Engaging Contemporary Atheism Through the Conceptual Tools of *Ashʿarī* Theology

Moamer Yahia Ali Khalayleh

School of History, Archaeology and Religion

Cardiff University

Submitted in Partial Fulfilment of the Requirements for the Degree of Doctor of Philosophy, July 2023

Abstract

This thesis explores the capacity of the *Ashʿarī* school of theology to respond to the critiques of contemporary atheism. The findings of the research suggest that within the *Ashʿarī* school there is a broadly accepted epistemology and ontology. The same may be said for the methods used to rationally justify God's existence. This system demonstrates the capability to grapple with modern and post-modern philosophies, which form the intellectual foundations of contemporary atheism. This thesis argues that atheism, from an *Ashʿarī* perspective, refers to a lack of certainty in the veracity of the proposition: *God, the necessarily existent creator, exists.*

'Contemporary atheism' is a term used to refer to schools in modern and post-modern philosophy whose epistemological and ontological ideas result in a lack of certainty in God's necessary existence. Modern *Ashʿarī* scholars have engaged with the ideas of contemporary atheism, demonstrating the efficacy of *Ashʿarī* thought in responding to critiques levelled against theism.

The thesis is comprised of four parts. The first is an elucidation of the development of the *Ashʿarī* school, its epistemology and ontology, and its arguments for God's necessary existence and divine attributes. The second part is an exploration of the ideas that are foundational to contemporary atheism. The third part juxtaposes *Ashʿarī* thought with contemporary atheist ideas and surveys how *Ashʿarī* scholars have engaged with these. The fourth part breaks new ground by developing a framework for an *Ashʿarī* philosophy of science. This is then applied to a current scientific idea, the proposed existence of the multiverse, to demonstrate how *Ashʿarī* thought may be used to respond to the claim that a multiverse negates the necessity for God's existence. The thesis showcases the vibrancy of the *Ashʿarī* school as a living tradition of Islamic theology and demonstrates its capacity to continually engage with novel ideas.

بسم الله الرحمن الرحيم

الحمد لله رب العالمين والصلاة والسلام على سيدنا محمد وعلى آله وصحبه أجمعين

In the name of God, the most merciful and most compassionate:

Praise be to God, the Lord of the Worlds, and peace and blessings be upon our master Muḥammad and his

family and companions, one and all.

Contents

List of Tables

List of Figures

Formatting and Transliteration Conventions

The Chicago Manual of Style is used as the citation format for this thesis. For Arabic names, the article 'al' is used with the full name but is dropped for all other uses (e.g., instead of 'al-Ghazālī', I use 'Ghazālī'). Death dates for Muslim scholars are written with the *hijrī* year first, then the Gregorian (e.g., Abu Ḥāmid al-Ghazālī, d. 505/1111). Death dates for non-Muslim thinkers include the Gregorian alone (e.g., Immanuel Kant, d. 1804). All quotations of the *Qurʾān* in English use the M. A. S. Abdel Haleem translation unless otherwise stated. All Arabic transliterations follow the International Journal for Middle East Studies standard.

Acknowledgements

Chapter 1: Introduction

1.0 Overview and Objectives

This thesis examines the capacity of the *Ashʿarī* school of theology to respond to the claims of contemporary atheism. *Ashʿarī*sm is one of three principal theological schools in *Sunnī* Islam. Initially founded by the eponymous Abu al-Ḥasan al-Ashʿarī (d. 324/935) in the fourth century of the *hijrī* calendar – the eleventh century of the common era – as a defence of orthodox *Sunnī* theology against *Muʿtazilī* thought, *Ashʿarī*sm spread throughout the Muslim world.[1] *Ashʿarī* theology was later utilised to respond to Greek-influenced Arab philosophy, as well as theological questions brought about through engagement with other faith traditions, such as Christianity and Judaism.[2] The school's hallmark is the use of reason to defend *Sunnī* creed whilst striving to maintain the integrity of the orthodox interpretation of Islam.[3] Shia Islam, which forms the second largest group of Muslims, has a few key differences from *Sunnī* Islam.[4] *Sunnī* Islam is followed by the great majority of Muslims and represents the religion's normative tradition.[5] Its etymology is found in the word *Sunna*, which in Arabic literally means *path* or *way* and refers to the example or traditions of the Prophet Muḥammad.[6] *Ashʿarī*sm steers a middle path between fideism, on the one hand, and extreme rationalism, which relegates scripture to a subordinate position, on the other. It is one of three theological traditions in *Sunnī* Islam: the *Māturīdī* school, which places a greater emphasis on discursive theology,

---

[1] Khalid Blankinship, "The early creed," in *The Cambridge Companion to Classical Islamic Theology*, ed. Timothy Winter (Cambridge and New York: Cambridge University Press, 2008), 52-54.

[2] Oliver Leaman, "The developed *kalām* tradition", in *The Cambridge Companion to Classical Islamic Theology*, 77-79. See also: Abū Ḥāmid al-Ghazālī. *Tahāfut al-Falāsifa,* (Cairo: *Dār al-Maʿārif*, 1966); Saʿd al-Dīn al-Taftazānī. *Sharḥ al-Maqāṣid,* Beirut: *ʿĀlam al-Kutub*, 1998; Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001.

[3] Fawzī al-ʿAnjarī and Ḥamad al-Sannān, *Ahl al-Sunna al-Ashāʿira Shahādat ʿUlamāʾ al-Umma wa Adilatihm*, (Kuwait: *Dār al- Ḍiyāʾ*, 2006). Oliver Leaman, "The developed *kalām* tradition," 81.

[4] These include an emphasized role of a central religious authority around a single imam. See: Amir-Moezzi, Mohammad Ali, Christian Jambet, Kenneth Casler, and Eric L. Ormsby. *What Is Shiʿi Islam? An Introduction.* Routledge Persian and Shi'i Studies Series, v. 3. (London ; New York: Routledge, Taylor & Francis Group, 2018), 6, 13.

[5] Britannica, T. Editors of Encyclopaedia. "Sunni." Encyclopaedia Britannica. Accessed November 1, 2022. https://www.britannica.com/topic/Sunni; "Sunnism, Sunnis". Koninklijke Brill NV. Accessed 17 April 2023. https://doi.org/10.1163/2211-2685_eco_SI.100.

[6] Almaany. "Translation and Meaning of سنة (Sunna)in Almaany English Arabic Dictionary." almaany.com. Accessed April 30, 2021. https://www.almaany.com/en/dict/ar-en/%D8%B3%D9%86%D8%A9/.

and the *Atharī* school, which attempts to avoid discursive theology and thereby relies heavily on scriptural evidence.[7]

In this thesis, I argue for the existence of a largely agreed-upon epistemological and ontological model in the *Ashʿarī* school that is used to ground Islam's creed in reason. This conceptual model proves capable of responding to contemporary atheistic thought because it addresses the foundational philosophical contentions of contemporary atheism. In essence, I demonstrate that the *Ashʿarī* scholarly tradition offers a cohesive conception of the nature of reality and an articulation of a theory of knowledge that is founded upon both Islam's primary scriptures – the *Qurʾān* and *ḥadīth* – and rational thought.

Ashʿarī epistemology and ontology are evident within *Ashʿarī kalām* treatises.[8] Epistemology and ontology are elaborated upon further in commentaries on creedal works, Islamic manuals on logic (*mantiq*), and, to a lesser extent, even Islamic jurisprudence (*ʾuṣul al-fiqh*; see chapter 4). Most intermediate and advanced *kalām* texts, for example, begin with an exposition of Islam's theory of knowledge and the nature of existence.[9] They explain and argue that the sources of sound knowledge are the intellect, physical senses, and true reports. 'Intellect' here refers to the use of the mind to arrive at knowledge independent of customary experience, such as the conclusions of basic arithmetic or of deductive syllogisms (e.g., all humans are mammals; John is a human; therefore, John is a mammal). 'Physical senses' refers to the use of touch, sight, hearing, taste, and smell to comprehend the physical world around us. The apprehension of the physical senses through customary experience reveals knowledge that can be gained by induction (e.g., fire burns; objects accelerate to the ground at a constant rate independent of their mass in a vacuum). Finally, 'true reports' refers to knowledge arrived at from a trusted source (e.g., knowing that the battle of Hastings occurred in 1066 CE via history books or knowing of the existence of China by being informed of its existence by someone who has seen it firsthand).[10]

The nature of reality is described in *kalām* treatises as real (i.e., neither an illusion nor a construction of the mind), as well as comprehensible to the human mind. Furthermore, the

---

[7] Halverson, Theology and Creed in Sunni Islam, 14-25.

[8] Literarily meaning speech in Arabic, *kalām* here refers to Islamic discursive theology. See "An Introduction to *Kalām*: (Islamic Theology)." *Dār al- Iftāʾ al-Miṣriyyah*. Accessed May 3, 2021. https://www.Daralifta.org/Foreign/ViewArticle.aspx?ID=116.

[9] Binyamin Abrahamov, *Islamic Theology: Traditionalism and Rationalism* (Edinburgh: Edinburgh University Press, 1998), 34.

[10] Al-Taftazānī, *Sharḥ al-Maqāṣid,* (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001), 1:70; ʿAbd al-Malik al-Jūwaynī. *Al-Irshād Ilā Qawātiʿ al-ʾAdilla fī ʾUṣul al-ʿAqāʾid* (Egypt: *Maktabat al-Khanjī*, 1950), 8.

universe is then understood to be a created entity that is separate from God, albeit not existing independently from Him (see chapter 4).[11]

This conceptual model forms an articulation of Islam's ontology and epistemology as they have been understood by millions of Muslims over many centuries. They are the philosophical foundations upon which *Ashʿarī* creed is rationalised and understood.

I argue that *Ashʿarī* thought is effective in engaging with the underlying philosophies of contemporary atheism. To demonstrate this, I survey how *Ashʿarī* thought has been used by modern proponents to defend against the critiques of contemporary atheism (see chapter 6). I also illustrate how the *Ashʿarī* paradigm may be used to develop a philosophy of science that can be utilised to address a particular prevailing argument of contemporary atheism: the postulation of a multiverse to negate the necessity of God's existence (see chapters 7 and 8).

The thesis aims to answer the following essential questions:

1. What is contemporary atheism, and how can its core intellectual strands be categorised and understood? What are its main arguments?

2. Is there a unified structure and methodology to *Ashʿarī* theology when arguing for God's existence and His necessary attributes? Does *Ashʿarī*sm form a cohesive conceptual model of a theory of knowledge and an ontology that is then used to establish God's existence and His necessary attributes? If so, what is it?

3. Can this hypothesised *Ashʿarī* conceptual model be used to address contemporary atheistic ideas? If so, how?

I argue that the ideological roots of present-day non-belief stem from modern and post-modern philosophy.[12] These two broad and complex systems of thought originated in renaissance Europe and flourished during the enlightenment, with the latter fully manifesting in the

---

[11] Saʿd al-Dīn al-Taftazānī. *Sharḥ al-ʿAqāʾid al-Nasafiyya* (Cairo: *Maktabat al-Kulīyyāt al-Azharīyya*, 1978), 13,14. Abu Bakr al-Bāqilānī. *Kitāb al-Tamhīd* (Beirut: *al-Maktaba al-Sharqīyya*, 1957), 16-21.
[12] Cornelio Fabro, *God in Exile: Modern atheism : A Study of the Internal Dynamic of Modern Atheism, from its Roots in the Cartesian cogito to the Present Day* (Westminster: Newman Press, 1968), 3-5; Patrick Masterson, *Atheism and Alienation: A study of the Philosophical Sources of Contemporary Atheism* (Notre Dame: University of Notre Dame Press, 1971), x; Gavin Hyman, "*Atheism in Modern History*" in *The Cambridge Companion to Atheism,* ed. Michael Martin (New York: Cambridge University Press, 2007), 27-28.

twentieth century.[13] I demonstrate that, whilst myriad philosophies fall under the umbrella of modernism and post-modernism, most share some common beliefs and have evolved from similar ideological roots, which ultimately led to the proliferation of atheism today. In other words, these philosophies have all provided intellectual reasons to doubt the necessary existence of God.

Modernism is a movement which has its origins in enlightenment thought and secular humanism. Its philosophical underpinnings are a belief in the absolute authority of reason and in human autonomy, as well as disillusionment with the past.[14] It proposes that man, free of the shackles of superstitions and myths inherent in religious belief, may use his intellect alone to progress and prosper.[15] Its proponents would argue that the scientific revolution and the extraordinary benefits it has achieved are a testament to its success.

The father of modern philosophy, René Descartes, founded his theory of knowledge upon the implementation of radical scepticism, through which he establishes the existence of himself and God through his subjective self-awareness.[16] Whilst he was an ardent defender of theism, some scholars argue that Descartes' epistemology lays the groundwork for atheism, through his conception of *cogito ergo sum* (commonly articulated by the phrase 'I think, therefore I am'). This foundational idea emphasised subjective thinking as the sole route to sound knowledge and human free will (see chapter 3).[17] As a result of Descartes' opening the gates of modernist philosophy, we see the subsequent rise of the philosophies of scepticism, idealism, nominalism, relativism, empiricism, naturalism, and physicalism, all of which inexorably led to atheism.[18]

For instance, modern philosophers, such as John Locke, Francis Bacon, and David Hume, place primacy on the empirical method as the most important, if not the lone, source of objective knowledge. They reduce knowledge of the reality of the external world to that which is verified by the input of sense data; hence, this understanding of empiricism is a reductionist approach to epistemology and has been interpreted as materialist in its ontology.[19] These empiricists

---

[13] Ibid.

[14] Louis K. Dupré, *The Enlightenment and the Intellectual Foundations of Modern Culture* (New Haven: Yale University Press, 2004), 16; Fabro, *God in Exile*, 91.

[15] William Bristow. *"Enlightenment."* Stanford Encyclopedia of Philosophy. August 29, 2017. Accessed April 20, 2021. https://plato.stanford.edu/entries/enlightenment/.

[16] Fabro, *God in Exile*, 92; Hyman, *"Atheism in modern history,"* 33, 34.

[17] Fabro, *God in Exile*, 92; Masterson, *Atheism and Alienation,* 8-10.

[18] Masterson, *Atheism and Alienation*, x.

[19] Charles T. Wolfe, *"From Locke to Materialism: Empiricism, the Brain and the Stirrings of Ontology,"* in *What Does It Mean to Be an Empiricist?* Ed. Siegfried Bodenmann and Anne-Lise Rey,

were highly influential in advancing *logical positivi*sm and *scientism* in later generations.[20] It is not difficult to see how an argument for atheism can be made with this philosophical frame of reference, as it becomes impossible to present a rational argument for the existence of God or any other non-material entity.[21] Hence, a person with an empiricist epistemology often claims that there is no evidence for God's existence, since by 'evidence' they mean empirical evidence, which is by definition impossible to obtain.

Post-modernism arrives as a reaction to the claims of modernity by challenging its basic assumptions.[22] After the colonial period, two world wars, and the discoveries of evolutionary biology and modern physics, modernism faced ever louder criticisms. Post-modernist thinkers argue that human beings are incapable of ascertaining objective truth. Indeed, post-modernism suggests that even the scientific method is theory laden, meaning that it is subjective because of subjective personal biases and societal influences. Truth, according to post-modernism, is a mere construction of the mind and is entirely subjective and relative.[23] This philosophy forms a type of social subjectivism in which its epistemology is fluid and dependent on individual or societal standards.[24] The nature of reality to the post-modernist is unknowable as it actually is, and therefore reality is deemed to be an abstract inclination of the mind that can be changed as one sees fit. Recent scholarship demonstrates Immanuel Kant's (d. 1804) influence on the development of post-modernism and atheism, even hundreds of years later.[25] This can be argued through his work attempting to dismantle rational arguments for the existence of God by suggesting they were founded on the ontological argument and then refuting its validity (see chapter 3). More broadly, Kant's epistemology casts doubt on the ability of human beings to ascertain objective knowledge. He suggested that the existence of epistemic filters or categories in the mind shape our perception of reality. His *Copernican revolution* of philosophy, as he referred to it, formed his philosophy of transcendental idealism. From Kant, we see the rise of ever more radical sceptic philosophers leading to the turn of the twentieth century with Fredrick Nietzsche famously declaring that God was dead (see chapter 2).

---

vol. 331, Boston Studies in the Philosophy and History of Science (Cham: Springer International Publishing, 2018), 235–63, https://doi.org/10.1007/978-3-319-69860-1_13.

[20] Tom Sorell, *Scientism: Philosophy and the Infatuation with Science*, International Library of Philosophy (London ; New York: Routledge, 1991), 24.

[21] Fabro, *God in Exile*, 273-277.

[22] Stephen Ronald Craig Hicks, *Explaining Postmodernism: Skepticism and Socialism from Rousseau to Foucault*, (Roscoe, Ill.: Ockham's Razor, 2011), 14.

[23] Ibid, 181; Ernest Gellner, *Postmodernism, Reason and Religion,* (London ; New York: Routledge, 1992), 23,24.

[24] Hicks, *Explaining Postmodernism,* 15.

[25] Ibid*,* 27-28, 181.

Through an analysis of *Ashʿarī* works, I attempt a response to the epistemological and ontological claims of modernism and post-modernism, which are the source of contemporary atheism, that is, the atheism that has developed from the advent of modernity in the eighteenth century. Contemporary atheism is not to be confused with the New Atheism movement, which began at the start of the century. Contemporary atheism encompasses many philosophical schools, and not all atheists today are New Atheists; they may believe in ideas that are quite different from those of New Atheism. New Atheism may be viewed as a subset or manifestation of contemporary atheism since both share the same philosophical roots, although New Atheism is less sophisticated and nuanced than the atheism of the past.[26]

1.1 Methodology

The research undertaken in this thesis lies at the intersection of three disciplines: theology, philosophy, and Islamic studies. As a result, it does not fall squarely within the discipline of Islamic studies in academia today because the field is largely focused on the historical analysis of theology rather than its application. Anglophone scholarship in theology as it pertains to contemporary issues (for instance, science and religion) is mostly found within the Christian tradition. As such, this research is somewhat unique in that it is positioned within these overlapping fields.

It is necessary to mention that the *Ashʿarī* sources with which the thesis engages fall primarily in the later post-*Ghazālī*an period of *kalām*. This is for two reasons. The first is that the later *Ashʿarī* tradition underwent several developmental stages in which a large part was its engagement with Greek philosophical works translated into Arabic. While *Ghazālī* famously initiated this engagement with Peripatetic philosophical discourse, later *Ashʿarī* scholars such as Rāzī, Ījī, and Jurjānī, fully developed a sophisticated schema of epistemology and ontology that was able to articulate *Ashʿarī* positions with regards to the Greek philosophy.[27]

With this more developed version of *Ashʿarī kalām*, a clear epistemology and ontology was expressed which provided granular treatment of ideas that are used in the thesis to juxtapose with contemporary atheism. The second reason is that most works that comply with the criteria

---

[26] Amarnath Amarasingam, ed, *Religion and the New Atheism: A Critical Appraisal*, Studies in Critical Social Sciences, Studies in Critical Research on Religion, v. 25. v. 1 (Leiden ; Boston: Brill, 2010), 2.
[27] See: Shihadeh, Ayman. "From Al-Ghazālī to Al-Rāzī: 6th/12th Century Developments In Muslim Philosophical Theology." *Arabic Sciences and Philosophy* 15, no. 1 (2005): 141–79. doi:10.1017/S0957423905000159.

used for the choice of sources in the thesis are found on the later *Ashʿarī* tradition. This includes the inclusion of these works in the curriculums of modern Islamic educational institutions.

That said, *Ashʿarī kalām* constitutes a method of arriving at the veracity of set of creedal points. This conception remains unchanged throughout the school's history. The creedal points primarily refer to the main articles of faith: belief in God, His angles, His books, His messengers, the last day, and divine decree (see chapter 2). As articulated in chapter 2, the definition of *kalām* is knowledge of creedal beliefs arrived at through apodotic proofs. This primary purpose and the foundational content of *Ashʿarī kalām* therefore remains a constant whichever stage of the *kalām* tradition we examine. This is the justification for the title of the thesis referring to *Ashʿarī theology* rather than specifying the later *Ashʿarī* theological tradition.

The study and analysis of contemporary atheism is an endeavour that poses quite a few challenges. Among these is the enormous volume of literature that is, in itself, at times prolix and fraught with ambiguity. Methodologically, I have tried to refer to primary sources in my research but have relied even more on a great many secondary sources, in the form of commentaries and analyses, to aid in deciphering the works of the great thinkers of modern and post-modern philosophy.

To ascertain the philosophical roots of contemporary atheism, I employ three criteria to determine my sources. The first is that each philosopher should be widely acclaimed as influential in the formation of modern-day Western philosophy. The second criterion is that their philosophical ideas can demonstrably justify atheism, defined according to *Ashʿarī* theology. The final criterion is that these philosophers are also recognised in academic literature as influential in the development of contemporary atheism.

I have consequently compiled a bibliography of relevant works on atheism and categorised them into three categories. I began with primary readings, which include publications on the background and history of Western philosophical thought. These books offer an overview of theology and atheism and their broad history and philosophy. I then progressed to secondary readings, which cover the writings of contemporary Christian and Muslim theologians and their engagement with atheism. I subsequently moved to my tertiary readings, which engage directly with the work of notable atheists and their ideas such as the New Atheism movement and atheistic interpretations of modern science.[28]

---

[28] For a full list of references on atheism and its historical, sociological, and philosophical development see chapter 3.

It is important to note that I reference a number of philosophers who themselves were believers in God. However, as I explain in chapter 3, this does not necessarily entail that their philosophies cannot be used as a means to justify atheism, especially vis-à-vis the *Ashʿarī* standard of belief in God.

The corpus of *Ashʿarī* scholarship is extensive. The school has developed over many centuries and spread throughout the Muslim world: from North Africa to Southeast Asia. As such, a full analysis of its texts is beyond the scope of a doctoral thesis. However, a deeper discussion of the works of some of the school's most influential scholars can offer a reliable cross-sectional representation of wider *Ashʿarī* thought.[29]

The methodology I employ in identifying primary sources is driven by the need to find an accurate representation of the *Ashʿarī* school's epistemology and ontology, which form the foundations of the school's thought. As it spans more than a millennium, it is important to understand the chronological progression of the school's ideas and how they manifest in contemporary *Ashʿarī* thought.

As such, I use the works of the most influential *Ashʿarī* thinkers throughout the centuries, from the founder of the school, Abu al-Ḥasan al-Ashʿarī, to modern scholars such as Mustafa Sabri (d. 1373/1954), Muḥammad Saʿīd al-Buṭī (d. 1434/2013), and Saʿīd Fodeh. Focus is given to the late *Ashʿarī* tradition, post-Ghazālī (Abu Ḥāmid al-Ghazālī, d. 505/1111), as it provides a more developed system of thought which has incorporated philosophical discourse more fully into its works. This approach reveals the development of the *Ashʿarī* conceptual model, the school's general cohesion and unity, and its relevance in responding to the philosophical challenges of atheism today.

---

[29] For further references on the history and development of Islamic theology in general: Richard M. Frank. *Classical Islamic Theology: The Ashʿarites*. Edited by Dimitri Gutas. 0 ed. Routledge, 2020. https://doi.org/10.4324/9781003110392; Ayman Shihadeh, and Jan Thiele, eds. *Philosophical Theology in Islam: Later Ashʿarism East and West*. Islamicate Intellectual History, vol. 5. Leiden ; Boston: Brill, 2020; Jeffry R. Halverson. *Theology and Creed in Sunni Islam: The Muslim Brotherhood, Ashʿarīsm, and Political Sunnism*. New York, N.Y: Palgrave Macmillan, 2010; Sabine Schmidtke, ed. *The Oxford Handbook of Islamic Theology*. Oxford Handbooks. Oxford, United Kingdom: Oxford University Press, 2016; Abrahamov, *Islamic theology: traditionalism and rationalism*; T. J. Winter, ed. *The Cambridge Companion to Classical Islamic Theology*. Cambridge Companions to Religion. Cambridge ; New York: Cambridge University Press, 2008. For Islamic epistemology and ontology: Franz Rosenthal. *Knowledge Triumphant: The Concept of Knowledge in Medieval Islam*. Brill Classics in Islam, v. 2. Boston; Leiden: Brill, 2007; Majid Fakhry. *A History of Islamic Philosophy*. 3rd ed. New York: Columbia University Press, 2004; For *kalām* theodicy see, Sherman A. Jackson. *Islam and the Problem of Black Suffering*. Oxford; New York: Oxford University Press, 2009. For works on notable *Ashʿarī* scholars, see: Frank Griffel. *Al-Ghazālī's Philosophical Theology*. New York, Oxford, Auckland: Oxford University Press, 2009; Ayman Shihadeh. *The Teleological Ethics of Fakhr Al-Dīn al-Rāzī*. Islamic Philosophy, Theology and Science. Texts and Studies, v. 64. Leiden, The Netherlands; Boston: Brill, 2006.

In addition to the chronological approach, I use three criteria to determine which scholars' works are sufficiently relevant and influential in the formation of *Ashʿarī* thought. The first criterion is that the works are advanced enough in their expositions that they include some treatment of topics in epistemology or ontology. This is foundational to the question of God's existence and Islam's basic creed, and it is necessary in responding to the philosophical arguments of contemporary atheism. The second criterion is that the scholar's works are identified and recognised by *Ashʿarī* scholars themselves as important contributions to the school. This is done either by reference to Islamic biographical literature (*tabaqāt*) or books on the *Ashʿarī* school (such as Ibn ʿAsākir's *Tabyīn kadhib al-Muftarī Fīmā Nusiba Ilā al-Imām Abī al-Ḥasan al-Ashʿarī*), or the references of scholars on major creedal works. The third criterion I employ is identifying the works of scholars whose texts are recommended and taught in *Sunnī* educational institutions today. Most prominent among these is al-Azhar University, the foremost Islamic educational institution in the world, which adopts and teaches *Ashʿarī* theology and whose curriculum includes many approved texts of *Ashʿarī* scholars from many periods of Muslim history. The works of contemporary *Ashʿarī* thinkers were selected according to two standards: 1. They are committed to *Ashʿarī* epistemological and ontological positions; and 2. They have engaged with at least some critiques of contemporary atheism.

1.2 Chapter Summaries

The thesis is divided into nine chapters:

(1) The first and introductory chapter provides an overview of the thesis and an exposition of the methodology of the research. This discussion covers the research questions, the selection criteria, and the process of identifying primary sources, as well as the method of analysis. The chapter also includes a summary of the chapters.

(2) The second chapter is a study of the development of the *Ashʿarī* school. It reviews academic literature on *Ashʿarī* theology. The works of Richard Frank, Frank Griffel, Franz Rosenthal, and other Western academics are discussed as they pertain to *Ashʿarī* thought, as well as the school's historical development. It should be noted that the focus of Western academic literature has been on historical analysis. I also survey and identify major *Ashʿarī* scholars and their works; based on an engagement with primary source material in Arabic, I present a broad analysis of modern literature on *Ashʿarī* theology. Islamic academic responses to atheism can be categorised into works that address the philosophical arguments of contemporary atheism

and apologetic works that respond to scientific controversies such as evolution and modern physics.[30] The former are more general responses and are usually written by classically trained *Ashʿarī* or *Māturīdī* scholars. These include the works of the last Ottoman, *Shaykh al-Islām* Mustafa Sabri, in his multi-volume critique of secularism and modernism, particularly in the Muslim world. The works of Syrian *Ashʿarī* scholar Muḥammad Saʿīd Ramaḍān al-Buṭī have also been influential in responding to modern philosophy, with a particular attention towards dialectical materialism and secularism. His most influential theological work, *Kubrā Al-Yaqiniyyāt al-Kawnīyya*, is prefaced with a response to philosophical materialism. Contemporary *Ashʿarī* scholar Saʿīd Fodeh offers a number of critiques to modern philosophy. His doctoral thesis addresses arguments for the existence of God in light of contemporary thought.

(3) The third chapter is a survey of contemporary atheism. I begin by analysing the definitions of atheism in academic literature. Even among monotheistic religions, the definition of what is sufficient to be considered a believer in God varies. For example, the level of certainty in one's belief in God is a factor in whether a person is considered a believer. In *Sunnī* Islam's conception of belief (*imān*), it is necessary to hold the fact of God's existence and His necessary attributes as a certainty rather than merely a probable assertion. Since the thesis is examining the engagement of *Ashʿarī kalām* with contemporary atheism, it is necessary to select a definition that is compatible with the conception of belief in Islam and *Ashʿarī* thought in particular. *Ashʿarī* definitions of what constitutes belief in God are well defined in *kalām* literature and are discussed and used to form an accurate definition of atheism from an *Ashʿarī* perspective.

Understanding the historical development of modern philosophy is essential to understanding the philosophical roots of contemporary atheism. I track the evolution of modern-day atheism from the birth of modern Western philosophy in the form of Cartesian dualism through Kant's transcendental idealism, to David Hume's and John Locke's empiricism, down to Fredrich Nietzsche, the Vienna circle, and the rise of post-modernism in the late twentieth century. In doing so, I identify three strands of atheistic thought: the first born of Cartesian rationalism,

---

[30] The latter responses to scientific ideas which may pose problems to classical theology are not covered in the chapter as they do not emerge specifically from an *Ashʿarī* framework but are noteworthy. The majority of works are completed by Muslim scientists, most with limited training in classical Islamic theology. While their contributions are valuable, some present heterodox views that may not be compatible with normative Sunni creed. Among these scientists are Nidhal Guessom and Rana Dajani who address evolutionary biology and Islamic scripture via an accommodative approach by attempting to demonstrate their compatibility at the expense of orthodox scriptural interpretations. In physics Mehmet Bulgen and Basil Altaie respond to the implications of modern physics to Islamic theology.

the second of empiricism, and the third of the necessary conclusions of radical scepticism. Throughout the chapter, I focus on identifying the epistemological and ontological origins of contemporary atheism.

(4) Chapter 4 is dedicated to exploring the epistemology and ontology of *Ashʿarī kalām*. I begin with an overview of the *Ashʿarī* school of theology then continue by analysing the ontological foundations of *Ashʿarī* belief. *Ashʿarī* ontological realism is discussed, as is the role of God in the created world. I explain how the contingent nature of the world is related to divine existence through occasionalism. I describe the different elements of the epistemology of the *Ashʿarī* school. This theory of knowledge and ontology synthesises rational, empirical, and revelatory knowledge into a holistic conceptual model used to defend *Sunnī* Islam's doctrinal beliefs as perceived by *Ashʿarī*s.

(5) In chapter 5, I explain how *Ashʿarī* thought derives philosophical proofs for the existence of God. I identify the *Ashʿarī* methodology and criteria for establishing the existence of God as a logically necessary being. Discussed are the two main proofs for God's existence: the contingency argument (*dalīl al-imkān*) and the argument from beginning (*burhān al-ḥudūth*). The second part of the chapter explores the logically necessary divine attributes, which are categorised into the attributes of negation (*al-ṣifāt al-salbiyya*), real or existent attributes (*al-ṣifāt al-wujudiyya*), and entailed attributes (*al-ṣifāt al-wujdāniyya*).

(6) Chapter 6 is a survey of the *Ashʿarī* responses to the critiques of contemporary atheism. The first part of the chapter categorises the critiques into four types, associated with 1. the nature of causation, 2. the existence of actual infinities, 3. the reliability of deductive reasoning, and 4. epistemic doubt in Islamic scripture. The second part of the chapter examines how *Ashʿarī* thought has responded to each of these critiques. Among these are Fodeh's and Sabri's responses to transcendental idealism and Karamali and Fodeh's refutations of Georg Cantor's belief in the existence of actual infinities based on set theory.

(7) Chapter 7 explores the formulation of an *Ashʿarī* philosophy of science because modern science, as articulated in chapter 3, is often used to argue for atheism. These understandings of science are often founded on epistemic and ontological naturalism. It is therefore necessary to conceive of a philosophy of science that is rooted in *Ashʿarī* thought.

(8) Chapter 8 applies the philosophy of science framework outlined in the previous chapter. A case study is used to demonstrate the capacity of *Ashʿarī kalām* to adequately respond to and engage with particular claims of contemporary atheism in modern science. The speculative possibility of a multiverse is often utilised as a means to argue against the existence of God by providing an explanation of our universe without the need for a supernatural creator. This fact

is negated by arguing that the existence of the multiverse and the existence of God are not mutually exclusive. The chapter examines the compatibility of different types of multiverse theories with *Ashʿarī* thought.

(9) The ninth and final chapter presents a discussion of the main findings of the research and a conclusion, in which I explain how the thesis is a work of theology and philosophy. It aims to shed light on the *Ashʿarī* tradition as a living school able to participate effectively in present-day philosophical and theological debates, not merely as a historical artefact of a bygone age.

Name	Topic
Chapter 1: Introduction	An overview of the thesis and an exposition of the methodology of the research: a discussion of the research questions, the selection criteria and process for identifying primary sources, and the method of analysis.
Chapter 2: The Development of the *Ashʿarī* School	A review of the historical and intellectual development of the *Ashʿarī* school and its major thinkers, along with a review of academic literature on *Ashʿarī* theology. The works of Ayman Shihadeh, Michael Marmura, Richard Frank, Frank Griffel, and other academics are discussed as they pertain to the *Ashʿarī* school's historical development.
Chapter 3: The Foundations of Contemporary Atheism	The determination of an appropriate definition of atheism from an *Ashʿarī* perspective and tracking of the evolution of modern-day atheism, from the birth of modern Western philosophy in the form of Cartesian dualism through to Kantian epistemology, David Hume's empiricism, and finally Nietzsche, the Vienna circle, and the rise of post-modernism in the late twentieth century.
Chapter 4: The Epistemology and Ontology of the *Ashʿarī* School	A discussion of the *Ashʿarī* ontological and epistemological conceptual model with particular focus on ideas that directly pertain to establishing the existence of God and divine attributes.
Chapter 5: *Ashʿarī* Proofs for the Existence of God and Divine Attributes	A description of how the ontological and epistemological *Ashʿarī* conceptual model is used to derive *Ashʿarī* philosophical proofs for the existence of God and the divine attributes.

Chapter 6: A Survey of *Ashʿarī* Reponses to the Critiques of Contemporary Atheism	A categorisation of the main arguments of contemporary atheism and how they have been responded to by *Ashʿarī* scholars.
Chapter 7: Towards the Formulation of an *Ashʿarī* Philosophy of Science	A definition of the relationship between *Ashʿarī* thought and natural science and establishment of a philosophical framework grounded in *Ashʿarī* epistemology and ontology.
Chapter 8: *Ashʿarī* Thought and the Multiverse	An application of the framework established in chapter 7 to the study of the proposed existence of the multiverse.
Chapter 9: Discussion and Conclusion	A summary of the entire thesis and an identification of the gaps and limitations in the thesis, as well as future research opportunities that have opened as a result of this study.

Table 1. Summary of chapter topics.

