existence as unbelievers, just as Imām al-Ḥasan did. He says as follows: "Bodies (ajsām) consist of indivisible atoms. Except for some *mulḥid* M'utazilites, everyone who believes the oneness of God accepts this premise."
See. Shaykh al-Mufīd, *Awāil al-maqālāt*, 40; For Shaykh al-Mufīd's cosmology understanding, also see. Martin J. Mcdermott, *The Theology of al-Shaikh al-Mufīd* (Beyrut: 1978), 189 etc.

33 Ibn Fūrak, *Mujarradu maqālāt al-Shaykh Abī al-Ḥasan al-Ashᶜarī.* ed. Daniel Gimaret (Beyrut: Dār al-Mashriq 1987), 202.

> "These fundamentals are only completed by the subsidiary (*tālī)* subjects. This is the reason why our friends speak on the *daqīq* issues. The foundational principles are explained in order to correct the argument, respond to questions, and remove doubts. And this includes proving the existence of temporal beings (*ḥādith*) that point to the existence of God and speaking about the temporality of bodies and things that are not bodies. There are innumerable examples for daqīq matters. For instance, if it was argued that an infinite number of bodies exists because there was an infinite amount of numbers, the theory on the atom (*juzʾ*) would be needed to refute it. This also applies to proving the existence of the Creator. On this, one has to be able to confront Zakariyyāʾ al-Rāzī, who argues that God has not the power to create the essence of the matter, and dispute with him. In the same way, you need to dispute with him on time and space [which he considers to be eternal] too..."[34]

As can be seen here, al-Qāḍī ʿAbd al-Jabbār terms cosmological matters such as the creation of the universe, body, atom, space and time as *daqīq* subjects, and categorizes them as the subsidiary matters by which the fundamentals of *tawḥīd* are established and defended. Therefore, his approach to this subject corresponds to those of his predecessors al-Jāḥiẓ, al-Khayyāṭ and al-Ashʿarī. On the other hand, al-Qāḍī ʿAbd al-Jabbār also uses the term "*daqīq al-kalām*" in referring to other *mutakallimūn*. For example, in speaking of Abū al-Hudhayl al-ʿAllāf in his work *Faḍlu al-iʿtizāl wa Ṭabaqāt al-Muʿtazila*, ʿAbd al-Jabbār notes that Abū al-Hudhayl al-ʿAllāf conversed with Hishām b. al-Ḥakam and others and disputed on *daqīq al-kalām* subjects.[35] He also says about Naẓẓām, the cousin and student of Abū al-Hudhayl the followings:

> "Ibrāhīm al-Naẓẓām was one of his [Abū al-Hudhayl] students. As he was on his way to the Hajj, he met Hishām b. al-Ḥakam and others. He discussed with them the *daqīq* subjects of *kalām*. He also read the works of the [ancient] philosophers. Later, he returned to Basra, believing that he resolved *kalām*'s difficult and confusing subjects (*min laṭīf al-kalām*), which others before him had failed to understand".[36]

A Muʿtazilite biographical author al-Ḥākim al-Jushamī (d. 494/1101) when speaking of al-Qāḍī ʿAbd al-Jabbār's prestige and influence among the Muʿtazilites, distinguished between the *jalīl* and *daqīq* subjects of *kalām*:

> "I have not found any accounts that harm the reputation of al-Qāḍī ʿAbd al-Jabbār, his high status, virtue and knowledge. This is because he has revealed *kalām* for others and achieved important works in this pursuit. Because of his efforts, *kalām* spread to the East and the West and to the near and far four corners of the world. In his works, in addition to the major (*jalīl*) issues of *kalām*, he also examined the *daqīq* subjects of this science in a way that has never been achieved before by any other person".[37]

An report attributed to al-Qāḍī ʿAbd al-Jabbār's student Abū Rashīd al-Nīsābūrī (d. 415/1024) clarifies what is meant here by "*daqīq* subjects". It is narrated that when he was in the academic circle of al-Qāḍī ʿAbd al-Jabbār, al-Nīsābūrī decided to sort the *kalām*-related *fatwā*s of his teacher

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34 al-Qāḍī ʿAbd al-Jabbār, *al-Majmūʿ fī al-muḥīṭ bi al-taklīf,* ed. J. J. Houben (Beyrut: Dār al-Mashriq, 1986), 26-27.

35 al-Qāḍī ʿAbd al-Jabbār, *Faḍlu al-iʿtizāl wa Ṭabaqāt al-Muʿtazila* (in *Faḍlu al-iʿtizāl wa Ṭabaqāt al-Muʿtazila*) ed. Fuād Seyyid (Tunus 1393/1974), 254.

36 al-Qāḍī ʿAbd al-Jabbār, *Faḍlu al-iʿtizāl,* 26.

37 al-Ḥākim al-Jushamī, *Sẖarḥ al-ʿUyūn* (in Faḍlu al-iʿtizāl wa Ṭabaqāt the Muʿtazila), ed. Fuād Seyyid (Tunus 1393/1974), 365.

in a book (*Dīwān al-uṣūl*) and ranked the subjects of body and accident before the subjects of *tawḥīd* and justice (*ʿadl*) in this work; however, al-Qāḍī ʿAbd al-Jabbār did not approve of this classification and requested that *jalīl* subjects must be treated before *daqīq* ones. In this case, it can be understood that according to al-Qāḍī, issues such as body and accident fell under the category of *daqīq* and those such as *tawḥīd* and justice under that of *jalīl.*[38]

The distinction between *jalīl* and *daqīq* in *kalām* can also be seen in the Zaydī Ibn al-Murtaḍā (d. 840/1437). In commenting on works written by *mutakallimūn*, Ibn al-Murtaḍā differentiates between *daqīq al-kalām* and *jalīl al-kalām*. While introducing Jāʿfar b. Ḥarb (d. 236/850) in his *al-Munya,* he notes that Jāʿfar ibn Ḥarb was a very ascetic and knowledgeable person of his time and compiled many works on *jalīl* and *daqīq* issues of *kalām*.[39] Also, in relation to Abū al-Hudhayl, he says that "it was narrated from Yaḥyā ibn Bishr that Abū al-Hudhayl al-ʻAllāf refuted his opponents in around sixty works on *daqīq al-kalām* and *jalīl al-kalām*."[40]

On the other hand, the distinction between *jalīl* and *daqīq* in classical kalām was also used by those out of *kalām*. For example, in the *Risāla fī thamarāt al-ʻulūm* of Abū Ḥayyān al-Tawḥīdī (d. 414/1023), an important master of Arabic prose, *kalām* is introduced as a science consisting of two parts, rationally based (*yatafarradu al-ʻaql bihi*), *daqīq* and based on revelation (*yufzaʻu ilā kitāb Allāhi fīhi*), *jalīl.*[41]

