

# Islam and Natural Philosophy

*Principles of Daqīq al-Kalām*

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# Note about Transliteration and Use of Terms

I have adopted the transcription of the Arabic words rather than their transliteration. This should enable the reader to get the vowels of the word, as much as possible, nearer to the Arabic sound. The reader should then be able to differentiate between the singular and the plural, for example, *Jawhar* is singular whereas *Jawāhir* is plural. Also, *ʿaraḍ* is singular and *ʿarāḍ* is plural. Also, of interest to note, is that Ḥayyīz is different from Taḥayyuz, and so on. Therefore, some caution should be taken in some places where a differentiation might be necessary.



# Preamble

Kalām is one of the basic pillars of Islamic thought. Begun during the early decades of the 2<sup>nd</sup> Century after Hijra (9<sup>th</sup> Century A.D.), this trend aimed to resolve some questions in the Islamic creed by adopting a rational interpretation of religious teachings. Soon the teachers of Kalām (the Mutakallimūn) found it necessary to get involved in discussing questions related to topics on natural philosophy, such as space, time, matter, and their constituents and properties. They tried to construct a system of thought and worldview that comply with the teachings of the Qurʾān. In this book, I present this part of their thought, which concerns their views of the natural world formulated in a modern context of expressions. Such a formulation is necessary to understand the true meaning and aims of kalām philosophy.

My first encounter with kalām was about thirty years ago, when I became interested in this area of Islamic thought. On reading Shlomo Pines' book, *Beiträge zur islamischen Atomenlehre (Studies in Islamic Atomism)*, which was translated from German into Arabic, I realised that this neglected area of Islamic thought contains important connections with many of the concepts and views in natural philosophy.

To get a better picture, I visited the University of Mosul library, looking for books and manuscripts containing original contributions on kalām. I was delighted to see that most of the references mentioned in Pines' book were still available. I found the books of al-Ashʿarī, al-Bāqillānī, al-Jūwaynī, al-Ghazālī, Ibn Ḥazm, Ibn Rushd, al-Khayyāt, as well as other books which were discovered at a later time. These include the encyclopaedia of al-Qāḍī ʿAbd al-Jabbār, one of the prominent leaders and historians of the Muʿtazilis (*al-Mughnī fī Abwāb al-ʿadl wa al-Tawḥīd*), as well as the books of al-Naysābūrī and Ibn Matawayh, along with many others. For me, this was akin to discovering a gold mine. Since then, I have become a permanent resident in that section of the library!

As I mined through those books over four years, I recognised that there were two topics which the Mutakallimūn were concerned with; the first of these was the part concerning theological questions, which they called *Jalīl al-kalām*, and the second part concerned the physical questions relating

to natural philosophy, which they called *Daqīq al-kalām*. Being a trained theoretical physicist, I was able to grasp much of the content connected to natural philosophy, while discarding the part regarding detailed theological questions (which were mostly on metaphysical enquiries in Islamic creed). On certain issues, however, it was hard to dissociate the theological questions from views which fell under natural philosophy. However, I was pleased that some of the early leaders of the Mutakallimūn devoted a section of their books to *Daqīq al-kalām*, and discussed natural philosophy, while devoting other sections to theological problems *i.e.*, *Jalīl al-Kalām* (the al-Ash‘arī’s book, *Maqalāt al-Islamyyīn*, for example). This distinction was necessary at this time of thought development in order to identify the influence of belief when it came to constructing a worldview.

On studying the topics of *Daqīq al-kalām*, I was always interested in following the motivations behind the views of those Mutakallimūn. For this reason, I had to go through detailed analysis and discussion of topics in Islamic theology, such as Divine action and understanding the process of change in Nature, according to the views of the Mutakallimūn. There I had to consider, for example, the question of causality in nature and human behaviour, including the issues related to Divine will, predestination and freewill. In this respect, I had to confine my study and concentrate on the physical issues related to the subject.