Chapter 2: The Development of the *Ashʿarī* School

2.0 Introduction

This chapter traces the development of the *Ashʿarī* school and determines the factors that led to its maturation as one of the foremost schools of theology in the Islamic faith. Additionally, the chapter aims to identify some of the most important and influential works of *Ashʿarī kalām*, particularly more advanced texts which include discussions on ontology and epistemology. These are used in the articulation of the *Ashʿarī* theological model later in the thesis. Through these discussions, the chapter fulfils two functions. The first is a review of scholarly literature on the development of *kalām* as a whole, with a particular focus on *Ashʿarī kalām*. The second is an elucidation of the methodology used in identifying a representative body of work that accurately represents the general position of the *Ashʿarī* school.[31]

For the purposes of this study, I examine the *Ashʿarī* school through three lenses. The first explains *Ashʿarī kalām* as it identifies itself: a religious science seeking to preserve a set of immutable creedal beliefs established both rationally and scripturally which are revealed by God and delivered by His messenger, Muḥammad.[32]

The second lens with which to explore *Ashʿarī kalām* is by tracing its development through the school's responses to the many intellectual challenges it has faced throughout its millennia-long history. These provided the impetus for the *Ashʿarī* school's adaptation and increased sophistication and stemmed from sources both external and internal to Islam. Internal

---

[31] Given the focus of this study on engagement with contemporary atheism, and the wide scope of *Ashʿarī* scholarship, greater emphasis will be placed on Ghazālī and post-Ghazālīan thinkers in the thesis as they represent a more mature *Ashʿarī* tradition that has fully engaged Greek philosophy. See: Marshall G. S Hodgson. *The Venture of Islam. 2: The Expansion of Islam in the Middle Periods*. Paper. ed., 14. pr. (Chicago, Ill: Univ. of Chicago Press,1977), 180-3, 323-4.

[32] Saʿīd Fodeh. *Tahthīb Sharḥ al-Sanūsiyya*, (Amman: *Dār al-Rāzī*, 2004), 25-6; Ibrāhīm al-Bayjūrī. *Tuḥfat al-Murīd ʿAlā Jawharat al-Tawḥīd* (Cairo: *Dār al-Salām*, 2002), 38-40; Michael E. Marmura. "Ghazālī and Ash'arism Revisited". *Arabic Sciences and Philosophy* 12, no. 1 (March 2002): 91–110. https://doi.org/10.1017/S0957423902002047; Ayman Shihadeh holds that most *kalām* scholars prior to Ghazālī held the view of this twofold function of *kalām*. He the suggests that while Ghazālī acknowledged both, his focus was on the defensive nature of *kalām* as a confutation of opposing views. I believe that this position is likely a reaction to the numerous ideological challenges that beset *Ashʿarī* orthodoxy at the time (e.g. Neoplatonism, *Ismāʿīlī* esotericism), and Ghazālī's understanding that prioritizing self-purification through correct religious practice was of greater importance due in part to its neglect by the scholarly class of his time. See: Ayman Shihadeh. "From Al-Ghazālī to Al-Rāzī: 6th/12th Century Developments in Muslim Philosophical Theology." *Arabic Sciences and Philosophy* 15, no. 1 (March 2005): 144.

challenges here refer to the ideas of un-orthodox sects as defined by the *Ashʿarī*s. By far the most significant of these are the *Muʿtazilī*s. External challenges refer to ideas brought from outside of Islam, such as Greek philosophy. No clear demarcation between these external and internal sources of dissent from *Ashʿarī* creed exists; rather, they are often an amalgamation of both. The *Muʿtazilī*s, for instance, used peripatetic philosophy to defend their positions, and the translation of Greek philosophy into Arabic is the inspiration behind the Arab philosophical tradition.

The third lens with which to view the development of *Ashʿarī kalām* is how it manifested in Islamic civilisation. This is done by examining social and institutional influences on the propagation of *Sunnī* orthodoxy, of which the *Ashʿarī* school is a part. These three viewpoints provide a more holistic picture of the development of the *Ashʿarī* school and shed light on the methodology used to identify the primary sources referenced in the thesis.

2.1 *Kalām* Defined

To properly trace the development of *Ashʿarī kalām*, it is necessary to define it, which allows for an exploration of *Ashʿarī*sm as it may be understood from within.[33] One can then contextualise the discussion of its evolution with that definition as a frame of reference.

The *Ashʿarī* school forms an integral part of the *Sunnī* tradition, or orthodoxy. Ahmed Shamsy views the formation of orthodoxy as a process created by both ideas and societal influences such as government, societal rituals, and the community of scholars in a given time and place.[34] The role of educational systems and institutions, religious endowments, and political will are thus means via which certain ideas are propagated or repressed.

Other scholars have described orthodoxy as a reflection of those with the power to delineate normative religious beliefs and practice.[35] Whilst societal and political influences are worth noting, this top-down understanding of orthodoxy fails to consider how the tradition was established in the first place and later passed on.[36] Additionally, a top-down approach towards understanding orthodoxy undervalues other factors at play. To trace the history of the ideas of

---

[33] See: Ovamir Anjum. "Islam as a Discursive Tradition: Talal Asad and His Interlocutors." *Comparative Studies of South Asia, Africa and the Middle East* 27, no. 3 (December 1, 2007): 662. https://doi.org/10.1215/1089201x-2007-041.

[34] Ahmed El Shamsy. "The Social Construction of Orthodoxy," in *The Cambridge Companion to Classical Islamic Theology*, 97.

[35] Anjum, "Islam as a Discursive Tradition: Talal Asad and His Interlocutors." 656–72.

[36] Walead Mosaad. *The Transmission of the Islamic Tradition in the Early Modern Era: The Life and Writings of Aḥmad Al-Dārdīr*," PhD diss., (University of Exeter, 2016), 17.

Sunnī creed and its established norms, one should first examine Islamic scripture: the *Qurʾān* and *ḥadīth*.[37] Both provide a basis of understanding the meaning of tradition. The literature references the foundational and authoritative nature of the both the *Qurʾān* and *Sunna* (prophetic example) as a source of guidance. It also designates the role of scholars as *inheritors of prophets* and their consensus on a given issue to be legally authoritative.[38] These two means of understanding Islam – scripture and scholarship – thus determine the content and methodology via which sound meanings are extracted from religious scripture, helping to maintain normative beliefs and practice. As Walead Mosaad explains, tradition or orthodoxy may be defined as,

> The set of transmitted principles, norms, customs, methodologies, and reflected in the intellectual disciplines whose legitimacy is conferred by their commitment to uncovering the intent of the divine commandments as revealed in the *Qurʾān* and prophetic *ḥadīth*, the range and bound of which is circumscribed by scholarly consensus.[39]

Whilst sound, this explanation provides an understanding of tradition in the realm of ideas. A more holistic view of orthodoxy would be a synthesis of Shamsy's and Mosaad's positions which incorporates all the factors involved in the creation of a tradition. That is to hold that these transmitted ideas originated with Prophet Muḥammad and the first generation of Muslims with the role of society and institutions being the preservation and promulgation of these ideas (the latter is discussed below).[40]

In light of the definition above, one may now look to understand the meaning and function of *Ashʿarī kalām* as a theological tradition of *Sunnī* orthodoxy. *Kalām*'s other names, such as *the science of the foundations of religion* (*ʿilm ʾusūl al-dīn*) and *the science of doctrinal beliefs* (*ʿilm al-ʿaqāʾid*), better clarify its relation to other disciplines.[41]

---

[37] Islamic orthodoxy one that is based on foundational texts and is discursive tradition. See Talal Asad conception of orthodoxy in: Anjum, "Islam as a Discursive Tradition: Talal Asad and His Interlocutors.*"* 656–72.

[38] Faraz Rabbani. "Is the Hadith: 'the Scholars Are the Inheritors of the Prophets' Authentic? If so, What Does It Mean? - Faraz Rabbani." Seekers Guidance. Shaykh Faraz, May 9, 2022. https://seekersguidance.org/articles/general-artices/is-the-hadith-the-scholars-are-the-inheritors-of-the-prophets-authentic-if-so-what-does-it-mean-faraz-rabbani/.

[39] Mosaad, *The Transmission of the Islamic Tradition,* 21.

[40] These conceptions of orthodoxy are similarly articulated by William Graham. See: William A. Graham. "Traditionalism in Islam: An Essay in Interpretation". *Journal of Interdisciplinary History* 23, no. 3 (1993): 500. https://doi.org/10.2307/206100.

[41] Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 25.

Scholars viewed subjects of study (such as *kalām*, jurisprudence, grammar, etc.) holistically. Every discipline is seen to be related to other disciplines. Thus, as the name the *science of the foundations of religion* would suggest, *kalām* was perceived as the most important of the sciences and that which underpins all others as it related to the establishment of sound doctrinal beliefs.[42]

Kalām may be defined as the knowledge of doctrinal beliefs and their apodictic proofs.[43] These proofs are derived from scriptural and rational sources. As such, *kalām* aims at correctly defining theological beliefs so that they are conceptualised (*taṣawwur*) accurately and also at providing proofs for these theological positions to establish assent to their veracity (*taṣdīq*).[44] As such, philosophical sciences, such as epistemology, ontology, formal logic, Arabic grammar, and morphology, all relate to *kalām* as ancillary.[45] They are seen as an aid that is

---

[42] This may be understood when looking at the ten principles of *kalām* as delineated by *Ashʿarī*s. According to Bayjūrī, these are: 1. Definition: the knowledge of doctrinal beliefs and their apodictic proofs, 2. Subject: knowledge of what is logically necessary, possible, and impossible regarding God, His messengers, and knowledge of matters of the unseen revealed in revelation (e.g. the last day, heaven, the hell-fire), 3. Benefit: knowledge of God with decisive proofs and attaining everlasting felicity in the afterlife, 4. Virtue: the most honoured of disciplines since it relates to knowledge of God, 5. Relation to other subjects: the foundation of all religious sciences, 6. Founder: Abū al-Ḥasan al-Ashʿarī, and Abū Manṣūr al-Māturīdī, and those scholars that followed them, 7. Name/s: e.g., *ʿilm al-kalām*, *ʿAqīda*, 8. Sources: Rational proofs and scriptural evidence, 9. Legal ruling: incumbent upon every morally responsible person to know basic creedal beliefs and general proofs, 10. Purpose: the exposition of all that leads to knowledge of what is logically necessary, possible, and impossible regarding God, His messengers, and knowledge of matters of the unseen revealed in revelation. See: Bayjūrī, *Tuḥfat al-Murīd*, 38-40; Harun Verstaen. *Principles of Islamic Studies: A Subtle Synopsis of the Ten Principles for Seventeen Islamic Sciences* (*Bayt al-Hikmah*, 2022).

[43] Bayjūrī, *Tuḥfat al-Murīd*, 38; Ḥasan Maḥmūd al-Shāfiʿī,. *Al-Madkhal Ilā Dirāsat ʿIlm al-Kalām*. (Cairo: *Maktabat Wahba*, 1991), 10, 11, 15.

[44] See: Frank Griffel. "Kalām." In *Encyclopedia of Medieval Philosophy*, edited by Henrik Lagerlund, (Dordrecht: Springer Netherlands, 2011), 665–72. https://doi.org/10.1007/978-1-4020-9729-4_286; Richard M. Frank. "The Science of Kalam." *Arabic Sciences and Philosophy* 2, no. 1 (March 1992), 7–37. https://doi.org/10.1017/S0957423900001557; Marmura, "Ghazālī and Ash'arism Revisited", 91–110.

[45] This differentiation between primary and ancillary subjects that provide the cognitive tools necessary for the study and articulation of primary subjects is important in understanding how *Ashʿarī* theology can maintain a consistent doctrine even when incorporating classical logic or elements of Greek philosophy into its schema. Thus, positions such as those of Richard Frank and Alexander Treigar, who argue that Ghazālī was a pseudo-*Ashʿarī*, have been refuted. Firstly, because the ideas that suggest Ghazālī differs with the *Ashʿarī*'s on are either non-essential positions or are easily interpreted to be in congruence with *Ashʿarī* ideas. Secondly, as stated above, Ghazālī's use of some of Avicenna's philosophical concepts are there to articulate and defend established Sunni creed, and is necessary when engaging with philosophical discourse. See: Ahmad Dallal. "Review of Ghazālī and the Perils of Interpretation, by Richard M. Frank," *Journal of the American Oriental Society* 122, no. 4 (2002): 773–87. https://doi.org/10.2307/3217616; Alexander Treiger. *Inspired Knowledge in Islamic Thought: Al-Ghazālī's Theory of Mystical Cognition and Its Avicennian Foundation*. Culture and Civilization in the Middle East, v. 27, (London ; New York: Routledge, 2012).

necessary to reach correct conceptualisation and assent of belief in God and a sound understanding of revelation.

In *Ashʿarī* theology, it is incumbent (*farḍ ʿayn*) on a morally accountable individual to understand and believe in basic theological doctrines and have at least a cursory understanding of why they are true (as is the case with a lay Muslim, for instance).[46] It is therefore not necessary for an individual to understand the particulars of *Ashʿarī* ontology or formal logic or to dictate the sources of knowledge. However, it is a societal obligation (*farḍ kifāyah*) to produce scholars who can further delineate religious beliefs and their proofs to ensure a correct conceptualisation and certainty in beliefs and to dispel misconceptions.[47]

A Muslim community is legally obliged to have trained scholars who understand the specifics of this knowledge such that should any individual wish to inquire, or any intellectual attack come against doctrine, it may be countered. As such, an important part of *kalām* is apologetics. The systematic defence of orthodox beliefs against differing views is the hallmark of *Ashʿarī* discourse and the catalyst that brought into being.

Any sound rational or scriptural method that may aid in correctly understanding and demonstrating the veracity of doctrine may be utilised. The difference between *kalām* and purely rational or speculative theology is that with *kalām*, the conclusions are already determined scripturally, and their understanding is preserved through tradition. The role of rational discourse is thus constrained to two areas: to correctly understand the meaning of revelation and to prove what has already been outlined in revelation.

This may be likened to a mathematical equation, where the final answer is known. All the information needed to find a solution to the equation is present within it. The rules needed to solve the problem are independent of the solution and universally agreed upon by all rational parties. The role of the mathematician in this case is to show the working out and justify the answer. The mathematician must also be proficient enough to answer questions and dispel any misunderstandings regarding their work. *Kalām* as described by the *Ashʿarī*s may be understood in much the same way. The *mutaklim*'s (scholar of *kalām*) role is to demonstrate how creedal beliefs may be proven. Rational inference is universally accepted regardless of

---

[46] Bayjūrī, *Tuḥfat al-Murīd*, 55; Shihadeh, "From Al-Ghazālī to Al-Rāzī," 144.
[47] Ibid. Marmura, "Ghazālī and Ash'arism Revisited", 91–110; Ulrich Rudolph. "Post-Ghazālian Theology What were the Lessons to be Learned from al-Ghazālī?" In *Philosophical Theology in Islam: Later Ashʿarism East and West*, 13.

one's beliefs. Scholars use these to demonstrate the logical inference of their position, dispel misconceptions, and defend their arguments.[48]

2.2 An Overview of the Schools of *Sunnī* Theology

With this understanding of *kalām*, one may begin to explore the historical development of the *Ashʿarī* school from its inception to the present day. It is necessary to discuss, albeit briefly, two other schools of *Sunnī* theology: the *Māturīdī* and *Atharī* traditions.

As the challenges of heterodox theological and philosophical thought to *Sunnī* theology increased, so did the requisite defences to these challenges, such that by the end of the twelfth century, *Ashʿarī*sm had developed a complex system of thought that included its own epistemology, ontology, and even a physical model of the universe through its atomism. All of these aimed to serve the primary purpose of *kalām* – to delineate knowledge of doctrinal beliefs and prove them without doubt.[49] Thus, *Ashʿarī*s viewed their role largely as preservers of an immutable doctrine as revealed by God through the Prophet Muḥammad.

At approximately the same period as the *Ashʿarī* school's inception by Abu al-Ḥasan al-Ashʿarī (d. 324/936), a Central Asian scholar, Abu Mansur al-Māturīdī (d. 333/944), established the eponymous *Māturīdī* school.[50] Despite developing independently of one another, both traditions utilise philosophical theology and hold the same doctrinal positions, with some minor

---

[48] Founder of the school, Abu al-Ḥasan al-Ashʿarī was motivated by his defence of Sunni beliefs against those of the Mutazilites. Some contemporary scholars, such as Sherman Jackson, note that it is argued that the *Ashʿarī* school may be viewed as a perennial commentary against Mutazilites. This is not entirely accurate, but it is nevertheless true that Mutazilī refutation is a reoccurring theme in the literature. See: Marmura, "Ghazālī and Ash'arism Revisited", 91–110; *Istihsān al-khawd fī ʿIlm al-Kalām (A Vindication of the Science of Kalām),* translated by Richard McCarthy. A short treatise attributed to Abu al-Ḥasan Al-Ashʿarī (though this is debatable) in which he argues for the importance of *kalām* and its role in defending creedal beliefs. See: "Istihsān al-khawd fi ʿIlm al-Kalām (A Vindication of the Science of Kalām)". In Al-Ashʿarī, Abu al-Ḥasan, and Richard McCarthy. *The Theology of Al-Ashʿarī.*

[49] In this regard *kalām* scholars are polemical.

[50] Ramon Harvey. *Transcendent God, Rational World: A Māturīdī Theology*. Edinburgh Studies in Islamic Scripture and Theology. (Edinburgh: Edinburgh University Press, 2021), 4-5; Kemalpaşazade, and Saʿīd ʿAbd al-Laṭīf Fodeh. *Masāʾil al-ktilāf baina al-Ashāʿira wa-al-Māturīdīyya: = The points of disagreement between the Ashʿarīs and the Māturīdīs*. 1ˢᵗ ed. (Amman: *Dār al-Fatḥ lil-Dirāsāt wa al-Nashr*, 2009), 11-19.

differences, many of which are deemed semantic in nature.[51] These are in contrast with the third *Ahl al-Ḥadīth* (partisans of *ḥadīth*), also known as the *Atharī* school, which eschewed speculative theology in favour of a more fideistic stance, with some individual scholars at times taking a more literalist approach to scriptural interpretation.[52]

Ancillary to the agreed-upon *Ashʿarī* creed, a plethora of discussions and differences of opinions exist within the *Ashʿarī* school over secondary and tertiary matters of faith (i.e., those whose rational and revelatory evidence would be deemed probable). Additionally, methods of theological proof, whilst largely consistent, are adapted and critiqued.[53] This understanding is in contrast with a more critical view of their theology, which sees *Ashʿarī* theology as a Hellenised Islam.[54]

2.3 Society and Institutions

Salient in Islamic history is the importance of the scholarly class (*ʿulamāʾ*), whose role is to preserve the Islamic tradition: to understand, explain, and interpret scripture within the confines of a set of principles and methodologies to comprehend divine command.[55] From the outset, the *Qurʾān* and *ḥadīth* established a pivotal role for scholars by marking them as preserves of

---

[51] Twelve differences are listed. See: Kemalpaşazade, Fodeh. *Masāʾil al-ktilāf*; Hamza al-Bekri. "*Masāʾil al-Ikhtilāf bayna al-Ashāʿira wa-al-Māturīdiyya* (Matters of disagreement between Ashāʿirs and Māturīdis)." YouTube. Dr Hamza el-Bekri. Accessed, April 24, 2022. https://youtu.be/dunEZ76CmLs.

[52] *Ahl al-Hadith* are in agreement with the *Ashʿarī*'s and the *Māturīdī* school on doctrine with a difference in their methodological approach to theology in that they held a position of consigning the meaning of ambiguous verses to God while affirming God's dissimilarity from created things and refrain from engaging in speculative theology. Scholarship on *Ahl al-Hadith* who are also referred to as *traditionalists* often includes followers of the reformist movement of Muhammad Ibn Abdulwahab along with those more closely aligned with *Ashʿarī* and *Māturīdī* positions within the movement. There is a marked difference between the two that at times is not fully expressed. See: "Who are the Ahl al-Sunna?": https://chechnyaconference.org/material/chechnya-conference-statement-english.pdf [Accessed 31 May 2022]; Jackson, *Islam and the Problem of Black Suffering*, 128-9; Abrahamov, *Islamic Theology: Traditionalism and Rationalism*, 19-31; Schacht, J., "Ahl al-Ḥadīth", in: Encyclopaedia *of Islam, Second* Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 26 January 2023 http://dx.doi.org/10.1163/1573-3912_islam_SIM_0379.

[53] For example, in *al-Mawāqif*, Jurjānī explains that the contingency argument is taken from philosophers and may be used to prove God's existence. In addition to the cosmological argument, contingency is adopted whole heartedly, especially by later *Ashʿarī*s. See chapter 5.

[54] Prominent scholars outside the *Ashʿarī* school, such as Taqī ad-Dīn Ibn Taymīyyah (d. 728/1328) held this position. See: Abrahamov, *Islamic Theology: Traditionalism and Rationalism*, 19-31; Jackson, *Islam and the Problem of Black Suffering*, 130-3.

[55] Mosaad, *The Transmission of the Islamic Tradition*, 19-20, 22.

religious knowledge.[56] Consensus among living scholars in a given time (*ijmā*) regarding a particular legal position is considered immune from error. This understanding is taken from scripture, such as a *ḥadīth* in which the Prophet Muḥammad states, 'My nation will not unite on misguidance'.[57] The *Qurʾān* also alludes to the importance of clinging to the path of believers.[58]

The scholarly community has thus been critical in preserving orthodoxy and orthopraxy, through the establishment of learning communities, methods of teaching, and institutions, in addition to checks and balances that ensured a consistent understanding and practice of religion.[59] Exclusion, as Ahmad Shamsy explains, was a means of enforcing orthodoxy. A particular scholar whose views are deemed un-orthodox may be socially ostracised.[60] Conversely, works of scholars who were accepted were taught and studied.

Scholars built upon and engaged with the works of their predecessors through expositions, commentaries, and textual analysis on creedal works, such as Ibrāhīm al-Laqqānī's (d. 1041/1632) didactic poem *Jawharat al-Tawḥīd*, a widely acclaimed doctrinal work of 144 lines, which summarises the essential creed of *Sunnī* Islam.[61] This condensed body of text (*matn* in Arabic) has been expounded upon in at least two dozen well-known commentaries by various notable scholars (*shurūḥ*) that are taught alongside the text. These commentaries are examined further with footnotes (*ḥawāshī*) which elucidate the meanings of the commentaries. The commentaries and super-commentaries provide painstakingly detailed textual and linguistic analysis, including a study of the grammar, syntax, and etymology of terms used. This model enabled consensus-building on the texts that were deemed accurate preservers of

---

[56] Ibid. See also the following hadith: Muḥammad ibn Ismāʿīl al-Bukhārī,, and Muhammad Muhsin Khan. *Sahih Al-Bukhari: The Translation of the Meanings of Sahih al-Bukhari*: Arabic-English. (Riyadh-Saudi Arabia: Darussalam Pub. & Distr., 1997), 115. http://books.google.com/books?id=GdclAQAAMAAJ.

[57] Muḥammad ibn Yazīd Ibn Mājah, Abū Ṭāhir Zubayr ʿAlī Zaʾī, Nasiruddin Khattab, Huda Khattab, and Abū Khalīl. *English Translation of Sunan Ibn Mâjah*. (Riyadh: Darussalam, 2007), 174-5.

[58] See: Q. (4:115).

[59] These include but are not limited to the *ijāza* system (license or permission to transmit or teach), and the *madrasas*. See: George Makdisi. *The Rise of Colleges: Institutions of Learning in Islam and the West*. (Edinburgh: Edinburgh University Press, 1981), 9-32; Graham, "Traditionalism in Islam", 512. To further emphasize the role of society in the preservation of orthodoxy, we may look to Wael Hallaq, who argues Islamic governance was ruled ultimately by the Shariah, and a strong independent scholarly class. He argues that '"*legislative power*" in Islam was entirely embedded in a socially based, divine body of law' and shariah '*was an independent "legislative power*'. See: Wael B. Hallaq. *The Impossible State: Islam, Politics, and Modernity's Moral Predicament*. New York: Columbia University Press, 2013), 57-63.

[60] Shamsy, "The Social Construction of Orthodoxy." In *The Cambridge Companion to Classical Islamic Theology*, 97–118.

[61] Mosaad, *The Transmission of the Islamic Tradition*, 25; Bayjūrī, *Tuḥfat al-Murīd*.

normative *Sunnī* doctrine and allowed for sophisticated scholarly discussion on these shared documents. Essentially, this model formed a pre-modern version of peer reviewed scholarly work. A *matn* that was of high quality was serviced by the scholarly community, often decades or even centuries later, with extensive *shurūḥ* and *ḥawāshī* and taught at educational institutions around the Muslim world.[62]

The Ottoman *madrasa* is an example of the systematisation of the teaching of Islamic sciences, including *kalām*.[63] The *madrasa* aimed to produce students that were proficient in the Islamic disciplines, including sacred law, legal theory, and *kalām*, as well as the transmission and preservation of the *Qurʾān* and *ḥadīth*.[64]

*Madrasa*s followed a similar formula for teaching religious sciences, which was found across the Muslim world.[65] Students would start studying a short introductory text with a teacher. This

---

[62] A.J Wensinck. "Matn", in: *Encyclopaedia of Islam*, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 27 January 2023 http://dx.doi.org/10.1163/1573-3912_islam_SIM_5041; Gilliot, Cl., "S̲h̲arḥ", in: *Encyclopaedia of Islam*, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 27 January 2023 http://dx.doi.org/10.1163/1573-3912_islam_COM_1039; Franz Rosenthal, "Ḥās̲h̲iya", in: *Encyclopaedia of Islam*, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 27 January 2023 http://dx.doi.org/10.1163/1573-3912_islam_SIM_2794.
This concept may be further appreciated when considering that a primary concern of Islamic societies was the preservation of tradition. See: Graham, "Traditionalism in Islam," 499; Mosaad, *The Transmission of the Islamic Tradition in the Early Modern Era*, 25.
[63] Frank Griffel. *The Formation of Post-Classical Philosophy in Islam*. (New York: Oxford University Press, 2021), 27; Shahab Ahmed, and Nenad Filipovic. "The Sultan's Syllabus: A Curriculum for the Ottoman Imperial Medreses Prescribed in a Fermān of Qānūnī I Süleymān, Dated 973 (1565)." *Studia Islamica*, no. 98/99 (2004): 183–218. http://www.jstor.org/stable/20059215; Makdisi, George. *The Rise of Colleges: Institutions of Learning in Islam and the West*. Edinburgh: Edinburgh University Press, 1981.
[64] These places of learning would graduate students who would later move to careers in government, primary and higher education, and law. As judges, professors, and imams, graduates were often leaders in their communities, which lead to the preservation of normative religion. See: Hamza Karamali. *The Madrasa Curriculum in Context*. (Abu Dhabi: Kalam Research and Media, 2017), 15;, Muhammad al-Faruque. "The Development of the Institution of Madrasah and the Niẓāmiyah of Baghdad." *Islamic Studies* 26, no. 3 (1987): 256. http://www.jstor.org/stable/20839845; Ebrahim Moosa. *What Is a Madrasa?* Islamic Civilization and Muslim Networks. (Chapel Hill: The University of North Carolina Press, 2015), 108-114.
[65] Karamali, *The Madrasa Curriculum*, 29; Moosa, *What Is a Madrasa?*, 109.
George Makdisi argues that while madrasas in theory shared similar curriculums, founders of institutions had the freedom to set the curriculum so there were differences. Nevertheless, we can still see similarity in contemporary schools and recent scholarship challenges this notion (see Karamali and Moosa, cited above). Makdisi also argues that they were focused solely on jurisprudence (*fiqh*). That said, as Muhammad al-Faruque argues there is evidence of a more diverse curriculum which includes *kalām*. Karamali, Ebrahim, and al-Faruque argue that there are a variety of subjects within a traditional madrasa curriculum that included the study of *kalām*. See: Muhammad al-Faruque. "The Development of the Institution of Madrasah and the Niẓāmiyah of Baghdad." *Islamic Studies* 26, no. 3 (1987): 256; Makdisi, *The Rise of Colleges*, 80. Modern examples of consistency of curriculum can be seen in the

primer would often be coupled with a commentary outlining the elementary ideas for a given subject. These simple creedal formulas were committed to memory and understood at a basic level. Once a student had mastered the beginner level, they would move on to study an intermediate text, which included further exposition of the topics covered in the first level, via understanding logical and scriptural proofs and identifying areas of differing opinion. The advanced *kalām* texts would cover the philosophical foundations of the rational proofs. Epistemology and ontology, as well as the further elaboration on topics covered in the previous levels including analysis of evidence and critique of scholarly differences, formed a significant portion of the material.[66] Introductory texts include Aḥmad al-Dardīr's *Sharḥ al-Kharīda al-Bahīyya*, a short didactic poem covering the fundamentals of *Ashʿarī* creed, and Sanūsī's *Ṣughrā*. Second level texts include Ghazālī's *al-Iqtiṣād fī al-Iʿtiqād*, or *Moderation in Belief,* and Muḥammad Ibn-Yūsuf al-Sanūsī's *Sharḥ al-ʿAqīda al-Kubrā*. Advanced texts include Aṣfahānī's commentary on Bayḍāwī's *Matāliʾ al-Anwār* and Taftazānī multi-volume commentary on his own treatise, *al-Maqāṣid*.[67]

Today, major educational institutions around the world which incorporate *Ashʿarī* theology in their curricula include al-Azhar University in Egypt, the Cambridge Muslims College in the United Kingdom, and the first Muslim liberal arts college in the United States, Zaytuna College.[68] Even in areas where their theology was not as prevalent, such as the *Darul Uloom madrasa* system, *Ashʿarī* scholars still played an important role in establishing the Indian scholarly class which formed the *Darul Uloom* franchise.[69] *Ashʿarī* theology also was highly influential in the post-classical Ottoman *madrasa* system.[70]

2.4 Intellectual Challenges

The development of *Ashʿarī* thought can be understood through its adaptation to ideas that conflict with its basic doctrine (*ʿaqīda*). Four notable intellectual challenges shaped *Ashʿarī*

---

adoption of Deobandi Programmes of study in educational institutions in Europe and North America. See: Masooda Bano, ed. *Modern Islamic Authority and Social Change*. (Edinburgh: Edinburgh University Press, 2018), 2:184-6.
[66] Karamali, *The Madrasa Curriculum*, 1.
[67] See chapters 4 and 5 for further elaboration on some these works including full biographical information.
[68] Bano, *Modern Islamic Authority*, 2: 59, 89, 184-6.
[69] Ibid, 1:219, 222.
[70] Ibid, 301.

scholarship throughout history: *Muʿtazilī* thought, Greek and Arab philosophy, literalist traditionalism, and modern science and philosophy. As discussed below, all but the latter have been sufficiently engaged with. Modern science and philosophy are seminal in the formation of contemporary atheism. Chapter 6 examines *Ashʿarī* scholarship as it pertains to them in more detail.

What follows is a brief phenomenological history of how Muslim scholars conceptualised the development of *Ashʿarī* theology. However, whilst Western critical historical methods have much to contribute, since the disciplinary focus of this thesis is more theological than historical, I suffice with only narrating the internal historical narrative of Muslim theologians.

During the lifetime of the Prophet Muḥammad and the subsequent rapid expansion of Muslim polities beyond the Arabian Peninsula, early Muslims practised little in the way of discursive theology. This is because the first community of Arabs to whom the Prophet preached were an insular society settled in the depths of the hostile Arabian desert. They were a largely unlettered community prior to Islam, who lacked a dedicated class of learned intelligentsia, which was a feature of the more sophisticated civilisations of their Byzantine and Persian neighbours.[71]

Theological disputations recorded in the *Qurʾān* with entrenched polytheistic understandings of the pre-Islamic Arabs are numerous.[72] Additionally, the *Qurʾān* addresses their denial of resurrection through similitudes of the dead being brought back to life and the demonstration of divine omnipotence that would permit its occurrence.[73] Here, a dialectic can be seen with a theological challenge to basic Islamic doctrine that was responded to through rational argument. Abu al-Ḥasan al-Ashʿarī posits that these examples demonstrate not only the validity but also the centrality of *kalām* according to the Islamic tradition.[74]

The physical and temporal proximity of the first generation of Muslims to the prophetic message engendered a deep spiritually infused faith, which, although rationally sound and

---

[71] Blankinship, 'The Early Creed'. In *The Cambridge Companion to Classical Islamic Theology*, edited by Tim Winter, 1st ed., 33–54. That said, the Arabs demonstrated a brilliant command of and devotion to language, producing an impressive oral tradition in which poetry was an integral part of their heritage and culture.

[72] Ibid. These include debates with Arab Christian emissaries with Prophet Muhammad on the nature of Jesus, as well as arguments in the *Qurʾān* levelled against polytheism.

[73] Abū al-Ḥasan ʿAlī ibn Ismāʿīl al-Ashʿarī, and Richard Joseph McCarthy. *The Theology of al-Ashʿarī : the Arabic texts of al-Ashʿari's kitāb al-lumaʿ and Risālat Istiḥsān al-Khawḍ fī ʿilm al-kalām* with briefly annotated translations, and appendices containing material pertinent to the study of al-Ash'ari. (Beirut: Impr. catholique, 1953), 120-134.

[74] Ibid.

professed as a logical theology, was uncluttered by the need to engage in lengthy philosophical disputations.[75] Through their rule as minorities in newly acquired lands of the Levant, Iraq, Persia, and North Africa, Muslims began interacting with the ever more literate and mature scholarly Jewish, Christian, and Zoroastrian traditions. Because of this, theological questions about the nature of God and His divine attributes began to emerge. The meanings of the *Qurʾān*, evident to the Arabs of the time, as they were revealed in their mother tongue, were not as readily accessible to non-native speakers and converts.

Initial internal upheaval brought about by an early civil war in the nascent empire between the fourth khalif, ʿAlī bin Abī-Ṭālib, and the Syrian governor, Muʿāwiya bin Abī-Sufyān, was to plant the seed of lasting rifts in the Muslim community.[76] These differences, whilst political at first, led to theological disputes in later generations. This period saw the rise of a group known as the Khawārij (*those who revolted*), who rebelled against ʿAlī's willingness to accept arbitration in the dispute between his faction and Muʿāwiya's. Their motto was that rule belongs to God alone. As a result of accepting the judgement of another human being, the Khawārij felt that the factions of ʿAlī and Muʿāwiya had gone against *Qurʾān*ic injunction and essentially apostatised with this act. The *Khawārij* developed a fundamentalist and zealous ethos, although later sects would develop more moderate ideologies, such as those of the *Sufriyya* and the *Ibāḍiyya*. [77]

Later, some of the followers of ʿAli bin Abī-Ṭālib asserted that political succession could only occur in the family of the Prophet. They would later develop into the major doctrinal schism of *Shīʿism* in its various forms.[78] The *Ashʿarī* school, whilst emerging 300 years later, was nonetheless to address many of the areas of disagreement arising from these early differences. Issues which are not inherently theological, such as legal rulings on the establishment of a political leader (*imām*) and the showing of reverence and ascribing piety and moral uprightness to the companions of the Prophet, were included in *Ashʿarī* theological works as they are points of divergence with Shia doctrine.[79] To avoid anthropomorphism and corporealism, correct methods of interpreting ambiguous verses regarding God's attributes in the *Qurʾān* were

---

[75] Aḥmad Ibn-Muḥammad al-Ṭaḥāwī,, and Hamza Yusuf. *The Creed of Imam Al-Ṭaḥāwī* 1. ed. (Berkeley, Calif: Zaytuna Institute, 2007), 14-15.
[76] Blankinship, "The Early Creed," 36.
[77] Blankinship, "The Early Creed," 38-9; Ṭaḥāwī and Yusuf, *The Creed of Imam Al-Ṭaḥāwī,* 17-19;
[78] Blankinship, "The Early Creed", 40-1.
[79] See verses (75-78) and (130-133) in Bayjūrī, *Tuḥfat al-Murīd*, 18, 20.

addressed.[80] However, it was the contestations of correct doctrine that occurred with the *Muʿtazilī*s which became the most significant influence on the development of the *Ashʿarī* school.