Lastly, it should be noted that the distinction of *daqīq al-kalām* and *jalīl al-kalām* has also been used to condemn the *mutakallimūn*. Some Zaydī-Salafī scholars like Ibn al-Wazīr criticized certain mutakallimūn, such as al-Ḥākim al-Jushamī, and Ibn Mattawayh, for their view that the soul merely consisted of breath and air, which they based on their atomic cosmology. Ibn al-Wazīr associates the root of this problem with the *mutakallimūn*'s engagement with *daqīq al-kalām.*[42] Referring to Ibn Mattawayh's *Tadhkira*, Ibn al-Wazīr opens a chapter titled "the *mutakallimūn*'s withdrawal from dealing with *daqīq al-kalām*", and here, he claims that *mutakallimūn* are doomed unless they disassociate themselves from *daqīq al-kalām*. al-Ḥākim al-Muʿtazilī, in his outstanding treatise about *maʿrifa Allah* (knowing Allah), says: "Jāʻfar b. Ḥarb and Jāʻfar b. Mubashshir among the *mutakallimūn* stopped engaging in *daqīq al-kalām*. Al-Ghazālī, in his *Iḥyā ʿUlūm al-Dīn*, also took a similar stance on this issue, and did not consider treating these matters in detail necessary."[43] Under another heading named "The way to be saved from *kalām*," Ibn al-Wazīr asserts that indulging in *kalām* is unnecessary by pointing out to *al-Tadhkira* and Fakhr al-Dīn al-Rāzī's

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38 See. Maʻn Ziyāda-Rıdvān Sayyīd, *al-Masāʾil fī al-khilāf bayn al-basriyyīn wa al-Baghdādiyyīn* (Abū Rashīd al-Nīsābūrī's foreword), Beyrut 1979, 6.

39 Aḥmad ibn Yaḥyā al-Murtaḍā, *Bāb Dhikr al-Muʻtazila min Kitāb al-Munya wa al-amal*, ed. Thomas Walker Arnold (Leipzig 1902), 41.

40 Ibn al-Murtaḍā, *Kitāb Tabaqāt al-Muʻtazila*, ed. Susanna Diwald Wilzer (Beirut: Maktabat al-Hayāt), 44.

41 Abū Ḥayyān al-Tawḥīdī, *Kitāb al-Adab wa al-inshā fī al-ṣadaqa wa al-ṣadīq* (Cairo 1323/1905), 192.

42 Ibn al-Wazīr, *Īthār al-ḥaqq ʻalā al-khalq*. ed. Anū ʻAbd al-Raḥmān Nabil Salah ʻAbd al-Majīd Salīm. Samanud (Eygpt), Maktaba Ibn ʻAbbās, 2010, 1/59; For Ibn Mattawayh's views on the soul, see. Ibn Mattawayh, *al-Tadhkira fī aḥkām al-jawāhir wa al-aʿrāḍ*, ed. Daniel Gimaret (Cairo: al-Ma'ha al-Fransī, 2009), 2/380, 386-387; For Ibn Mattawayh's views on cosmology, see. Metin Yıldız, *Kelam Kozmolojisi Mu'tezilenin Âlem Anlayışı* (Istanbul: Endulus, 2020); al-Ashʿarī has similar ideas on the soul to Ibn Mattawayh. See. Ibn Fūrak, *Mujarrad*, 267.

43 Ibn al-Nadīm, *al-Fihrist*, 204.

Muḥaṣṣal.[44] According to Ibn al-Wazīr, to substantiate sublime issues by means of low-level methods is not right. Indeed, diving into profound issues using this method can neither help with doubts nor remove them. He further says on the issue: "Jubbāī and Mattawayhī treatment cannot help a person who could not benefit from divine and prophetic treatment."[45]

In summary, the conclusion to be reached through all of these works is that since the early periods, *kalām* issues are divided into two parts: *jalīl al-kalām* and *daqīq al-kalām*.[46] Accordingly, issues pertaining to Islam's fundamentals, such as God's essence and His attributes, prophethood, afterlife, and revelation, are termed *jalīl al-kalām*; matters related to epistemology, ontology, physics, and cosmology are named *daqīq al-kalām* or *laṭīf al-kalām*. The first part (*jalīl*) is mostly based on revelation; in contrast, the second part is based on reason. Moreover, since this part is not directly a component of faith principles and counted as subsidiary, it does not lead to sectarian divisions. As we cited above from some *mutakallimūn* like al-Jāḥiẓ, al-Khayyāṭ, al-Ashʿarī, Ibn Fūrak, Shaykh al-Mufīd, and al-Qāḍī ʿAbd al-Jabbār, the purpose of the second part of *kalām* is to build a foundation for the *jalīl* matters, especially "the principle of *tawḥīd*," and to function as a means to defend it.

2. The Main Scientific and Philosophical Issues that the Scholars of *Kalām* were Occupied with under the Heading of *Daqīq* and *Laṭīf* Matters

After showing that the *mutakallimūn* divided the subjects of *kalām* into those based on revelation, *jalīl al-kalām*, and those based on reason, *daqīq al-kalām*, the question of what kind of scientific and philosophical matters they discussed under the category of *daqīq/laṭīf* issues arises. In this chapter, I will attempt to identify that in which matters the 9th and 10th-century scholars, whose works are not extant, were more interested in, especially based on the *daqīq al-kalām/ laṭīf al-kalām* chapters in the *Maqālāt* books of al-Kaʿbī, Shaykh al-Mufīd, and al-Ashʿarī. However, while doing so, two other very important books representing approximately the same period will be used. For this purpose, a list of scientific and philosophical books which were attributed to the *mutakallimūn* of 9th and 10th centuries in Ibn al-Nadim's *al-Fihrist* will be presented. Even though these books are not available today and there is no information about their contents, their titles will provide us an insight into the subjects of the books written on the *daqīq al-kalām* by the *mutakallimūn*. Then, some information will be given about the content of Ibn Mattawayh's *al-Tadhkira fī aḥkām al-jawāhir wa al-aʿrāḍ* (*On the Properties of Substances/Atoms and Accidents*), which is also titled as *Tadhkira fī laṭīf al-kalām*.[47] This book will provide us an opportunity to discern how Ibn Mattawayh treated the terms, substance/atom (*jawhar*) and accident (*ʿaraḍ*), which he considered among the *laṭīf/daqīq* issues of *kalām*. Thus, through three different works, the kind of philosophical and scientific issues that the *mutakallimūn* discussed under the headings of *daqīq* and *laṭīf* matters between the 9th and 10th centuries will be revealed.

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44 Ibn al-Nadīm, *al-Fihrist*, 204.

45 Ibn al-Wazīr, *Tarjīḥu asālib al-Qur'ān 'alā asālib al-Yūnān* (Bairut: Dār al-Kutub al-'ilmiyyah, 1984), 91. For detailed information, see. Metin Yıldız, *İbn Metteveyh'in Kozmoloji Anlayışı*, 35.