An important part of my scientific enquiry, when studying diverse issues, was to recognise basic elements and principles, as well as the embodied assumptions that served to construct the Mutakallimūn’s views on those issues. Such an identification helped me understand the pillars and structure of their thought. Thus, after thoroughly studying the main topics of *Daqīq al-kalām*, I was able to identify some basic principles, propositions and doctrines that formed the Mutakallimūn’s views on natural philosophy. It is these that I call *The Principles of Daqīq al-Kalām*, and which are the subject of study, analysis, and discussion in this book.

It should be noted that my presentation of the Mutakallimūn’s thoughts and principles on natural philosophy is not intended to be historical, nor is it meant to be put in a context of editing and comparative studies. Instead, it is an analysis of their philosophical and scientific understanding of the natural world. This might require, in some places, making a comparison with rival notions in Greek philosophy so as to identify differences, but certainly this comparison is not exhaustive. In this respect, I have taken care to identify the true meanings for some expressions used by the Mutakallimūn, such as jawhar, and ‘araḍ, which have corresponding terms in the Greek philosophy of substance and accident. The intention of this is to bring the expressions to

their true meaning in Arabic, as expressed by the Mutakallimūn.

In his book, *The Philosophy of the Kalām*<sup>1</sup>, Harry Wolfson, of Harvard University, followed the methodology of conjecture and verification without having a frame of reference for his ideas when probing the thoughts of the Mutakallimūn. Such an approach caused Wolfson's analysis to lean on assumptions which were very much influenced by his personal attitude. In this study, I analyse the living texts of kalām by adopting two basic references: namely the Arabic, in which the authentic text is written, and those that have been verified by science.

During my journey investigating kalām, I visited the Faculty of Arts at my university and met with Professors of History and Philosophy, seeking to discuss the legacy of kalām with them. I was disappointed to learn that kalām was not part of their curricula. Perhaps this was because they did not have a faculty member who was specialised enough to teach this subject. Nevertheless, it was a kind gesture from the Dean of Faculty to invite me to teach a course on "Topics in Kalām and Philosophy". Since then, I have learned a lot and was able to publish my first article, *The Scientific Value of Daqīq al-Kalām*, in 1994.

My own area of specialisation in Quantum Field Theory and the Theory of General Relativity was a great help to me as it enabled me to recognise, not only the theoretical roots, but also the scientific and philosophical applications of the principles of *Daqīq al-kalām*. My encounters with the philosophical implications of quantum mechanics allowed me to appreciate areas where these principles could be applied, either to gain a better understanding or to provide clearer explanations when I found a fruitful interplay between *Daqīq al-kalām* and contemporary philosophy of science. This was elaborated over many years of struggle through discussions and involvements in several debates concerning science and religion. During this period, I attended and contributed to several conferences held at Oxford University and other British universities, which were organised by the British Science and Religion Forum. I learned a great deal and found that Islamic kalām had much to say on those discussions. Similarly, I have also found that some questions and arguments in current science and religion debates were also hot topics of the old kalām, with some contemporary views echoing the old ideas of the Mutakallimūn.

All this provided me with the necessary knowledge to write this book, which was first written in Arabic under the title, *Daqīq al-Kalām: the Islamic Approach to Natural Philosophy*, and which was published in 2010. In it, I presented the main principles of *Daqīq al-kalām* and discussed some problems of current interest. The book was published as a second, expanded, edition by

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1 Wolfson, H. A. (1976). *The Philosophy of the Kalām*. Cambridge, MA: Harvard University Press.

Kalām and Research Media (KRM) in 2018.

I find that a new formulation of kalām, using the basic doctrines of the early works of the Mutakallimūn could lay the foundation for a major transformation in Islamic thought. The old kalām is no longer useful; it is simply a monumental legacy that may, in their historical context, serve to teach us some useful lessons. However, we can re-build kalām and set it as a new venture, free from those enigmas which led theological kalām (*Jalīl al-Kalām*) to descend into a vicious debate. This reformation is very important; first, for Muslims, to enable them to break away from those historical and cultural boundaries and limitations which have captivated their minds for centuries. Secondly, the revival of kalām is important for the rest of the world, which is suffering from the riddle of atheism-theism and the puzzle of scientism versus belief. Furthermore, there are many fundamental questions which contemporary philosophers of science are grappling with in vain. It may be that some of these questions could gain enlightenment from the new kalām.