2.4.1 *Muʿtazilī* Theology

Few Islamic groups were as influential and ideologically antagonistic to the creation and development of the *Ashʿarī* school as the *Muʿtazilī*s. Self-described as the people of Justice and [God's] Unity*, ahl al-ʿAdl wa al-Tawḥīd*, the *Muʿtazilī*s were the first Muslim sect to develop their own sophisticated system of discursive theology. Their origins may be traced back to two Basran's: Wāṣil bin ʿAttāʾ (d. 131/748) and ʿAmr ibn ʿUbayd (d. 143–4/761), along with Abu Huthayl al-ʿAllāf (d. 235/850), who further developed their theology and first articulated the five principles of *Muʿtazilī* thought, some of which are explained below.[81] Other notable *Muʿtazilī* thinkers include Bishr bin al-Muʿtamir (d. 210/825), Abū ʿAlī Muḥammad al-Jubbāʾī (d. 302/915), and Qāḍī ʿAbduljabbār (d. 415/1025).[82.]

The creation of the *Ashʿarī* school was initially predicated on the defence of their view of orthodoxy against *Muʿtazilī* ideas (see the section on al-Ashʿarī). Their scholarly sophistication made them formidable adversaries. Even centuries after the demise of the *Muʿtazilī*s as a living school of theology, *Ashʿarī* texts taught today still dedicate large parts of their discussions to refuting *Muʿtazilī* positions on diverse topics, from the nature of God's divine attributes to the possibility of the beatific vision of God in paradise.

There are four main areas of contention between the *Ashʿarī*s and *Muʿtazilī*s that pertain directly to the current discussion on the nature of God. The first is the *Muʿtazilī* conception of God's unity, which led to their denial of ascribing attributes to God. Instead, attributes mentioned in the *Qurʾān* could be interpreted metaphorically. God's *hand* could be interpreted as an allusion to His ability to act; His speech refers to that of created words existing temporally. Whilst some of their interpretations could be accommodated to some extent, such

---

[80] Bayjūrī, *Tuḥfat al-Murīd*, 156-159.
[81] Blankenship, "The Early Creed," 47-51; D. Gimaret, "Muʿtazila", in: Encyclopaedia of Islam, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 28 January 2023 http://dx.doi.org/10.1163/1573-3912_islam_COM_0822.
[82] Ibid.

as those attributes whose literal meaning denoted clear anthropomorphism, the *Muʿtazilī*s took this denial of attributes a step further by rejecting them altogether.[83]

*Ashʿarī*s countered by referring to scriptural evidence of these attributes, as well as a supra-rational interpretation of meaning of God's attributes. They are neither equal to nor other than God and are predicated on logical and scriptural necessary (see chapter 5).[84] Perhaps the most renowned controversy on this matter related to *Muʿtazilī* belief on the nature of the *Qurʾān*. Contrary to the orthodox opinion, which views the *Qurʾān* as the uncreated speech of God (in as much as the words indicate divine pre-eternal speech), the *Muʿtazilī*s held that the *Qurʾān* was the created speech of God.[85] Jurist and founder of the *Ḥanbalī* school of law, Aḥmad Ibn Ḥanbal (d. 241/855), was famously chastised, imprisoned, and tortured by the inquisition of *Muʿtazilī* Abbasid caliph al-Maʾmūn (d. 218/833) for refusing to compromise on this point.[86]

A second area of contention was that *Muʿtazilī*s held that God's justice took precedence over His other attributes.[87] It was thus incumbent upon God to always do what was in the best interest of His creation. This includes the necessity of sending messengers to guide people and conferring upon them rational faculties that can independently identify the morality of an action.[88] This meant that a person is deemed morally responsible even before the coming of revelation. The *Ashʿarī*s held a contrary view, in which moral accountability (*taklīf*) was contingent upon receiving news of divine revelation (*bulugh al-daʿwa*).[89]

The third point of difference relates to the existence of evil and suffering in the world. *Muʿtazilī*s held that it could be explained by their conception of human free will. They attributed to people the power to not only choose but also create their own actions. It was not

---

[83] For example, they believed that one could not ascribe to God the attribute of knowledge or power. Rather, God is powerful and knowledgeable. He knows and acts directly from His essence because to ascribe these attributes to God would entail the existence of pre-eternal entities alongside Him, which would be inconceivable. See: Ṭaḥāwī and Yusuf. *The Creed of Imam Al-Ṭaḥāwī*, 20.

[84] Ibid.

[85] Henry Corbin. *History of Islamic Philosophy*. (London ; New York : Kegan Paul International; In association with Islamic Publications for the Institute of Ismaili Studies, 1993), 110.

[86] This is a prime example of the role of the scholarly class in the preservation of orthodoxy in society. See: Britannica, T. Editors of Encyclopaedia. "miḥnah." Encyclopedia Britannica, July 20, 1998. https://www.britannica.com/topic/mihnah.

[87] Ibid.

[88] Richard M Frank. "*Several fundamental assumptions of the Basra school of the Muʿtazila,*" In *Richard M. Frank: Early Islamic Theology: The Muʿtazilites and al-Ashʿarī. Texts and Studies on the Development and History of Kalām, Vol. II.* Edited by Dimitri Gutas. (Burlington and Aldershot: Routledge, 2007), 7; Jackson, *Islam and the Problem of Black Suffering*, 56.

[89] Bayjūrī, *Tuḥfat al-Murīd,* 37-8.

God but human beings who created their actions (although God endowed them with that power).[90] This is in contrast with the occasionalist view of the *Ashʿarīs*, who viewed God as the sole efficient cause of change in the universe, with human beings acquiring their actions through their choices (*kasb*).[91]

The *Muʿtazilī*s emphasised the capacity of the mind to reach objective truths. Thus, they believed in the ability of the intellect to determine God's existence and to ascertain morality, independently of divine revelation. An unrepentant believer who committed a sin was said to be in an intermediate state (*manzila bayna manzilatayn*), meaning they were considered neither a believer nor a non-believer.[92]

Fourth, the primacy of God's justice meant that it was incumbent upon Him to reward believers with paradise and punish non-believers with hellfire.[93] Thus, there was no possibility of the intercession of prophets and righteous individuals on behalf of unrepentant sinners on the day of judgement, nor God's forgiveness of them, as is understood by *Ashʿarī*s through their understanding of *ḥadīth* and *Qurʾān*ic verses stating as such.

The creation and spread of the *Ashʿarī* school can partly be viewed as akin to an immunological response to the ideas of the *Muʿtazilī*s by traditional *Sunnī* Islam. The significance of their school of thought is attributed to their fully realised system of thought and its inclusion of Hellenistic philosophy. Additionally, *Muʿtazilī*s were influential because their ideas came from within Islam and were not seen as being superimposed from outside the religion. Whilst they employed Greek philosophy in their theology, their ideas were distinctly Islamic. Other religious theologies, such as Christian, Jewish, or purely Hellenistic philosophies, were effective influences on theology only to the extent that they were appropriated by Muslims and used to develop their own theologies that were Islamic or at least ostensibly Islamic. *Muʿtazilī*s excelled at this. Their system of thought was sophisticated and had practical implications with regards to the lay Muslim's conception of God. Khalid Blankenship argues that, especially early, *Muʿtazilī* thought conveyed God as a less personal deity, in contrast with the more personal traditional *Sunnī* idea of God.[94]

---

[90] Frank, "*Several fundamental assumptions of the Basra school of the Muʿtazila*", 7.
[91] See chapters 4 and 5 for further information.
[92] Corbin, *History of Islamic Philosophy*, 111.
[93] Jackson, *Islam and the Problem of Black Suffering,* 51.
[94] Blankenship, "The Early Creed," 50.

That said, the *Ashʿarī* school does share a number of important positions and methods of reasoning with the *Muʿtazilī*s. This includes their arguments for God's existence and their use of Aristotelian logic. *Muʿtazilī*s understood God as the logically necessary creator, whose existence could be proven rationally without doubt. Some ideas in ontology were shared by some *Ashʿarī*s, such as the *theory of states* (*aḥwāl*), which was championed by Bāqilānī.[95]

2.4.2 Greek and Arab Philosophy

From the beginning of the Abbasid dynasty and under its patronage, for around 200 years up until the tenth century, a large corpus of Greek philosophical literature was translated into Arabic.[96] This had a considerable influence on the *kalām* tradition. The *Ashʿarī* school would adopt ideas and methodologies from Greek philosophy, such as classical logic, to build a systematic school of thought.[97] Conversely, Greek philosophy posed a series of significant challenges to traditional *Sunnī* creed, including positions on the nature of God and His attributes, as well as cosmological and eschatological claims contrary to *Ashʿarī* teachings.

The interaction of Arab philosophers with Aristotelian and Neo-Platonic ideas produced an Arab and Islamic philosophical tradition adapted from Greek thought. In other words, translations were not only studied but modified and built upon.[98] The earliest texts included Aristotle's *Analytics* and Porphyry's *Isagoge*, translated by Ibn al-Muqaffaʿ (d. 142/759)

---

[95] Theile, Jan. 'Ḥāl (Theory of "states" in Theology)'. In Encyclopaedia of Islam, three, edited by Kate Fleet, Gudrun Krämer, Denis Matringe, John Nawas, and Devin J. Stewart. Accessed June 14, 2023. doi:http://dx.doi.org/10.1163/1573-3912_ei3_COM_30220; His aḥwāl theory which will be discussed in later chapters was not accepted by the majority of *Ashʿarī*s. Bāqilānī was a highly influential *Ashʿarī* whose work was instrumental in the spread of *Ashʿarī* school in the levant and Iraq. See: Hodgson, *The Venture of Islam. 2: The Expansion of Islam in the Middle Periods*, 2:175.

[96] Dimitri Gutas. *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early ʿAbbāsid Society (2nd-4th/8th-10th Centuries)*. (London ; New York: Routledge, 1998), xiii, 1.

[97] Shihadeh puts forth a strong argument regarding the centrality of *Ashʿarī* theologian Fakhr al-Dīn al-Rāzī in completing the synthesis between *Ashʿarī kalām* and philosophy. He developed a theological philosophy defending *Ashʿarī* doctrine. Through this we may understand why scholars such as Dimtri Gutas called the *kalām* approach 'paraphilosophy' because it was constrained by theological premises that according to Gutas disqualified it from being categorised as legitimate philosophical pursuit. See: Shihadeh, "From Al-Ghazālī to Al-Rāzī," 177-9; Dimitri Gutas. "*Avicenna and After: The Development of Paraphilosophy. A History of Science Approach*", in Islamic Philosophy from the 12th to the 14th Century, edited by A. Al Ghouz (Bonn: Bonn University Press, 2018), 42-56.

[98] This contrary to the once prevalent conception that Arab philosophers were passive recipients who added little or nothing to the ideas of philosophy. See: Dimitri Gutas. "The Study of Arabic Philosophy in the Twentieth Century: An Essay on the Historiography of Arabic Philosophy." *British Journal of Middle Eastern Studies* 29, no. 1 (2002): 10-11. http://www.jstor.org/stable/826146.

during the caliphate of al-Maʾmūn; both works were influential in the adoption of formal logic in *kalām*. The latter text, originally an introduction to Aristotle's categories, was later commented and expanded upon by famed philosopher, astronomer, and mathematician Athīr al-Dīn al-Abharī (d. between 660/1263–663/1265) and intended as primer on formal logic.[99] The text is highly influential in Islamic studies curriculum, with numerous commentaries written on it. It has been a part of Islamic educational institutional programmes of study throughout the Muslim world for centuries, including at al-Azhar university.[100]

Famous Arab philosopher Abū Yūsuf Yaʿqūb b. Isḥāq al-Kindī (d. 256/873) initiated the grand project of translating and incorporating Neo-Platonic and Aristotelian philosophy into his own thought. He and his circle of scholars translated numerous Greek texts.[101] Abū Naṣr Muḥammad al-Fārābī (d. 339/950) was the first to begin a systemisation of his own metaphysics based on an amalgamation of Neo-Platonic and Islamic ideas.[102]

However, the philosopher whose work was most directly challenged by the *Ashʿarī* school was the ideological successor of Kindī and Fārābī, Ibn Sīnā (d. 428/1037), or Avicenna, as is the Latinised name.[103] His system of philosophical theology included a Neo-Platonic rejection of creation *ex nihilo* and a cosmology which included the belief in the radical contingency of the universe on God. He wrote a series of encyclopaedic works on philosophy, including *al-Shifāʾ* (*The Cure*), which covered a wide variety of topics, including epistemology, ontology, and theology. Despite numerous distinct differences, *Ashʿarī* thought does overlap with Avicennian philosophy. Examples in ontology include their belief in the differentiation between the existence and essence of entities. In epistemology, they agree on the validity of syllogistic reasoning.[104] Theologically, they are aligned in their belief in the necessary existence of God and in their shared acceptance of the contingency argument for God's existence.

---

[99] Salim Aydüz, Leonard B. Abbey, Thomas R. Williams, Wayne Orchiston, Hüseyin Topdemir, Christof A. Plicht, Margherita Hack, et al. "Abharī: Athīr Al-Dīn Al-Mufaḍḍal Ibn ʿUmar Ibn Al-Mufaḍḍal Al-Samarqandī Al-Abharī." In *The Biographical Encyclopedia of Astronomers*, edited by Thomas Hockey, Virginia Trimble, Thomas R. Williams, Katherine Bracher, Richard A. Jarrell, Jordan D. Marché, F. Jamil Ragep, JoAnn Palmeri, and Marvin Bolt (New York, NY: Springer New York, 2007), 7-8. https://doi.org/10.1007/978-0-387-30400-7_9.

[100] *Al-Manāhij al-Azharīyya: Qāʾima bi-al-Kutub al-Muʿtamada fī al-Azhar al-Sharīf. 1st edition*, (Cairo: *al-Azhar*, 2016), 138.

[101] Gutas, *Greek Thought, Arabic Culture,* 145.

[102] Majid Fakhry. *Al-Farabi: founder of Islamic Neoplatonism; his life, works and influence*. (Oxford: Oneworld, 2002), 2-3.

[103] Sajjad Rizvi. "Avicenna (Ibn Sina) (c. 980—1037),". *The Internet Encyclopedia of Philosophy*, ISSN 2161-0002, https://iep.utm.edu/, Accessed: 5 May 2022.

[104] Ibid.

Scholarly opinion on the relationship between *Sunnī kalām* and philosophy has seen the articulation of several broad ideas. The oldest and perhaps one of the most prevailing views in the literature is that *kalām* and philosophy were two distinct and incompatible pursuits.[105] This first idea is founded on the narrative that Ghazālī's critiques of Greek philosophy in his *Incoherence of the Philosophers* (*Tahāfut al-Falāsifa*) marks the beginning of a complete disengagement with philosophy in Islamic civilisation and is a factor in its subsequent decline.[106]

A cursory study of *kalām* works post-Ghazālī reveals that this idea lacks nuance and fails to acknowledge that most influential works on theology in the *Ashʿarī* tradition engage thoroughly in philosophical discussions, particularly in the fields of general ontology (*umūr ʿāmma*) and epistemology.[107] Indeed, this belief is no longer as widely accepted in scholarly literature.[108] Rather, the research has moved towards more varied and nuanced perceptions of the relationship between *kalām* and philosophy.

Dimitri Gutas is of a similar opinion as the first in that he deems post-Avicennian philosophy as *paraphilosophy* (e.g., philosophical theology post-Ghazālī) because it was bound by theological constraints and was overly concerned with apologetics. As Gutas argues, philosophy and science are open endeavours, and to limit them with theological doctrine is to render their true function sterile.[109] Here, Gutas is revisiting the first narrative by claiming that the intellectual activities of post-Avicennian thinkers, such as Ghazālī and Fakhr al-Dīn al-Rāzī (d. 606/1210), only mimicked real philosophy. At the heart of this understanding is his use of the definition of philosophy as it was understood in pre-modernity, as an overarching term that is concerned with all rational disciplines including the natural sciences.[110] Frank

---

[105] Gutas, "The Study of Arabic Philosophy in the Twentieth Century: An Essay on the Historiography of Arabic Philosophy.".

[106] Ayman Shihadeh, and Jan Thiele, Ed. Philosophical Theology in Islam: Later *Ashʿarī*sm East and West. (Brill, 2020), 1. https://doi.org/10.1163/9789004426610;

[107] Griffel, *The Formation of Post-Classical Philosophy in Islam*, 94-96.

[108] Ayman Shihadeh, and Jan Thiele, Ed. Philosophical Theology in Islam, 2; Malik, Shoaib, "Did Al-Ghazali Condemn Philosophy and Science? With Dr. Shoaib Ahmed Malik". Blogging Theology. 13 April. 2023. Accessed, 16 June 2023. https://youtu.be/6QjSXJSt7KI.

[109] Gutas' analysis is undergirded by what seems to be a naturalistic metaphysics. For instance, he defines religious beliefs as '*a mythological narrative endorsed by society at large*'. Here he is arguing for the validity of this metaphysical system as a source of objective truth over others. Scientific naturalism appears to be the standard which Gutas has chosen as the measure of the validity of which pursuit is deemed correct as a philosophy and which to relegate to *paraphilosophy*. One may argue that the setting of conditions by *Ashʿarī kalām* on philosophy are no different than any of the parameters Gutas himself has set through secular metaphysics or the conditions set by assuming any metaphysical school of thought. See: Gutas, "Avicenna and After: The Development of Paraphilosophy. A History of Science Approach", 20-1, 39, 42-56.

[110] Ibid, 20.

Griffel's work strongly disputes this conception by arguing that in addition to *kalām*, a parallel philosophical tradition (*hikmah*) developed and indeed thrived post-Ghazālī.[111]

Richard Frank's detailed exposition of the development of *Ashʿarī kalām* decisively shifts some of the perceptions of the *end of philosophy* narrative. For instance, in his work, he demonstrates the sophisticated ontological positions of *Ashʿarī*s and identifies *kalām* as a pursuit which incorporates philosophy, particularly ontology and logic, into its schema.[112]

Another position sees some scholars taking a completely opposing view to the first. Alexander Trieger makes the rather extraordinary argument that Ghazālī was a pseudo-*Ashʿarī*, whose opinions were sympathetic to philosophy, given his acknowledgement that some Neo-Platonist philosophical positions were not in conflict with theology.[113] This view has been challenged, given the great interpretative room needed to argue this point. Even if one were to accept some of the discrepancies found in Ghazālī's later work, it is still difficult to sufficiently refute the argument that he followed *Ashʿarī* doctrine.[114]

A look at the work of Ayman Shihadeh, Michael Marmura, and Montgomery Watt reveals a balanced approach to how philosophy and *Ashʿarī kalām* intersected. Shihadeh and Marmura provide an important synthesis of these views and hold the position of this nuanced relationship between *Ashʿarī kalām* and philosophy. In his paper *Ghazālī and Ashʿarīsm Revisited*, Marmura clarifies that the aim of philosophical pursuit for Arab philosophers such as Kindī and Farābī was that of finding the ultimate true nature of all things, whereas this was not the case for *Ashʿarī kalām*.[115] Ghazālī recognised that philosophy was limited in its capacity to attain true knowledge of things; rather he limited its scope to a means via which to rationally understand and defend theological positions.[116]

[111] Sultan Saluti. 'Frank Griffel. The Formation of Post-Classical Philosophy in Islam' review of *The Formation of Post-Classical Philosophy in Islam* (Oxford: Oxford University Press, 2021) *Revista Española de Filosofía Medieval* 29, no. 1 (12 October 2022): 256–59. https://doi.org/10.21071/refime.v29i1.15153.

[112] Frank, Richard M. "The Science of *Kalām*". 7–37.

[113] Alexander Treiger. *Inspired Knowledge in Islamic Thought: Al-Ghazālī's Theory of Mystical Cognition and Its Avicennian Foundation*. Culture and Civilization in the Middle East, v. 27. (London ; New York: Routledge, 2012), 93-6. Also see the section on Ghazālī.

[114] Tobias Mayer. "Al-Ghazālī and the Ashʿarite School, by Richard M. Frank," *Journal of* Qurʾān*ic Studies* 1, no. 1 (Durham and London, Duke University Press, 1994), 170–82. https://doi.org/10.3366/jqs.1999.1.1.170.

[115] Marmura, 'Ghazālī and Ashʿarism Revisited', 91–110.

[116] Ibid; Oliver Leaman, 'Islamic Philosophical Theology', in Thomas P. Flint, and Michael C. Rea (eds), The Oxford Handbook of Philosophical Theology (2011; online edn, Oxford Academic, 2 Sept. 2009), https://doi.org/10.1093/oxfordhb/9780199596539.013.0026, accessed 23 June 2023.

Ayman Shihadeh's work on the development of the *Ashʿarī* school between Ghazālī and Rāzī shows that Rāzī sought the systemisation of *Ashʿarī kalām*, a marked difference from Ghazālī's dialectic approach.[117] In conclusion, as Montgomery Watt correctly summarises, the *Ashʿarī* and *Māturīdī* schools were able to properly integrate Greek philosophical positions into their *Sunnī kalām* without compromising doctrinal integrity.[118]

Whilst *Ashʿarī* responses to the positions of Arab philosophers (*falāsifa*) prior to Ghazālī exist (such as the allusions of Bāqilānī and others to philosophers), it was Ghazālī's seminal work, *The Incoherence of the Philosophers* (*Tahāfut al-Falāsifa*), that set the stage for a major shift in *Ashʿarī* literature towards an engagement with Arab and Greek philosophy. Followed later by thinkers such as Fakhr al-Dīn al-Rāzī, Saʿd al-Dīn al-Taftāzānī (d. 719/1390), and ʿAbd al-Qāhir bin ʿAbd al-Raḥmān al-Jurjānī (d. 471/1078), they worked on responding to and incorporating elements of Neo-Platonic and peripatetic philosophy into *Ashʿarī Kalām*.[119] Instead of rejecting all aspects of Greek philosophy outright, Ghazālī and later *Ashʿarī*s subsumed the philosophical tradition and aligned it with their orthodoxy.[120] They likely conceived of their work as sifting the wheat of sound methodology (such as classical logic and the contingency argument for God's existence) from the chaff of heterodox claims and opinions (such as the emanation principle of the universe).[121] This is the key distinctive feature of *kalām* which may explain the stark differences in positions within Western academic literature. As explained above, Gutas' conception of the new *kalām* being a *para-philosophy* was taken from the correct understanding that the *kalām* after its engagement with Avicennian philosophy was markedly different from previous iterations in that it gained a set of rational tools, ancillary to its primary pursuit, the delineation and preservation of theological doctrine. As understood by

---

[117] See: Shihadeh, "*From Al-Ghazālī to Al-Rāzī*".

[118] Montgomery Watt. *Islamic Philosophy and Theology: An Extended Survey*. (Edinburgh: Edinburgh University Press, 1985), 68.

[119] These are highly influential *Ashʿarī* scholars whose works are studies around the Muslim world up to the present day. See: Shāfiʿī, Ḥasan Maḥmūd al-. *Al-Madkhal Ilā Dirāsat ʿilm al-Kalām, 110*.

[120] Karamali, Hamza. *The Madrasa Curriculum in Context*, 20.

[121] This is related to Ulrich Rudolph's elaboration of three different conceptions of philosophy before Ghazālī. The first is that philosophy was conceived of as a system and methodology of thought that was distinguished in its ability to attain knowledge and trans-disciplinary. The second usage which was adopted by *kalām* scholars was that philosophy was a group of heterodoxic or heretical ideas. The third conception was that philosophy was a system of thought that could be incorporated into multiple disciplines but did not have a monopoly on true knowledge. Ghazālī and post-Ghazālīan *kalām* scholars steer a new path that recognises the utility of the methodological approaches of philosophy and the doctrinal claims of some philosophers and maintaining the primacy of revelation as a source of knowledge. See: Frank Griffel. *The Formation of Post-Classical Philosophy in Islam*. New York: Oxford University Press, 2021), 94-96.

*Ashʿarī*s, *kalām* as a philosophical theology consists of an immutable and malleable element. The immutable are basic doctrinal positions; the malleable are the rational tools that one may use to substantiate them.[122]

The content of philosophical ideas was nevertheless forcefully argued against by *kalām* scholars, with the first and perhaps the most important attempt being made by Ghazālī in his *Tahāfut al-Falāsifa*. To illustrate the areas of conflict between *falsafa* and *Ashʿarī* theology, Ghazālī identifies 20 positions of Avicennian philosophy that contradict traditional *Sunnī* creed. Ghazālī attributes these positions to followers of Greek philosophers who also espouse antinomian beliefs.

Of these theological positions, he deems 17 of them heterodoxic and three of them blatant disbelief, meaning a person holding such positions could not be considered a Muslim since they would deny positions explicitly stated in scripture. These three are belief in the pre-eternality of the universe, affirming that resurrection in the hereafter is limited to the soul alone and not the body and rejecting that God's knowledge extends to particulars.[123]

The *falāsifa*'s belief that the universe is pre-eternal is founded upon the idea that God's creative power necessitates that He is always manifesting His omnipotence, thus concluding that the universe has always existed. The limiting of God's knowledge to universals alone affirms a deistic rather than a personal theistic God who has knowledge of all things. This is justified by Avicenna by arguing that knowledge of particulars would entail change in God and in that which He knows. This, he concludes, would be logically impossible.

These ideas are refuted by Ghazālī primarily via rational rather and scriptural justification. For example, he argues that claiming that the universe is a necessary emanation negates divine free will, which is impossible since that would entail God's contingency. Additionally, Ghazālī uses logical modalities to argue that by definition, the universe is not logically necessary since it is conceivable that it does not exist.[124] As an *Ashʿarī*, Ghazālī affirms the impossibility of accidents occurring in God's essence but denies that knowledge of particulars would mean a change in God's essence since knowledge is absolute and relational to that which is known.

---

[122] The conflation in the literature between the two elements is partly responsible for the conflicting claims discussed above.

[123] Griffel, *Al-Ghazālī's Philosophical Theology*, 5.

[124] Frank Griffel. 'Al-Ghazālī's (d. 1111) Incoherence of the Philosophers'. In *The Oxford Handbook of Islamic Philosophy*. Edited by Khaled El-Rouayheb and Sabine Schmidtke. Vol. 1. (Oxford University Press, 2016), 200-202. https://doi.org/10.1093/oxfordhb/9780199917389.013.8,

This means that God's knowledge is pre-eternal, as such it is does not necessitate change in Him, since His knowledge is already whole.[125] Bodily resurrection is affirmed through appeal to unequivocal scriptural evidence.[126]

In the end, Greek philosophy was subsumed by *Ashʿarī* scholars and made their own by identifying and adopting what they viewed as universal rational principles and ideas and building upon them. This endeavour ultimately culminated in, among other works, two voluminous works: Jurjānī's commentary on the *Mawāqif of* al-Ījī, and Tatfazani's commentary on his own *al-Maqāsid*.[127] They provide an all-encompassing exploration of *Ashʿarī* philosophical theology through the lens of these scholars. Another by-product of *Ashʿarī* engagement with philosophy was the formation of a logically inferential based theory of atomism[128] proposing that all matter comprises indivisible fundamental particles. Whilst never part of any basic creedal formulas, nor seen as a central part of creed, it nevertheless enjoys widespread inclusion in *Ashʿarī* literature.

2.4.3 Ibn Taymīyyah and Salafi-Wahhabism

Of the more lasting challenges to *Ashʿarī* thought that continues to the present day are the anti-*Ashʿarī* positions taken by the renowned scholar Taqī ad-Dīn Ibn Taymīyyah (d. 728/1328) and the influence his ideas have had in the formation of the Salafi-Wahabi movement, sometimes referred to as *traditionalism* in academic literature.[129] Whilst slight differences exist between Salafism and Wahhabism, their positions regarding discursive theology are essentially indistinguishable. The hallmark of these movements is that they are anti-rationalist, meaning they reject speculative theology and opt for a purely scripturalist approach to belief. Perhaps the most influential theologian in the formation of the Salafi-Wahhabi movement is Ibn

---

[125] Ibid, 203.
[126] Ibid, 202.
[127] This is demonstrated in chapter 5 as these works are referenced multiple times.
[128] See: Shoaib Ahmed Malik & Nazif Muhtaroglu. "How Much Should or Can Science Impact Theological Formulations? An Ashʿarī Perspective on Theology of Nature*" European Journal of Analytic Philosophy*, 2022. 18 (2):(SI8)5-35.
[129] Jackson, *Islam and the Problem of Black Suffering,* 127-157*;* Binyamin Abrahamov. *Islamic Theology: Traditionalism and Rationalism*. (Edinburgh University Press, 1998); http://www.jstor.org/stable/10.3366/j.ctvxcrx1d; Holtzman, Livnat. *Anthropomorphism in Islam: The Challenge of Traditionalism (700-1350)* (Edinburgh University Press, 2018). http://www.jstor.org/stable/10.3366/j.ctv7n0b7q.

Taymīyyah, and it draws heavily on his work.[130] Given his ongoing centrality, discussions here focus on his ideas rather than, for example, the ideas of the founder of Wahhabsim, Muḥammad ibn ʿAbdelwahhāb (d. 1792 CE), whose scholarly works are relatively sparse.

Ibn Tayymiah's theology is often named *traditionalism*, perhaps taken from the Arabic *Ahl al-Athar* or *Ahl al-Ḥadīth,* meaning the people of tradition or the people of *ḥadīth* (those who prefer only scriptural as opposed to discursive proofs for establishing creedal beliefs).[131] The name may be misunderstood to mean that other schools of theology do not adhere to tradition. However, both the *Ashʿarī* and *Māturīdī* schools claim to be followers of the traditional beliefs of early Muslims as they would claim that their discursive theology is the means via which a preservation of traditional *Sunnī* doctrine occurs. *Ahl al-Athar* (traditionalists), though the follow a common *Sunnī,* creed differ in how the approach theology. For instance, they consign the meanings of ambiguous *Qurʾān*ic verses on divine attributes to God rather than try to ascertain their meanings themselves.[132] As Sherman Jackson notes, traditionalism has been expressed in multiple ways and is not necessarily synonymous with the Salafi–Wahabi movement.[133]

Of the most salient features of Salafi–Wahhabism is its anti-philosophical stance towards theological issues. Ibn Taymīyyah critiques *Ashʿarī*sm as he argues it veers away from traditional understanding of theology by invoking Greek philosophy to justify its beliefs.[134] According to this understanding, the imposition of Hellenistic thought into Islamic beliefs is a grave innovation far removed from the traditions and practices of the Prophet Muḥammad and the first three generations of Muslims (*salaf*). The *salaf* are those whom prophetic tradition tells us are the best generations of Muslims, whom later Muslims should emulate.[135]

---

[130] Bernard Haykel. 'On the Nature of Salafi Thought and Action1'. In *Global Salafism*, edited by Roel Meijer (Oxford University Press, 2014), 34–57. https://doi.org/10.1093/acprof:oso/9780199333431.003.0002; Hoover, Jon. *Ibn Taymiyya*. Makers of the Muslim World. (London: Oneworld Academic, 2019), 144.

[131] Halverson, *Theology and Creed in Sunni Islam*, 36.

[132] See the final statement of the 2016 Chechnya International conference "Who are the Ahl al-Sunna?": https://chechnyaconference.org/material/chechnya-conference-statement-english.pdf [Accessed 31 May 2022].

[133] Jackson, *Islam and the Problem of Black Suffering,* 134.

[134] See: Hallaq, Wael B, et. al. *Ibn Taymiyya against the Greek Logicians*. (Oxford : New York: Clarendon Press ; Oxford University Press, 1993), xi, xii, xiv; Carl Sharif El-Tobgui. 'Ibn Taymiyya': In *Ibn Taymiyya on Reason and Revelation*, 78–131. A Study of *Dārʾ Taʿāruḍ Al-ʿaql Wa-l-Naql*. (Brill, 2020), 81, 83-4. http://www.jstor.org/stable/10.1163/j.ctv2gjwv76.8.

[135] Jon Hoover. *Ibn Taymiyya*. Makers of the Muslim World. (London: Oneworld Academic, 2019), 29-33, 108-9.

Ibn Taymīyyah would argue that belief in God is known innately through natural human inclination (*fiṭra*).[136] Knowledge of God is almost self-evident and does not require the abstruse discursive theology employed by the *Ashʿarī*s. The Prophet Muḥammad and his companions did not engage in the discussion of philosophical arguments for God's existence, nor did they have to. To do so is to participate in unacceptable innovation (*bidʿa*) in religion.

The anti-rationalism of Ibn Taymīyyah's objections include a number of problematic issues from the perspective of *Ashʿarī* theology. The first is that it leads to the reading of religious scripture through the lens of literalism. For example, when interpreting verses regarding divine attributes, Ibn Taymīyyah does not recognise the distinction between *Qurʾān*ic verses that are ambiguous in meaning (*mutshābihāt*) and those that are explicit (*muḥkamāt*), as the *Ashʿarī*s do.[137] To combat anthropomorphic misunderstandings of God's attributes, this exegetical method of interpretation is of prime importance in the *Ashʿarī* school and is included in even some elementary creedal texts.[138]

According to Ibn Taymīyyah, the verse 'Truly, God's hands are open wide: He gives as He pleases' is interpreted as God possessing hands.[139] This literal interpretation leads invariably to him holding a distinctly anthropomorphic view of God.[140] When a *ḥadīth* claims that God descends to the earthly heaven in the last third of the night, Ibn Taymīyyah's understanding of this, according to *Ashʿarī*s, implies corporealism (*tajsīm*).[141] In other words, God is a body that physically descends from His throne each night. Ibn Taymīyyah rejected this conclusion and claimed that affirming the outward meaning of these verses was necessary and was not mutually exclusive to affirming God's dissimilarity to created things. He thus argued that God does indeed sit upon his throne, as the outward meaning of the verse in *Surah Ṭahā,* Q. (20:5) would suggest, but in a way that befits His divine nature. God has hands but in a fashion that

---

[136] Ibid, 44.

[137] *Ashʿarī*s use the differentiation between clear and ambiguous texts based on the *Qurʾān*'s own categorization of its verses. See: Q. (3:7).

[138] See for instance: Bayjūrī, *Tuḥfat al-Murīd*, 156-159.

[139] Q. (5:64)

[140] This was what *Ashʿarī*s of his time accused him of. See: El-Tobgui, Carl Sharif. 'Ibn Taymiyya': In *Ibn Taymiyya on Reason and Revelation*, 78–131. A Study of Dārʾ Taʿāruḍ Al-ʿaql Wa-l-Naql. (Brill, 2020), 81,83. http://www.jstor.org/stable/10.1163/j.ctv2gjwv76.8.