46 In al-Jāḥiẓ, this division is in the form of "*kalām al-dīn – kalām al-falsafa*". See. *Kitāb al-Ḥayawān*, 2/134.

47 See. *Kalām and Hellenistic Cosmology*, 26.

Starting with the *Maqālāt* books, major scientific and philosophical subjects that al-Ashʿarī examined under the title of *"Views of People on Subtle (daqīq) Issues"* in his *Maqālāt al-Islāmiyyīn* can be listed as follows:[48]

SOME HEADINGS FROM THE *DAQĪQ* CHAPTER OF AL-ASHʿARĪ'S *MAQĀLĀT*	
Quiddity (*māhiya*) of the body (*jism*)	Whether five senses are homogenous (*mutajānis*) or different genera
Controversy (*ikhtilāf*) over substance (*jawhar*) and its meaning	Motions, rest, and actions
Whether all substances are bodies or not	Homogeneity of motions and whether they are one genus or not
Whether substances are homogenous (*jins wāḥid*) or not	Whether accidents (*aʿrāḍ*) are perpetual or not
Whether decomposition of the body [into atoms] is possible	Whether accidents cease to exist or not
Existence of two movements in one part (*juzʾ*)	Persistence (*baqāʾ*) and annihilation (*fanāʾ*)
Leap (*ṭafra*)	Conversion of accidents into bodies and visa-versa
Movement of a thing to another place while its place is moving	Whether the motion is motion due to its essence and without a quality (*maʿna*).
Controversy (*ikhtilāf*) over the standing (*wuqūf*) of the earth	Permissibility of bringing back the accidents
Interpenetration (*mudākhala*), latency (*mukāmana*) and proximity (*mujāwara*)	Perception (*idrāk*) of perceptible things
Quiddity (*māhiya*) of human	Cause of the perception
Knowledge of color through senses.	The thing seen in the mirror
Engenderment/secondary causation (*tawallud*)	Place (*makân*)
Weight and lightness	Time (*waqt*)
Whether the shadow of thing is that thing or something else	Known (*maʿlūm*) and unknown (*mechūl*)
Life (*ḥayāt*)	Causes (*asbāb*)
How the sound is heard and whether its transmission is possible or not	The subject of senses and the possibility of a sixth sense
Whether sound is a body or not	The soul, anima, and the life
Ideas/thoughts (*khawātir*)	The one who reaches his hand beyond the universe

[48] al-Ashʿarī, *Maqālāt,* 301.

God's creation of the universe without being in a place (*makān*)	Removal of air (*havāʾ*) from the Space (*ḥayyiz*) of bodies

What strikes us the most about the headings is that that the *mutakallimūn* were mostly interested in philosophical and scientific issues related to physics and cosmology. Accordingly, the *mutakallimūn* intensely discussed such issues as the essential elements forming the universe, the structure and properties of objects, their change and continuity, substance and accident, and causality. In addition, they were also intrigued by some other issues such as human essence, senses, perception, soul, breath, and life. Besides, what al-Ashʿarī recounted under different headings shows that the *mutakallimūn*, in that period, made a special effort to explain motion.

Another remarkable thing in al-Ashʿarī's book is the richness of discussions among the *mutakallimūn* especially on physics-related matters. Although the discussions took place mainly between the Basrian and Baghdadī schools of the Muʿtazila, when examined in detail, there was hardly any *mutakallim* who did not have an opinion on subjects such as the structure of the objects, substances, accidents, and causality. For instance, al-Ashʿarī stated that the *mutakallimūn* were divided into twelve groups regarding the structure of the objects.[49] He also indicates that the *mutakallimūn* were split up into fourteen groups as to whether objects can be divided into the smallest part. As for the content of these discussions, it can be said that the *mutakallimūn* developed some complicated theories and original terms, such as leap (*ṭafra*), latency (*kumūn*), manifestation/appearance (*ẓuhūr*), engenderment/secondary causation (*tawallud*), custom (*ʿāda*), interpenetration (*tadākhul*). This shows that the *mutakallimūn* fully incorporated scientific and philosophical matters. Hence, a community interested in epistemological and cosmological issues was formed.

After al-Ashʿarī's *Maqālāt*, we encounter a similar case when we look at the *Kitāb al-Maqālāt* of Abu'l-Qāsim al-Balkhī al-Kaʿbī (d. 319/931), one of the Baghdadī school leaders. Like al-Ashʿarī, al-Kaʿbī has a chapter titled "the chapter on *laṭīf* issues" (*bābu'l-qawli fi'l-laṭīf*) in which he deals with the philosophical and scientific views of the *mutakallimūn*.[50] Headings of philosophical and scientific ideas that al-Kaʿbī attributed to the *mutakallimūn* can be listed as follows:

SOME HEADINGS OF THE *LAṬĪF* CHAPTER OF AL-KAʿBĪ'S *MAQĀLĀT*	
Views (*al-qawl*) on whether "non-existent" (*maʿdūm*) is "thing" (*shayʾ*) or not	Views on natural actions (*afʿālu't- ṭibāʾ*)
Views on the quiddity of the body (*jism*) and its other states (*aḥwāl*)	Views on perception (*idrāk*) and senses (*ḥawās*)
Views on the earth, its origination, and the whole universe (*ʿālam*)	Views on latency (*kumūn*)
Views on one of the two stones passing the other when thrown	Views on air (*havāʾ*)

[49] al-Ashʿarī, *Maqālāt*, 301.

[50] al-Kaʿbī, *Kitāb al-Maqālāt*, 441 etc.

Views on whether it is possible to divide the [indivisible] part (*juzʾ*) of the body	Views on place (*makān*)
Views on accidents (*aʿrāḍ*) of the body	Views on time (*waqt*)
Views on human (*ʾinsān*)	Views on whether someone looking at the universe will see something or whether their hand can reach it when they extend their hand or not
Views on creation (*khalq*), persistence (*baqāʾ*), annihilation (*fanāʾ*), and re-creation (*iʿāda*) of something	Views on a particle (*ẕarra*) on a large ship
Views on whether causes precede the effects or coexist with them	Views on what is seen in the mirror
Views on perception (*idrāk*)	Views on senses (*ḥawās*)

As can be understood from the table above, subjects al-Kaʿbī discussed in his *Maqālāt* under the *laṭīf al-kalām* heading seem to have a similar theme to those that al-Ashʿarī included in his *Maqālāt* under the *daqīq al-kalām* heading. What differs between al-Kaʿbī and al-Ashʿarī is that al-Kaʿbī starts his chapter with the question of whether the nonexistent can be considered a thing rather than the problem of the nature of objects. This question that is of both ontological and epistemological aspects, became, later on, one of the main questions of dispute among the *mutakallimūn*. It is also possible to find information in al-Kaʿbī's *Maqālāt*, which are not available in al-Ashʿarī's *Maqālāt*, on the ideas of some *mutakallimūn*, such as Abū al-Hudhayl and al-Naẓẓām, about the structure and the properties of bodies, motion, causality, the nature of space and time.

The other *Maqālāt* work we are going to examine belongs to Shaykh al-Mufīd (d. 413/1022). Similar to al-Kaʿbī and al-Ashʿarī, he also discussed the *mutakallimūn*' ideas related to physics and cosmology under the heading of *laṭīf* issues (*bāb al-qawl fī al-laṭīf min al-kalām*).[51]

SOME HEADINGS FROM THE *LAṬĪF MIN AL-KALĀM* CHAPTER OF SHAYKH AL-MUFĪD'S *AWĀʾIL AL-MAQĀLĀT*	
Substances/atoms (*jawāhir*)	Quiddity (*māhiyya*) of the universe
Are substances/atoms homogeneous (*mutajānis*) or different (*iḫtilāf*) from each other?	Celestial sphere (*falak*)
Do substances/atoms have surface (*masāha*) and magnitudes (*aqdār*)in themselves?	Motion of the celestial sphere
Place (*ḥayyiz*) of substances/atoms and accidents of location (*akwān*)	Earth and its shape; is the earth moving or at rest?
Substances/atoms and their concomitants: accidents	Void (*khalāʾ*) and fullness (*malāʾ*)
Persistence (*baqāʾ*) of substances/atoms	Place (*makān*)

[51] al-Shaykh al-Mufīd, *Awāil al-Maqālāt*, ed. Ibrāhim al-Anṣārī (Mashad: el-Muʿtamar al-ʿĀlam li Alfiyyah al-Shaykh al-Mufīd, 1413/2000), 95.