PART I:  
HISTORICAL BACKGROUND





# CHAPTER ONE: INTRODUCTION



## Short History

This book aims to uncover the basic tenets in, what was, an important chapter in the history Islamic thought; one which was presented as rational discourse concerned with understanding the natural world and its phenomena. This chapter was part of a system of thought, which grew up as a rival for philosophy and was named *kalām*.

Generally, *kalām* is concerned with providing a rational Islamic worldview on all matters regarding religious belief, as well as the social and personal aspects of life. It was aimed at laying the foundations for the *Sharī'a* (religious) laws. The part concerned with questions of natural philosophy is called *Daqīq al-Kalām* (fine *kalām*) while the other, which deals with theological questions is called *Jalīl al-Kalām* (the major or coarse *kalām*). These parts were not always set out in separate or independent contexts. In some cases, both sections were interwoven, especially when dealing with theological questions. However, for the sake of clarity, and since I am hoping to re-construct the *kalām* system of thought in a modern context, I selected the topics concerning natural philosophy and regarded them as being distinct in themselves. This certainly enabled me to analyse the approach undertaken by the *Mutakallimūn* and disseminate the results in a clearer and more efficient way.

The subject of *kalām* was developed during the first few decades of the 8<sup>th</sup> Century A.D, two hundred years after the Prophet Muhammad died, as a rational approach for elaborating the truth of Islam as revealed in the *Qur'an* and the teachings of the Prophet. It was an intellectual venture aimed at expressing an Islamic worldview in terms of the natural world and human

beings. Additionally, it welcomed input from all Muslim intellectuals, thereby inspiring a burst of contributions. These generated several tenets and schools of thought; one of the earliest of which was called the *Mu'tazila*. Scholars of this school tried to establish the basis for the Islamic fiqh (jurisprudence) by which Shari'a law could be deduced through the rational understanding of the Qur'an and the teachings of the Prophet. Initially, the venture went well and achieved great success through Abū Ḥanīfa al-Nu'mān (699-767) and his school in Basra, the Maliki school, founded by Malik Ibn Anas (711-795), the Shari'a school of fiqh, founded by al-Shafi'i (767-820), and the school of Ahmad Ibn Ḥanbal (780-855), which was set up later. The difference between these schools of fiqh lay in the principles they upheld and the resources they used for deducing Shari'a laws. These set of rules are called *Usūl al-Fiqh*.

Abū Ḥanīfa relied on a rational analysis of problems with some support from the Qur'an and the narrations of the Hadith of the Prophet. The Maliki and Shafi'i schools took a moderate position and relied on rational analysis as much as authentic narrations from the Hadith to deduce Shari'a laws. The Hanbali school was almost fixated on following the Hadith (narrations) of the Prophet and the views of his companions (Sahāba), a trend that established a more dogmatic approach to Shari'a.

An unfortunate incidence during the early history of Islamic thought occurred when the Mu'tazilis became engaged in a conflict regarding dogma, especially the Hanbali school. The main point of the conflict was the issue known as the *Problem of the Creation of the Qur'an*. Here, the dominant leaders of the Mu'tazilis, supported by the state, insisted that all the clergy should adopt the notion that the Qur'an was created (*makhlūq*). This approach, they felt, would allow them to consider the Qur'an and its content from both the rational as well as the historical viewpoint. The Hanbali school, led by Ahmad Ibn Ḥanbal, opposed this enforcement and fell into a dispute with the Abbasid regime of al-Mu'tasim (794-842), which was overwhelmed with Mu'tazilis. As a consequence of this disagreement, Ibn Ḥanbal was jailed and tortured, and his followers prosecuted by the Mu'tazilis.