[141] This accusation was denied by Ibn Taymīyyah. See: Jon Hoover. "Early *Mamlūk Ashʿarī*sm against Ibn *Taymiyya* on the Nonliteral Reinterpretation (*taʾwīl*) of God's Attributes." In Shihadeh, Ayman, and Jan Thiele, Ed. Philosophical Theology in Islam: Later *Ashʿarī*sm East and West.

befits His majesty (*kamā yalīq bijalālih*). Such a paradoxical interpretation was not convincing for the *Ashʿarī*s, who insisted that this was a form of corporealism.[142]

Ibn Taymīyyah's understanding contrasts with the *Ashʿarī tafwīḍ* or *taʾwīl* stance. This is a method of classifying two acceptable positions on the interpretation of such verses. Whilst first articulated in post-classical *kalām* literature by Ghazālī and later by Fakhruddin Rāzī, the two positions existed from the earliest generations of Muslims.[143]

This means they affirm explicit verses about God that claim God is dissimilar to His creation and understand other verses that are ostensibly anthropomorphic by rejecting their literal interpretation, which they claim is both scripturally and rationally impossible, and then either consigning the knowledge of their true meaning to God (*tafwīḍ*) or reverting to metaphorical or figurative interpretations as is permitted by the context of the verse and what is rhetorically possible in the Arabic language (*taʾwīl*). The former *tafwīḍ* stance is often attributed to the first generation of Muslims; the later *taʾwīl* position is attributed to later generations.[144] As such, the verse regarding God's hands may be interpreted as an allusion to His benevolence, and the *ḥadīth* saying God descends may be alluding to His mercy or that God sent down angels since it is possible the verb *yunzil* is in the passive form. In his *Ḥamawiyya*, Ibn Taymīyyah rejected *tafwīḍ* as it would suggest that the first generations of Muslims, the companions of the Prophet, were ignorant of the meanings of the *Qurʾān* and that later generations were more knowledgeable.[145]

Ibn Taymīyyah's influence on the development of *Ashʿarī* theology was through theological responses to his ideas, which are significant and have been long lasting. There are two examples which demonstrate this; one is the series of responses during his lifetime, and another the contemporary responses to his ideas. These may be demarcated between the series of responses made during his lifetime and those that have continued into the present age. Jon Hoover highlights four *Ashʿarī* responses during the life of Ibn Taymīyyah in early Mamluk Egypt, those of Ṣafī l-Dīn al-Hindī (d. 715/1315–16), Shams al-Dīn al-Sarūjī (d. 710/1310), Ibn Jahbal al-Kilābī (d. 733/1333), and Badr al-Dīn Ibn Jamāʿa (d. 733/1333).[146] *Ashʿarī* scholars at the time argued that the early generations of Muslims did indeed engage both in *taʾwīl* and *tafwīḍ*.

---

[142] Ibid.
[143] Bayjūrī, *Tuḥfat al-Murīd*, 156-159.
[144] Ibid.
[145] Hoover, *Early Mamlūk Ashʿarīsm against Ibn Taymiyya,* 4.
[146] Ibid, 2.

For instance, ʿAbd Allah ibn ʿAbbās (d. 67/687), an important scholarly figure and a companion of the Prophet, is known to have made interpretations of some ambiguous verses, and Mālik bin Anas (d. 179/795), eponymous founder of the *Mālikī* school of jurisprudence once famously chastised a questioner about the verse stating God sits upon His throne. Interestingly, these and other narrated examples are also used by Ibn Taymīyyah to argue his position of literalism.

The difference is that he would suggest whilst the meaning may be understood as it is stated (i.e., literally), the modality is unknown. God sitting on the throne or God's hands are affirmed but not in how this may be, only that it is a means that befits God, which is how he explains Mālik bin Anas' objection to the questioner.[147]

Modern *Ashʿarī* theologians such as Muḥammad Saʿīd Ramaḍān al-Būṭī (d. 1434/2013) and Saʿīd Fodeh offer extensive refutations of Ibn Taymīyyah, and by extension contemporary manifestations of Salafism and Wahabism.[148] Fodeh in his *The Abbreviated Illumination of the Beliefs of Ibn Taymīyyah (al-Kāshif al-Saghīr ʿan ʿAqāʾid Ibn Taymīyyah)* argues for and cites evidence of corporealism in Ibn Taymīyyah's writing. Whilst there is no explicit admission, Fodeh argues that Ibn Taymīyyah was indeed a corporealist in all but name. For example, the assertion of God's spatial extension is affirmed by Ibn Taymīyyah, and he consistently refuses to deny that God is a body (*jism)*.[149] As a formidable and prolific scholar, Ibn Taymīyyah's works continues to challenge *Ashʿarī* theology and remain an important factor that shapes the school's theological discourse.[150]

2.4.4 Modern Science and Philosophy

Modern Western philosophy, covered in chapter 3, is an important contemporary challenge to *Ashʿarī* theology. It has upended classical philosophy and critiqued the traditional logical

---

[147] Ibid, 6-7.

[148] Saʿīd Fodeh. *Al-Kāshif al-Saghīr ʿan ʿAqāʾid Ibn Taymīyyah.* (Amman: *Dār al-Rāzī*, 2000).

[149] Ibn Taymīyyah argues that this is because such a denial was never reported by the *salaf* and argues that there is ambiguity about what is meant by *jism* because of a difference in interpretation between *Ashʿarī*s and philosophers. Fodeh argues that this not the case and in essence, they both agree upon spatial extension as a common attribute of a *jism*.

[150] It is notable that some form of anti-*kalām* sentiment existed long before Ibn Taymīyyah. Aḥmad bin Ḥanbal, founder of the Hanbali school of law, was famously averse to discursive theology. The difference being, *Ashʿarī*s would argue, that he shared the same creedal beliefs as the *Ashʿarī*s, if not ascribing to the same methodological approach to establishing those beliefs.

foundations for belief in God. *Ashʿarī*s have had limited engagement with and have not yet fully adapted to the challenges of modern and post-modernist thought. That said, there have been notable attempts including Mustafa Sabri's encyclopaedic work on refuting modern philosophy as well as Saʿīd Fodeh, and other *Ashʿarī* scholars. These attempts have yet to trickle down to *madrasa* curricula, and students are not exposed or fully equipped to deal with these ideas.[151]

Ashʿarī philosophical discourse arguably already includes responses, at least in principle, to the challenges of modern and post-modern philosophy because pre-modern philosophy covers many of the same foundational issues addressed by contemporary philosophy. Nevertheless, even if that were the case, these have not been collected, synthesised, or reformulated to address these topics directly.[152]

Modern developments in natural science particularly those concerning evolutionary biology, physical cosmology, and quantum physics, have demonstrated the need for further research in these fields in as much as their conclusions pertain to doctrinal beliefs. Evolutionary biology is the textbook example of this, and it is an area that has seen increased interest in recent years. Shoaib Ahmed Malik's *Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm* attempts to bridge the gap between *Ghazālī*'s *Ashʿarī* theology and evolution.[153] Malik argues that the question of evolution is in fact a-theological. In other words, from a *Ghazālī*an paradigm, it is of no theological relevance if evolution is scientifically correct or not, because scriptural sources are non-committal to any particular means of creation. Coupled with the occasionalist belief in God's actions, one may still believe in the literal interpretation of Adam's miraculous creation as stated in scripture and hold the position that there was, simultaneously, an evolutionary method of creation.

---

[151] A look at the al-Azhar university's list of approved *kālam* books demonstrates this. See: *Al-Manāhij al-Azharīyya,* 159-168.

[152] *Madrasa* students are more likely to be familiar with *Muʿtazilī* positions and refutations than with the philosophies of Kant or Nietzsche, which are arguably more relevant today.

[153] For Muslim engagement with the theory of evolution we see quite a range of responses that range from a complete rejection, such as the works of Harun Yahya, to more accommodative stances such as Nidal Guessoum. see: Nidhal Guessoum. *Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science*. London: I. B. Tauris, 2011; Shoaib Ahmed Malik. *Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm*. Routledge Science and Religion Series. Abingdon New York (N.Y.): Routledge, 2021; Hârun Yahya. *The Evolution Deceit: The Scientific Collapse of Dārwinism and Its Ideological Background*. 6. ed., Istanbul: Kültür Publ, 2001; Anne Ross Solberg. *The Mahdi Wears Armani: An Analysis of the Harun Yahya Enterprise*. (Huddinge: Södertörns högskola, 2013), 107-141.

In physics, Mehmet Bulgen's *Kalām Atomism According to Contemporary Cosmology* offers a look at atomism theory and how it fits into the modern understanding of the field of physical cosmology.[154] Muḥammad Basil Altaie is an Iraqi physicist who offers interesting insights on similar topics and into the relationship between modern physics and *kalām*. [155] Shoaib Malik and Emil Salim give an insightful interpretation of the concept of divine command and quantum randomness.[156] Whilst these works explore the *kalām* tradition as a whole, they are largely applicable to the *Ashʿarī* school.

However, a noticeable dearth of direct *Ashʿarī* theological engagement with modern science remains when compared to other religious traditions such as contemporary Christian theology.[157] In chapter 7, I propose a method of engagement with modern science that is founded on *Ashʿarī* epistemology and ontology. Following that, in chapter 8, I attempt to apply this framework to a particular case study, the theory of the multiverse.

2.5 Notable *Ashʿarī* Scholars

This section discusses the most important voices in the *Ashʿarī* tradition and those whose works are referenced in later chapters. The great majority of scholars cited are post-*Ghazālī*an, since it was he who initiated the *Ashʿarī* response and incorporation of Greek philosophy into the *Ashʿarī* tradition.[158] To identify a representative body of scholarship of the *Ashʿarī* school and accurately portray their fundamental philosophical and theological positions, I employ three criteria for including their works: 1. the acceptance of the community of scholars that the work is part of the *Ashʿarī* school, either by reference to *Ashʿarī* biographical (*ṭabaqāt*) literature or by the inclusion of their works in *Sunnī* educational institutions; 2. the relevance of scholars'

---

[154] Mehmet Bulgen. *Kalām Atomism According to Contemporary Cosmology*. Institute of Social Sciences, (Marmara: Marmara University, 2013).

[155] M. B. Altaie. "Atomism in Islamic Kalām." *Études Orientales* 23 (2005): 24.

[156] Emil Salim, and Shoaib Ahmed Malik. "Creatio Continua and Quantum Randomness." In *Abrahamic Reflections on Randomness and Providence*. Kelly James Clark, and Jeffrey Koperski, eds. Cham: Springer International Publishing, 2022. https://doi.org/10.1007/978-3-030-75797-7.

[157] While not directly related to modern science and philosophy, Sherman Jackson's contribution to applying Islamic theology to the topic of Black theodicy in his *Islam and the Problem of Black Suffering* is an important contribution, given the relevance of theodicy in contemporary atheism.

[158] Famed historian and sociologist Ibn Khaldun states that *Ashʿarī kalām* may be divided into two eras, the *earlier* and the *later* periods with Ghazālī being the central figure who reorients the school. See: Aḥmad ibn al-Ḥusayn al-Bayhaqī. *The Creed of Imam Bayhaqī*. Translated by Nasir Abdussalam. (London: Turath, 2017), 34-5.

works in contemporary Islamic educational institutions, via citing the references of al-Azhar university, the Ottoman *madrasa* curriculum, or other institutions; and 3. the works are sufficiently advanced in their expositions such that they include at least some discussions on epistemology or ontology.[159]

In the subsequent chapters on *Ashʿarī* epistemology, ontology, and proofs for God's existence, rather than mentioning the specific scholar I am referencing, I refer to the position as the *Ashʿarī school* whenever general agreement on a given topic exists. The community of *Ashʿarī* scholars entertains a wide range of opinions on many issues, but when it comes to fundamentals, such as their philosophical foundations and proofs for God's existence, they are overwhelmingly in agreement.

I use some oral references and online posts for contemporary thinkers whose lectures provide valuable insights. Classes and lectures known as gatherings of knowledge (*majālis al-ʿilm*) are a part of the *Ashʿarī* and broader *Sunnī* scholarly tradition. Contemporary *kalām* scholars who have recorded their lectures offer a novel medium to draw upon. This body of work is especially necessary when exploring responses to contemporary issues.[160]

2.5.1 Abu al-Ḥasan al-Ashʿarī (d. 324/935)

Eponymous founder of the *Ashʿarī* school Abu al-Ḥasan's seminal contribution to orthodox *Sunnī* doctrine is his systematic use of reason to defend and uphold it. Abu al-Ḥasan was initially a *Muʿtazilī* who grew up in the household of his stepfather, an influential *Muʿtazilī* scholar, al-Jubbāʾī. Abu al-Ḥasan's *al-Lumaʿ fi al-Radd ʿalā Ahl al-Zaygh wa al-Bidaʿ* is perhaps his most influential work. It is referenced as part of the Azhar university curriculum.[161] Other works are attributed to him, although these are disputed. Abu al-Ḥasan formed a systematic –and at the time – sophisticated rational defence of *Sunnī* doctrine which included a critique of *Muʿtazilī* ideas.

---

[159] These form a part of my research methodology.
[160] Likewise, this section explains my research methodology.
[161] *Al-Manāhij al-Azharīyya*, 167.

2.5.2 Abu Ḥāmid al-Ghazālī (d. 505/1111)

Muḥammad ibn Muḥammad al-Ṭusi al-Ghazālī's honorific as the proof of Islam is a testament to his profound impact on Islamic thought.[162] His writings span many fields of Islamic scholarship, including *Shāfiʿī* jurisprudence, *kalām*, and sufism.[163] As an *Ashʿarī*, he set the course for the school's engagement with Greek philosophy.[164] Ghazālī critiqued the Neo-Platonist ideas of his time, which he viewed as heterodox or heretical. However, Ghazālī recognised the importance of logic as an ancillary tool for the Islamic sciences. His manuals on logic, *Miʿyār al-ʿIlm* and *Maḥak al-Naẓar*, include detailed expositions on epistemology, some ontology, and the philosophy of language.[165] The oft-portrayed idea of him as a staunch adversary of philosophy in its entirety is inaccurate.[166]

Ghazālī's theological writings including *al-Iqtiṣād fī al-Iʿtiqād* (*Moderation in Belief*) and a *qwāʿid al-ʿaqāʾid* (*Principles of Belief*), which offer concise expositions of *Ashʿarī* theology.[167] His service to the *Ashʿarī* school was to begin filtering Neo-Platonist thought through orthodox *Sunnī* doctrine by incorporating elements of its ideas and demonstrating a middle way between fideism, which absconds reason, and radical rationalism, which puts revelation in a subordinate

---

[162] See: Ibn ʿAsākir, ʿAlī ibn al-Ḥasan. *Tabyīn kadhib al-muftarī fī mā nusiba ilā al-imām Abī al-Ḥasan al-Ashʿarī* (Damascus: *Matbaʿat al-Tawfīq*, 1929), 291-2; Shihadeh, Ayman, and Jan Thiele. *Philosophical Theology in Islam: Later Ashʿarīsm East and West*. (Brill, 2020), 12. https://doi.org/10.1163/9789004426610.

[163] Ibid, 292-6.

[164] Arguments by Richard Frank and others that posit that Ghazālī was not in fact an *Ashʿarī* have been challenged. Alexander Trieger posits, Ghazālī was engaged in pseudo-refutations of philosophical positions. He was able to infuse the ideas of philosophy into his work while espousing *Ashʿarī* doctrine. See: Tobias Mayer. "Reviewed Work: Al-Ghazali and the Ashʿarite School," Book review in *Journal of Qurʾānic Studies* 1, no. 1 (1999): 170–82. http://www.jstor.org/stable/25727954; Treiger, Alexander. *Inspired Knowledge in Islamic Thought: Al-Ghazālī's Theory of Mystical Cognition and Its Avicennian Foundation*. Culture and Civilization in the Middle East, v. 27. (London ; New York: Routledge, 2012), 93-6. His methodological approach, the use of logical refutations of philosophical positions, has to some extent been confused with his theological commitments to *Ashʿarī* doctrinal positions. The argument that Ghazālī was a pseudo-*Ashʿarī* has been properly challenged in later scholarship. It is apparent that Ghazālī did indeed hold the same fundamental views of *Ashʿarī*s, with some minor differences. His doctrinal positions as explained in his works such as *Qawaʿid Al-ʿAqāʾid* clearly demonstrate this. Al-Sharfāwī in his introduction to Ghazālī's *Moderation in Belief* argues that his beliefs were certainly those of the *Ashʿarī*'s notwithstanding his novel approach of refutation. See: Abū-Ḥāmid Muḥammad Ibn-Muḥammad al-Ghazālī and, Anas Muḥammad al-Sharfāwī. *Al-Iqtiṣād Fī al-Iʿtiqād*. (Beirut: *Dār al-Minhāj*, 2016), 70-2. See these following references for similar arguments demonstrating Ghazālī's clear *Ashʿarī* disposition: Rudolph, *Post-Ghazalian Theology*, 13; Marmura, "Ghazālī and Ash'arism Revisited", 91–110.

[165] Muḥammad bin Muḥammad al-Ghazālī. *Miʿyār al-ʿIlm* (Beirut: *Dār al-Minhāj*, 2016); Muḥammad bin Muḥammad al-Ghazālī. *Maḥak al-Naẓar fī Fann al-Mantiq*, (Beirut: *Dār al-Minhāj,* 2016).

[166] Griffel, *Al-Ghazālī's Philosophical Theology*, 98.

[167] Karamali, *The Madrasa Curriculum in Contex*t,14.

position to reason. Ghazālī views reason and revelation as supportive of each other. One may discern the veracity of revelation through reason and interpret it through rational tools such as logic. Revelation and reason are thus interdependent, not mutually exclusive.[168]

Ghazālī's use of logic in his theological works is evident in his use of essential and non-essential definitions and syllogisms. His theological method of inquiry is comprehensive yet concise. He discusses all possible arguments and counter-arguments on a given topic. His methodology is explained in the introduction to one of his most prominent works of theology, *al-Iqtiṣād*, in which he presents three techniques used to support his arguments. The first is *al-sabr wa al-taqsīm*, which entails demonstrating the dichotomy of two mutually contradictory propositions. By disproving one, the other is true *ipso facto*. The second is in the use of deductive syllogisms. The third is by disproving the validity of opposing opinions, thus affirming the validity of one's own position. As he states, these methods are based on the works of logic and epistemology discussed above.[169]

In *Iljām al-ʿAwāmm ʿan ʿilm al-kalām* and his introduction to *al-Iqtisād*, Ghazālī explains his understanding of *kalām* as a tool to be used only by those who are adequately trained and intellectually and spiritually capable, and then only as a doctor would use medicine, as a treatment for intellectual challenges on matters of creed.[170] *Kalām*, Ghazālī states, is a communal obligation to be studied by qualified scholars. Delving excessively into philosophical theology is not a source of spiritual sustenance; rather, it should be used sparingly and only when needed. His response to ideological threats to Islam's creed was by demonstrating their rational inconsistency.

Ghazālī's works are accepted in important contemporary Islamic institutions.[171] His incorporation and critique of aspects of Neo-Platonism into *Sunnī* theology was assimilated

---

[168] Sherman A. Jackson, et. al. *On the Boundaries of Theological Tolerance in Islam: Abū Ḥāmid al-Ghāzalī's Fayṣal al-Tafriqa bayna al-Islam wa al-Zandaqa*. Studies in Islamic Philosophy, v. 1. (Karachi: Oxford University Press, 2002).

[169] His articulation of peripatetic philosophy and his counter-arguments to it are famously outlined in *Maqāsid al-Falāsifa* (*The Aims of the Philosophers*), and his response to their ideas, *Tahāfut al-Falāsifa* (*The Incoherence of the Philosophers*). Here, and in his *Fayṣal al-Tafriqah bayna al-Islām wa al-Zandaqah* (*The Distinction Between Islam and Heresy*), he delineates which positions are heretical and which are heterodox.

[170] Ghazālī, *al-Iqtiṣād*, 16-17.

[171] These include al-Azhar university, see: *Al-Manāhij al-Azharīyyah*, 144, 165; Former Azhar rector Ali Gomma includes a number of his works as those foundational books in the *Sunnī* tradition. His selection is based on four criteria: a. The works' distinction and inventiveness in its field according to the testimony of specialists. b. The work is included in the curriculum of reputable Islamic madrasas

into *madrasa* studies.[172] His books on theology and logic are among the official references of the al-Azhar curriculum and listed as accepted works in Ottoman lands.[173]

Whilst Ghazālī writes far less on *kalām* and philosophy than his successors, his work marks a turning point in *Ashʿarī* theology, as scholars began to grapple with Greek philosophy by incorporating parts that were in line with creedal beliefs, eliminating others that were not, and ultimately synthesising its ideas into mainstream *Ashʿarī* thought.

2.5.3 Fakhr al-Dīn al-Rāzī (d. 606/1210)

Fakhr al-Dīn al-Rāzī is one of most influential and original thinkers of the *Ashʿarī* school. Rāzī is credited with fully revising and incorporating the philosophical sciences (e.g., Neo-Platonist and Aristotelian philosophy in the works of Ibn Sīnā and Farabī) into *Ashʿarī* theology by identifying elements that were useful and compatible with *Sunnī* orthodoxy.[174] This was a continuation of the works of his predecessors, most notably Ghazālī.

Rāzī's other contributions to *Ashʿarī kalām* was the completion of the utilisation of logic as a tool for theological discussion. This is evident in his critiques of what he deemed as weaker methods of argument used by scholars of *kalam*.[175] A thorough and meticulous writer, Rāzī

---

across the Muslim world. c. Its influence on influential scholars in the field d. Its acceptance by the scholarly class. e. Scholars have written extensive commentaries and glosses on the work. See: Ali Gomma. *Al-Kutub al-Muqawwina li al-fikr al-Islamī al-Sunnī* (*Cairo: Dār al-Salaḥ*, 2018), 180-3.

[172] Karamali, *The Madrasa Curriculum in Contex*t, 7.

[173] Ahmed, and Filipovic. "The Sultan's Syllabus"; *Al-Manāhij al-Azharīyyah,* 144, 165.

[174] Rāzī was a prolific scholar whose writings spanning a wide range of philosophical and theological topics. Griffel classifies Rāzī's work into *kalām* scholarship that was in line with *Ashʿarī* orthodoxy and philosophical works (*ḥikmah*) that include views less acceptable to *Ashʿarī* thought. Josef Van Ess was of the opinion that these differences can be attributed to a development in Rāzī's thought, though this idea is challenged by Griffel who shows that this may not be corroborated by the chronology of publications. Griffel suggests that the relationship between *kalām* and *hikmah* and their context may have been apparent through the way they were taught in a madrasa curriculum. Nevertheless, these differences are not particularly pertinent to the study. We are more concerned with Rāzī's theological writings and those that are purely philosophical treatises. Additionally, of the criteria I use to accept primary sources in the thesis is that the works be recognized by Sunni Islamic educational institutions and that the positions therein are corroborated with other *Ashʿarī* works. Many of Rāzī's works are recognized as such. Additionally, Rāzī has explicitly professed himself as an *Ashʿarī*. See: Shihadeh, "From Al-Ghazālī to Al-Rāzī," 163-4, 170; Karamali, *The Madrasa Curriculum in Context*, 7; Griffel, *The Formation of Post-Classical Philosophy in Islam,* 13-15, 312, 336, 543.

[175] Shihadeh, *"*From al-Ghazālī to al-Rāzī,"166–8.

used *al-sabr wa al-taqsīm*, among other methods (following Ghazālī's approach), in his theological discussions.[176]

Rāzī is listed in *Ashʿarī* biographical literature.[177] He is widely renowned and highly respected by later *Ashʿarī*s and was given the title the *Shaykh of Islam*. Tāj al-Dīn al-Subukī (d. 771/1370) counted him among the most important *Ashʿarī* scholars.[178]

Even a cursory look at his explication of proofs of God's existence, the attributes of negation, and the seven real attributes demonstrates a clear alignment with *Ashʿarī* doctrine through his acceptance of their main arguments and categorisations of the divine attributes.[179] He himself attests to following *Ashʿarī* doctrine. Certain positions notwithstanding, Rāzī's theology was certainly in line with *Ashʿarī* orthodoxy.[180] This is also evident in the acceptance of his books in the subsequent centuries. Rāzī's books are foundational to later *Ashʿarī* works, such as Ījī's *al-Māwaqif*,[181] which include ontological and epistemological positions largely shared by Rāzī. Rāzī's *Maʿālim Uṣūl al-Dīn* includes epistemological and ontological preludes to theological discussions.[182] Purely philosophical works include *al-Mabāḥith al-Mashriqīyya*, which discusses a wide range of topics, including large sections on epistemology and ontology. In addition to his philosophical and theological works, Rāzī authored an important exegetical work, *al-Tafsīr al-Kabīr*, a highly authoritative commentary on the *Qurʾān* for which he is perhaps most famous.[183] *Taʾsīs al-Taqdīs* offers a critique of anthropomorphism by arguing against the de-contextualisation and literal interpretation of ostensibly anthropomorphic

---

[176] Frank Griffel. "Fakhr al-Din al-Rāzī." In Encyclopedia of Medieval Philosophy. Vol. 2, Philosophy between 500 and 1500. Edited by Henrik Lagerlund, 665–672. Dordrecht, The Netherlands: Springer, 2011.

[177] Muʿallim, ʿAbd Allah. *Al-Budūr al-Zāhira fi Tabaqāt al-Ashāʿira*, (Amman: n.p. 2008), 199-200. https://www.Quranicthought.com/ar/books/%D8%A7%D9%84%D8%A8%D8%AF%D9%88%D8%B1-%D8%A7%D9%84%D8%B2%D8%A7%D9%87%D8%B1%D8%A9-%D9%81%D9%8A-%D8%B7%D8%A8%D9%82%D8%A7%D8%AA-%D8%A7%D9%84%D8%A3%D8%B4%D8%A7%D8%B9%D8%B1%D8%A9-%D8%A7%D9%84%D8%B7%D8%A8/ . [Accessed on 6th June 2022].

[177] Gomma, *al-Kutub al-Muqawwina,* 227-232.

[178] Ibid, 199.

[179] Fakhr al-Dīn al-Rāzī. *Al-Arbaʿīn fī Uṣūl al-Dīn*. (Cairo: *Maktabat al-Kulīyyāt al-Azharīyya*, 1986), 337-342; Griffel, *The Formation of Post-Classical Philosophy in Islam,* 543.

[180] Ibid; Shihadeh, "From Al-Ghazālī to Al-Rāzī," 163-4.

[181] Griffel, *The Formation of Post-Classical Philosophy in Islam*, 546-7.

[182] *Ashʿarī-Malikī* theologian ʿAbd Allāh ibn Muḥammad al-Tilimsānī (d. 644/1246) has an extensive commentary on this work which we will be referencing in the thesis.

[183] *Al-Manāhij al-Azharīyya*, 69.

scripture. Islamic educational institutions include a number of Rāzī's works as part of their curriculum.[184]

2.5.4 ʿAḍud al-Dīn al-Ījī (d. 756/1355–56)

ʿAḍud al-Dīn Al-Ījī is of the most influential *Ashʿarī* scholars in the history of the school.[185] His most significant contribution to *kalām* is his book, *Kitāb al-Mawāqif fī ʿIlm al-Kalām*, which includes extensive discussions of epistemology and ontology is highly influential. It features in the curricula of Islamic institutions around the Muslim world.[186] *Ashʿarī* scholar al-Sharīf al-Jurjānī wrote a detailed commentary on *al-Mawāqif*.[187] *Al-Mawāqif* forms the culmination of *Ashʿarī* thought up to the present day.[188] It is perhaps the most sophisticated and thorough analysis of *Ashʿarī* ideas particularly pertaining to epistemology and ontology.

2.5.5 Saʿd al-Dīn al-Taftāzānī (d. 793/1390)

Saʿd al-Dīn al-Taftāzānī is prolific scholar whose works range from Arabic grammar and rhetoric to law, theology, and logic.[189] Taftāzānī authored perhaps one the most extensive and thorough work on *Ashʿarī* theology. His *Sharḥ al-Maqāṣid* offers a multi-volume exposition on epistemology and ontology. After laying down the philosophical foundations of *Ashʿarī* thought, he then follows the typical structure of theological manuals, covering the proofs for existence of God and divine attributes, prophecy, eschatology, definitions of acceptable belief, and other ancillary topics such as rulings on political leadership.[190] His commentary on the creed of *Najm al-Addīn al-Nasafī* (d. 537/1142), a *Māturīdī* scholar, is perhaps the most well-

---

[184] These include Rāzī's *Kitāb al-Arbaʿīn fī Uṣūl al-Dīn*. See: Şen, A. Tunç. "The Sultan's Syllabus Revisited: Sixteenth Century Ottoman Madrasa Libraries and the Question of Canonization," 229.

[185] Gomma, *al-Kutub al-Muqawwina,* 212-217.

[186] Ibid; *Al-Manāhij al-Azharīyyah*, 162; Pourjavady, Reza "The Legacy of ʿAḍud al-Dīn al-Ījī: His Works and His Students," 342-3.

[187] Gomma, *al-Kutub al-Muqawwina*, 214.

[188] Ibid, 212.

[189] Madelung, W. 'Al-Taftāzānī'. In Encyclopaedia of Islam, Second Edition, edited by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs, P.J. Bearman (Volumes X, XI, XII), Th. Bianquis (Volumes X, XI, XII), et al. Accessed March 30, 2022.; Pourjavady, "The Legacy of ʿAḍud al-Dīn al-Ījī: His Works and His Students", 361. For a summary of the apparent positioning of al-Taftāzānī within the two schools and in relation to al-Nasafī, see al-Taftāzānī, A Commentary on the Creed of Islam, pp. xxiv–xxxi; Al-Taftāzānī, *Sharḥ al-ʿAqāʾid al-Nasafiyya*, 8; Harvey, Ramon. *Transcendent God, Rational World: A Māturīdī Theology*. Edinburgh Studies in Islamic Scripture and Theology. (Edinburgh: Edinburgh University Press, 2021), 44.

[190] Taftazānī, *Sharḥ al-Maqāṣid,* (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001), 1:379-384, 2:475-484; 3:374-376, 5:321-323, (Beirut: *ʿĀlam al-Kutub*, 1998), 4:351-355.

known and influential of his works and has been taught in educational institutions across the Muslim world for centuries.[191]

2.5.6 Muḥammad b. Yūsuf al-Sanūsī (d. 895/1490)

Muḥammad ibn Yūsuf al-Sanūsī authored a number of influential theological works; best known among them is *Umm al-Barāhīn* (known also as *al-Ṣughrā*), a short treatise on *Ashʿarī* theology that has many important commentaries and glosses.[192] Other works, including *al-ʿAqāʾid*: *al-Kubrā, al-Wusṭā, Ṣughrā al-Ṣughrā*, are theological treatises for the beginner, intermediate, and advanced students. He also wrote on logic, *Qurʾān*ic exegesis, *ḥadīth* commentary, Sufism, and other topics. *Umm al-Barāhīn* and its commentaries have been taught widely in religious institutions across the Muslim world, particularly in North and West Africa, including al-Azhar.[193] Sanūsī's work is clearly influenced by earlier *Ashʿarī*s, and his use of logic, including the modalities are clear in his writing.[194]

2.5.7 Ibrāhīm al-Laqqānī (d. 1041/1631)

Ibrāhīm al-Laqqānī (d. 1631) was a scholar of Maliki law, *ḥadīth*, and theology.[195] Laqqānī authored an exceptionally influential work, *Jawharat al-Tawḥīd*.[196] This widely acclaimed doctrinal work consists of 144 lines which summarises the essential creed of *Sunnī* Islam. His didactic poem, a condensed body of text, (*matn*) has been expounded upon in at least two dozen well-known commentaries by various notable scholars (*shurūḥ*) that are taught alongside the text. These commentaries are examined further with glosses (*ḥawāshī*) which elucidate the meanings of the commentaries. These include the author's own commentaries, most notably *Hidāyat al-Murīd lijawharat al-Tawḥīd*, which I reference.

---

[191] Oliver Leaman, ed. *The Biographical Encyclopedia of Islamic Philosophy*. 1. publ. in paperback. (London: Bloomsbury Academic, 2015), 473-4; Şen, A, "The Sultan's Syllabus Revisited"; Gomma, *al-Kutub al-Muqawwina, 192-7, 217-219.*

[192] Muʿallim, *Al-Budūr al-Zāhira*, 257; Ed. S. Nurit, C.E. Bosworth *Encyclopaedia of Islam. 9. San - Sze*, (Leiden: Brill, 1997), 20-1; Gomma, *al-Kutub al-Muqawwina, 219-227*; Harvey, *Transcendent God, Rational World: A Māturīdī Theology*, 44.

[193] Ibid; *Al-Manāhij al-Azharīyyah,* 161-3.

[194] Ed. S. Nurit, C.E. Bosworth *Encyclopaedia of Islam. 9. San - Sze*, (Leiden: Brill, 1997), 20-1.

[195] Muʿallim, *Al-Budūr al-Zāhira*, 270.

[196] Gomma, *al-Kutub al-Muqawwina,* 227-232.

Jawhart al-Tawḥīd is taught in Islamic educational institutions around the world, including al-Azhar and Cambridge Muslim College.[197] The text itself and two of its commentaries are recognised as official references of al-Azhar.[198]

2.5.8 Aḥmad al-Dardīr (d. 1201/1786)

Ahmad Al-Dardīr was an eighteenth century Egyptian scholar whose works are renowned throughout the Muslim world.[199] His books encompass *Ashʿarī* theology, Maliki law, and other ancillary sciences.[200] An accomplished Sufi Shaykh, his theological works are infused with spiritual instruction.[201]

His short primer on *Ashʿarī* theology*, al-Kharīda al-Bahīyya (Kharīda)*, provides a succinct but comprehensive account of basic creed and is prefaced with a short exposition of basic modal logic. It has been furnished with a number of commentaries and glosses, including those by Saʿīd Fodeh and Abdulsalam Shinar, which we rely upon. Dardīr's works were studied widely throughout the Middle East and North Africa.[202] Dardīr's *Kharīda* is officially referenced in the al-Azhar curriculum.[203] It is accepted as a standard primer of *Ashʿarī* creed in many regions in the Muslim world.[204] Dardīr's contributions to the preservation of the *Ashʿarī* tradition in the early modern period are well established.[205]

2.5.9 Ibrāhīm al-Bayjūrī (d. 1277/1860)

Ibrāhīm al-Bayjūrī (d. 1860) was an *Ashʿarī* scholar and rector of al-Azhar. Heavily influenced by Rāzī, Taftāzānī, Laqqānī, and Sanūsī, his theological works reflect this.[206] Most notably is Bayjūrī's commentary on Laqqānī's *Jawhara*: *Tuḥfat al-Murīd ʿAlā Jawharat al-Tawhīd*, which is officially referenced in the al-Azhar curriculum.[207]

---

[197] *Al-Manāhij al-Azharīyyah,*161-3; Bano, *Modern Islamic Authority,* 2:89,
[198] Gomma, *al-Kutub al-Muqawwina*, 70.
[199] Mosaad, *The Transmission of the Islamic Tradition*, 14.
[200] Muʿallim, *Al-Budūr al-Zāhira*, 276.
[201] Mosaad, *The Transmission of the Islamic Tradition*, 15.
[202] Ibid, 13.
[203] *Al-Manāhij al-Azharīyyah,* 161.
[204] Gomma, *al-Kutub al-Muqawwina, 232-234.*
[205] Mosaad, *The Transmission of the Islamic Tradition*, 135, 142.
[206] Aaron Spevack. *The Archetypal Sunnī Scholar: Law, Theology, and Mysticism in the Synthesis of al-Bājūrī.* (Albany: State University of New York Press, 2014), 64-71.
[207] *Al-Manāhij al-Azharīyyah,* 165.