Do substances/atoms need a place (*makān*)?	Time (*zamān*) and moment (*waqt*)
Bodies (*ajsām*)	Natures (*ṭabāʿi*)
Accidents (*aʿrāḍ*)	Composition of bodies out of natures (*ṭabāʿi*) and their conversion into matter (*ʻunṣūr*) and *usṭuqus*
Reversion (*qalb*) of accidents and their re-creation (*iʻāda*)	Will and its necessity
Non-existent (*maʿdūm*)	Engenderment/secondary causation (*tawallud*)
Difference between what is necessitated (*mūjab*) and what is engendered (*mutawallid*)	Types of generative (*muwallid*) and engendered (*mutawallid*) acts.

As can be seen from the table, the headings of the *laṭīf al-kalām* chapter of Shaykh al-Mufīd's *Maqālāt* are largely similar to the issues that al-Ashʿarī and al-Kaʿbī dealt with under the daqīq and *laṭīf* chapters respectively. The difference is that, besides void, Shaykh al-Mufīd included issues such as *falak* and its motion, as well.

Considering all three Maqālāt works together, it appears that, from the end of the 8th century to the 9th century, theologians were intensely concerned with philosophical and scientific issues and mostly treated them under the title of *daqīq* and *laṭīf* issues. Also, the richness of the discussions held on physics-related issues and the participation of many *mutakallimūn* in these discussions show the emergence of a creative environment regarding the structure of the universe, matter and its properties. This assertion necessitates pursuing the origins of cosmological theories - particularly atomism- maintained by the *mutakallimūn* in creative and authentic inner processes of disputation of that period of *kalām* instead of external sources. The fact that the *mutakallimūn* developed a type of atomism unprecedented in other civilizations confirms this assertion.

On the other side, when looking at the books that Ibn Nadīm assigned to the *mutakallimūn*, we encounter a situation similar to that of *Maqālāt* works. In his book, Ibn Nadīm ascribed various books written on particular issues of physics and cosmology to Hishām b. al-Ḥakam, Ḍirār b. ʻAmr, Ḥafṣ al-Fard (d. 195/810), Abū Bakr al-Aṣamm, Bishr b. al-Muʻtamir (d. 210/825), Jaʻfer b. Ḥarb, Muʻammar b. ʻAbbād, Abū al-Hudhayl al-ʻAllāf, Ḥusayn al-Najjār (d. 220-230/835-845), Ibrāhīm b. al-Sayyār al-Naẓẓām, and many more *mutakallimūn*. The scientific and philosophical books that Ibn al-Nadīm attributed in his *al-Fihrist* to the 9th and 10th-century *mutakallimūn* can be listed in chronological order as follows:[52]

Hishām b. al-Ḥakam (d. 179/795): *Kitāb al-Radd ʻalā aṣḥāb al-ṭabāʾiʿ* (*The refutation of the Naturalists*), *Kitāb ʻalā Aristutālīs fī al-tawḥīd* (*Against Aristotle on tawḥīd*), *Kitāb al-Radd ʻalā al-zanādika* (*The refutation of the Zanādika*), *Kitāb al-Radd ʻalā aṣḥāb al-ithnayn* (*The refutation of the Dualists*);[53]

[52] Alnoor Dhanani organized these books Ibn al-Nadim attributed to *mutakallimūn* under three headings as follows: Books written by *mutakallimūn* exclusively on certain physics subjects, Refutations of *mutakallimūn* against each other on various issues of cosmology, and Cosmology-oriented books written by *mutakallimūn* against different religions and thought systems. *Kalām and Hellenistic Cosmology, 40.*

[53] Ibn al-Nadīm, *al-Fihrist*, 224.

Ḍirār b. ʿAmr (d. 200/815 [?]): *Kitāb Ikhtilāf al-ejzā'* (*On difference of the parts*), *Kitāb al-Dalāla 'alā ḥadath al-ashyā'* (*The Argument on createdness of the things*), *Kitāb al-Radd 'alā Aristutālīs fī al-jawāhir wal-aʿrāḍ* (*The refutation of Aristotle on substances and accidents*), *Kitāb al-Radd 'alā aṣḥāb al-ṭabāʾiʿ* (*The refutation of the Naturalists*);[54]

Abū al-Hudhayl al-'Allāf: *Kitāb al-Jawāhir wal-aʿrāḍ* (*On substances and accidents*), *Kitāb al-Masā'il fī al-ḥarakāt wa ghayrihā* (*The questions on motion and other accidents*) and *Kitāb al-Ḥarakāt* (*On motion*), *Kitābu Tathbīt al-aʿrāḍ* (*The demonstration of accidents*), *Kitāb fī al-Ṣawt mā huwa* (*On sound, what is it*), *Kitāb al-Insān mā huwa* (*On human, what is it*), *Kitāb al-Tawlīd 'alā al-Naẓẓām* (*Against al-Naẓẓām on causality*), *Kitāb al-Ṭafra 'alā al-Naẓẓām* (*Against al-Naẓẓām on leap*), *Kitāb 'alā al-Naẓẓām fī al-insān* (*Against al-Naẓẓām on human*), *Kitāb 'alā al-sūfistā'iyya* (*Against the Sophists*), *Kitāb 'alā al-majūs* (*Against Zoroastrians*);[55]

al-Naẓẓām: *Kitāb al-Juz'* (*On atom*), *Kitāb al-Tawallud* (*On causality*), *Kitāb al-Ṭafra* (*On leap*); *Kitāb al-Mudākhala* (*On al-mudākhala*), *Kitāb al-Harakāt* (*On motion*), *Kitāb al-Jawāhir wa al-aʿrāḍ* (*On substances and accidents*), *Kitāb al-Insān* (*On human*), *Kitāb al-ma'nā 'alā Mu'ammar* (*Against Mu'ammar on al-ma'nā*), *Kitāb 'alā aṣḥāb al-hayūlā* (*Against the Proponents of hyle*), *Kitāb al-Radd 'alā al-dahriyya* (*The refutation of the Dahriyya*), *Kitāb al-Radd 'alā aṣḥāb al-ithnayn* (*The refutation of the Dualists*);[56]

Mu'ammer b. 'Abbād (d. 215/830): *Kitāb al-Juz' alladhī lā yatajazza'* (*On the indivisible particle*), *al-Kawl bi al-al-aʿrāḍ wa al-jawāhir* (*On substances and accidents*), *Kitāb 'illal al-karastūn wa al-mir'a* (*On balances and mirrors*),[57] *Kitāb tathbīt dalāla al-aʿrāḍ* (*The demonstration of accidents*), *Kitāb ithbāt al-juz' alladhī lā yatajazza'* (*The demonstration of the indivisible particle*);[58]

Abū Bakr al-Aṣamm (d. 200/816): *Kitāb al-Ḥarakāt* (*On motion*),[59] *Kitāb al-Radd 'alā al-dahriyya* (*The refutation of the Dahriyya*);[60]

Hishām al-Fuwātī (d. 218/833): *Kitāb al-Radd 'alā al-Aṣamm fī nafy al-ḥarakāt* (*Against al-Aṣamm on refutation of motion*);[61]