At the beginning of the 10<sup>th</sup> Century, Abū al-Ḥasan al-Ash'ari, a descendant of the Mu'tazilis, formed a new school of kalam, called the *Ash'aris*. Greatly influenced by the suffering and agony of the past conflict between the Mu'tazilis and the Hanbalis, many people subscribed to this new school. Ever since then, this school has flourished.

The Ash'aris school established different views of kalām and attempted to drastically move away from the Mu'tazilis school on questions related to the divinity, divine attributes and seeing the divine in doomsday, amongst other issues. The decades that followed witnessed conflicts between Ash'aris

and Mu'tazilis, the winner being the one which gained support from the ruler of the time. This situation continued until al-Qādir Billah's came to power (991-1031). During his reign, this Abbasid Caliph issued the famous al-Qādir declaration by which he banned all kalām schools and endorsed the Ḥanbalī school in the Islamic system of belief. Sharī'ā laws were assigned to jurisprudent scholars to deal with according to their particular school of study and deduction.

Here, we should note that the kalām schools were not religious schools. Although, historically, they were considered theologians, the Mutakallimūn (practitioners of kalām) were innovative scholars who were not necessarily theologians. The four main schools: the Ḥanafī, Mālikī, Shāfi'ī and Ḥanbalī, however, are all schools of theology and Sharī'ā. Thus, when kalām was banned, the only venue for meaningful discussion and studies were these dogmatic schools of theology and Sharī'ā. Consequently, the free, intellectual atmosphere declined, and very little innovative or intellectual material in kalām was produced thereafter.

As mentioned above, kalām was intended to establish a rational approach to understanding God, humankind, and nature according to the Islamic system of belief. Kalām considered two types of questions: those about divinity, where matters directly related to belief (including divine attributes, resurrection of the dead, seeing God, and punishment and reward in the afterlife), and those questions related to divine knowledge, will, and power. These queries, in turn, led to the question of human free will, as advocated by the Mu'tazilis school of kalam, and the counter proposal of self-acquisition (*kasb*) of actions, which was held by the Ash'aris school. This has led to discussions on the concept of space, time, motion, force, and many other aspects of the physical world. Thus, this part might be also called the physical theory of kalām.

## **Aims of the book**

In this book I am going to discuss the basic tenets of Islamic approach to natural philosophy. I have articulated these as the *Principles of Daqīq al-Kalām*, having authenticated them from the original sources of kalām and analysed them from a modern perspective. I am seeking to present the tenets in a modern philosophical and scientific context, as many of the principles and doctrines are compatible with theories in modern-day physics. Indeed, it would be interesting to see how far these concepts of *Daqīq al-kalām* can be taken along this line.

It might be noted that my designation of the basic view of kalām concerning the physical issues that I deal with here, is somewhat selective, since my aim is to construct a basic view based on the legacy of kalām and to reconstruct it

from a new perspective on natural philosophy. One of the main objectives of this book is to re-evaluate some common impressions and pre-conceptions that have been established by contemporary authors. Several of these perceptions were generated through misreading the kalām texts or reading them from secondary sources which were either written by opponents of kalām, or the opponents of some schools of kalām. For example, if we take the words of ‘Abdul Qāhir al-Baghdādī, the famous Ash‘aris, about the Mu‘tazilis literally, we would get the wrong impression about them, especially his views about Ibrāhīm al-Nazzām, where he calls those views of al-Nazzām scandals!

Some of the errors in understanding certain concepts are due to the incorrect translation of several terms. This, we can see clearly in a number of contemporary studies on various topics of the physical theory of kalām. Some concepts have not received the proper appreciation. This may be due to the authors and scholars, who dealt with them, searching for their historical origin, and believing that they must have a Greek or Indian source. In this case, they would have overlooked the fact that the cultural wealth of those who initiated kalām was so deeply rooted in the history of thought as to boost their intellectual capabilities to high levels. This privilege enabled them to deal with delicate matters which needed an intense theoretical involvement. Accordingly, the results obtained by such scholars has been mostly inconclusive. In this respect, I point to the studies of Shlomo Pines (*Studies in Islamic Atomism*) and Harry Wolfson (*The Philosophy of the Kalām*).