2.5.10 Contemporary Scholars

To demonstrate how *Ashʿarī* theology has been used to engage with contemporary atheism, I have explored the work of several modern *Ashʿarī* scholars. I employ two criteria to identify the suitability of their *kalām* works for the thesis. The first is that the scholars are committed to *Ashʿarī* epistemological, and ontological positions.[208] This is understood through their writings and online lectures. The second is that the scholars have actively engaged with the philosophical ideas employed in contemporary atheism, as expressed in the next chapter on the foundations of contemporary atheism. This section does not form an exhaustive list of scholars active in the field, rather it demonstrates a sample of the work of some important thinkers in modern *Ashʿarī* thought whose work is cited most frequently in the thesis.

2.5.10.1 Mustafa Sabri (d. 1373/1954)

Mustafa Sabri was a Turkish scholar who was the Ottoman empire's last *Shaykh al-Islam*.[209] He received a traditional *madrasa* education and was promoted to the highest judicial post in the empire before its fall. He was influential both in the Turkish and Arabic speaking world as he authored works in both languages. Sabri wrote extensively on theology and engaged deeply with European philosophical thought and responded to Arab thinkers influenced by their ideas.[210] His refutation of transcendental idealism, materialism, and other modern philosophical positions were informed by his *Ashʿarī* theology. His primary work referenced here is the four-volume *Mawqif al-ʿAql wa al ʿIlm wa al-ʿAlim min Rabb al-ʿAlamīn wa Ibadihī al-Mursalīn*, in which he tackles many of these topics.[211] Sabri was staunchly opposed to any modernist re-interpretations of Islam and held that it was of paramount importance that Muslims develop and articulate their epistemological and ontological frames of reference to properly engage with modernity.[212]

---

[208] See chapter four for a discussion of the relevant epistemological and ontological positions referred to here.

[209] Yasushi Kosugi, Mahmoud Haddad, Dale F. Eickelman, Stéphane A. Dudoignon, Stéphane A. Dudoignon, Komatsu Hisao, and Kasuya Gen, eds. *Intellectuals in the Modern Islamic World: Transmission, Transformation, Communication*. (New Horizons in Islamic Studies. Abingdon: Routledge, 2009), 75.

[210] Kalin and Leaman, ed. *The Biographical Encyclopedia of Islamic Philosophy*, 435-7; Ahmet Şeyhun. *Islamist Thinkers in the Late Ottoman Empire and Early Turkish Republic*. (Leiden and Boston: Brill, 2015), 44-53. https://doi.org/10.1163/9789004282407.

[211] Kalin and Leaman, *The Biographical Encyclopedia of Islamic Philosophy*, 435-7

[212] Ibid.

2.5.10.2 Muḥammad Saʿīd Ramaḍān al-Būṭī (d. 1434/2013)

Muḥammad Saʿīd Ramaḍān al-Būṭī was a Syrian scholar whose prolific writing spanned *Ashʿarī* theology, Sufism, and law.[213] Būṭī authored three works that are relevant to *Ashʿarī* thought which provide an exposition of *Ashʿarī* creed in light of elements of modern philosophy, a critique of dialectic materialism, and a critique of anti-Madhhab positions in some strands of Salafi–Wahabi thought.[214]

2.5.10.3 Saʿīd Fodeh

Saʿīd Fodeh is perhaps one of the foremost experts on *Ashʿarī* theology alive today. He has written numerous commentaries on works spanning multiple levels of complexity, from basic primers such as his commentary on *al-Kharīda al-Bahīyya* to intermediate works such as his commentary on Sanūsī's *Umm al-Barāhīn* (*al-Ṣughrā*), and he authored a two-volume commentary on *al-ʿAqīda al-Tahāwīyya*. He lectures on these and other theological texts and has included responses to enlightenment philosophers.[215] Fodeh's work includes a detailed survey of the arguments for God's existence according to *kalām* scholars, Christian theologians, and classical and modern philosophers.[216]

2.5.10.4 Hamza Karamali

Hamza Karamali is the founder of al-Basira institute for Islamic education.[217] He has taught and studied in multiple countries, including Jordan and India, where he received his traditional training in the Islamic sciences. He authored a detailed monograph of the traditional *madrasa*

---

[213] Mark Sedgwick. "The Modernity of Neo-Traditionalist Islam," In Jung, Dietrich, and Kirstine Sinclair eds. *Muslim Subjectivities in Global Modernity: Islamic Traditions and the Construction of Modern Muslim Identities* (Brill, 2020), 121-46. https://doi.org/10.1163/9789004425576.

[214] Muḥammad Saʿīd Ramaḍān al-Būṭī. *Al-Lāmadhhabiyya: Akhṭar bidʿa tuhaddidu al-Sharīʿa al-Islamīyya,* Damascus: *Dār al-Farābī*, 2005; Muḥammad Saʿīd Ramaḍān al-Būṭī. *Kubrā al-Yaqīnīyyāt al-Kawnīyya,* Damascus: *Dār al-Fikr*, 1997; Muḥammad Saʿīd Ramaḍān al-Būṭī. *Naqd Awham al-Jadaliya al-Mādīyya.* Damascus: *Dār al-Fikr*, 1985.

[215] These are relevant to contemporary atheism. His lectures are available online and will be referenced in later chapters. See also: Saʿīd Fodeh. *Tafnīd al-ʾusūs al-naẓarīyah wa-al-ʿamalīyah lil-ʾilhād.* Amman: *al-Aslein*, 2016.

[216] Saʿīd Fodeh. *Al-Adilla al-ʿAqliyya ʿAlā Wujūd Allah Bayn al-Mutakilmīn wa al-Falāsifa* (Amman: *al-Aslein*, 2013).

[217] Hamza Karamali. *Hamza Karamali's Official Website*. [online] Hamza Karamali's Official Website. Available at: <https://www.hamzakaramali.com/> [Accessed 6 June 2022].

curriculum, in which he explains the different subjects of Islamic studies and the way each area relates to the next. Karamali engages in teaching both elementary and advanced texts on *Ashʿarī* theology and logic; these include his lectures on classical logic through the *Isagoji*, Sanūsī's *Ṣughrā*, and others. Karamali discusses contemporary philosophical problems related to atheism in his commentaries. These include addressing modern arguments against traditional *Ashʿarī* proofs for God's existence. Karamali has researched the *Qurʾān* design argument and how it may be understood in light of the 'intelligent design' movement.[218]

2.6 Conclusion

Ashʿarī kalām developed through the engagement of scholars with a series of intellectual challenges, including *Muʿtazilī* thought, literalism, Greek philosophy, and modern science and philosophy. The latter remains under-theorised within *Ashʿarī*sm. Historically, the most significant of these challenges was Greek philosophy. Ghazālī's adoption of classical logic and his refutations of some of the positions of Avicennian philosophy marked a turning point for the school, after which it began to incorporate some elements and critique others of Greek philosophy. Through the works of key *Ashʿarī* thinkers such as Ghazālī, Rāzī, Ījī, Taftāzānī, and others, the *Ashʿarī* school formed a sophisticated epistemology and ontology that scholars have used to rationally justify *Ashʿarī* creed, as well as engage in polemical refutations of heterodox and heretical opinions. I employ three criteria for the inclusion of primary sources in this thesis: 1. the acceptance by the community of scholars that the work is part of the *Ashʿarī* school; 2. the relevance of scholars' works in contemporary Islamic educational institutions; and 3. that the works are sufficiently advanced in their expositions, such that they include at least some discussions on topics in epistemology or ontology. I have identified four modern *Ashʿarī* thinkers to draw from, based on two criteria: 1. they are committed to *Ashʿarī* epistemological and ontological positions, and 2. they have actively engaged with the philosophical ideas in contemporary atheist literature. The next chapter identifies a definition of atheism from an *Ashʿarī* standpoint based upon the works discussed in this chapter and explores the philosophical foundations of contemporary atheism in light of this definition.

---

[218] He co-authored a paper on this topic along with Shoaib Malik and the author. See: Shoaib Ahmed Malik, Hamza Karamali, and Moamer Yahia Ali Khalayleh. "Does Criticizing Intelligent Design (Id) Undermine Design Discourse in the *Qurʾān*? A Kalāmic Response." *Zygon* 57, no. 2 (June 2022): 490–513. https://doi.org/10.1111/zygo.12773.

Chapter 3: The Foundations of Contemporary Atheism

3.0 Introduction

This chapter aims to provide a definition of atheism that is compatible with the *Ashʿarī* school of theology and to offer an overview of the philosophical foundations of contemporary atheism through an exposition of seven major schools of philosophy that have shaped Western thought. The central argument is that the ideological underpinnings of contemporary atheism arose from casting doubt in the validity of one or more of acceptable sources of certain knowledge as understood by *Ashʿarī* scholars.[219] The acceptable sources of certain knowledge according to *Ashʿarī*s are *a priori* or intuitive knowledge (*awalīyāt*), sensible knowledge (*ḥissyāt*), widely transmitted reported knowledge (*mutawātir*), logical inference (*naẓar)*, inductive knowledge (*tajrīb*), and abductive knowledge (*ḥads*).[220] These are identified by *Ashʿarī* scholars (such as Ghazālī) as a means to attain objective truth.[221] The word used for non-belief in Islamic lexicon is *kufr*, which has a root meaning of hiding or concealing.[222] That is, a person who is in a state of non-belief conceals or does not acknowledge that which is apparent. It is also often used in the *Qurʾān* to denote unbelief or ingratitude. A *kāfir* is an unbeliever.[223] The plural of *kāfir* is used in the *Qurʾān* to refer to farmers, who are so named because they cover or conceal seeds in the earth.[224]

What I demonstrate in this chapter is that from an *Ashʿarī* lens, each of the schools of philosophy under discussion fails to acknowledge or conceals at least one source of sound knowledge, which leads thinkers to accept atheism as a rationally possible position. The philosophies under discussion are Cartesian rationalism, empiricism, idealism, analytic

---

[219] E.g, Ghazālī, Rāzī, Taftazānī, Ījī, Jurjānī, and others. These scholars were identified in the previous chapter and their opinions represent the positions of the *Ashʿarī* school.

[220] See chapter 4 on *Ashʿarī* epistemology and ontology. There are multiple Arabic translations of some of the terms. *A priori* knowledge, for instance, has at least three possible translations each referring to a nuanced meaning. Chapter four looks into these.

[221] Chapter four explores this idea further.

[222] Arabic Academy Cairo. *Al-Muʿjam Al-Wasīṭ*. (Cairo: *Maktabat al-Shurūq al-Dawlīyya,* 2008), 791; W. Björkman, "Kāfir", in: Encyclopaedia of Islam, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 29 May 2023 <http://dx.doi.org/10.1163/1573-3912_islam_SIM_3775>.

[223] Ibid.

[224] Q. (57:20)

philosophy, existentialism, Marxism, and post-modernism in its various forms.[225] I define 'atheism' from an *Ashʿarī* perspective as a lack of certainty in the veracity of the proposition 'God, the necessarily existent creator, exists'. *Contemporary atheism* is founded upon the philosophical assumptions of the philosophies under discussion (Cartesian rationalism, empiricism, idealism, analytic philosophy, existentialism, Marxism, and post-modernism). I define 'contemporary atheism' as the ideas in modern and post-modern philosophy which have led to a lack of certainty in the veracity of the proposition 'God, the necessarily existent creator, exists'.

The rise of atheism as a popular position may be attributed to various factors and may be studied in various disciplines and through multiple lenses, including social, historical, political, and cultural perspectives.[226] The focus of this chapter is on the history of ideas.[227] The philosophical development of secularism, particularly the epistemological and ontological

---

[225] Considering there are multiple philosophical schools under scrutiny, there are clear limitations to covering all their ideas in a single chapter. Additionally, there are theistic interpretations to a number of the schools of thought under discussion. The purpose of the chapter is to gain an understanding of the philosophical foundations of contemporary atheism, therefore I intend to prioritize the ontological and epistemological positions of these schools that directly pertain to atheism. For overviews of the philosophies under discussion. See: Gordon Daniel Marino, ed. *Basic Writings of Existentialism*. The Modern Library Classics. New York: Modern Library, 2004; Stanley J. Grenz. *A Primer on Postmodernism*. Grand Rapids, Mich: William B. Eerdmans Pub. Co, 1996; Stephen Law. *Humanism: A Very Short Introduction*. Very Short Introductions 256. Oxford: Oxford University Press, 2011; Friedrich Wilhelm Nietzsche, and Walter Arnold Kaufmann. *Basic Writings of Nietzsche*. Modern Library ed. New York: Modern Library, 2000; Roger Scruton. *Kant: A Very Short Introduction*. Rev. ed. Very Short Introductions 50. Oxford; New York: Oxford University Press, 2001; *Modern Philosophy: An Introduction and Survey*. New York: Penguin Books, 1996; Worsley, Peter. *Marx and Marxism*. Rev. ed. London: Routledge, 2002; Forrest E Baird, ed. *From Plato to Derrida*. 6th ed. Upper Saddle River, N.J: Pearson Prentice Hall, 2010; Michael Beaney. *Analytic Philosophy: A Very Short Introduction*. New York, NY: Oxford University Press, 2017.

[226] For a broad study of atheism from multiple disciplines including philosophical, historical, and sociological, see: S.S. Bullivant and, M. Ruse ed. *The Oxford Handbook of Atheism*. Oxford, United Kingdom: Oxford University Press, 2015; Michael Martin, ed. *The Cambridge Companion to Atheism*. New York: Cambridge University Press, 2007; John Gray. *Seven Types of Atheism*. London: Allen Lane an imprint of Penguin Books, 2018. For a sociological study of atheism, see: Phil Zuckerman, ed. *Atheism and Secularity*. Praeger Perspectives. Santa Barbara, Calif: Praeger, 2010; Phil Zuckerman. *The Nonreligious: Understanding Secular People and Societies*. New York: Oxford University Press, 2016; Amarnath ed, *Religion and the New Atheism.*

[227] For a study of the development of the philosophical ideas of atheism in modern history, see: Corneoli Fabro. *God in Exile: Modern Atheism: A Study of the Internal Dynamic of Modern Atheism, from Its Roots in the Cartesian Cogito to the Present Day*. New York and Toronto: Newman Press, 1968; Gavin Hyman. *A Short History of Atheism*. Library of Modern Religion 13. London: I. B. Tauris, 2010;, Patrick Masterson. *Atheism and Alienation: A Study of the Philosophical Sources of Contemporary Atheism*. London: Gill and Macmillan, 1971; Charles Taylor. *A Secular Age*. Cambridge, Mass: Belknap Press of Harvard University Press, 2007; Michael Cyril William Hunter, and David Wootton, eds. *Atheism from the Reformation to the Enlightenment*. Oxford: Oxford ; New York: Clarendon Press ; Oxford University Press, 1992; Liam Jerrold Fraser. *Atheism, Fundamentalism and the Protestant Reformation: Uncovering the Secret Symptahy*. Cambridge; New York: Cambridge University Press, 2018.

ideas that led to the emergence of atheism in Western societies today is central to our discussions. Though there are some allusions to political philosophy (namely, Marxism), this is primarily covered via an exploration of the metaphysical assumptions of Marxist ideology. Following this, we explore the reasons why some Muslims leave Islam (and then often adopt an atheistic worldview) and how these reasons align with the philosophies under consideration.[228] Finally, we discuss the emergence of New Atheism as a popular movement and investigate its philosophical roots: naturalism, positivism, and scientism.[229]

3.1 Defining Atheism: An *Ashʿarī* Perspective

When studying atheism, the first challenge one encounters is finding a universally agreed-upon definition. Academics and laymen alike differ widely in how they use the term.[230] Relying on an etymological meaning of the Greek word (*atheism* meaning *without God*) can give us an approximate understanding of the subject matter, but it does not suffice, since the practical use of the word varies.[231] In fact, from its origin, the ancient Greek *atheistos* was used to mean not the rejection of the existence of the Gods but rather those who went against the polytheistic religion of the ruling Greeks of Athens.[232] A more contemporary example displays these differences in definitions. A layman's concept of an atheist could be someone who does not believe in God, whereas another may understand the word to refer to someone who holds the

---

[228] For research on underlying rationale for ex-Muslims leaving Islam, see: Simon Cottee. *The Apostates: When Muslims Leave Islam.* London: C Hurst & Company, 2015; Brian Whitaker. 'Arabs Without God: Introduction – Brian Whitaker – Medium'. Accessed 10 November 2018. https://medium.com/@Brian_Whit/arabs-without-god-introduction-cbdbacd13e9f.

[229] For works on rational justifications for atheism, including New Atheism, see: Richard Dawkins. *The God Delusion.* 1st Mariner Books ed. Boston: Houghton Mifflin Co, 2008; Daniel. C. Dennett. *Breaking the Spell: Religion as a Natural Phenomenon.* New York, NY: Penguin Books, 2007; Joseph W. Koterski, ed. *Theism and Atheism: Opposing Arguments in Philosophy.* Farmington Hills, Mich: Macmillan Reference USA, a part of Gale, a Cengage Company, 2019; C. M Lorkowski. *Atheism Considered: A Survey of the Rational Rejection of Religious Belief.* Cham: Palgrave Macmillan, 2021. https://doi.org/10.1007/978-3-030-56208-3; Kai Nielson. *Atheism and Philosophy.* New York: Prometheus Books, 2005; Bertrand Russell. *Why I Am Not a Christian: And Other Essays on Religion and Related Subjects.* Repr. Routledge Classics. London: Routledge, 2010; Alom Shaha. *The Young Atheist's Handbook: Lessons for Living a Good Life without God.* London: The Robson Press, 2014; Christopher Hitchens. *God Is Not Great: How Religion Poisons Everything.* 1. Trade ed., Nachdr. New York, NY: Twelve, 2009; Sam Harris. *The End of Faith: Religion, Terror, and the Future of Reason.* 1st Norton pbk. New York: W.W. Norton & Co, 2005; David Eller. *Natural Atheism.* Cranford, N.J: American Atheist Press, 2004.

[230] Bullivant, "Defining 'Atheism'". In *The Oxford Handbook of Atheism*, 23-5.

[231] Ibid.

[232] Alister E McGrath. *The Twilight of Atheism: The Rise and Fall of Disbelief in the Modern World.* 1st ed. (New York: Doubleday, 2004), 8.

belief of the universal rejection of anything metaphysical or transcendent, essentially equating atheism with the philosophical theory of naturalism.[233]

The scholarly definition of 'atheism' has also been contested. *The Oxford Handbook of Atheism*, as well as the *Cambridge Companion to Atheism*, both use 'atheism' as a comprehensive term which encompasses *positive* atheism (an active rejection of the existence of God) and *negative* atheism, also known as agnosticism. *The Oxford Handbook of Atheism* defines atheism as 'the absence of belief in God or gods'.[234] *The Stanford Encyclopaedia of Philosophy*, on the other hand ,rejects this understanding, stating that atheism is 'a proposition that God does not exist' and a claimed statement of fact that differs from a belief, which is a psychological state that is independent of the veracity of the proposition.[235] It goes on to say that if atheism is considered a psychological state, the content of a proposition cannot include positive atheism, which is based not on the truth of the proposition that *there is no God* but rather on the belief in the same proposition, justified or not.

The two most common words used for atheism in Islamic terminology are *ilhād* and *dahriyyah*. The roots of both words are found in the *Qurʾān*, although neither is a direct translation of atheism, in the sense of an absence of belief in God or gods. *Ilhād* means heresy or deviation from the right path.[236] *Dahriyyah* refers to a form of heresy associated with a denial of an afterlife and a type of materialism.[237] Both terms can be used interchangeably and are considered one type of disbelief among many. Another contemporary term that is used is *lā dīnī*, meaning without religion or non-religious.[238] The word *kufr*, mentioned in the previous section, is an umbrella term for unbelief in its various forms that includes atheism. A *kāfir* in this sense would therefore be someone who has covered over truth of the reality of belief in God and the message of Islam.[239]

---

[233] McGrath, *The Twilight of Atheism*, XII, 8.

[234] Bullivant, "*Defining 'Atheism'*". In *The Oxford Handbook of Atheism*, 23-31.

[235] Paul Draper, "Atheism and Agnosticism", *The Stanford Encyclopedia of Philosophy* (Summer 2022 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2022/entries/atheism-agnosticism/ .

[236] I. Goldziher, and Goichon, A.M., "*Dahriyya*"*, in: Encyclopaedia of Islam*, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 06 November 2022 <http://dx.doi.org/10.1163/1573-3912_islam_SIM_1666>; Schielke, "The Islamic World". In *The Oxford Handbook of Atheism*, 524-534.

[237] Shabbir Akhtar. *The Qurʾān and the secular mind: a philosophy of Islam*. (London; New York: Routledge, 2008), 91.

[238] Schielke, "The Islamic World". In *The Oxford Handbook of Atheism*, 524.

[239] For a study of the multiple uses of the word *kufr* in the *Qurʾān*, see: Marilyn Robinson Waldman. "The Development of the Concept of Kufr in the Qur'ān." *Journal of the American Oriental Society* 88, no. 3 (1968): 442–55. https://doi.org/10.2307/596869.

Generally speaking, anyone who denies one of the six major tenets of Islam is considered a disbeliever. These tenets are the belief in God, His angels, His revealed books, His messengers, the last day, and divine decree.[240]

If we take *the absence of belief in God or gods* as a definition, it would entail that a Muslim, whose conception of God is that He is dissimilar from created entities, would be an atheist regarding any conceptions of God or gods that are anthropomorphic or characterised as analogous to the created world. It is therefore necessary to hone in on a definition that is compatible with the Islamic definition of God and the requisites for belief in Him as understood by the *Ashʿarī*s.

Ashʿarī kalām (discursive theology) may be defined as the knowledge of doctrinal beliefs and their apodictic proofs.[241] This knowledge must therefore be arrived at with complete certainty through unequivocal validation, derived from revelation and sound logical inference.[242]

In the Arabic language, *Īmān* (belief or faith) is understood as acceptance and compliance to a set of given propositions,[243] the propositions here being the six articles of faith: belief in God, His angels, His messengers, His books, the last day, and the divine decree and their entailments.[244] The most relevant article of faith for our study is belief in God. The *Ashʿarī* school elevates the level of conviction a person must have for belief in God to that of certainty.[245] The *Ashʿarī* understanding is that God is the necessarily existent creator, who a morally responsible person is obliged to accept as a reality with complete certitude.[246]

Since the foundational tenet of Islam is the belief in God, it is viewed as legally incumbent upon Muslim society to provide a strong rational defence of this worldview.[247] This entails that they demonstrate the logical consistency and robustness of *Sunnī* doctrine. For the *Ashʿarī*s, the use of the intellect is necessary to be able to understand the meaning of revelation and arrive

---

[240] Sachiko Murata, and William C. Chittick. *The Vision of Islam*. Visions of Reality. (New York: Paragon House, 1994), 18. Belief in the last day would also include the belief in bodily resurrection after death and is explicitly affirmed in the *Qurʾān* and hadith tradition.

[241] Bayjūrī, *Tuḥfat al-Murīd*, 38. Both rational and scriptural proofs are considered sound means via which to establish certain knowledge of religious beliefs.

[242] Nūḥ al-Quḍā. *Al-Mukhtaṣar al-Mufīd fī Sharḥ Jawharat al-Tawḥīd*, (Amman: *al-Rāzī*, 1999), 45.

[243] Ibid, 24, 33.

[244] Sachiko and Chittick, *The Vision of Islam*, 18. For Ījī's understanding see also: Muḥammad Gamal Abdelnour. *The Higher Objectives of Islamic Theology*. 1st ed. AAR Reflection and Theory Stu Religion. (New York: Oxford University Press, 2022), 63.

[245] Saʿīd Fodeh. *Tahthīb Sharḥ al-Sanūsiyya*, (Amman: *Dār al-Razī*, 2004), 29-30; Bayjūrī. *Tuḥfat al-Murīd*. (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2004), 53.

[246] Ibid.

[247] Abū Ḥāmid Muḥammad ibn Muḥammad al-Ghazālī. *Iḥyāʾ ʿUlūm al-Dīn* (Beirut: *Dār Ibn Ḥazm*, 2005), 1:31-32, 39.

at the veracity of its teachings, especially for those outside the fold of Islam. To claim otherwise, as scholars explain, would be to fall into circular reasoning, such as attempting to prove the veracity of scripture by quoting a passage in scripture affirming its own validity.

Through an *Ashʿarī* assessment of what is deemed as acceptable belief in God, I define atheism as *a lack of certainty in the veracity of the proposition 'God, the necessarily existent creator, exists'*.[248] This not only contains the two categories listed above but also includes positions in between, such as those who suspect or presume that God exists but do not have full conviction. This *Ashʿarī* interpretation of atheism forms a significant departure from other definitions in the literature, which usually categorise non-belief through two possible expressions: atheism and agnosticism. Each acknowledges the possibility that there is no God or gods, whether through an active commitment (atheism) or a more ambivalent predilection (agnosticism).

The *Ashʿarī* stance sets a high bar for acceptable belief in God. Much of the contemporary theological discourse which attempts to provide probabilistic proof of God's existence would still fall short of the *Ashʿarī* requirement.[249] As demonstrated above, only firm conviction in God's existence entails actual belief according to the *Ashʿarī* school. Anything less than complete conviction would be categorised as atheism.[250] As part of their epistemology,

---

[248] See Ghazālī's discussion of types of certainty in: al-Ghazālī, *Maḥak al-Naẓar*, 112-114.

[249] For example, some contemporary Christian theologians such as Richard Swinburne, John Polkinghorne, and John Hick hold that the existence of God is only rationally demonstrable as the best (and not the only) possible account for the existence of the universe. Their line of inquiry - with the exception of John Hick - follows a series of inductive arguments which are probabilistic in their conclusions. They generally do not ascribe considerable epistemological merit to deductive arguments for God's existence. See: John Hick. ed. *The Existence of God*. Nachdr. New York: Macmillan, 1995; John Hick. *Between faith and doubt: dialogues on religion and reason*. Houndmills, Basingstoke, Hampshire; New York: Palgrave Macmillan, 2010; John Hick. *What Is God? (Pt. 1) - Video Interview Series - Closer To Truth*. 2012 [online] Closertotruth.com. Available at: <https://www.closertotruth.com/series/what-god-part-1#video-2402> [Accessed 14 April 2020]; John Polkinghorne. *Belief in God in an age of science*. New Haven, Conn.: Yale Univ. Press, 1998; Jon Polkinghorne. *Exploring reality: the intertwining of science and religion*. London: SPCK, 2005; John Polkinghorne, et al. Arguing God From Natural Theology? | Closer To Truth. [online] Closertotruth.com, 2010. Available at: <https://www.closertotruth.com/series/arguing-god-natural-theology#video-3615> [Accessed 11 April 2020]; Richard Swinburne. *The Coherence of Theism*. Rev. ed. Oxford: Oxford ; New York: Clarendon Press ; Oxford University Press, 1993; Richard Swinburne Ed. Brüntrup, Godehard. and Tacelli, Ronald. *The Rationality of Theism*. Dordrecht: Springer Netherlands, 1999. Available at: https://doi.org/10.1007/978-94-015-9289-5 [Accessed: 18 April 2020]; Richard Swinburne. *The Existence of God*. 2nd ed. Oxford : New York: Clarendon Press ; Oxford University Press, 2004; Richard Swinburne. *Is there a god?* Rev. ed. Oxford ; New York: Oxford University Press, 2010; Richard Swinburne. et al. Is God logically necessary? | Closer To Truth. 2010 [online] Closertotruth.com. Available at: <https://www.closertotruth.com/series/god-logically-necessary#video-4311> [Accessed 12 April 2020]; Richard Swinburne. et al. Arguments about God | Closer To Truth. 2010 [online] Closertotruth.com. Available at: <https://www.closertotruth.com/series/arguments-about-god#video-4165> [Accessed 12 April 2020].

[250] Rosenthal, *Knowledge Triumphant*, 218, 237-8.

*Ashʿarī*s classify acceptable knowledge of creedal beliefs as those which are accepted with certainty, as opposed to guesswork, doubt, uncertainty, or ignorance.[251] The diagram below differentiates between levels of conviction and how they relate to acceptable belief in God's existence, according to the *Ashʿarī*s.[252]

Jahl Ignorance	Wahm Uncertainty	Shak Doubt	Ẓan Conjecture, Guesswork	ʿIlm Yaqīn Certain Knowledge
•Atheism	•Atheism	•Atheism	•Atheism	•Ashʿarī theism

Figure 1. Degrees of certainty and their relationships to acceptable belief, with Arabic terms.

Someone who is merely ignorant (*jāhil*) of the existence of God may not be labelled an atheist, since a person cannot lack certainty in a proposition if they have no knowledge of it. However, ignorance (*jahl*) may be conceived of as simple ignorance, a mere absence of knowledge of something, or compound ignorance, a lack of knowledge due to an erroneous belief.

My definition of atheism as *a lack of certainty in the veracity of the proposition 'God, the necessarily existent creator, exists'* is also important in shaping the exploration of the development of contemporary atheism. Any system of thought, be it philosophical or theological, that does not acknowledge a rational means to verify the logical necessity of the existence of God is, by the *Ashʿarī* standard, atheistic.

As discussed in chapter 5, *Ashʿarī* epistemology accepts revelation, sensible knowledge, and logical inference as a means of arriving at certain knowledge.[253] Derived from these three, *Ashʿarī* scholars delineate *a priori* intuitive knowledge, sensible knowledge, reported knowledge, logical inference, empirical knowledge, and abductive knowledge.[254] These sources produce personal conviction in the individual when conceptualised correctly.[255]

---

[251] Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 29-30; Bayjūrī, *Tuḥfat al-Murīd*, 53.
[252] Rosenthal, *Knowledge Triumphant*, 31.
[253] See: Ghazālī, *Maḥak al-Naẓar*, 116-122.
[254] Rosenthal, *Knowledge Triumphant*, 237-238.
[255] ʿAbd al-Malik al-Juwaynī, and al-Shanqītī, Muḥmmad al-Ḥasan. "Sharḥ al-Waraqāt," *al-Maktaba al-Shāmila,* accessed 30 May 2023, https://al-maktaba.org/book/7689/26#p1.

Each of these methods of knowing pertains to a particular metaphysical domain.[256] The senses relate to that which is materially existent; the mind relates to that which is logically coherent, be it physical or supernatural, such as the existence of God, or mental or extra-mental, such as the concept of a unicorn, which is purely in the mind, or the concept of a horse, which also exists outside of the mind. Reported knowledge refers to existent entities and events, be they natural or supernatural. Historical facts are mostly attained through reported knowledge. The same may be said of eschatology, which is epistemologically sourced from revealed knowledge by God to His prophets.[257]

In the following sections, I argue that any philosophical position that repudiates any of these sources of knowledge (*a priori* intuitive knowledge, sensible knowledge, reported knowledge, logical inference, empirical knowledge, and abductive knowledge) leads to the formation of epistemologies that may accept the validity of atheism. From an *Ashʿarī* sense, there is an element of concealment, the literal meaning of *kufr,* of at least one valid cause of knowledge in each of the philosophies under discussion.

As I attempt to demonstrate in the following sections, modern philosophy often creates dichotomies that favour one source of knowledge at the expense of another. Post-modern philosophy developed out of certain ideas in modern philosophy. It disavows all claims to objective truth, rendering ineffective any attempt at arguing for God's necessary existence.

3.1.1 On the History of the Term *wājib al-wujūd* (Necessarily Existent).

The term necessarily existent (*wājib al-wujūd*) was used extensively outside of the *Ashʿarī* tradition and is found prior to its widespread adoption in the works of Ibn Sīnā (d. 428/1037).[258] However, we do see an earlier use of the term with *Ashʿarī* theologian Abū Bakr al-Bāqillānī (d. 403/1032).[259] Nevertheless, it was Ibn Sīnā who properly expanded and utilized the idea of *wājib al-wujūd* as an important part of his theological discourse.[260] In his works, *Kitāb al-*

---

[256] See: Recep Şentürk. *Comparative Theories and Methods: Between Uniplexity and Multiplexity.* 1st edition (İstanbul: İbn Haldun University Press, 2020), 45-105, 175-207.
[257] Ibid.
[258] Fedor Benevich. "The Necessary Existent (wājib al-wujūd) From Avicenna to Fakhr al-Dīn al-Rāzī". Shihadeh, Ayman, and Jan Thiele, eds. *Philosophical Theology in Islam: Later Ashʿarism East and West.* Islamicate Intellectual History, vol. 5. (Leiden ; Boston: Brill, 2020), 123.
[259] Thiele, Jan. *Between Cordoba and Nīsābūr.* Edited by Sabine Schmidtke. Vol. 1. (Oxford University Press, 2015), 7. https://doi.org/10.1093/oxfordhb/9780199696703.013.45.
[260] BÄCK, ALLEN. "Avicenna's 'Conception of the Modalities.'" *Vivarium* 30, no. 2 (1992): 217–55. http://www.jstor.org/stable/42569869; Kamal, Muhammad. 'Avicenna's Necessary Being'. *Open Journal of Philosophy* 06, no. 02 (2016): 194–200. https://doi.org/10.4236/ojpp.2016.62018; Ziai,

Shifāʾ and *al-Ilāhiyyāt*, Ibn Sīnā describes God as being necessarily existent and founds this claim upon the argument from the contingency of the world concluding that God is logically necessary.[261] We see prior to Ibn Sīnā, the idea of necessary existence used implicitly by Aristotle to refer to the unmoved mover as that which cannot undergo change,[262] the same may be said of Fārābī (d. 339/950) who also implicitly refers to the necessarily existent as the first cause.[263] Ibn Sīnā formulated a more rigorous understanding of the concept and uses it extensively. Concurrent to its full articulation and adoption by the *Ashʿarī*'s other philosophers utilised the concept of *wājib al-wujūd* in their works such thinkers include Sharaf al-Dīn al-Masʿūdī (d. before 600/1204).[264]

Ashʿarī scholars particularly Fakhr al-Dīn al-Rāzī (d. 606/1210) references Ibn Sīnā's works, demonstrating engagement with his ideas and their influence on *Ashʿarī* thought.[265] Rāzī's predecessor, Ghazālī also engaged with many of Ibn Sīnā's ideas in the *Incoherence of the Philosophers*, particularly with Ibn Sīnā's understanding of necessary existence.[266]

According to *Ashʿarī* thinkers the term *wājib al-wujūd* is used to establish rationally other attributes of God such as His pre-eternality, and everlastingness, self-sufficiency and oneness. Necessary existence is thus used as means of differentiating God's existence from the possible existence of contingent entities and negating certain attributes deemed impossible for God (see chapter 5). This understanding is tied to *Ashʿarī* use of modalities in logic, which divides propositions into necessary, possible and impossible. Ibn Sīnā's conception of the necessarily

---

Hossein. "Islamic Philosophy (Falsafa)." Chapter. In *The Cambridge Companion to Classical Islamic Theology*, edited by Tim Winter, 65. Cambridge Companions to Religion. Cambridge: Cambridge University Press, 2008. doi:10.1017/CCOL9780521780582.004.