Bishr b. Mu'tamir: *Kitāb al-Tawallud 'alā al-Naẓẓām* (*Against al-Naẓẓām on causality*);

Ja'far b. Ḥarb (d. 236/850): *Kitāb al-Radd 'alā aṣḥāb al-ṭabāʾiʿ* (*The refutation of the Naturalists*);[62]

Abū Hāshim: *Kitāb al-Naqd 'alā Aristutālīs fī al-kawn wa al-fasād* (*The critique against Aristotle on generation and corruption*), *Kitāb al-Ṭabāʾiʿ wa al-naqd 'alā al-qā'ilīn bihā* (*On natures and the critique against their proponents*).[63]

54 Ibn al-Nadīm, *al-Fihrist*, 215.
55 İbnü'n-Nedîm, *el-Fihrist,* 204.
56 Ibn al-Nadīm, *al-Fihrist*, 206.
57 Ibn al-Nadīm, *al-Fihrist*, 207.
58 Ibn al-Nadīm, *al-Fihrist*, 215.
59 Ibn al-Nadīm, *al-Fihrist*, 214.
60 Ibn al-Nadīm, *al-Fihrist*, 214.
61 Ibn al-Nadīm, *al-Fihrist*, 214.
62 Ibn al-Nadīm, *al-Fihrist*, 213.
63 Ibn al-Nadīm, *al-Fihrist*, 236 etc.

As is seen, the books that Ibn al-Nadīm reported clearly show that the *mutakallimūn*'s interest in physics-related issues cannot be limited to a few names such as al-Naẓẓām and al-Jāḥiẓ, but this was a field of study to which theologians from all different groups actively contributed. In addition, it is noticed that the scholars of *kalām* not only contented themselves with writing books criticizing each other and other thought systems but also wrote to explain certain philosophical and scientific matters, such as the nature of knowledge, the structure of objects, substance, accident, motion, and causality.

On the other hand, Ibn al-Nadīm's *al-Fihrist,* and al-Ashʿarī's and al-Kaʿbī's *Maqālāt*s give some hints about the beginning of philosophical and scientific discussions in *kalām*, because in these books, no physics-related ideas or scientific books were attributed to the scholars known as the first founders of *kalām*, such as Wāṣil b. ʿAṭā' and ʿAmr b. ʿUbayd.[64] However, in the generation of Hishām b. al-Ḥakam, Ḍirār b. ʿAmr and Abū al-Hudhayl al-'Allāf, a great number of ideas[65] and books[66] related to physics and cosmology were attributed to these scholars. The striking point here is that scholars such as Hishām and Ḍirār b. ʿAmr lived even before al-Kindī, who is considered the first Muslim philosopher, and prior to the transmission of Greek philosophical works in the Muslim world. Some *mutakallimūn*' writing books[67] criticizing Aristotle prior to the presence of the Muslim philosophers, like al-Kindī, indicates that they knew about Greek philosophers' ideas well enough to criticize them.[68] This is of great importance in revealing the existence of the philosophical and scientific debates among the *mutakallimūn* before al-Kindī.[69]

It is also possible to demonstrate which philosophical and scientific issues that the *mutakallimūn* dealt with under the title of *laṭīf* and *daqīq* matters through the example of Ibn Mattawayh's book called *al-Tadhkira fī aḥkām al-jawāhir wa al-al-aʿrāḍ* (On the Properties of Substances/Atoms and Accidents). The value of this book arises from the fact that it is dedicated to the discussions on substances and accidents. Additionally, the other title of this book, *Tadhkira fī laṭīf al-kalām*, gives another evidence to the fact that the *mutakallimūn* examined physics and cosmology-related issues, such as substances and accidents, under the title of *laṭīf al-kalām*.

Ibn Mattawayh started *Tadhkira fī laṭīf al-kalām* with a classification about the objects of knowledge (*maʿlumāt*).[70] He classifies the objects of knowledge into two parts as *mawjūd* and *maʿdūm*. *Mawjūd* means existent, while *maʿdūm* means non-existent. Again, in his opinion, all existents are also divided into two parts: *qadīm* (eternal) and *ḥādith* (temporally originated). Having divided existents into two as *qadīm* and *ḥādith*, Ibn Mattawayh proceeds to divide all originated things into two: Substance/atom (*jawhar*) and accident (*'araḍ*) that inheres/occurs in substances. In this

64 Ibn al-Nadīm, *al-Fihrist*, 202.

65 al-Ashʿarī, *Maqālāt*, 260.

66 Ibn al-Nadīm, *al-Fihrist*, 204, 224.

67 For instance, Hishām ibn Hakam's *Kitāb 'alā Aristotālīs fī al-tawḥīd*, which he wrote on *tawḥīd* against Aristotle; Ḍirār b. ʿAmr's *Kitāb al-Radd 'alā Aristotālīs fī al-jawāhir wa al-a'rāz*, which he wrote on atoms and accidents against Aristotle. See. Ibn al-Nadīm, *al-Fihrist*, 204, 224.

68 For a noteworthy analysis on this, see. Dhanani, *Kalam and Hellenistic Cosmology*, 112-13.

69 Sayyed Husayn Nasr stated that those who first discussed issues such as the structure of bodies, motion, and causality in Islamic thought were the *mutakallimūn*.

70 Ibn Mattawayh, 2009: 1/6; for similar classification see Al-Bāqillānī, 1987: 34.

division, substance corresponds to a space-occupying object (*mutaḥayyiz*) when it exists, while accident refers to the thing not occupying space and not being able to exist by itself. According to the Ibn Mattawayh, all substances are a single genus (*mutajānis*); whereas accidents are of different types, such as colors, taste, smells, heat, cold, dryness, humidness, and spatial occurrences (*akwān*) like motion, rest, composition and separation, impetus/inclination/force (*i'timād*), pain, voice, life, power, desire, hatred, will, dislike, belief, supposition, reasoning, and annihilation.[71]

One of the noteworthy parts of Ibn Mattawayh's exposition is his inclusion of the terms, such as *qadīm*, *hādith*, *jawhar,* and '*araḍ*, within the group of known things (*ma'lumāt*) in the most general sense. It shows that the *mutakallimūn* treated equally both God and the universe in terms of being objects of knowledge.[72] The reducing of the universe into bodies, substances and accidents, and subsequently the reaching to the concepts of "*qadīm*" and "*muḥdath*" through them are characteristics of this exposition. Beyond this, the *mutakallimūn*'s division of existents into two, as God and the universe, reveals their attempt to use the theory of *jawhar*-'*araḍ* in order to explain everything existent other than God. Therefore, it could be said that for Ibn Mattwayh, *kalām* was not a discipline dealing only with God or the properties of material objects but also a universal discipline examining all existents.[73]

It would be beneficial to look closely at this book of Ibn Mattwayh to see in which contexts the *mutakallimūn* used the concepts of substance/atom and accident at that time. Ibn Mattawayh started his book with a chapter on the parts of accidents and then a chapter on substances comes. The subjects he discussed in the chapter on substances can be listed as follows:[74]

SOME HEADINGS FROM THE SUBSTANCE/ATOM (*JAWHAR*) CHAPTER OF IBN MATTWAYH'S *AL-TADHKIRA*	
Bodies (*ajsām*) do not consist of the combination of accidents (*aʿrāḍ*)	Bodies do not need a place (*makān*) (to exist)
Substances/atoms (*jawāhir*) are perceived (*mudrak*) through seeing and touching	On qualities (*ṣifāt)* of the substance/atom (*jawhar*)
Being substance/atom (*jawhar*) is only a state for substance	Occupying space (*taḥayyuz*) and existence (*wujūd*) are different qualities of substance/atom (*jawhar*)

71 Ibn Mattawayh, 2009: 1/6; also see Baghdādī, 1928:35-36; Al-Nasafī, 2004: 1/62-63.

72 Knowledge's relation to non-existent (*maʿdūm*) according to the *mutakallimūn* led to the debate whether or not non-existent is a thing in terms of being an object of knowledge. According to the Basrian Muʿtazila , because substance and accident are objects of God's knowledge, they should have an essential quality that distinguishes them from each other even when they are non-existent. However, the Baghdadī Muʿtazila and Ashʿarites did not accept such a claim on the ground that it would remove substances and accidents from being subject to God's will in terms of having their own essential qualities.