There are erroneous myths that have been widely circulated about some schools of kalām. One concerns the position of the Mu‘tazilis on causality. In this book I show that the understanding of natural causality of the Mu‘tazilis is not much different from that of the Ash‘aris; if we take the views of Qaḍī ‘Abd al-Jabbār to represent the first school and those of al-Bāqillānī to exemplify the other. We see that both scholars adopted common principles according to which they formed their common views. Within the same myth lies the claim that the Mu‘tazilis understood the world to be deterministic, whereas the Ash‘aris assumed it was occasional. The investigation presented in this book shows that both the Mu‘tazilis and the Ash‘aris believed in the same principles and adopted similar views as far as the natural world was concerned. The actual difference between them was in their views about divinity and subjects of *Jalīl al-kalām*. This ability to distinguish between similarities and differences is one of the fundamental benefits of studying the legacy of kalām under the separate classifications of *Daqīq* and *Jalīl al-kalām*.

## Reforming Islamic Thought

The Muslim community is in urgent need of reforming their way of

thinking if it is to remove itself from the stagnation they have suffered during the last three centuries. Two factors play an essential role in any successful transformation of Islamic thought. Firstly, the change should come from within the Islamic way of thinking itself and, secondly, it should have a strong philosophical basis, stemming from original Islamic sources which are compliant with the modern state of knowledge and life. The previous attempts to revitalise kalam, which were undertaken during the last decades of the 19<sup>th</sup> Century and the beginning of the 20<sup>th</sup> Century, has been reviewed by Özervarli<sup>2</sup>.

My proposal for effecting a transformation in Islamic society is based on revitalising kalām to become an efficient methodology for analysis and deduction in religion and modern Islamic thought. This can be done in two stages. First, we should revitalise *Daqīq al-kalām* such that this tradition of thought stands for the Islamic view of nature and science. The fact that the principles of *Daqīq al-kalām* conform with concepts of modern physics and cosmology would enable us to achieve such a goal without much trouble. Second, once the principles and methodology of *Daqīq al-kalām* are established, some essential problems in natural sciences, social sciences, religion, and the arts will need to be re-analysed and studied according to the new methodology. Questions, such as the epistemological value of science, determinism and causality in the natural world, biological evolution, the design argument, and others, might be discussed and analysed within the context of neo-kalām interfacing with scientific facts, thereby developing a worldview that shares the achievements of modern science. This might be initiated by some sample case studies to demonstrate the effectiveness and efficiency of the new methodology and principles.

Once *Daqīq al-kalām* is set in scholastic studies, other questions, such as divine action, consciousness, free will and predestination can be studied on the grounds provided by the earlier studies of *Daqīq al-kalām*. No doubt these studies will also serve as an essential step in delving into *Jalīl al-kalām* as well, which is a much more subtle topic matter. With new light shed on the topics of *Jalīl al-kalām*, matters of Shari‘a law can then be discussed and the proper rules applied.

I believe that if one can develop a trend of change that motivates critical thinking based on proper foundations, and proposes an efficient scheme to deal with revising Islamic thought, including Islamic Shari‘a, then a real

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2 Özervarli, M. Sait. “Attempts to Revitalize Kalām in the Late 19th and Early 20th Centuries”. *The Muslim World* 89, no. 1 (1999): 90–105.

transformation might be initiated. To be successful, this transformation should stem from the original sources of Islam, thereby preserving the mission of Islam and developing it into a workable modern system of thought.