[261] Daniel D. De Haan,. *Necessary Existence and the Doctrine of Being in Avicenna's Metaphysics of the Healing*. Investigating Medieval Philosophy, volume 15. (Leiden Boston: Brill, 2020), 8, 13, 270-274, 391; Marmura, Michael E. 'Avicenna's Proof from Contingency for God's Existence in the Metaphysics of the Shifā''. *Mediaeval Studies* 42 (January 1980), 345-6. https://doi.org/10.1484/J.MS.2.306261

[262] Brown, Patterson. 'St. Thomas' Doctrine of Necessary Being'. *The Philosophical Review* 73, no. 1 (January 1964), 82. https://doi.org/10.2307/2183203; Leftow, Brian. 'Necessary Being'. In *Routledge Encyclopedia of Philosophy*, 1st ed. London: Routledge, 2016. https://doi.org/10.4324/9780415249126-K052-1.

[263] While he does not use the term, he does allude to a similar meaning. See: Fackenheim, Emil L. 'The Possibility of the Universe in Al-Farabi, Ibn Sina and Maimonides'. *Proceedings of the American Academy for Jewish Research* 16 (1946): 39-40. https://doi.org/10.2307/3622267.

[264] Fedor Benevich. "The Necessary Existent (wājib al-wujūd) From Avicenna to Fakhr al-Dīn al-Rāzī". In Shihadeh, Ayman, and Jan Thiele, eds. *Philosophical Theology in Islam: Later Ashʿarism East and West*. Islamicate Intellectual History, vol. 5. (Leiden ; Boston: Brill, 2020), 124.

[265] See: Fedor Benevich. "The Necessary Existent (wājib al-wujūd) From Avicenna to Fakhr al-Dīn al-Rāzī". In Shihadeh, Ayman, and Jan Thiele, eds. *Philosophical Theology in Islam: Later Ashʿarism East and West*. Islamicate Intellectual History, vol. 5. (Leiden ; Boston: Brill, 2020), 150.

[266] See: Ġazzālī, Abū-Ḥāmid Muḥammad Ibn-Muḥammad al-, and Michael E. Marmura. *The incoherence of the philosophers*. Provo,Utah: Brigham Young Univ. Press, 1997.

existent, while similar to the *Ashʿarī*s, still contains some important differences. These include the differentiation of the *Ashʿarī*s between the conception of existence and essence.[267] Ibn Sīnā famously equates the two which is a position he takes to overcome what he argued was the problem of attributing to God properties that would entail He was a composite. Rāzī apposes this view in several of his works.[268] Another important distinction between the *Ashʿarī* and Ibn Sīnā's understanding of necessary existence is that Ibn Sīnā attributed necessary existence to the cosmos as a pre-eternal emanation of the divine. He therefore distinguishes between the necessary existence of God and the necessary existence of that which is contingent upon God, the universe. The *Ashʿarī*s ascribe necessary existence only to God and strongly opposed the concept of emanation and the pre-eternality of the world, arguing that both could be rationally and scripturally refuted.[269]

3.2 Modern and Post-modern Philosophy

Beginning in the seventeenth century, modern philosophy marks the ideological beginnings of contemporary atheism[270] because modern philosophy is a turning point in Western philosophy, in that it eschews previous traditions.[271] These systems of thought deliberately attempt to break from pre-modern philosophical ideas to start anew by laying the groundwork for a robust system of thought founded upon the human intellect without recourse to religion or past philosophical traditions.[272] It is necessary to mention that, whilst it is certainly the case that a hallmark of modern philosophy is an attempt at novel thinking, many of the concepts described do resemble some pre-modern ideas.[273] As chapter 6 on *Ashʿarī* engagement with contemporary atheism demonstrates, many of the foundational positions for these philosophies have had precedent in pre-modern times and are discussed in the polemical works of the *Ashʿarī*s.[274]

---

[267] Benevich, "The Necessary Existent (wājib al-wujūd) From Avicenna to Fakhr al-Dīn al-Rāzī", 124.

[268] Shihadeh, Ayman. "From Al-Ghazālī to Al-Rāzī: 6th/12th Century Developments in Muslim Philosophical Theology." *Arabic Sciences and Philosophy* 15, no. 1 (2005), 171. doi:10.1017/S0957423905000159.

[269] Ghazālī's *Incoherence of the philosophers* is a prime example of this.

[270] Masterson, *Atheism and Alienation*, 8.

[271] Baird, *From Plato to Derrida*, 371.

[272] Ibid, 371-2.

[273] Fabro, *God in Exile: Modern Atheism,* 361-3.

[274] See Chapter 7 on *Ashʿarī* engagement with contemporary atheism.

Additionally, the ideas of modern philosophy have been enormously influential in a great many later philosophies up to the present day. This impact came in several forms that included responses that acknowledged and attempted to build upon previous philosophical ideas, as well as re-interpretations or synthesis of earlier schools of thought, and indeed even outright rejections of them.[275] Rationalist philosophy was countered by empiricist philosophy.[276] Later, there were attempts to reconcile these two schools of thought, through Immanuel Kant's transcendental idealism.[277] Idealism later influenced existentialism through its systematic scepticism of extra-mental reality and the belief that reality is mind dependent. Existentialist philosophies, such as those of Friedrich Nietzsche (d. 1900), would later influence post-modern ideas.[278] Furthermore, as addressed below, an ideological thread runs from earlier empiricists in the seventeenth and eighteenth centuries to analytic philosophy, logical positivism, and scientism in the twentieth and twenty-first centuries.

Each of the schools of philosophy under discussion includes epistemological or ontological foundations that are incompatible with *Ashʿarī* thought and, from its perspective, lead to atheism because these philosophies are not capable of providing certain logical proof for the necessary existence of God. In instances where some of these schools offer arguments for the existence of God, they fail to affirm necessary existence, rather the proofs are probabilistic at best.[279] Even if it is the case that some proponents of these philosophies argue for the certain existence of God, it nevertheless suffices that a. the philosophies under discussion allow for arguments for God's existence that are merely probable, and b. they have been demonstrably shown to lead to atheism.[280] The table below offers a summary of the philosophies examined

---

[275] This is discussed in numerous works on the history and development of modern philosophy, for one of the best written surveys see: Scruton, *Modern Philosophy: An Introduction and Survey*.

[276] Scruton argues that Cartesian philosophy was to cause a cascade effect which saw the emergence of many modern philosophies. The *cogito* influenced even more recent ideas, such as those of phenomenology and existentialism. See: Roger Scruton, *A Short History of Modern Philosophy: From Descartes to Wittgenstein*, (London and New York: Routledge, 2005), 34-7, 274.

[277] Ibid, 139

[278] Ken Gemes. "Postmodernism's Use and Abuse of Nietzsche". *Philosophy and Phenomenological Research* 62, no. 2 (March 2001): 337–60. https://doi.org/10.1111/j.1933-1592.2001.tb00059.x.

[279] Kierkegaard's conception of belief, for instance, was the acceptance of the rationally contradictory. See: William McDonald, "Søren Kierkegaard", *The Stanford Encyclopedia of Philosophy* (Winter 2017 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2017/entries/kierkegaard/>.

[280] See for examples, Charles Taylor's study of the formation of contemporary atheism which offers deep insight on how modern philosophy led to a shift in western societies from a belief of traditional theism to deism, and then atheism. Taylor goes beyond philosophical discussions by including the social, cultural, and historical factors that saw the emergence of atheism as a viable and even popular belief. See: Taylor, *A Secular Age*, 25-6, 293-5.

in this chapter, where they differ with the *Ashʿarī* school, and how their ideas may lead to atheism from its perspective.

Philosophy	Philosopher(s) within the school of thought under discussion	Epistemological differences with the *Ashʿarī* school	Atheism entailed
Cartesian *cogito*	René Descartes	Does not acknowledge certain types of *a priori* knowledge and can lead to scepticism about extra-mental reality.	The knowing subject is the measure of truth; equates essence with existence in ontological arguments. This is invalid with *Ashʿarī* proofs.
Transcendental idealism	Immanuel Kant	Sceptical about objective knowledge of extra-mental reality and denies deductive knowledge.	Entails scepticism, doubt, or conjecture about the necessary existence of God.
Existentialism	Søren Kierkegaard, Fredrich Nietzsche, Martin Heidegger, and Jean-Paul Sartre	Sceptical about objective knowledge and denies human essence.	Leads to scepticism, doubt, or conjecture about the necessary existence of God.
Analytic philosophy	Bertrand Russell	Sceptical about the ability to attain certain knowledge, which is conjectural at best. Empirical knowledge is the most favoured form.	Leads to scepticism, doubt, or conjecture about the necessary existence of God.

Scientism/positivism/ empiricism	David Hume, Auguste Comte, Richard Dawkins, Daniel Denett, Christopher Hitchens, Sam Harris	Only affirms empirical knowledge and denies purely rational knowledge.	God cannot be proven through empirical means and is assumed non-existent or unknowable by definition.
Marxism	Karl Marx, Fredrich Engels	Denies knowledge of anything beyond the material world. Physical world is a brute fact.	God cannot be proven through empirical means and is assumed non-existent by default.
Post-modernism	Jacques Derrida, Jean-François Lyotard, Richard Rorty, and Michel Foucault	Denies objective knowledge whether rational, empirical, or otherwise and is characterised by relativism and subjectivism.	God cannot be proven as a necessarily existent reality, which leads to scepticism and doubt in His existence.

Table 2. Contemporary atheist philosophies and their main differences with *Ashʿarī* thought.

3.3 Cartesian Rationalism

Modern philosophy began with the French thinker René Descartes (d. 1650).[281] His attempt at forming his own theory of knowledge radically changed European thought and ushered in schools of philosophy that would ultimately dismantle the idea of the rationality and the logical necessity of God's existence.[282] Many of the architects of modern philosophy, including

---

[281] Scruton, *A Short History of Modern Philosophy,* 2.
[282] See: Mark C. Taylor. *Erring: A Postmodern a/Theology*. Paperback edition. (Chicago: University of Chicago Press, 1987), 22. As Richard Popkin argues, Descartes' endeavour to create an objective

Descartes, were avowed believers and attempted to justify their religious positions through their own ideas.[283] This does not negate the fact that their philosophies were detrimental to classical arguments for the existence of God, particularly those of the *Ashʿarī* school. Their own justifications for God's existence were, from the *Ashʿarī* perspective, less logically rigorous than previous arguments, particularly when compared to the cosmological and contingency proofs.

Descartes rooted his metaphysics in the *cogito*, encapsulated in the famous phrase *I think therefore I am* (*cogito ergo sum*).[284] According to philosopher and theologian Patrick Masterson, Thomist philosopher Cornelio Fabro (d. 1995), and others, this idea invariably paved the way for subjectivism and atheism.[285] Rather than accepting certain types of understanding as intuitive and self-evident, such as knowledge of the existence of the self, Descartes casts doubt upon the most apparent of things. The foundations of Cartesian epistemology were built upon on the subject's self-awareness rather than on the objective reality of the thing itself.[286] Thought precedes existence, rather than the other way around. This re-ordering of epistemology and ontology challenges the notion of the subject's validity as an arbiter of truth. This results in a type of anti-realism, which opens the door to doubt in the reality of the external world.[287] Whilst Descartes himself was not an atheist, anti-realist, or sceptic, his epistemology lays the foundations for all these ideas.[288] A number of accusations

---

foundation for knowledge from his subjective certainty was heavily critiqued by his contemporaries. Descartes philosophy was ultimately unsuccessful in its attempt to overcome scepticism. See: Popkin, Richard H. *The History of Scepticism: From Savonarola to Bayle*. Rev. and Expanded ed. Oxford; New York: Oxford University Press, 2003), 157, 143-173.

[283] Hiram Canton argues that Descartes was a closet atheist and that he did not intend his proofs for God's existence to be serious attempts. These are demonstrably poor arguments since, as Michael Hunter and David Wootton point out, they are ahistorical and arbitrary judgments. Nevertheless, even if Descartes was not himself an atheist, his novel approach to metaphysics at least allows for a logically coherent atheism. This position is borne out by the argument that the methodological scepticism, which is necessary in the construction of his epistemology, may just as easily lead to doubt about God. See: David Wootton. 'New Histories of Atheism'. In *Atheism from the Reformation to the Enlightenment*, edited by Michael Hunter and David Wootton, 13–54. Oxford University Press, 1992), 14-15; Theo. Verbeek. "Descartes and The Problem of Atheism: The Utrecht Crisis." *Nederlands Archief Voor Kerkgeschiedenis / Dutch Review of Church History* 71, no. 2 (1991): 211–23. http://www.jstor.org/stable/24009081; Popkin, *The History of Scepticism,* 143-173.

[284] Graham Robert Oppy, and Nick Trakakis, eds*. The History of Western Philosophy of Religion. Vol. 3: Early Modern Philosophy of Religion*. 1. publ. Durham: Acumen, 2009. 106-7.

[285] Fabro, *God in Exile: Modern Atheism,* 51; Masterson, *Atheism and Alienation*, 8-9; Hyman, Gavin. *A Short History of Atheism*, 25-31; Taylor, *Erring: A Postmodern a/Theology*, 22.

[286] Masterson, *Atheism and Alienation*, 25.

[287] Ibid, 26.

[288] See for example, one analysis of David Hume's epistemology, see it as a '*derivation*' of Descartes' epistemology and his focus on the self, in addition to Hume's own radical empiricism. See: Scruton, *A*

were levelled at Descartes by his contemporaries, such as those of Dutch theologian Gysbertus Voetius (d. 1676) and Maarten Schoock (d. 1669).[289] They argue that Descartes dismantles all previous sound and logically impermeable arguments for God's existence with one that is markedly weaker and prone to intellectual assault.[290] If one is to consider doubt as a starting point for creating a metaphysical system and then move to one's own awareness of one's own existence as evidence of this, rather than accepting the apparent, intuitive, and self-evident nature of one's existence, this invariably leads to a type of scepticism; without basic intuitive knowledge, it is impossible to build a sound metaphysics, at least according to the *Ashʿarī*s.[291] Fabro, Masterson, and others argue that it was the *cogito* that established a type of immanentism, the belief that it is the human subject – in other words, the mind – which is foundational in the formation of reality.[292] Rather than acknowledging the objectivity of logical inference as an arbiter between objective truth and falsehood, it is the subjective human will that chooses and understands.[293] The human subject is one that is apart from the extra-mental world; Descartes thus divides reality into *res extensa*, and *res cognitas.* Fabro argues that this bifurcation, as he calls it, led to a kind of materialism.[294] According to Fabro, an argument can be made for the fact that the Cartesian *cogito* and its method of scepticism influences later ideas, such as David Hume's scepticism regarding the primacy of causation and, following from that idea, Hume's materialist empiricism.[295]

As explained in chapter 4, the *Ashʿarī*s are proponents of foundationalism, an epistemological stance that regards knowledge as going back to certain non-inferential ideas that are self-evident and known instinctually without need for proof. What Descartes aims to do with his

---

Short History of Modern Philosophy, 136-7. Richard Popkin also argues David Hume's point about the inventible scepticism entailed by Cartesian doubt. See: Popkin, *The History of Scepticism,* 170-1.

[289] Verbeek, Theo. "Descartes and The Problem of Atheism: The Utrecht Crisis." 211–23; See also: Han Ruler van. *The Crisis of Causality: Voetius and Descartes on God, Nature and Change*. Brill, 1995. https://doi.org/10.1163/9789004247208.

[290] Igor Agostini. "Descartes's Proofs of God and the Crisis of Thomas Aquinas's Five Ways in Early Modern Thomism: Scholastic and Cartesian Debates." *The Harvard Theological Review* 108, no. 2 (2015): 235–62. http://www.jstor.org/stable/43948455.

[291] See chapter 6 on *Ashʿarī* epistemology and ontology. Interestingly, renowned British analytic philosopher, Bertrand Russell, who himself was an atheist, holds a similar position in which he states that basic intuitive knowledge must be the only way to build a sound epistemology (thought he is sceptical of the validity of arriving at objective truths this way). See: Russell, Bertrand. *The Problems of Philosophy*. Rockville, Md.: Arc Manor, 2008.

[292] Masterson, *Atheism and Alienation*, 9; Fabro, *God in Exile: Modern Atheism,* 91-92. Note that immanentism in this sense is similar to subjectivism. Immanentism is also used to refer to the idea that God dwells in the material world, which is not the intended meaning here.

[293] Masterson, *Atheism and Alienation*, 9.

[294] Fabro, *God in Exile: Modern Atheism*, 363, 51.

[295] Ibid.

cogito is to provide such a foundation. However, he argues that his own existence is a concept that requires justification. According to the *Ashʿarī*s, one's existence is comprehended immediately, with no requirement for justification. This small but subtle change – the move from comprehending the simple concept of existence to doubting its clarity and its need for rationalisation – opens the doors of further scepticism. If Cartesian rationalism permits doubt in the most primary and immediate concepts known to us, it legitimises further doubt in everything else.[296]

Descartes' proofs for God's existence are his ontological argument and his argument based on causation.[297] The former is rejected as a valid proof according to the *Ashʿarī* school.[298] The latter, in which he argues that he is a contingent being that necessarily requires a cause outside of himself to bring him into being, is valid according to the *Ashʿarī*s.[299]

It was French philosophers Denis Diderot (d. 1784) and Paul Henri D'Holbach (d. 1789) who demonstrated the means through which Cartesian ideas (and Newtonian physics) could be used to affirm an atheistic worldview.[300] Other notable rationalists influenced by Descartes were Gottfried Wilhelm Leibniz (d. 1716) and Baruch Spinoza (d. 1677). In Leibniz's epistemology, experience alone was not sufficient in forming complete understanding, since it can only provide particular knowledge. He attempted to create a theory of knowledge that was reliant solely on *a priori* principles, and he reasoned from these basic principles.[301] Similarly, Spinoza worked from basic principles to form his epistemology.[302] For *Ashʿarī*s, this idea is problematic since it denies direct sense perception as a source of knowledge.

---

[296] It is noteworthy the Ghazali underwent a period of doubt. However, there is a difference between Cartesian doubt which was systematic and volitional and Ghazālī's period of doubt which does not seem volitional on his part. Ghazālī calls this period of doubt in his intellectual journey a type of spiritual sickness that he was able to overcome. This contrasts with Cartesian doubt which Descartes saw as instrumental in attaining certain knowledge. See: Ghazālī, Abu Ḥāmid al-. *Al-Munqith min al-Ḍalāl*. (Amman and Damascus: *Dār al-Fatḥ, Dār al-Taqwā*, n.d.), 33-37.

[297] Lawrence Nolan, "Descartes' Ontological Argument", *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/spr2021/entries/descartes-ontological/; Oppy, and Trakakis, eds *The History of Western Philosophy of Religion. Vol. 3*, 107; Buckley, *At the Origins of Modern Atheism*. (New Haven: Yale University Press, 1987), 92.

[298] This is because the ontological argument conflates the conceptualization of God's existence with substantiating his existence. The mere concept of God does not suffice in establishing His existence rationally, according to *Ashʿarī*. (Chapter 6 explores this point in greater detail).

[299] See chapter five for an examination of *Ashʿarī* arguments for God's existence.

[300] Hyman, *A Short History of Atheism*, 8; Buckley, *At the Origins of Modern Atheism*, 249-50.

[301] Brandon C. Look. "6.3 Innate Ideas" in "Gottfried Wilhelm Leibniz", *The Stanford Encyclopedia of Philosophy* (Spring 2020 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/spr2020/entries/leibniz/;

[302] Scruton, *A Short History of Modern Philosophy,* 49-50.

3.4 Empiricism

Empiricism holds that the foundation of all human knowledge is experience.[303] The primary source of our understanding of the world comes through the senses.[304] This includes observations of many discrete instances but also the ability to draw general conclusions about reality through induction, that is, drawing universal conclusions from multiple observations.[305] As one of the most eminent empiricists, John Locke (d. 1704) was of the position that human beings are born as a blank slate, a *tabula rasa,* and through physical experience, they come to know the world.[306]

Empiricism is an epistemology that is diametrically opposed to Cartesian rationalism because it claims that all knowledge begins with experience.[307] David Hume (d. 1776), John Locke, George Berkely (d. 1753), Francis Bacon (d. 1626), and more recently Bertrand Russell (d. 1970) are of the most influential philosophers of the school.[308]

John Locke was a firm believer in the existence of God. He argues that God may be known with certainty, through knowledge of our own selves and our need of an originator that is pre-eternal.[309] Not only does Locke provide a strong argument for God's existence, akin to the contingency argument used by the *Ashʿarī*s, he does so to the extent that he may very well be said to believe in the necessary existence of God. He argues that we may be certain of the idea of the necessity of an ultimate cause that brought us into being.[310] How then can empiricism, of which he is a primary proponent, be an epistemological position that leads to atheism? The answer is that John Locke does not take his empiricism to its logical conclusion.[311] David Hume

---

[303] Alexander Rosenberg. *Philosophy of Science: A Contemporary Introduction*. 2nd ed. Routledge Contemporary Introductions to Philosophy. (2nd ed, New York ; London: Routledge, 2005; 3rd, New York: Routledge, 2012), 88-89, 113, 115.

[304] Ibid.

[305] James Hawthorne , "Inductive Logic", *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2021/entries/logic-inductive/>.

[306] Nathan Rockwood. "Locke: Epistemology." *Internet encyclopedia of philosophy*. Accessed: 30 May 2023. https://iep.utm.edu/locke-ep/.

[307] Quinton, A. M. , Quinton, . Baron , Fumerton, . Richard and Duignan, Brian. "*empiricism*." Encyclopedia Britannica, September 15, 2022. https://www.britannica.com/topic/empiricism; Rockwood, "Locke: Epistemology."; Rosenberg, *Philosophy of Science*, 2nd ed, 88-89, 196.

[308] Ibid.

[309] John Locke. *An Essay Concerning Human Understanding*. (Penn State University Classic Electronic series, 1999), 612-624.

[310] Ibid.

[311] We see French materialist atheists, Diderot, d'Hobach and Naigeon argue this very point and use empiricism, more specifically sensationalism (the idea that we may only know through direct sense

applied empiricism, the idea that all knowledge comes from sense perception, methodically and pursued it to its inevitable conclusion, that causation is not an innate principle and therefore cannot be logically necessary.

Hume argues that it is impossible to draw any firm conclusions about reality.[312] All that humans have access to are discrete physical experiences.[313] Cause-and-effect relationships in the physical world are no more than observations of two or more consecutive events.[314] When a pot is placed on a hot stove, its temperature increases. An intuitive conclusion is that the fire caused the stove to get hot, but Hume argues that all we can be certain of is the correlation of these two events. We cannot see the actual causal connection.[315] Therefore, we can never be certain of the existence of causation in the world.[316] In fact, in his writings, Hume even casts doubt on the ability of the human mind to be certain that extra-mental reality even exists.[317]

Hume's tenuous relationship with certain objective truth notwithstanding, he did not believe it was possible to provide sufficiently strong evidence for God's existence with reason, both

---

experience), to argue for atheism. This is because if, as Locke is correct that it all knowledge comes from the sense then it is meaningless to assert the existence of anything beyond the material. See: Alan Charles Kors. 'The Atheism of d'Holbach and Naigeon'. In *Atheism from the Reformation to the Enlightenment*, 273–300. Subsequently, other empiricists such as George Berkely recognized that empiricism leads to scepticism regarding that which we are unable to perceive. See: Rosenberg, *Philosophy of Science,* 2nd ed., 113-4.

[312] Scruton, *A Short History of Modern Philosophy,* 129-130.

[313] Hume argued against the existence of miracles and believed they were impossible. The section on miracles in chapter 4, and the section on critiques of Hume in chapter 6 provide further exploration of this topic. See also: Benjamin F. Armstrong. "Hume's Actual Argument against Belief in Miracles." *History of Philosophy Quarterly* 12, no. 1 (1995): 65–76. http://www.jstor.org/stable/27744648.

[314] Ibid*, 126-8; C. M. Lorkowski. "Hume: Causation." Internet encyclopedia of philosophy, Accessed: 30 May 2023. https://iep.utm.edu/hume-causation/.

[315] David Hume, and Tom L. Beauchamp. *An Enquiry Concerning Human Understanding*. Oxford Philosophical Texts. (Oxford; New York: Oxford University Press, 1999), 11-15; Fabro, *God in Exile: Modern Atheism*, 300-1; Scruton, Roger. *A Short History of Modern Philosophy, 126-8.*

[316] Ibid. *Ashʿarī*s agree in habitual necessity rather than the logical necessity of physical cause and effect but disagree about the conclusion by denying causality altogether. Rather they recognised the logical necessity of an ultimate, immaterial cause, i.e., God. Chapter five and six delve more deeply into this topic.

[317] Hume posed the sceptic's argument about the lack of rational justification the existence of an external world and understood the challenge antirealism poses for traditional theism. He says, "*once the external world has been called in question, we are left with no arguments to prove that God exists or to show what his attributes are.".* It is difficult to ascertain the actual views of Hume himself in his writings since he employs different characters to argue their positions and thus a reader is never sure of the author's real convictions, which is why there are multiple interpretations of his beliefs among scholars. See: Hume, and Beauchamp, *An Enquiry Concerning Human Understanding,* 79; David O'Connor. *Routledge Philosophy Guidebook to Hume on Religion*. (Hoboken: Taylor and Francis, 2013), 214-18; T. K. Seung. *Kant: A Guide for the Perplexed*. Guides for the Perplexed. (London ; New York: Continuum, 2007), 1.

deductively and inductively.[318] His ideas influence later schools of empiricism such as logical positivism.[319]

For the *Ashʿarī* school, empiricism swings to the opposite extreme of the epistemological spectrum. If, as empiricists hold, only experience and observation may be taken as valid sources of knowledge, it is not possible to argue for the existence of anything beyond the physical world. Even if one were to assume God to exist, according to empiricism, it would not be possible to know that He does.

These ideas led to the popularisation of a school of thought called naturalism – the ontological philosophy of secular humanism and of much enlightenment thought.[320] It assumes that all that exists stems from or is ultimately material and is the logical conclusion of empiricism[321] and suggests that the universe can be explained by the laws of science without the need for a God. In this sense, the universe and its constituent parts are deemed self-explanatory. There is no recourse for anything outside the laws of physical and life sciences to determine the origin of the universe or its components, including the stars, planets, life, and human consciousness. In his book *Brief Answers to Big Questions*, acclaimed physicist Stephen Hawking describes his quintessentially naturalistic view on God and the creation of the universe succinctly, 'I think the universe was spontaneously created out of nothing, according to the laws of science',[322] and '…it's my view that the simplest explanation is that there is no God. No one created the universe and no one directs our fate'.[323]

Naturalistic ontology entails a rejection of the supernatural and an assertion that anything that cannot be proven using empirical methods cannot be said to exist. Therefore, nothing exists in reality but the physical. This leaves no place for that which is non-material, such as God, angels, spirits, the soul, the afterlife, and so on. Epistemological naturalism sees that the physical and life sciences become the source of ultimate certainty about the world.[324] In the

---

[318] O'Connor, *Routledge Philosophy Guidebook to Hume on Religion*, 8-13.

[319] Britannica, T. Editors of Encyclopaedia. "logical positivism." Encyclopaedia Britannica, April 28, 2015. https://www.britannica.com/topic/logical-positivism.

[320] Michael Shermer. 'Scientific Naturalism: A Manifesto for Enlightenment Humanism'. *Theology and Science* 15, no. 3 (3 July 2017): 220–30. https://doi.org/10.1080/14746700.2017.1335060; Bristow, William, "Enlightenment", *The Stanford Encyclopedia of Philosophy* (Fall 2017 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2017/entries/enlightenment/>.

[321] Ibid.

[322] Stephen Hawking, Eddie Redmayne, Kip S. Thorne, and Lucy Hawking. *Brief Answers to the Big Questions*. First U.S. edition. E-book. (New York: Bantam Books, 2018), 22.

[323] Ibid, 24-25.

[324] Rosenberg, *Philosophy of Science,* 2nd ed,161.

Ashʿarī sense, empiricism covers or conceals *a priori*, purely rational knowledge that is attained without reference to sense experience.

3.4.1 Scientism

Scientism, as an epistemological position, asserts that the natural sciences provide the only legitimate source of knowledge about the world.[325] It is a reductionist philosophy that limits the locus of human understanding to the empirical. The literature identifies other types of scientism, though epistemic scientism is defined above.[326] It holds to the primacy of sense experience in the formation of knowledge, making scientism more exclusionary of other forms of knowledge. In this regard, scientism differs from empiricism, which still may be used to argue, however accurately one may deem it, for the existence of God, as with Locke. Some forms of empiricism, such as Hume's understanding discussed above, are epistemologically agnostic regarding the existence of anything beyond sense experience, whereas scientism takes a further step by arguing that science is the only means of knowing which *de facto* results in the position that anything which cannot be scientifically researched is meaningless.[327]

Ontological scientism is an extension of this idea and is the belief that all that exists is that which can be discovered using the scientific method.[328] This position is synonymous with some forms of naturalism discussed above. Epistemic scientism has had a tremendous impact on the thought of modern-day atheism. Many New Atheists are proponents of scientism and use it to promote and argue their beliefs.[329] The existence of God, human consciousness, ethics, and human free will are claimed to be under the purview of the natural sciences.[330] In the *Ashʿarī*

---

[325] Tom Sorell. *Scientism Philosophy and the Infatuation with Science*. (London and New York: Routledge, 2013), 1.
[326] Mikael Stenmark. 'What is Scientism?' *Religious Studies* 33, no. 1 (March 1997): 15–32. https://doi.org/10.1017/S0034412596003666.
[327] This position is akin to that of the logical positivists of the 1920s (see the section on analytic philosophy). Britannica, T. Editors of Encyclopaedia. "logical positivism." Encyclopedia Britannica, April 28, 2015. https://www.britannica.com/topic/logical-positivism.
[328] Ibid.
[329] Shoaib Malik, A. *Atheism and Islam: A Contemporary Discourse* (Dubai: *Kalām* Research and Media, 2018), 2, 23-4; Stenmark, Mikael. '*What is Scientism?*'.
[330] Rosenberg, Alexander. *Philosophy of Science: A Contemporary Introduction*, 161. Prominent books by new atheists that espouse scientistic ideas include Daniel Dennett's *Consciousness Explained* and Sam Harris' *The Moral Landscape: How Science Can Determine Human Values*, and Dawkins' *The God Delusion*, to name but a few.

sense, scientism covers up or conceals purely rational knowledge and denies any ontological reality beyond the material.

3.5 Idealism

Idealism is a metaphysical concept that posits that all knowledge of extra-mental reality is dependent on the mind.[331] The focus of this section is on the most important school of this system of thought in modern philosophy, Immanuel Kant's transcendental idealism.[332] Kant aimed to create the philosophical equivalent of a Copernican revolution. He largely succeeded, in the sense that his work was hugely influential in the development of later philosophical schools.[333]

Kant's work is highly complex and fraught with ambiguity,[334] which has left later scholars with some latitude as to how to interpret it. That said, some important concepts can be clearly elucidated in his work, which have serious implications for any attempt at forming a rationally consistent theological system that conforms with the *Ashʿarī* conception of belief in God.[335] More specifically, transcendental idealism leaves no room for arguing the existence of God as a logically necessary being in the *Ashʿarī* sense.[336]

---

[331] Paul Guyer, and Rolf-Peter Horstmann, "Idealism", *The Stanford Encyclopedia of Philosophy* (Fall 2022 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/fall2022/entries/idealism/>.

[332] Kant's writings can be quite bewildering and as such are subject to multiple interpretations among scholars. The views in this section follow some positions regarding Kant's work that restrict the ability of the mind to unequivocally argue for the necessary existence of God, deeming transcendental idealism a philosophy that may be used to argue for atheism, according to the *Ashʿarī* conception. See: Seung, *Kant: A Guide for the Perplexed*, 1; Scruton, *Kant: A Very Short Introduction*, 16.

[333] Michael Rohlf, "Immanuel Kant", *The Stanford Encyclopedia of Philosophy* (Fall 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2020/entries/kant/>.

[334] Scruton, *Kant: A Very Short Introduction*, 16; Baird, Forrest E., ed. *From Plato to Derrida*, 775.

[335] Kant dismisses the cosmological and design arguments for God's existence. The former is especially significant in *Ashʿarī* theology as is explained in chapter 5. Kant contends that the arguments are founded upon the ontological argument, which he refutes, and are thus invalid for proving God's existence. His own moral argument for God's existence by no means fulfils the role of proving the necessary existence of God, according to *Ashʿarī* theology. See: Pasternack, Lawrence and Courtney Fugate, "Kant's Philosophy of Religion", *The Stanford Encyclopedia of Philosophy* (Summer 2022 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2022/entries/kant-religion/>.

[336] Ibid.

Kant differentiates between knowledge attained with our subjective mind and knowledge of the world outside of our minds.[337] This form of idealism acknowledges the existence of extra-mental reality but argues that the mind is not only limited in its capacity to access the world but also shapes our perception of it, because it views the mind's processes as subjective by their very nature. The reality experienced by each person is modelled by concepts of thought that are not reflections of the outside world; rather, they are hardwired into the mind and alter one's perception of the world outside of the mind.[338] Kant calls these 'categories',[339] of which he identifies 12, including time, space, and causality. Rather than consider these universal concepts aspects of extra-mental reality, he posits that their universality stems from the fact that human beings share the same mental filters which inform their thinking.[340]

Kant identifies the world as it appears as *phenomenal* reality and the world as it actually is as *noumenal* reality.[341] According to transcendental idealism, it is impossible to have objective access to extra-mental reality; rather, one many only conceive of that which is apparent and perceptible.[342] Scruton summarises this idea by stating, 'In the end, however, anti-realism seems to be identical to what Kant called "transcendental idealism"'.[343] Our shared *phenomenal* reality is how we can build an objective epistemology. Human beings may use their rational faculties to reach universally objective knowledge, but this knowledge does not pertain to the world outside of the mind. A shared understanding of causation, space, time, and other categories are in the mind and may be used to reach objective truths within phenomenal reality. According to Kant, these are *a priori* ideas which are known through reason alone and without recourse to sense experience since these concepts create our understanding of experience.[344] This means that senses provide only discrete information that the mind then must make meaningful, which it does through pre-programmed ideas innate in the mind. What one know and can acknowledge as objective truth, according to Kant, is only so because we all share the

---

[337] Lucy Allais. 'Kant's Transcendental Idealism and Contemporary Anti-realism'. *International Journal of Philosophical Studies* 11, no. 4 (December 2003): 369–92. https://doi.org/10.1080/0967255032000136489.

[338] Henry E. Allison. *Kant's Transcendental Idealism*. Rev. and Enlarged ed. (New Haven (Conn.): Yale university press, 2004), 21-22; Scruton, *Kant: A Very Short Introduction*, 47-8.

[339] Scruton, *Kant: A Very Short Introduction*, 47-8.