73 It is repeatedly stated by many *mutakallimūn* that *kalām* is a universal discipline (*al-'ilm al-kullī*). Imām al-Ghazālī is one of them. See Imām al-Ghazālī, *Al-Mustaṣfā min ʿilm al-uṣul* al-Ghazālī, ed. Ḥamza bin Zuhair Hafiz. Vol.1. (al-Madīna al-Munawwara: al-Jamaʿa al-Islāmiyya), 12.

74 The headings belongs to Daniel Gimaret, who edited Ibn Mattawayh's *al-Tadhkira*. Cairo edition is used. (Cairo: al-Ma'hat al-Fransī, 2009).

Substance/atom has the state of being in a direction (*jihat*)	Substances do not have a state when non-existent
There is no increase in the quality of being existent too	An increase in the qualities of substance/atom except existing in a direction is not possible
Substance/atom is substance when non-existent just as when existent	Rebuttal of those who claim that substance/atom is not substance when non-existent
Substance/atom does not occupy space when non-existent	Space occupation for substance/atom does not happen through an agent
Substances/atoms are created due to the impossibility of them being devoid of spatial occurrences (*akwān*)	Explanation of the proof for the temporality of the bodies (*ḥuduth al-ajsām*)
It is not possible (*jāiz*) for the infinite (*mā lā yatanāhā*) to exist	Rebuttal of the statement that created things do not have a beginning
Doubts of those who deny the temporality of the universe (*ḥuduth al-ʿālam*) and responses to these doubts	Possibility of proving the createdness of bodies without relying on the createdness of accidents
On the cause for substance/atom not being able to exist in two directions (*jihatayn*) at one time	Substance does not generate something just as it is not generated out of something
Impossibility of two substances/atoms to exist in one direction (*jihat*)	On rebuttal of al-Naẓẓām's idea of interpenetration (*tadākhul*)
On the cause of what makes existing of two substances/atoms in one direction impossible	Possibility of formation of two substances without a third one between them due to the void (*khalāʾ*) in the universe
Statement on the possibility of substance/atom being devoid of all accidents except for the accident of location (*kawn*)	Impossibility of making a definitive judgment regarding the absence of color in the body
Homogeneity (*mutamāthil*) of all substances	Persistence (*baqāʾ*) of substance/atom
Doubts of those who deny the existence of [indivisible] part (*juzʾ*) and responses to these doubts	Fire is hidden (*kāmin*) in some bodies.
Rejection of the one who says that it is impossible for air to turn into water.	On the annihilation (*fanāʾ*) and re-creation (*iʿāda*) of substances/atoms

After dealing with the substance in detail, he analyzed accidents under the titles of colors, taste, smells, heat, cold, dryness, humidness, and spatial occurrence (*akwān*) like motion, rest, composition, separation, inclination/force (*iʻtimād*), pain, voice, life, power, desire, hatred, will,

dislike, belief, supposition, reasoning.[75] It is understood from Ibn Mattawayh's explanations that in the 9th and 10th centuries, the Muʿtazila separated into two schools, the Basrian and the Baghdadī, and they argued for different opinions about *daqīq* or *laṭīf* matters such as the properties of the atom, types of accidents, void, the nature of motion and causality, even though they all adopted atomism.[76]

When we consider Ibn Mattawayh's book of *al-Tadhkira* together with the other books we have examined before, we reach the conclusion that the *mutakallimūn,* under the title of *daqīq* or *laṭīf al-kalām*, largely focused on two controversial areas.[77]

a. The Key Components of the Universe: In the classical period, one of the topics frequently discussed by the *mutakallimūn* under the title of *daqīq* matters was the fundamental elements of the universe. It is seen that in the 9th century, the *mutakallimūn*, gathered around three different opinions on the structure of bodies in the universe. The group led by Ḍirār b. ʿAmr, Ḥusayn al-Najjār, and Ḥafṣ al-Fard claimed that objects are constituted through the aggregation of some accidents, such as heat and cold. Hishām b. al-Ḥakam and al-Aṣamm , on the other hand, maintained that the universe is entirely made up of the bodies. Thirdly, Abū Hudhayl and Muʿammar argued that the universe is comprised of bodies and accidents, and bodies are

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75 Ibn Mattawayh, in this book, dealt with accidents in a very detailed way, just as he did about substances. For example, it is possible to title the subject of colors as follows: On the Reality of Color, On the Impossibility of Perceiving an Object without Perceiving Its Color, On Color not Being an Object or a Quality of an Object, On the Number of the Basic Colors being Five: Black, White, Red, Green, and Yellow, On the Possibility of Adding on These Types of Colors, On the Homogeneity of Each Color Type, [On the Possibility of Two Homogenous Accidents Existing in The Same Place], [On the Possibility of the Contrast between Two Colors Being in Two Aspects: Either in Reality or in Genus], [On the Case of Elimination of One Contrary the Other Its Non-existence not by means of a Cause but a Condition], [Impossibility of Color Existing without Being in a Place], [On the Impossibility of Seeing Colors in case of Them Existing without Being in a Place], [On the Possibility of Existence of a Color Inherent in a Place Only in that Place], [On the Impossibility of the Transference of Accidents], [On the Impossibility of Accidents' Inherence in Accidents], [On Color's Need only for a Place not for a Structure and Two Places], [On Establishing the Createdness of Colors and Other Accidents], [On Color Being Exclusive to God's Power not Ours], [On Color not Being Originated from Others and Not Originating Others], [Perpetuity of Colors], [On the Proof about the Perpetuity of Colors and Stating the Answer to These Proofs].