The decision for a need to revitalise kalam raised a number of vital issues that had to be considered. First, we should take into account that kalām is traditionally not favoured and is a subject in disrepute. Most traditional theologians of the 14<sup>th</sup> Century, and later, considered discourse on kalām to be a distortion of Islam and a potential danger that might cause a pious Muslim to be dislodged from their religion. This attitude is also widespread amongst Muslims today, and I confess to having faced difficulties in discussing *Daqīq al-kalām* with scholars who were brought up according to traditional (Salaf) beliefs. Second, we should remember that the practical failure of scholars' efforts during the 19<sup>th</sup> and early 20<sup>th</sup> Centuries is partially because they were not acquainted with modern scientific knowledge and, consequently, they could not harmonise the truth of Islam alongside that of science. Muhammad 'Abduh in Egypt and Shiblī Nu'mānī in India, are examples of such scholars. Certain facts on quantum physics, relativity and modern biology were unknown to those scholars and, hence, they applied the concepts of classical physics and their limited knowledge of other natural sciences. Subsequently, 'Abduh was unable to practically implement his claims of harmony between science and Islam, while Nu'mānī Shiblī could not adapt the concepts of the mechanistic world of classical physics and assume deterministic causality, which is in contradiction with the ideas of kalām.

The new approach suggested for the transformation of Islamic thought opens the way for a well-founded methodology of theological development (*Ijtihād*); discussions around this fundamental trend of jurisprudence have been threatened with being banned. This trend concerns the sources for establishing Sharī'a, the rules for accepting and rejecting narrations of Ḥadīth, interpreting verses of the Qur'ān dealing with Sharī'a, and deducing its laws. This is, potentially, a pivotal point when it comes to establishing new trends in Islamic jurisprudence.

Some modern thinkers and reformists have been captivated by the methodology of the traditional theologians (the *Salaf*) and their understanding of various terms in the Qur'ān and the Ḥadīth, including mistakes, both deliberate and accidental, that they made in those interpretations. However, I feel that we should neither allow ourselves to become involved in such captivation, nor accept their methodology in full. Instead, we should allow for whatever we find truthful to be in our hands. For this purpose, we should be able to provide strong arguments from the Qur'ān, the Arabic language, and our intellect, using a common ground of agreement, which supports the fact

that our approach maintains the originality of Islamic teachings as delivered by the Prophet Muhammad.

The main target of transformation in Islamic thought is to revitalise the good values and valuable tenets of Islam into practice. Resources in Islamic culture and literature provide the decent researcher with enough assistance in this endeavour, and there is plenty of room for the reformation of legal, as well as social, trends. Although, the latter might be much more difficult to uphold.

One of the major topics of the old kalām was the question of divine attributes. This was one of the main sources of disagreement and conflicts among the Mutakallimūn themselves, as well as with other theologians. For this reason, a new understanding of divinity was required. Allah is described in the Qur'ān as: *He who nothing resembles him, yet He is the one who hears and sees*. This means that the reality of the Divine stands in His existence and His ability to act. His perception of things is a matter that goes beyond our comprehension, since he is not a material entity, and, therefore, we cannot expect Him to perceive through any physical means. Thus, this attribute must be taken *a priori* and not be subjected to rational analysis. Conversely, divine acts are something else, which we are directly concerned with. To understand the development of the world, our life and destiny in the presence of Divine action imposes the requirement that we should analyse and understand how God acts through his creations. The Qur'ān calls upon us to contemplate Creation and to question how it all started. Such an understanding will help us comprehend the mechanism by which the physical world developed and may help us understand our destiny. This can be seen as the role of analytic theology, whereby our understanding of creation may very much help us understand how our *re-creation* in the next life will be possible. If we adopt *re-creation* as a general rule, then it would be easy to envisage how the next form of life might be very different from this one. For example, the moment we cease to live, our souls may be *re-created* in another world. This assumption does not necessarily entail the many-worlds hypothesis, because the world into which the soul transfers is strictly non-physical.

To summarise: I would say that while the topic of divine action in this world is of interest to neo-kalām, the issues concerning divine attributes are not a matter of philosophical significance, but to be taken metaphorically without the need for further study. Nevertheless, spiritual experience should be allowed to have a room in neo-kalām as it constitutes a vital part of Islamic teaching and religious practice. The rational acknowledgement of spiritual experience can always be maintained because there is much to learn about our souls and the world which extends beyond our limited, current knowledge. That is to say, spiritual experience is something that cannot be denied. It is a real feeling,

obtained through the interaction of our senses with their environment and our mind. Therefore, it cannot be but an integrated part of our consciousness which may well extend far beyond our direct sensing.