[340] Ibid, 51-53

[341] This is perhaps the clearest interpretation of the distinction between the two though Kant did not always use this unequivocal understanding of these terms. See: Allison, Henry E. *Kant's Transcendental Idealism*, 57-8; Scruton, Roger. *Kant: A Very Short Introduction*, 55-6.

[342] Scruton, *Modern Philosophy: An Introduction and Survey (ebook)*, 277.

[343] Ibid.

[344] Seung, *Kant: A Guide for the Perplexed*, 2-5

same mental filters (categories) that make this possible for a shared experience of reality.[345] This shared experience is that alone, a coloured impression of reality, rather than reality itself.[346] By Kant's admission, his theory of knowledge does not allow for the ability to truly know anything immaterial either, such as the existence of God.[347]

This is a brief overview of Kant's attempt at reconciling David Hume's scepticism and empiricism with Descartes and Leibniz's rationalism. Hume went so far in his scepticism as to deny the validity of causality an cast doubt on the ability to know anything beyond sensory experience.[348] This Kantian bifurcation of the *phenomena* and *noumena* is deeply problematic from an *Ashʿarī* standpoint because such an epistemology denies the human mind's capacity to know objective truths about the world.

Proving the necessary existence of God is ruled as rationally impossible according to Kant.[349] Moreover, Kant famously critiques deductive arguments for the existence of God by arguing that cosmological arguments and designs arguments all rest upon the ontological argument.[350] By demonstrating the invalidity of the ontological argument, he concludes that all deductive methods to prove God's existence are invalid.[351] He goes on to assert the existence of God through other means. Through his moral argument, he posits that there must be a God because there must be an afterlife for the actualisation of justice in an ideal ethical system.[352] Nonetheless, a basis for belief in God that is not rooted in the idea that God is necessarily existent and can be inferred with certainty is not sufficient for the *Ashʿarī*s. From an *Ashʿarī* stance, transcendental idealism conceals or covers up the sense of objective direct knowledge of the world through the senses.

It is not difficult to see that later philosophical schools took inspiration from Kant's transcendental idealism and formed ever more sceptical positions. Existentialism and post-modernism are prime examples of this.[353]

---

[345] Ibid.
[346] Ibid.
[347] Ibid.
[348] Ibid,1, 5-6, 25.
[349] Ibid, 85-9.
[350] Ibid.
[351] Ibid.
[352] Ibid, 128-30.
[353] Roe Fremstedal. '*Kant and Existentialism: Inescapable Freedom and Self-Deception'*. In *The Palgrave Handbook of German Idealism and Existentialism*, edited by Jon Stewart, 51–75. Cham: Springer International Publishing, 2020. https://doi.org/10.1007/978-3-030-44571-3_3; Hubert Schwyzer. 'Subjectivity in Descartes and Kant'. *The Philosophical Quarterly (1950-)* 47, no. 188 (1997): 342–57.

3.6 Existentialism

Existentialism rose as a popular and influential philosophical movement in the mid-twentieth century. Its intellectual foundations were by laid by a number of philosophers in the late nineteenth and early twentieth century, including Søren Kierkegaard (d. 1855), Friedrich Nietzsche (d. 1900), Martin Heidegger (d. 1976), and Jean-Paul Sartre (d. 1980).[354]

Whilst existentialism encompasses a wide range of ideas and opinions, they all share a principal concern: the topic of human existence.[355] What makes existentialism unique as a philosophy in this endeavour is its examination of areas outside the realm of traditional philosophy. Human subjectivity, emotions, ad psychological states are considered alongside rational ideas and conceptions.[356]

Nietzsche is known as the father of existentialism. He was a sceptic in the sense that he doubted human capacity to comprehend reality as it is. Rather, he was a proponent of perspectivism,[357] an epistemological position that argues that knowledge is only possible through the subjective viewpoint of the person perceiving.[358] It is impossible to gain any understanding of things as they are since the human mind is always bound by its own concepts. Attaining objective truth is an impossible feat because truth is coloured by man's will and power to shape reality. Truth is a pragmatic concept that should be subordinate to humankind's freedom to form their own moral and political systems with the self as the centre point.

He is famously accredited with the proclamation, 'God is dead. God remains dead. And we have killed him'.[359] Here, Nietzsche means that since Western society has done away with the idea of God as the standard for truth and morality, they must now themselves be the measure of truth through what he called the will to power.[360]

---

[354]   Stone, *Existentialism*. In *The Oxford Handbook of Atheism*, 278; Crowell, Steven, "Existentialism", *The Stanford Encyclopedia of Philosophy (Winter 2017 Edition)*, Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2017/entries/existentialism/>. [Accessed: 19 April 2019].

[355] Robert C. Solomon, ed. *Existentialism*. 2nd ed. (New York: Oxford University Press, 2005), xii, xix.

[356] Ibid, xviii-xix.

[357] Perspectivism is a form of relativism which views knowledge about reality to be inseparable from the subjective perception of the individual. See: Reginster, Bernard. "The Paradox of Perspectivism." (*Philosophy and Phenomenological Research* 62, no. 1 (2001): 217–33), 217. https://doi.org/10.2307/2653601; Peter Seipel, and Philosophy Documentation Center. 'Nietzsche's Perspectivism, Internal Reasons, and the Problem of Justification:' *International Philosophical Quarterly* 55, no. 1 (2015): 49–65. https://doi.org/10.5840/ipq20152929.

[358] Ibid.

[359] Nietzsche, '*From the Gay Science'*. In *Existentialism*, 67.

[360] Ibid, 65-7; 97-100.

Jean-Paul Sartre asserts that human beings are utterly free. Because of this freedom, he argues, atheism is an inescapable consequence of existentialism.[361] To understand this statement, one must probe Sartre's understanding of the human condition and its implications. For Sartre, human consciousness is directed through its own volition to objects in the external world. It can apprehend these objects through its own choice to direct its attention towards them. Human consciousness is thus unrestricted in its ability to choose.[362] This idea reveals a fundamental trait of the human condition, which is that the purpose or essence of human beings is self-determining.[363] There is no quintessential human nature. Man has no archetype and no essence with which they are born.[364] A person must choose their own essence through how they freely choose to live their life. The same can be said of their morals and values, which are therefore independent of any supreme cosmic authority. Sartre summarises existentialism's position on human nature with his maxim, 'Existence precedes essence'.[365] God does not exist because if He did, He would have created human beings with a purpose.[366]

In addition to atheist existentialism, it is important to note that existentialism as a movement also includes a strong Christian strand. Philosophers such as Søren Kierkegaard and Gabriel Marcel were both Christians.[367] Nonetheless, even theological existentialism's definitions of belief are incompatible with *Ashʿarī* theism because it does not acknowledge a valid means to rationally prove the necessary existence of God. Rather, as is the opinion of Kierkegaard, faith and reason are diametrically opposed.[368] When one believes in God, they are wilfully choosing to commit to ideas that conflict with reason. Faith becomes an act that is the embracing of the absurd.[369] This anti-rational stance towards religion leaves no room for any type of certainty. Existentialism as viewed by thinkers such as Sartre is an atheistic philosophy because it asserts human free will and denies an essence or an ultimate objective purpose to human existence.[370] It therefore, and more importantly, does not affirm any rational way of positing God's necessary existence.

---

[361] Gregory Bassham. "Atheistic Existentialism". In *The Philosophy Book: From the Vedas to the New Atheists: 250 Milestones in the History of Philosophy*. (New York: Sterling, an imprint of Sterling Publishing Co., Inc, 2016), 1005.

[362] Stone, "*Existentialism*". In *The Oxford Handbook of Atheism*, 283-87; Solomon, *Existentialism*, 207.

[363] Sartre, 'From *Existentialism Is a Humanism*'. In *Existentialism*, 207-11.

[364] Ibid.

[365] Bassham, *The Philosophy Book*, 1005; Crowell, "Existentialism". In *The Stanford Encyclopedia of Philosophy*; Stone, *Existentialism*. In *The Oxford Handbook of Atheism*, 283-4.

[366] Stone, Alison. *Existentialism*. In: *The Oxford Handbook of Atheism*, 283-287.

[367] Bassham, "Atheistic Existentialism". In *The Philosophy Book*, 1005.

[368] McDonald, "Søren Kierkegaard", *The Stanford Encyclopedia of Philosophy.*

[369] Ibid.

[370] Stone, *Existentialism*. In *The Oxford Handbook of Atheism*, 283.

At the heart of these philosophies is a scepticism about the ability to attain any objective understanding of the world outside of our minds. Indeed, the very existence of such a reality is unknowable to them. It means that atheism is automatically implied if there is no way to even acknowledge the fundamental *a priori* principles that are the foundations of the arguments for the necessity of God's existence.

3.7 Marxism

Marxism is a materialist and atheist political philosophy that is outwardly critical of religion.[371] It stands apart from other schools under discussion, in that it interprets religion through a historical and social lens. Karl Marx (d. 1883) had little concern with arguing about God's existence for he viewed the world as self-explanatory through scientific means.[372] Through his theory of historical materialism, he viewed religion as a method of subjugating the general population to serve the needs of ruling bourgeois. Religion was there to confine individuals and society to maintain the status quo.[373] For Marx, religious belief was an illusion that society would be rid of if it was able to progress beyond the social factors that created it.[374] His and Friedrich Engels' (d. 1895) ideas were based on *dialectic materialism* and demonstrate a type of naturalism.[375] However, Marx did not see humans as subjugated by a deterministic natural order; rather, the individual was endowed with an ability to shape their own future.[376] From an *Ashʿarī* perspective, Marxist epistemology covers up or conceals rational or inferential knowledge, since it relies on naturalism and materialism in its understanding that scientific knowledge suffices as an explanation for the world.

3.8 Analytic Philosophy

Analytic philosophy is one of the most significant and influential philosophical traditions of the twentieth century.[377] As with many modern philosophical movements, it is difficult to

---

[371] Thompson, "Marxism". In *The Oxford handbook of Atheism.*
[372] Ibid.
[373] Ibid.
[374] Ibid.
[375] Ibid.
[376] Ibid.
[377] M. Beaney, ed. *The Oxford handbook of the history of analytic philosophy*. (Oxford: Oxford University Press, 2015), 3.

define as many different strands of analytic philosophy have spanned over a century. However, as a whole, analytic philosophy is a largely atheistic tradition.[378] The following analysis focuses on two major ideas within the analytic tradition – the denial of metaphysics, and logical positivism – which entail either a rejection or ambivalence towards God's existence. This section discusses Bertrand Russell's contributions on logical positivism and how his viewpoints lead to non-belief.[379]

A founder of analytic philosophy, Bertrand Russell expressed in the early twentieth century his position on philosophy that, as a discipline, it has proved incapable of answering any of the essential questions about the human condition and the world.[380] For example, Russell believed that philosophy could not state with any certainty whether the external world existed or whether it is only a subjective creation of our mind (realism or anti-realism).[381] He argued that philosophy had failed at providing a sound moral and ethical system derived through reason alone.[382] If we are incapable of answering such a basic question about the nature of existence, how are we even able to tackle questions such as the existence of God? If the natural world cannot be proven to exist, how can we prove the existence of the supernatural? According to Russell (whilst originally a realist, he would later take a more idealist stance), nothing outside of the mind can be proven. With regards to his atheism, Russell's 1927 essay *Why I am Not a Christian* provides an exposition of his position.[383] He states that his rejection of the teleological argument is based on the grounds of Darwinian evolutionary theory, which explains the outward appearance of design in nature without referring to a creator. He also suggests that arguments from first cause were not valid because of the necessity of an infinite regress of causes.[384] Lastly, Russell suggests that developments in modern science have upended the classical arguments for the existence of God based on the need for God to explain the existence of the laws of nature.[385]

From Russell's ideas emerged a strong trend in analytic philosophy, the denial of metaphysics.[386] This came to fruition with the movement known as logical positivism, which

---

[378] Pigden, "Analytic Philosophy". In *The Oxford Handbook of Atheism*, 307-315.
[379] For a summary of Russell's atheism, see: David Berman. *A History of Atheism in Britain: From Hobbes to Russell*. (London New York: Routledge, 1990), 230-1.
[380] Russell, *The Problems of Philosophy*, 73.
[381] Ibid, 12.
[382] Hicks, *Explaining Postmodernism,* 72.
[383] Russell, Bertrand. *Why I Am Not a Christian: And Other Essays on Religion and Related Subjects*. Repr. (Routledge Classics. London: Routledge, 2010).
[384] Ibid, 4-10.
[385] Ibid, 7.
[386] Russell, *The Problems of Philosophy*, 73.

would act as a catalyst by which philosophy came to be viewed as a method and means to organise ideas and utilise them for human benefit and not as a way to discern truth from falsehood.[387] Whilst initially starting as a search for realism in response to the dominant Hegelian-based idealism, Russell's analytic philosophy soon found itself metaphysically anti-realist.[388] According to logical positivists, metaphysics was dead as there was no valid method by which one can discover objective truths about reality.[389] The only method of determining whether a given proposition about the world was meaningful was via empirical evidence.[390] If it could be verified experimentally and observed then it was meaningful, otherwise it was not.[391] Thus, propositions such as *God exists* are meaningless because they cannot be empirically verified. This position of analytic philosophy thus differs from *Ashʿarī* epistemology in concealing the validity of non-empirical, inferential knowledge.

3.9 Post-modern Philosophy

Post-modernism is a movement that developed in the second half of the twentieth century and spans a number of disciplines, including philosophy, literature, art, and architecture.[392] Prominent post-modernist thinkers include Jacques Derrida, Jean-François Lyotard, Richard Rorty, and Michel Foucault.[393] Post-modernism stands as a rejection of enlightenment ideals and a radical dismissal of any claims to a legitimate, objective metaphysical or epistemological paradigm.[394] All such attempts are deemed inherently subjective and relative. History, science, and language are under scrutiny as their claims to objective understanding in their respective fields are regarded as fundamentally misguided.[395] Languages are viewed as entirely self-referential systems that reflect the cultures they emanate from and are, as such, impotent in

---

[387] Hicks, *Explaining Postmodernism*, 71-72.
[388] Hicks, *Explaining Postmodernism,* 78.
[389] Owen Chapman. *The End of Metaphysics: Logical Positivism and Postmodernism* (Masters diss., Queen's University, 1997), 39.
[390] Bertrand Russell. "Logical Positivism." *Revue Internationale de Philosophie* 4, no. 11 (1950): 3–19. http://www.jstor.org/stable/23932366; Barbour, Ian G. *Religion in an Age of Science: The Gifford Lectures, Volume One*. (E-book, HarperOne, 2014), 22.
[391] Ibid.
[392] See: Christopher Butler. *Postmodernism: A Very Short Introduction*. Very Short Introductions. Oxford; New York: Oxford University Press, 2002.
[393] Duignan, B. "postmodernism." Encyclopedia Britannica, September 6, 2022. https://www.britannica.com/topic/postmodernism-philosophy.
[394] Anthony Giddens. *The Consequences of Modernity*. 6th pr. (Stanford, Calif: Stanford Univ. Press, 1997), 46.
[395] Paul Sheehan. '*Postmodernism and Philosophy*'. Connor, Steven, ed. *The Cambridge Companion to Postmodernism*. Cambridge Companions to Literature. (Cambridge, UK ; New York: Cambridge University Press, 2004), 20-37.

their ability to describe reality.[396] Historical accounts are subjective interpretations and thus any suggested metanarratives are rejected.[397] Science is a theory-laden venture that is in a state of flux and that cannot be trusted as a source of objective knowledge about reality.[398] In other words, with regards to epistemology, post-modernism can be said to be synonymous with relativism.[399]

As such, post-modernism cannot allow for any belief in God because it is sceptical about any epistemological, metaphysical, or historical narrative that can allow for any objective understanding of reality or the possibility of divine revelation. From an *Ashʿarī* stance, post-modernism conceals the human ability to attain any type of objective knowledge through sense experience or reason.

3.10 New Atheism

New Atheism refers to an anti-theistic movement that began at the start of the twenty-first century.[400] One of the major catalysts for its emergence were the 11 September 2001 terrorist attacks in America.[401] As possibly one of the most vociferous and outspoken types of atheism, New Atheism emerged as a response to what it views as the dangerous beliefs espoused by religion.[402] New Atheism differentiates itself from previous atheistic movements in its zealousness, unprecedented popular appeal, and less sophisticated rhetoric, as well as the singling out of Islam for particularly vicious criticism.[403] Popularly known as the four horsemen of atheism, Richard Dawkins, Christopher Hitchens, Daniel Dennett, and Sam Harris spearheaded the movement.[404] Barring Dennett, none are trained in philosophy or religious studies. This is evident in that whilst their books have had mass appeal, they lack deep theological scholarship and betray their authors' uninformed opinions on many of the topics on which they write, including Islam.[405]

---

[396] Ibid, 23.
[397] Butler, *Postmodernism: A Very Short Introduction,* 32-4; Giddens, *The Consequences of Modernity,* 50.
[398] Hicks, *Explaining Postmodernism,* 78-9; Butler, *Postmodernism: A Very Short Introduction, 37-39.*
[399] Ernest Gellner. *Postmodernism, Reason and Religion*, (London, New York: Routledge, 2013), 24.
[400] Amarnath, *Religion and the New Atheism* ,1-2.
[401] Zenk, "*New Atheism.*" In *The Oxford Handbook of Atheism*, 245-258.
[402] Amarnath, *Religion and the New Atheism*, 1.
[403] Rory, "Religion As Phantasmagoria: Islam in the End of Faith". In *Religion and the New Atheism: A Critical Appraisal*, 37-53; Malik, *Atheism and Islam: A Contemporary Discourse*, 14.
[404] Zenk, "*New Atheism.*" In *The Oxford Handbook of Atheism*, 245-258.
[405] Amarnath, *Religion and the New Atheism*, 1-2, 53-54.

I have not classified New Atheism as a distinct type of atheism in a philosophical sense because their ideas and arguments are decidedly not new and are a repetition of older ideas, albeit usually less nuanced.[406] Their arguments all fall under the categories of atheism discussed in the previous section, namely humanism, naturalism, and epistemic scientism. John Gray, in his book *Seven Types of Atheism*, posits that New Atheism's intellectual positions in some ways mirror positivism, a naturalistic philosophy developed by August Comte in the nineteenth century.[407] In his law of three stages, Comte viewed human societies as progressing from more primitive religious beliefs to more sophisticated science-driven ideals. The New Atheists as such believe religion is destructive and regressive. They feel that science dispels many of the claims of religion and believe in a decidedly scientistic epistemology. Muslim engagement and responses to New Atheism in scholarship are sparse.[408] This is in stark contrast to Christian engagement, where the books responding to New Atheism number in the hundreds.[409]

3.11 Ex-Muslims

The rise of atheism in the West can be said to have been a result of the unravelling of the philosophical underpinnings of pre-renaissance Europe through modernity and post-modernity.[410] Charles Taylor, in his seminal work *A Secular Age*, explores these ideas and frames the rise of secularity and atheism as a fundamental shift in the European worldview from one in which the intellectual and philosophical frame of reference was such that non-belief was unthinkable to the contemporary paradigm, which sees non-belief as just one legitimate position to be selected from many others.[411] Even though the Islamic world has not undertaken such a radical shift, it has not been immune to the enormous changes brought about by the changes described above. Particularly with the rise of globalisation, the rise of non-belief is quite evident over the past two centuries.[412]

In recent history, easier access to the internet and the proliferation of social media facilitated the rise of ex-Muslim atheist and agnostic groups that are more vocal about their ideas and

---

[406] Zenk, "*New Atheism.*" In *The Oxford Handbook of Atheism*, 245-258; Amarnath, *Religion and the New Atheism: A Critical Appraisal*, 1-2; Gray, "The New Atheism: A Nineteenth-century Orthodoxy". In *Seven Types of Atheism*, 12-24.
[407] Gray, "The New Atheism: A Nineteenth-century Orthodoxy". In *Seven Types of Atheism*, 12-24.
[408] Malik, *Atheism and Islam: A Contemporary Discourse*, 31.
[409] Zenk, "New Atheism." In *The Oxford Handbook of Atheism*, 245-258.
[410] Hyman, Gavin. *A Short History of Atheism*, xviii.
[411] Taylor, *A Secular Age*, 3.
[412] Schielke, "The Islamic World." In *The Oxford Handbook of Atheism*, 524-534.

beliefs.[413] An analysis of Brian Whitaker, Simon Cottee, and Schelike's works on apostasy and non-belief among Muslims reveals a set of similar conclusions regarding factors that lead Muslims to reject their faith.[414] Before proceeding, it is important to note that their works are largely based on qualitative research of discrete case studies. There is limited research on macro-trends and statistics regarding non-belief in the Muslim world. However, this research is telling in terms of its relation to the different philosophies of modernity and post-modernity, discussed previously. The most noteworthy intellectual reasons given for non-belief by ex-Muslims are a. theodicy, the problem of evil and suffering in the world; b. the existence of hellfire and of non-Muslim salvation; c. the issue of divine decree and how it relates to human salvation and free will; and d. epistemological doubt regarding the legitimacy of the *Qurʾān* and *sharīʿa* (Islamic law) as sources of objective truth and moral guidance.[415]

Schelike notes that these reasons can be seen as reflections and critiques of modernity.[416] In addition to the intellectual and philosophical causes for atheism, the literature also determines many psychological and emotional factors that may equally act as a driving force or a catalyst for leaving Islam. These include the loss of a loved one, romantic involvements with non-Muslims, exposure to alternative views, and experiences of violence.[417] In addition to these works in sociology, a vocal group of ex-Muslims in Europe and the United States have aligned themselves with the New Atheists and share in their vehement attacks on Islam. Among these are Ayan Hirsi, Ibn Warraq, Ali Rizvi, and Armin Navabi. Their ideas are encapsulated in the points mentioned above. They differ in their outspokenness against Islam, their relative prominence in the field of anti-Islamic rhetoric, and their influences on the New Atheism movement briefly discussed above.[418]

Of the notable reasons given for non-belief by ex-Muslims is epistemological doubt. If the *Qurʾān* is indeed a legitimate source of revelatory knowledge, its claims about the world should reflect reality. No contradiction should arise between scientific findings and Islamic scripture.

---

[413] Ibid.
[414] See: Schielke, "The Islamic World." In *The Oxford Handbook of Atheism*, 524-534; Cottee, *The Apostates: When Muslims Leave Islam*; Whitaker, Brian. *Arabs Without God.*
[415] Cottee, *The Apostates: When Muslims Leave Islam*, 31-2.
[416] Schielke, "The Islamic World". In *The Oxford Handbook of Atheism*, 524-534.
[417] Cottee, *The Apostates: When Muslims Leave Islam*, 51-59.
[418]Malik, *Atheism and Islam: A Contemporary Discourse*, 10-13.

Apparent divergence between the two is a reason why some Muslims leave Islam. This causes some to leave religion altogether and embrace atheism.[419]

3.12 Agnosticism

Agnosticism is ambivalent towards the proposition that there is a God. As defined at the beginning of the chapter, it is a type of atheism according to the *Ashʿarī*s. Thomas Henry Huxley, a nineteenth century evolutionary biologist, is credited with coining the term 'agnostic'.[420] As a firm believer in the scientific method as the preeminent source of knowledge, he posited that there was no way of ascertaining whether or not God existed scientifically, hence his agnosticism.[421] Conversely, a person who has yet to come to a conclusion whether God has existed because they have not considered reasons behind this ambivalence is also categorised as an agnostic, but for very different reasons. Three main sub-categories identified in the literature are described below:

1. Cancellation agnosticism: A cancellation agnostic believes that the arguments for and against the existence of God are both equal and therefore *cancel* each other out. In other words, both arguments are equally convincing (or unconvincing), and neither tips the scale one way or the other.[422] For example, someone could adopt a stance where they hold the *kalām* cosmological argument to be true but are simultaneously unable to reconcile belief in God because of the existence of evil in the world. Both arguments are just as compelling for them and as such cancel each other out.

2. Sceptical agnosticism: A sceptical agnostic believes that the arguments given for God's existence are weak and not convincing,[423] for example, a person who finds the *kalām*'s cosmological, teleological, and moral arguments to be explained away by modern science. The absence of evidence for such a person is not evidence of absence, and as such they reserve judgement on whether God exists. Huxley is a prime example of a sceptical agnostic.

---

[419] In chapter 8, we will explore a case study that looks at a particular example of scientific inquiry that may be a cause for epistemological doubt and how *Ashʿarī kalām* may be utilized to address such an issue.

[420] Croliss Lamont. *The Philosophy of Humanism*. (Amherst, N.Y.: Humanist Press, 1997), 49.

[421] Thomas Henry and Huxley, Leonard. *Life and Letters of Thomas Henry Huxley — Volume* 3. (Project Gutenberg 2004 [EBook #5799], 98.

[422] Martin, *The Cambridge companion to atheism*, 2-3.

[423] Ibid.

3. Detached agnosticism: A detached agnostic alludes to the common understanding of the term, which refers to someone who has not yet made up their mind as to whether God exists.[424] This person differs from a cancellation agnostic in that they have not deemed the reasons for theism or atheism to be of equal merit. Such a person maybe entirely uninterested in religion and as such not inclined to contemplate the question of God's existence.

From an *Ashʿarī* viewpoint, agnosticism entails the covering up of the ability of the mind to attain certain knowledge about the existence of God, either from a lack of interest or because of the adoption of any one of the philosophies discussed in this chapter.

3.13 Conclusion

Contemporary atheism has its ideological roots in modern and post-modern philosophy. The hallmark of modern philosophy is that it aims to break from past traditions and create systems of thought that are novel. Whilst their ideas were not entirely new, their formulations did bring about lasting change in the Western world. The definition used for atheism that is compatible with the *Ashʿarī* conception of sound belief is *a lack of certainty in the veracity of the proposition 'God, the necessarily existent creator, exists'.* The philosophies under discussion have been Cartesian rationalism, empiricism, transcendental idealism, existentialism, and post-modernism. All of these schools of thought led to atheism in the *Ashʿarī* sense because of the limits of their epistemologies or their conceptions of the ontological nature of the world. The word *kufr* in Arabic means unbelief or ingratitude, and a *kāfir* is an unbeliever. One of its other meanings, which relates to the concept of unbelief or ingratitude, is to conceal or cover something. The plural of *kāfir* is used in the *Qurʾān* to refer to farmers who are named so because they cover seeds with earth. An ungrateful person is someone who conceals and does not acknowledge good deeds done to them. Similarly, a disbeliever in the Islamic sense is someone who covers up or does not acknowledge what is apparent. The philosophies under discussion all deny or conceal one or more aspects of knowledge or sources of knowledge that are deemed valid and intuitive according to *Ashʿarī* epistemology.

---

[424] Bullivant, "*Defining 'Atheism'*." In *The Oxford Handbook of Atheism*, 23-31.

Rationalists such as Descartes and Leibniz inflate the role of the mind at the expense of experiential knowledge, to the extent that some rationalists deny entirely or conceal that which is manifest or apparent to common sense, which is that our senses can tell us something about the world. This type of rationalism leads to scepticism about the reality of the external world in its entirety, thus making it difficult to prove the necessary existence of God. Empiricists, on the other hand, deny the possibility of purely rational knowledge and rather see all understanding as stemming from the senses. Experience tells us everything we can know about ourselves and the world around us. According to some empiricists, such as Hume, even concepts that we assume are known innately, such as causation, are in fact products of our interaction with the world through observations and direct experience. If this is the case, it becomes clear why many empiricists deny the existence of anything beyond the material world, or at least any possibility of inferring the existence of anything beyond physical reality. Naturalism and scientism arise from these ideas, and this makes it impossible to prove God's necessary existence. If the human being's epistemological domain pertains to the physical world alone, it is fruitless to make any metaphysical claims about reality, including the existence of God. As such, from an *Ashʿarī* stance, empiricism conceals innate knowledge that is acquired without reference to sense experience.

After acknowledging many of the limitations of both philosophical approaches, Immanuel Kant attempted to reconcile rationalism and empiricism. In doing so, however, he further challenges the notion that the mind can know of the existence of God with certainty. Kant's idealism did not acknowledge the mind's access to noumenal reality, the world as it is. As such, according to the *Ashʿarī* understanding, he concealed the apparent, direct, and objective knowledge we have of the world through our senses and our ability to use logical inference to prove God's necessary existence through deductive arguments.

Existentialism and post-modern philosophies deny the ability of the human mind to make an objective conclusion about the world, given the mind's inherently subjective nature. Indeed, the very reality of the extra-mental world is called into doubt. This invariably leads to a lack of certainty about the necessary existence of God. These epistemologies, in the *Ashʿarī* sense, cover up or conceal universal, intuitive, non-inferential ideas about the existence of the objective truth of extra-mental reality, the understanding of existence, and the ability to reach any firm conclusions about the world, including the existence of a creator.

The next chapter provides an outline of the epistemology and ontology of the *Ashʿarī*s. Following this, I explore the arguments used by *Ashʿarī*s to establish God's necessary existence

in chapter 5. I then juxtapose the ideas discussed in this chapter with those of the *Ashʿarī*s in chapter 6.

Chapter 4: The Epistemology and Ontology of the *Ashʿarī* School

4.0 Introduction

In this chapter, I argue that the *Ashʿarī* school formed a cohesive, and sophisticated theory of knowledge and ontology that I rearticulate within the context of Western philosophical language. The *Ashʿarī* epistemological and ontological model framed its discursive theology and produced a robust philosophical system which is taught in Islamic educational institutions up to this day.[425] This study focuses on philosophical ideas that are relevant to engaging with contemporary atheism. These are positions that are foundational for proving God's necessary existence and fundamental attributes, according to the *Ashʿarī*s.

Whilst some secondary conclusions of *Ashʿarī* ideas may require updating in light of their reliance on pre-modern concepts in physical cosmology (e.g., *Ashʿarī* atomism), the philosophical bedrock of the school remains quite relevant today and is independent of scientific conventions, as I demonstrate.[426]

The chapter follows a similar sequence to the one found in *Ashʿarī* texts. Longer theological treatises begin with the following topics, in this order: 1. A prolegomenon on the principles of the science of *kalām*; 2. an exposition on knowledge and its various subdivisions; and 3. general ontology, including topics on the nature of existence.[427] Introductory and intermediate texts often include epistemological discussions on causes of knowledge, basic modal logic, and types of propositions.[428] In longer *kalām* treatises, whole volumes are dedicated to expounding upon

---

[425] As discussed in chapter 2.

[426] *Ashʿarī* atomism played an important part of the school's discourse. While it is related to the school's ontological conception of the world, I will not be expounding upon it at great length in this chapter. This is because atomism is not directly related to the ability to prove the existence of God according to the *Ashʿarī*'s. Affirming or denying atomism, has little bearing on the validity of the proofs *Ashʿarī*s used for arguing God's existence and fundamental attributes. Additionally, *Ashʿarī* atomism is a purely intellectually derived model, meaning it is not scripturally based. See: Malik, Shoaib Ahmed, and Nazif Muhtaroglu. "How Much Should or Can Science Impact Theological Formulations?: An Ashʿarī Perspective on Theology of Nature". *European Journal of Analytic Philosophy* 18, no. 2 (16 December 2022): S8-35. https://doi.org/10.31820/ejap.18.2.9.

[427] See for instance: ʿAbdallāh Ibn-ʿUmar al-Bayḍāwī, and ʿAbbās Sulaimān. *Ṭawāliʿ al-Anwār min Maṭāliʿ al-Anẓār*. (Cairo: *Al-Maktaba al-Azharīyya li-al-Turāth*, 2007), 248.

[428] See for example: Aḥmad ibn Muḥammad Al-Dārdīr, and Shinnār Abd al-Salām. *Sharḥ al-Kharīda al-Bahīyya* (Damascus: *Dār al-Bayrutī*, 2004), 226; Aḥmad Al-Dārdīr, and Saʿīd Fodeh. *Mukhtasar Sharḥ al-Kharīda al-Bahīyya li al-Shaykh Aḥmad al-Dardīr*. QuranicThought.com, 3-5. Accessed, 1

epistemology and ontology. Notable examples include Taftazānī's opus magnus, *Sharḥ al-Maqāṣid*, and Jurjānī's commentary on Ījī's al-*Mawāqif*.

Likewise, I begin with an exposition on the meaning of knowledge, as well as its relation to the concept of belief in God according to the *Ashʿarī*s. Following this, I discuss the role of logic in *kalām* and elucidate the sources of knowledge described in scholarly texts. I describe how the *Ashʿarī*s were foundationalists who acknowledged the validity of rational, empirical, and reported knowledge, which were all grounded in classical logic.

The second part of the chapter focuses on ontology. I argue that the *Ashʿarī* school was grounded in the philosophies of realism, occasionalism, and essentialism. Its cosmology was rooted in *Qurʾān*ic scripture, which framed its understanding of Greek philosophy. I demonstrate how *Ashʿarī* metaphysics informs its epistemology.

Throughout the chapter, I endeavour to present the school's epistemology and ontology within the larger context of the ideas of Western philosophy to juxtapose the views of contemporary atheism and *Ashʿarī*sm more adequately in later chapters.

4.1 Epistemology

To understand how *Ashʿarī* scholars provided proofs for God's existence, it is necessary to recognise what they believed constituted valid proof. At the philosophical roots of the question *How do we know God exists?* is the question *How do we know that we can know God exists?*

As this section demonstrates, the most important primary texts on *Ashʿarī* theology emphasise the value of epistemology as a means of establishing sound foundations for the proofs of the validity of Islam's creedal beliefs. *Ashʿarī*s formed their theory of knowledge from the idea that there are basic *a priori* concepts and principles upon which all understanding may ultimately be attributed.

The *Qurʾān* is referenced in exegetical literature as identifying the three primary sources of knowledge from which all of the former are derived. These are the mind, the senses, and true

---

June 2023. https://www.Quranicthought.com/ar/books/%D9%85%D8%AE%D8%AA%D8%B5%D8%B1-%D8%B4%D8%B1%D8%AD-%D8%A7%D9%84%D8%AE%D8%B1%D9%8A%D8%AF%D8%A9-%D8%A7%D9%84%D8%A8%D9%87%D9%8A%D8%A9-%D9%84%D9%84%D8%B4%D9%8A%D8%AE-%D8%A3%D8%AD%D9%85%D8%AF-%D8%A7%D9%84/; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 24-28.

reports. The primacy of epistemology as a means of providing logical arguments for the validity of *Ashʿarī* creedal beliefs is expressed clearly in their theological works. As Jurjānī in his commentary on Ījī's *Mawāqif* says,

> It is necessary for the scholar of *kalām* to investigate the essence of knowledge at the outset. Second, it is to show how it is divided into inferential and non-inferential knowledge. Third, is to demonstrate the existence of non-inferential knowledge upon which all knowledge rests upon. [Fourth,] Delineate types of inference and how they lead to certain knowledge. Fifth, is how to infer correctly in order to reach required conclusions. It is through these subjects that one can substantiate [the veracity of] the articles of belief and provide proof of other ideas upon which the articles of belief rest.[429]

Taftazānī states a similar opinion in his *Sharḥ al-Maqāṣid*.[430] These are by no means unique opinions. The epistemology of *Ashʿarī kalām* may also be found in *Ashʿarī* works on logic or logic treatises taught alongside *kalām*.[431] Scholars such as Ghazālī and Taftazānī wrote their own manuals and commentaries on logic.[432] Ghazālī gives a useful analogy to help understand the role of epistemic logic in the Islamic sciences as ancillary (*ʿilm āla*). Just as the study of grammar provides the rules for the correct construction of sentences through the appropriate use of language, logic provides the rules for sound inference through the correct use of the mind.[433]

Additionally, *kalām* scholars have included epistemological interpretations in their exegetical works on the *Qurʾān*. For example, Rāzī and Bayḍāwī interpret the following verses as references to the causes of knowledge: 1. the intellect, 2. senses, and 3. true reports (indirectly through hearing):[434]

---

[429] ʿAli Ibn- Muḥammad al-Jurjānī, ʿAḍud al-Dīn al-Ījī, ʿAbd al-Ḥakīm al-Siyālkūtī, and Ḥasan al-Jalabī. *Sharḥ al-Mawāqif* (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2012), 1:68. (Author's translation).