76 Another Muʿtazilī mutakallim Nīsābūrī, a contemporary of Ibn Mattwayh, dealt with the disagreements between the Basrian and Baghdadī Muʿtazila in a detailed way in the center of substance and accident. For example, some of the conflicts about the Basrian and Baghdadī schools are as follows: On the Homogeneity of Substances, On Substance Being Substance in case of its Non-existence, On the Possibility of Two Substances Being Separated (*Muftariq*) without a Third Substance in between, [On Accidents Being Gathered in a Place], On the Existence of a Hidden (*Kāmin*) Fire in Stone and Wood, [On the Conversion of Air into Water], On Each Atoms (*jawhar al-fard*) Having a Specific Location (*masāḥa*), On the Possibility of Separation of Substances from Each Other, On Whether The Direction of Part Being Different from Part or Direction Belonging Part], The Existence of Substance Only in case of Occupying Space and This Happening only It Being in a Direction, On Whether or not Atom Being Individuated (*Munfarid*) due to a Cause, On the Possibility of Substance Being Devoid of All Accidents except the Accident of Location (*Kawn*), On the Impossibility of Substance Being Perpetual due to a Cause, On the Impossibility of Occurrence (*Ṭāri'*) of Substance due to a Cause at the Time of Its Existence, On the Annihilation of Substance with Its Contrary, On the Impossibility of Some Substances Being Perishable and Some Substances Being Persistent, On the Possibility of Placing an Atom on Two Atoms' Conjunction Point (*Mawzi' al-Ittiṣāl*), On Whether Earth Being Spherical or not." After relating debates between the Basrian and Baghdadī schools as mentioned, Nīsābūrī also presented disagreements on accidents in detail.

77 Alnoor Dhanani, *Kalām and Hellenistic Cosmology*, 40.

comprised of atoms. al-Naẓẓām, however, opposing the atomism, claimed that the universe is wholly made up of bodies except for motion, which is an accident. Thus, we can put al-Naẓẓām in the second group.

Among these three opinions, the atomist one holding that the universe is made up of bodies that are constituted of atoms and accidents, became later on the dominant opinion among the *mutakallimūn*. However, atomist scholars could not come to an agreement on issues, such as the definition of body, substance, and accident, whether or not atoms can exist separated from each other, whether or not atoms have shape, size and weight, the number of atoms required for the formation of the smallest body, and which accidents atoms can bear on their own. They intensely engaged in discussions about whether or not bodies interpenetrate each other (*mudākhala*), whether or not bodies are the same genus (*mutajānis/mutamāthil*), what causes the distinction in bodies, motion-rest, composition-separation (*akwān*), heat-cold, dryness-humidness, colour, the nature of sound and light, and the occurrence of hearing and seeing as well.[78]

b. Functioning of the Universe and Causality: Another subject that the *mutakallimūn* are largely concerned with is how events in the universe function. In this context, the following issues were discussed: Whether or not objects have nature (*ṭabāʿi*), causality, secondary causation (*tawlīd*), how the continuity of objects is ensured, motion-rest, and formation-deformation. Even though the *mutakallimūn* are generally claimed to refuse the necessary natural causality, they developed theories, such as lantency (*kumūn)* - appearance *(ẓuhūr)*, meaning (*maʿnā*), conjunction (*iqtirān)*, impetus or force (*ʿitimād)*, and *tawlīd* in order to explain the systematic functioning of the universe.[79] Indeed, when the debates of the Basrian and Baghdadī schools of the Muʿtazila are considered, it appears that they supported different opinions on the properties of objects and causality. The Basrian school maintained that the relationship between cause and effect results from the custom (*ʿāda*) set by God. According to them, if God wills, He can keep a heavy rock from falling and hinder the result of burning despite the existence of cotton and fire; he can even create an animal from the sperm of a human. However, the Muʿtazilites of Baghdad, believing that God's power cannot be against the nature of objects, argued that God could not create barley out of wheat. Similarly, in their opinion, without the existence of support, it is not possible for a heavy object to remain in the air and for fire not to burn cotton.[80] On causality, the Ashʿarites and Māturīdites mostly rejected inherent natures (*ṭabāʿi*), the theory of secondary causation (*tawlīd*), and adopted an *ʿāda*-based approach.[81]

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78 al-Khayyāṭ, *Kitāb al-Intiṣār,* 15; al-Ashʿarī, *Maqālāt*, 74.

79 Ahmet Mekin Kandemir, *Mu'tezili Düşüncede Tabiat ve Nedensellik* (İstanbul: Endülüs, 2019), 253.

80 Shaykh al-Mufīd, *Awā'il al-Maqālāt*, 129-130; Nīsābūrī, *al-Masā'il*, 133; Ibn Mattawayh, *al-Tadhkira*, 1/323; cf. Metin Yıldız, *İbn Metteveyh'in Kozmoloji Anlayışı*, 74-75.

81 According to what Ibn Fūrak reported, al-Ashʿarī maintained that upward movement of fire and downward movement of the stone does not due to a nature necessitating these movements or a cause producing them (*muwallid*). Similarly, Imam al-Ashʿarī argued for the possibility of God removing coldness and wetness from water and creating heat and dryness in it. See. Ibn Fūrak, *Mujarrad*, 132. Again according to Ibn Fūrak's report, Imam al-Ashʿarī was claiming that incidents, such as drunkenness after drinking wine, satiety after eating, satisfaction after drinking water, wellness after taking medication, ignition after contact with fire, falling of stone after being thrown into the air, do not originate from causal factors (*maʿnā*) that are necessitated by nature or from engendered causes that produce them. In Imam al-Ashʿarī's opinion, all of these have happened by God's choice. God has created them

Without a doubt, the scientific and philosophical issues that the *mutakallimūn* discussed do not consist of only the key elements of the universe and causality. They also largely engaged in discussions on ontological and epistemological issues, such as existence-non-existence, essence-property, the possibility of knowledge, its types, and sources. In addition, they also debated over such matters as the structure of humans, their actions, their physiological and psychological characteristics, how human perception and knowledge occur, and whether he has free will or not. However, the *mutakallimūn*'s views on human conform to the two principles mentioned above. Whichever views a *mutakallim* maintains on the key elements of the universe and causality, his ideas on humans becomes compatible with it. For instance, Ḍirār b. ʿAmr, claiming the constitution of the universe to be of accidents, stated that humans are also made up of accidents such as colour, taste, smell, and power, and that there is no substance in humans.[82] As for al-Ashʿarī, who asserts that the universe consists of substances and accidents claimed that the soul is a delicate body belonging to the genus of breath, and considered such elements as life, will, and knowledge to be accidents.[83] al-Naẓẓām, who maintained that accidents apart from motion are bodies, considered the soul to be a delicate body and explained humans' liveliness based on it. In addition, the scholars of *kalām* also discussed whether or not humans are agents and creators of their actions based on the continuity of accidents, which is a cosmological matter.

Another noteworthy point to be mentioned about the *mutakallimūn*'s discussions on physics and cosmology-related matters is the significant impact of the Arabic language on *kalām* debates. Most *mutakallimūn* took the lexical meaning to determine the denotations of the key terms such as the universe, object, substance, accident, motion, and rest. This situation, which implies that Arabic is not only a means of communication but a carrier of a worldview for the *mutakallimūn*, contributed to the uniqueness and locality of the physical theories of the *mutakallimūn*.[84]

Consequently, upon evaluating al-Ashʿarī's, al-Kaʿbī's and Shaykh al-Mufīd's *Maqālāt*, Ibn al-Nadīm's *al-Fihrist* and Ibn al-Mattawayh's *al-Tadhkira* together, it is possible to reach to the following drastic conclusion: The *mutakallimūn* largely interested in philosophical and scientific issues related to physics and cosmology in the classical period starting from the end of 2nd/7th century to the 6th/12th century. Especially the 3rd/9th century is a period when the *mutakallimūn*' interest in philosophical and scientific issues was highly intense. Even though the *mutakallimūn*'s interest in these types of matters has to do with the need to advocate Islam against other religions and thought systems, such as dualists, naturalists, Peripatetics, materialists, sceptics, and

with a custom that takes place in the creation (*ihdāth*) of things. See. Ibn Fūrak, *Mujarrad*, 283; also see. ibid., 134; Juwaynī, *al-Shāmil fī uṣūl al-dīn*. Beirut, 1999, 154-5.

82 al-Ashʿarī, *Maqālāt*, 260.

83 For instance, Ibn Fūrak stated in his book under the title "Explanation of al-Ashʿarī's View on the Soul, Life, and Issues Related to Them" as follows: al-Ashʿarī was saying: Our life is an accident and originated (*muhdath*)... When it comes to the soul, according to al-Ashʿarī, it is wind (*rīh*). It is a delicate object and circulates in the hollows of man's limbs. However, humans become alive by means of life, not with the soul. al-Ashʿarī was saying: Survival of body with the soul takes place in the form of custom. It is similar to the survival of the body with nourishment, food, and drinking. Accordingly, just as it is impossible for humans to live without food, it is also impossible for them to live without the soul. Because a living being needs food and the soul in terms of being alive ... al-Ashʿarī considered the soul to be similar to the wind. In fact, the soul per se meant wind. On this issue, see. Ibn Fūrak, *Mujarrad*, 267.

84 See. Mehmet Bulğen, "The Power of Language in the Classical Period of Kalam", *Nazariyat* 5/1 (May 2019), 37-82.

heretics, it would be wrong to describe their engagement in physics and cosmology-related matters as mere apologetic or a means to reject opposing views. As is understood from al-Ashʿarī's *Maqālāt* and Ibn al-Nadim's *al-Fihrist*, the *mutakallimūn* have not only written books against other thought systems or condemned them, but they also developed alternative terms and theories on the structure of bodies, their functioning and the nature of human. Moreover, the *mutakallimūn* penned books[85] solely with the purpose of explicating some physics matters without any theological context. This case indicates that some *mutakallimūn*' approaches to physics and cosmology were not merely based on religious concerns but also on being seekers of truth.

Lastly, it should be noted that the *mutakallimūn*'s interest in the theory of knowledge and natural philosophy was not limited to the classical period but increasingly continued in the period after al-Ghazālī. For example, while only the fifth and the sixth chapters of 'Aḍud al-dīn al-Ījī's (d. 756/1355) *Mawāqif* are related to the theological matters, the remaining parts contain epistemological, ontological and cosmological issues.[86] Sa'd al-dīn al-Taftāzānī (d. 792/1390) referred to this situation by saying that, "It is almost impossible to differentiate *kalām* books from philosophy books except for the chapters of *sam'iyyāt*".[87]

Conclusion

In the present article, based on the extant *kalām* books, we have attempted to show that *kalām*'s matters were divided into two main categories as *daqīq or laṭīf al-kalām* and *jalīl al-kalām* in the classical period of *kalām*, between the 9th and 11th centuries. In this division, *jalīl* matters correspond to revelation-based issues, on which the *mutakallimūn* had a consensus, such as the existence of God, His oneness, revelation, prophethood, and the hereafter. On the other hand, matters included under the title of *daqīq* or *laṭīf* mainly refer to physical and philosophical questions related to knowledge, ontology and the universe.

The reason why the *mutakallimūn* engaged in philosophical and scientific issues might seems, at first glance, to demonstrate and defend *jalīl* issues, which are regarded as the principles of religion; however, their involvement in *daqīq* or *laṭīf* issues requires a further explanation other than just being apologetic. The is because the scholars of *kalām* interested in *daqīq* matters more

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85 Abū al-Hudhayl's *Kitāb fī al-ṣawt mā huwa*, which he wrote on the nature of sound, Muʿammar ibn 'Abbād's (d. 215/830) *Kitābu 'ilal al-karastūn wa al-mir'at*, which he wrote about balances and mirrors, can be given as examples of this. See. Ibn al-Nadīm, *al-Fihrist*, 204, 207.

86 In *kalām*, subjects related to epistemology, ontology, and cosmology have been named differently in different periods. While, in the classical period prior to Ghazzālī, the term "*daqīq al-kalām*" was more common, in the post-classical period, for example, 'Aḍud al-Dīn al-'Ījī discussed existence, unity, multiplicity, essence, causality under the title of "*al-Umūr al-'Amma*". See. 'Adud al-Dīn al-'Ījī, *al-Mawāqif fī 'ilm al-kalām*, (Bairut: 'Ālam al-kutub, n.d.), 41. Izmirli Ismail Hakkı (d. 1868-1946), one of the late Ottoman *mutakallimūn*, in *Yeni Ilm al-Kalām (The New Science of Kalām)*, named these types of subjects as 'the principles' (*mabādi')* and 'the means' (*wasā'il)* and stated that they are a means of substantiating and defending theological principles. According to Izmirli, while 'the issues' (*masā'il)* and 'the aims' *(maqāṣid)*, which constitute the pillars of Islam and its final goals, always remains the same, *mabādi'* and *wasā'il*, which helps to explain and better understand them, is constantly renewed, and constantly change according to the age and conditions. Ismail Hakkı İzmirli, *Yeni İlm-i Kelam*, (Istanbul: Awqāf al-Islāmiyya Publishing, 1339-1341), 1/7-8. Also see. İlyas Çelebi, "Ortaya Çıkışından Günümüze Kelam İlminde "Konu" Problemi", *Marmara Üniversitesi İlahiyat Fakültesi Dergisi*, 28 (2005/1), 9.

87 Al-Taftāzānī, *Sharḥ al-ʿAqā'id*, (Beyrut: 2007), 55.

than a typical scholar of religion. The classical sources that we have referred show that the *mutakallimūn* developed various comprehensive theories in order to solve the main problems of physics and cosmology. Moreover, the *mutakallimūn* did not only debate over physics-related issues among themselves or with opposing thought systems, but they also produced works in order to enlighten physics-related problems without any theological background.[88] This shows that the *mutakallimūn*, et least some of them, engaged in philosophical and scientific issues as the seekers of truth, not just for apologetic purposes. Indeed, this holds great importance in terms of showing that the *mutakallimūn*'s theological arguments on the existence of God have a considerable philosophical basis and that they were fed on the activity of exploring nature.

Here, we need to make a final point. The first engagement of the *mutakallimūn* in philosophical and scientific matters such as knowledge, existence, non-existence, body, substance, accident, void, motion, and causality dates back to the mid-8th-century and coincides with a period when the translation activities led by philosophers like al-Kindī did not start yet in the Islamic world. Especially, the 9th century corresponds to a period when the interest in philosophical matters related to knowledge, existence, and the universe reached its peak and flourished. In this century, the *mutakallimūn* concerned themselves with matter and the universe and developed various theories and unique terms, in a rare way in the history of the world. However, they cannot be said to have received the credit they deserve in the academic research on the history of Islamic science and philosophy. The consideration of the *mutakallimūn* as theologians in modern researches causes historians of science to overlook *kalām* books and therefore leads to the inability of properly explaining the emergence and development of philosophy and science in Islamic thought. Further researches that closely look at the 9th century *kalām* would help to recognize better the philosophical and scientific contributions of the *mutakallimūn* to the Islamic world in particular and the universal culture in general.

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88 Ibn al-Nadīm, *al-Fihrist*, 206.

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