[430] Taftazānī, *Sharḥ al-Maqāṣid*, (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001), 1:27.

[431] See: Ghazālī, *Maḥak al-Naẓar*; Athīr al-Dīn Al-Abharī, *Sharḥ Matn Īsāghūjī*, (Damascus: *Dār al-Fikr*, 2003); Aḥmad al-Damanhūrī. *Īḍāḥ al-Mubham li-maʿānī al-Sillam: Sharḥ ʿAlā Matn al-Sillam al-Manūraq fī ʿIlm al-Manṭiq*. Cairo: *Dār al-Baṣaʾir*, 2008; Taftazānī, Masʿūd Ibn-ʿUmar. *Sharḥ al-imam al-Saʿd al-Taftazānī ʿala al-Shamsiyya*, Amman: *Dār al-Nūr al-Mubīn,* 2011.

[432] Taftazānī, *Sharḥ al- Shamsīyya.;* Ghazālī, *Maḥak al-Naẓar.*

[433] Ghazālī, *Miʿyār al-ʿilm,* 50; Damanhūrī, *Īḍāḥ al-Mubham,* 48-9*;* Taftazānī, *Sharḥ al-Shamsiyya*, 110.

[434] Fakhr al-Dīn al-Rāzī. *Al-Tafsīr al-Kabīr li al-Imām al-Fakhr al-Rāzī.* 33 vols. (Beirut: *Dār al-Fikr*, 1981), 20:91-2, 20:211; ʿAbd Allāh al-Bayḍāwī. *Anwār al-Tanzīl wa Asrār al-Taʾwīl wa bi Hāmishihi Ḥāshiyat-al-Kāzarūnī.* 4 vols. (Damascus: *Dār al-Rashīd*, 2000), 2:273.

'It is God who brought you out of your mothers' wombs knowing nothing, and gave you hearing and sight and minds, so that you might be thankful.'[435] 'Do not follow blindly what you do not know to be true: ears, eyes, and heart, you will be questioned about all these.'[436]

Rāzī and Bayḍāwī extrapolate from these verses that we attain knowledge from the mind (heart) and knowledge of particulars through the senses and then can do the following: 1. grasp intuitive non-inferential knowledge (*badahīyāt*) and 2. attain knowledge of universals, and as a result, also know through deduction, induction, and abduction (*naẓar, tajrīb* or *istiqrāʾ, ḥads*).[437]

4.1.1 Defining and Classifying Types of Knowledge

*Ashʿarī*s provide two opinions regarding the definition of knowledge (*ʿilm*). The first position is held by Rāzī, who views knowledge as a self-evident concept that cannot be defined. Conversely, as Ghazālī suggests, it is so apparent that it is difficult to create a definition that is adequately exhaustive and exclusive (*jāmiʿ māniʿ*).[438]

Most others hold that knowledge may be defined. The first definition, held by Taftazānī, Sanūsī, Jurjānī, Ījī, and many other *Ashʿarī*s, states that knowledge is an attribute through which the object of knowledge become fully manifest in the mind of the one who beholds it.[439] Bāqillānī holds that knowledge is to comprehend something in a way that corresponds to reality. Other *kalām* scholars, such as Sanūsī, Fodeh, and others, define knowledge as it pertains to *kalām* (since it is a science which aims to prove creedal beliefs) and its original linguistic meaning as to include only certain knowledge. They posit that knowledge is

---

[435] Q. (16:78).

[436] Q. (17:36).

[437] Al-Rāzī, *Al-Tafsīr al-Kabīr*, 20:91-2, 20:211; Al-Bayḍāwī, *Anwār al-Tanzīl*, 2:273.

[438] Taftazānī, *Sharḥ al-Maqāṣid,* (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001), 1:55; Ibn al-Tilimsānī, 'Abd Allāh ibn Muḥammad, and Nizār Ḥammādī. *Sharḥ Maʿālim Uṣūl Al-Dīn Li-al-Imām Fakhr al-Dīn al-Rāzī*. (Amman: *Dār al-Fatḥ li al-Dirāsāt wa al-Nashr*, 2010), 65.

[439] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001), 1:56; Jurjānī, and al-Ījī, *Sharḥ al-Mawāqif*, 1:93; Laqqānī, Ibrāhīm, et al. *Sharḥ al-Nāẓim ʿalā al-Jawhara*. (Cairo: *Dār al-Baṣāʾir*, 2009), 1:117. For an extensive exposition on the different definitions of knowledge in the Islamic tradition including those of the *Ashʿarī*s see: Rosenthal, *Knowledge Triumphant*, 46-69.

'certainty that is brought about through correct inference and corresponds to reality'.[440] In other words, certain knowledge may be reached through both empirical and rational means.[441]

A synthesis of these two views is offered in *al-Baḥr al-Muḥīṭ* by Zarkashī (d. 794/1392), who divides knowledge into immediate and acquired knowledge (non-inferential and inferential). For example, knowing that *one thing is not two things* is understood instantly, whereas understanding that *a quarter of a tenth of one hundred is two and a half* requires calculation and is not immediately known to the mind prior to analysis.[442]

For example, saying that two is greater than one is a rationally necessary and self-evident fact. All knowledge, according to this understanding, is based on these self-evident foundational building blocks of rational thought.

That said, whilst distinguishing between immediate and acquired knowledge (*ḍarūrī* and *naẓarī*) is a widespread opinion in the school, there are notable exceptions. Rāzī, for instance, believed that all knowledge is immediate since it is occurring without volition on the part of the receiver.[443]

Both inferential and non-inferential knowledge may also be divided into conceptualisation and assent (*tassawur and taṣdīq*).[444] The former refers to the ability of the mind to form an idea of the meaning of something and is independent of judgement, which means it is not in need of assessing whether the concept is necessary, possible, impossible, or existent.[445] Conceptualisation is arrived at through the formation of essential definitions and non-essential,

---

[440] Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 30; Laqqānī, *Sharḥ al-Nāẓim ʿalā al-Jawhara*, 1:122. Other definitions would include probable knowledge though only as it is related to jurisprudence. They provide scriptural and practical justifications for this since most of Islamic legal reasoning is based on a preponderance of evidence and not on certainty (*adilla ẓaniyya*).

[441] These means must rest upon direct knowledge, otherwise it leads to circularity and infinite regress which is not possible. *Ashʿarī*'s, therefore, would not recognize *coherentism* as a valid epistemological position.

[442] Badr al-Dīn Muḥammad al-Zarkashī. *Al-Baḥr al-Muhiṭ fī Usūl al-Fiqh.* (Kuwait: *Dār al-Ṣawfa*, 1992) 1:58-60.

[443] For example, when one feels a soft blanket, one cannot help but know that the blanket is comfortable to touch. When one performs a mathematical calculation in one's mind, one cannot help but know the answer after finishing the operation. There are five different definitions of *ḍarurī* and *naẓarī*. These differences of opinion are based on how scholars chose to define the words as technical terms, which leads to some confusion about how to distinguish between their meanings. These variations of opinion are largely semantic. See: Abdul Azīz al-Farhārī. *Al-Nibrās fī Sharḥ al-ʿAqāʾid al-Nasafiyya.* (Istanbul: *Maktabat Yasīn*, 2012), 138-144.

[444] Ghazālī, *Maḥak al-Naẓar*, 53; Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001), 1:59-60; Jurjānī, and al-Ījī, *Sharḥ al-Mawāqif*, 1:97; Taftazānī, *Sharḥ al- Shamsīyya,* 100-106.

[445] Ibid.

descriptive definitions. Knowledge through assent is propositional and is a judgement of certainty that one attributes a given proposition.[446] For example, picture a triangle with its three sides and three angles. Being able to understand what a triangle is, is conceptualisation. Being able to comprehend that it is correct that in reality a triangle is a shape with three sides and three angles is assent.

When assent is given to a particular proposition (e.g., *this man is standing*), if he is standing in reality, this proposition is said to be true, and the person believes in a true statement since he assents to it. However, if the man is not standing, the proposition is said to be false, and thus assent is given to falsehood. Whilst this may be a seemingly benign statement, it is necessary to explain, since it allows us to conclude that *Ashʿarī* epistemology subscribes to a correspondence understanding of truth.[447] One may conclude that *Ashʿarī* theologians believe in the ability to attain sound knowledge of the external world. This is a result of the ontological implications of the *Ashʿarī* worldview, which subscribes to realism, which is discussed in the next section.

Assent is certainty in the veracity of a given proposition. One classification describes knowledge as being attained through volitional (acquired) and non-volitional means (*iktisābī* and *ḍarurī*).[448] Volitional means include deduction, induction, abduction, sense experience, and true reports. Knowledge can also be arrived at through non-volitional means, including internal sensory experience (*wijdanīyāt*), basic non-inferential *a priori* ideas (*awalīyāt*), and intuitive knowledge (*fiṭrī*).[449]

A more popular categorisation is to divide knowledge into inferential knowledge (*naẓarī*) and non-inferential or direct knowledge (*ḍarurī*). Inferential knowledge is that which is arrived at through sound reasoning. Non-inferential knowledge is immediate knowledge and includes basic non-inferential *a priori* ideas (*awalīyāt*), intuitive knowledge (*fiṭrī*), internal sense

---

[446] Ibid.

[447] Laqqānī, *Sharḥ al-Nāẓim ʿalā al-Jawhara*, 1:93; Taftāzānī, Masʿūd ibn ʿUmar. *A Commentary on the Creed of Islam: Saʿd al-Dīn al-Taftāzānī on the Creed of Najm al-Dīn al-Nasafī*. (New York: Columbia University Press, 1950), 10-11.

[448] *Ashʿarī* scholars have categorised types of knowledge in a variety of ways, often quite similar. They will sometimes use the same terms but have slightly altered definitions. The *terms naẓarī and iktisābī, badīhī* and *ḍarurī* have been used interchangeably but also to convey subtle differences in meaning which can cause confusion. I have opted to cite two classifications, explained here for its clarity (definitions one and three in the referenced work below). This is not to say that other categorizations are not of equal merit, but I have restricted my use of them to these two to avoid ambiguity. For an explanation of the usage of these terms see: Farhārī, *Al-Nibrās*, 138-144.

[449] Ibid.

experience (*wijdanīyāt*), external sense experience (*ḥissyāt*), induction (*tajrīb*), abduction (*ḥads*), and widely transmitted reports (*mutawātir*).[450]

---

[450] Jurjānī, and al-Ījī, *Sharḥ al-Mawāqif*, 1:131-2; Farhārī, *Al-Nibrās*, 138-9; Taftazānī, *Sharḥ al-Shamsiyya*, 368-373.
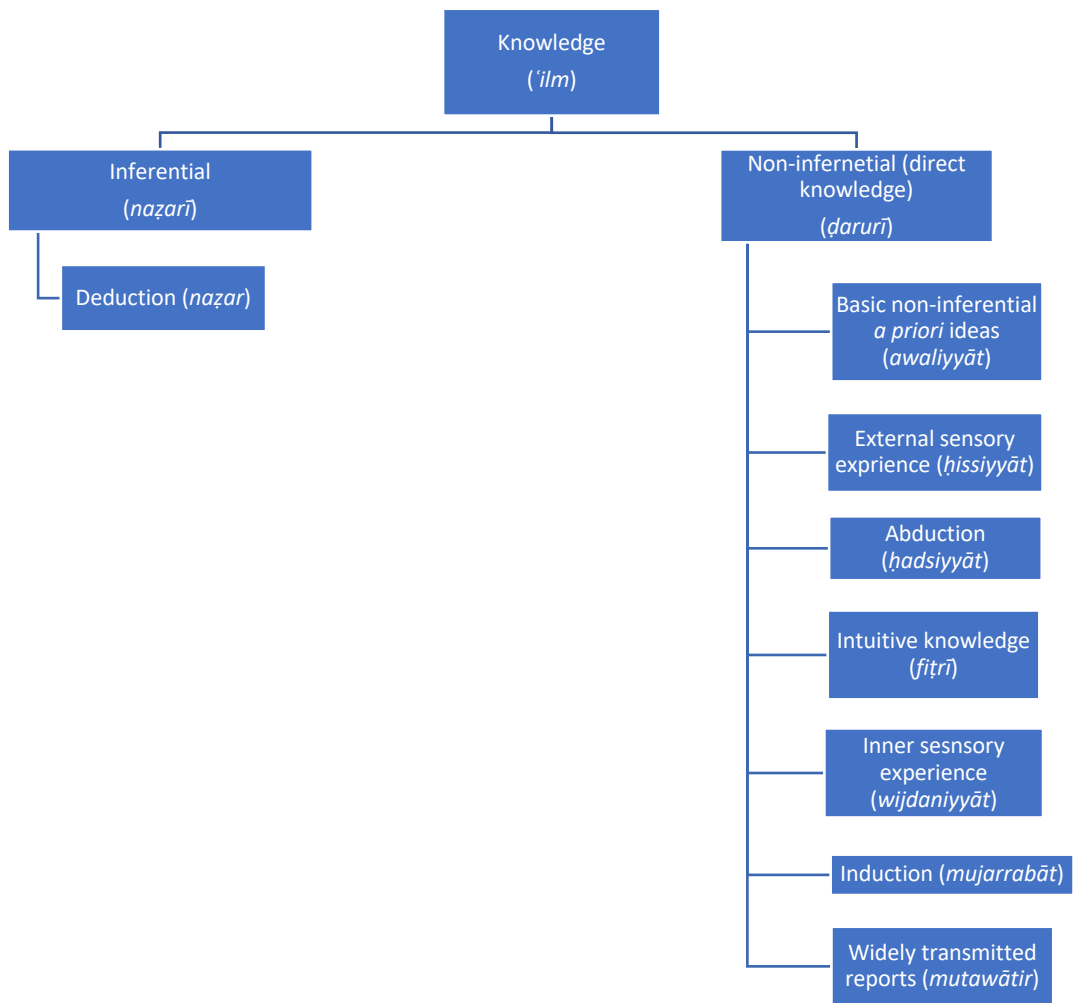
Figure 2. The most widely accepted categorisation of types of knowledge.
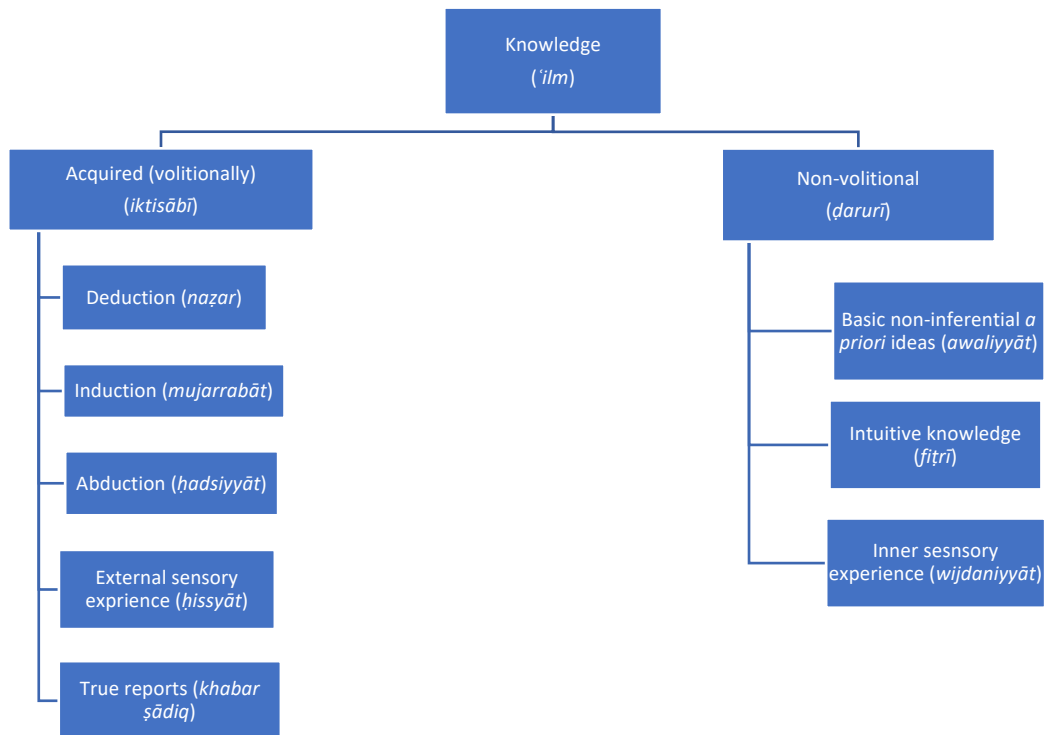
Figure 3. An example of another classification of the means of attaining knowledge as identified by the *Ashʿarī*s.

Method of attaining knowledge	Explanation
a priori ideas (*awalīyāt*)	Knowledge obtained directly merely through the conception of the subject and the predicate (e.g., the part is smaller than the whole)
Intuitive knowledge (*fiṭrī*),	Knowledge known directly but that requires the presence of a mediative step (e.g., the number eight is divided into two equal parts)
Internal and external sense experience (*wijdaniyyāt* and *ḥissiyyāt*)	Internal senses such as hunger, pain, joy, one's existence and external senses such as hearing, sight, and touch
Deduction (*naẓar*)	Drawing particular conclusions from universals
Induction (*tajrīb*),	Drawing conclusions by the universalising of particulars
Abduction (*ḥads*)	Drawing conclusions through inference to the best explanation from known information
Mass transmission (*mutawātir*)	Heard from a multitude of reliable sources such that it is inconceivable for them to conspire to lie
Conceptualisation through an essential definition. (*ḥad tām*)	Includes exhaustive and exclusive traits of that which is defined
Conceptualisation through an incomplete essential definition (*ḥad nāqis*)	Includes some but not all of the essential traits of that which is defined
Conceptualisation through a non-essential definition (*rasm*)	Includes unique identifiable traits not essential to that which is defined

Table 2. Methods of attaining knowledge according to *Ashʿarī*s.

4.1.2 Foundationalism

*Ashʿarī*s are foundationalists, which means they believe that all knowledge must rest on non-inferential, direct knowledge.[451] *Ashʿarī*s may be categorised as being proponents of a type of strong foundationalism, in that they hold that properly basic knowledge is infallible and is to be held with certainty (e.g., the law of non-contradiction). They may also be said to be *a priori* foundationalists, who affirm *a priori* certainty with regards to the accuracy of sense experience.[452] Rāzī, Juwaynī, Bāqillānī, Taftazānī, and other *Ashʿarī*s explicitly state that there are basic, self-evident, non-referential ideas upon which all other knowledge rests.[453]

As discussed in chapter 1, knowledge, especially as it pertains to creedal beliefs, is only considered acceptable as knowledge (*ʿilm*) when it is held with certainty through sound reasoning.[454] As discussed in chapter 3, there are five degrees of belief that a given proposition is true: 1. certain, 2. conjectural, 3. equivocal, 4. doubtful, and 5. ignorance (either through an absence of understanding or a rejection of the proposition).

---

[451] There are a number of different interpretations and positions regarding foundationalism. See: Ḥasan, Ali and Richard Fumerton, "Foundationalist Theories of Epistemic Justification", in *The Stanford Encyclopedia of Philosophy* (Fall 2022 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = https://plato.stanford.edu/archives/fall2022/entries/justep-foundational/; Noah Marcelino Lemos. *An Introduction to the Theory of Knowledge*. Cambridge Introductions to Philosophy. (Cambridge, UK; New York: Cambridge University Press, 2007), 44-49; Tes Poston. "Foundationalism." Internet encyclopedia of philosophy. Accessed December 26, 2022. https://iep.utm.edu/foundationalism-in-epistemology/; Darren Bradley. *A Critical Introduction to Formal Epistemology*. Bloomsbury Critical Introductions to Contemporary Epistemology. (London: Bloomsbury Academic, an imprint of Bloosmsbury Publishing Plc, 2015), 171-2, 174-5.

[452] Ibid; Taftazānī et. al, *Sharḥ al-Shamsiyya*, 368-73.

[453] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001), 1:61-2; Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 1:68; Bāqillānī, Muhammad. *Kitab al-Tamhīd*, (Beirut: *al-Maktaba al-Sharqiyya*, 1957), 7-9; Ibn al-Tilimsānī, et al., *Sharḥ Maʿālim Uṣūl Al-Dīn*, 64; Ghazālī, *Miʿyār al-ʿIlm*, 218-9; Taftazānī et. al, *Sharḥ al-Shamsiyya,* 103-5. See also: Nora Jacobsen Ben Hammed. 'Meno's Paradox and First Principles in Fakhr al-Dīn al-Rāzī'. *Oriens* 48, no. 3–4 (9 June 2020): 320–44. https://doi.org/10.1163/18778372-04801101.

[454] Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 29; Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 1:76,84; Taftazānī, *Sharḥ al-Maqāṣid*, 1:29,55-6; Ibn al-Tilimsānī, et. al., *Sharḥ Maʿālim Uṣūl al-Dīn*, 60-1; Dārdīr and Shinnār, *Sharḥ al-Kharīda al-Bahīyya,* 28.
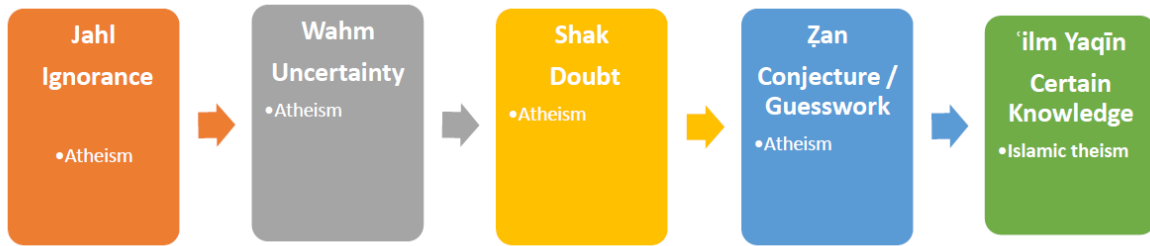
Figure 4. Degrees of certainty and their relationships to acceptable belief, with Arabic terms.

According to the *Ashʿarī*s, to be justified in asserting a given claim as certainly true is to ascertain that the proposition corresponds to external reality or the reality of the thing as it is (e.g., certain knowledge of a unicorn is confirmed if one knows of the reality of what a unicorn is independent of whether it exists in reality or not).[455] Possessing certain knowledge of what a horse is comprises understanding in the mind which corresponds to what a horse is in external reality.[456] Now, to justifiably say that we are completely certain something is true means that we have an undeniable reason to claim that it is so based on evidence and sound reasoning.[457] This in contrast to other definitions of certain knowledge as it pertains to faith, such as having religious belief in spite of evidence of the contrary (e.g., Kierkegaard's position that faith is attained through the suspension of reason).[458]

For example, take the following proposition: *There is writing on this page.* To be completely certain of it means I must have irrefutable proof to believe the statement is true. These proofs are the causes of my knowledge and thus my certainty of the truth of the proposition (these causes of knowledge are discussed in the following sections). That fact of my *seeing* writing on the page is why I am certain that it is true. Assuming the reliability of my senses, the question may be asked, how can my mind be certain in knowing that what I am seeing is writing on the page? The answer would be that there are some basic, immutable principles that we – as human beings – know intuitively to be true. These are *a priori* ideas which are foundational to attaining

---

[455] There is a subtle distinction between truth (*ḥaq*) which is a judgment that agrees with factual knowledge and knowledge (*ʿilm*) which is an attribute which brings cognition to the subject under discussion. *See:* Taftāzānī, et. al, *A Commentary on the Creed of Islam*, 10-11; Rosenthal, *Knowledge Triumphant*, 53.

[456] See: Bayjūrī, *Tuḥfat al-Murīd*, 54; Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 1:97; Taftāzānī, et. al, *A Commentary on the Creed of Islam*, 10-11.

[457] Ghazālī, *Maḥak al-Naẓar,* 112; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 26.

[458] McDonald, "Søren Kierkegaard", *The Stanford Encyclopedia of Philosophy*.

any kind of knowledge.[459] In the previous example, I must be able to comprehend universals (*kullīyāt*; i.e., conceptually understand what a *page* is and what *writing* is).[460] More fundamentally, however, I must know that the *marks on the page* are *writing*, not images or shapes, random lines, or just a blank page. In comprehending these universals, I must also know that in knowing there is writing on the page, I implicitly understand that the page cannot be blank, nor can it only have pictures on it. These ideas are implicitly and immediately understood without resorting to any proof for their validity. It seems almost redundant to mention them because of how apparent they are. However, my knowledge of these two simple facts is vital to my thought process and is an example of two axioms of logic: 1. the principle of identity, which states that an entity is identical to itself; and 2. the law of non-contradiction, which states that a thing and its contradiction cannot apply to the same proposition under the same conditions (e.g., the pen I hold in my hand is either moving or still; it cannot be both).[461] *Ashʿarī*s are therefore foundationalists. They assert that knowledge can only be true if it is founded on principles that are true in and of themselves and are known directly and immediately to us.[462] To suggest otherwise leads to logical contradictions, either though infinite regress of causes of knowledge or a circularity of causes.[463] For example, if we take the proposition *the horse is moving*, I know implicitly that since it is moving, it cannot be still at the same time it is moving in the same frame of reference. How do I know that this contradiction cannot occur? I have no way to prove it. It is a self-evident fact that the intellect accepts directly. It is a basic principle that is used in rational thought and thus cannot be proven. Even if we were to assume that I could give a reason to prove the law of non-contradiction, one would then ask what the proof is for that proof. Furthermore, even if I were able to provide justification for the justification, I would ultimately still need a foundational idea that needs no proof, otherwise I would just keep going forever with justifications, which would lead to an

---

[459] In contemporary epistemology, this is known as the epistemic regress argument. See: Robert Audi. *Epistemology: A Contemporary Introduction to the Theory of Knowledge*. 3rd ed. Routledge Contemporary Introductions to Philosophy. (New York: Routledge, 2011), 215-6; Hasan, Ali and Richard Fumerton, "Foundationalist Theories of Epistemic Justification", *The Stanford Encyclopedia of Philosophy*.

[460] Ghazālī, *Miʿyār al-ʿIlm,* 424-6.

[461] This means that for two propositions to contradict one another they must be exactly the same in eight aspects, see: Karamali, Hamza. "The Isagoge of Athir al-Din al-Abhari". *Scribd.com*. 2018. https://www.scribd.com/document/369642018/Abharis-Isagoge-Translated.

[462] Ibid.

[463] Jurjānī, and al-Ījī, *Sharḥ al-Mawāqif*, 1:105-6; Ibn al-Tilimsānī, et. al, *Sharḥ Maʿālim Uṣūl Al-Dīn,* 64-5; Audi, *Epistemology: A Contemporary Introduction to the Theory of Knowledge*, 215-16.

infinite regression and all the contradictions and absurdities that would entail. These two ideas – infinite regress and circularity – are significant reoccurring concepts in *kalām* literature and are used as rational proofs.

What of the challenges modern philosophers face with these axioms of logic? And what of the findings of modern physics and quantum mechanics, such as Heinsberg's uncertainty principle, that, ostensibly, seem to contradict epistemic logic? *Ashʿarī* scholars have engaged with many of these ideas, and these objections are discussed further in chapter 6.

Let us now examine the role of epistemic logic and its relation to sources of knowledge according to *Ashʿarī*s. There are three causes of sound knowledge discussed in the sections below, each pertaining to a particular domain of existence, both physical and metaphysical.

4.1.3 Logical Knowledge

Rational or logical knowledge is knowledge attained through pure reason without reference to repeated observation nor revelatory knowledge to draw a conclusion.[464] A purely logical judgement is one that asserts the veracity of a proposition without need to resort to repetition or appeal to law to confirm its truth.[465] In other words, logical judgements are made solely by exercising the intellect without recourse to sense data. What is meant by repetition, which is not required for attaining purely rational knowledge, is induction or abduction. Rational knowledge may be inferential or non-inferential (*ḍarurī* or *naẓarī*).

Rational knowledge is based on logical axioms, such as the law of identity or the law of non-contradiction, and includes mathematical propositions such as basic arithmetic. These ideas may only be understood through a human being's rational faculty (*ʿaql*). Based upon these simple concepts, more complex rational perception is possible through the formation of propositions and syllogisms.[466] Syllogisms are a set of known propositions organised so as to infer a conclusion previously unknown from the set of premises (major and minor) and are a means via which certain knowledge may be attained.[467] The example below demonstrates this (one particular kind called a *categorical syllogism*):

> 1. Major premise: All humans have brains.

---

[464] Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 27; Dārdīr and Shinnār, *Sharḥ al-Kharīda al-Bahīyya*, 30-1.
[465] Here referring to either revelatory knowledge or man-made law (*sharʿī* or *waḍʿī*).
[466] Ghazālī, *Maḥak al-Naẓar*, 59-61.
[467] Ibid; Ibn al-Tilimsānī, et. al, *Sharḥ Maʿālim Uṣūl Al-Dīn*, 81-3.

2. Minor premise: John is a human.

3. Conclusion: John has a brain.

The form of a syllogism dictates that if the premises are correct, the conclusion must necessarily be true.[468] This is also known as deductive reasoning. The veracity of the premises is dictated by the matter (content) of the argument, which relates in part to modal logic. *Ashʿarī*s use basic modal logic to classify propositions as either necessary, possible, or impossible.[469] A logically necessary proposition means that it must be the case in all possible worlds independent of time, place, or scientific convention (e.g., 2+2=4). A logically impossible proposition means that it cannot be the case in any possible world, independent of time, place, or scientific convention, (e.g., 3+1=5); such propositions are deemed meaningless. A logically possible proposition means that it equally may or may not be the case in all possible worlds, such as *John is a plumber*.[470]

Logically necessary premises are used in *Ashʿarī kalām* to form arguments for the existence of God (e.g., the *kalām* cosmological argument and the argument from contingency). Logical (or rational) knowledge encompasses all that is metaphysically possible. In other words, all other types of knowledge, including empirical and reported knowledge, must be at least logically possible. Thus, all scientific knowledge falls under the category of what is logically possible. The mind can conceive and accept empirical facts and their opposite as equally likely.[471] This point is explained in the next section on sense perception and empirical knowledge.

---

[468] A syllogism may have a correct form, but it does not lead to certain knowledge if it is founded upon false premises.

[469] The use of modal logic, specifically alethic modality, was quite basic and was restricted to their categorizations of propositions into logically necessary, possible, and impossible. They did not use symbolic logic. The logical system used by the *Ashʿarī*'s would perhaps most closely resemble S5. Meaning that if a proposition is logically possible it would be necessary that it is logically possible. It would be possible in all possible worlds. See: Dārdīr, and Shinnār, *Sharḥ al-Kharīda al-Bahīyya, 32*; Laqqānī, Ibrahim, et al., *Sharḥ al-Nāẓim ʿalā al-Jawhara*,1:168-9; Roberta Ballarin, "Modern Origins of Modal Logic", *The Stanford Encyclopedia of Philosophy* (Winter 2022 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/win2022/entries/logic-modal-origins/>.

[470] Ibid.

[471] For example, one may conceive of a human being flying unaided. This is not empirically possible, but it is rationally possible.

4.1.4 Sense Perception and Empirical Knowledge

Sense perception may be divided into external and internal.[472] External senses (*ẓāhir*) include hearing, sight, touch, taste, and smell, while internal senses (*wijdaniyyāt*) include feelings of one's own existence, pain, anger, sorrow, and joy. Whilst the latter are subjective, the former offer verifiable and thus objective sources of knowledge.[473] These senses produce immediate knowledge of particulars (as opposed to universals) that is perceived and processed by the mind. This is significant because it implies two things: according to *Ashʿarī kalām*, 1. sense perception from a sound organ inputs accurate sense data into the mind; and 2. the mind is what processes, conceptualises, and assents to the input of sense data. These two ideas have implications in how *Ashʿarī*s would respond to objections from empiricism, which is discussed in the next section.

Empirical reasoning (i.e., knowledge attained through experience, *mujarrabāt* and *ḥadsiyyāt*) falls under the purview of sense perception and rational induction and abduction.[474] For *Ashʿarī*s, such as Ghazālī and Taftazānī, this type of knowledge produces certainty.[475] Ghazālī states that this is true because the certainty here is in the correlation of these events and not necessarily in the manner that they are correlated (whether causal or not).[476] Scientists can see falling objects repeatedly move to the ground at a constant rate of acceleration. They can then use their rational faculties, and through induction, they conclude that objects always fall to the ground at rate of 9.81 m/s^2 in a vacuum according to customary experience. They draw a universal conclusion through induction from empirical evidence. Through abductive reasoning, one may conclude that there is a force pulling the objects down, which is why they are falling. This is also known as an *inference to the best explanation*.[477] A well-known example of this type of reasoning (*ḥads*) in *Ashʿarī* texts is the inference made that since the moon is spherical and its phases change as it travels around the earth, it must be the case that it is lit by the sun. It may be noted that the conclusions of such a method are known to be logically possible and not necessary. In other words, it is through natural convention that these events or patterns are seen and that through them, one may develop a scientific understanding of the material

---

472 Taftazānī, *Sharḥ al-Maqāṣid*, (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001), 1:70-3.
473 Ibid.
474 Igor Douven, "Abduction", *The Stanford Encyclopedia of Philosophy* (Summer 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2021/entries/abduction/>.
475 Ghazālī, *Miʿyār al-ʿIlm*, 220-222; Taftazānī, *Sharḥ al-Shamsiyya*, 369.
476 Ghazālī, *Miʿyār al-ʿIlm*, 220-221.
477 Peter Lipton. *Inference to the Best Explanation*. 2nd ed. International Library of Philosophy. (London; New York: Routledge/Taylor and Francis Group, 2004), 56-7.

world.[478] Since empirical knowledge is based on the universalisation of individual occurrences perceived through the senses, they are customarily necessary.[479]

For example, to say that *the boiling point of water at 1 atm (sea level) on earth is 100 °C* is a scientific fact that is verified through repeated measurement. Our ability to replicate the result allows us to conclude that it is a scientific fact, or, in the words of the *Ashʿarī*s, it is customarily necessary. The proposition that *the boiling point of water at 1 atm (sea level) on earth is 100 °C* is thus customarily necessary but rationally possible since the mind can just as easily conceptualise water boiling at 20 °C, 40 °C, or any other temperature for that matter. There is nothing logically contradictory in assuming any of these values for the boiling temperature of water.

Here, it is necessary to distinguish between complete and incomplete induction.[480] Complete induction occurs when the entirety of the sample for which the conclusion is being made is studied leads to a rationally necessary conclusion. Say that I were to ask an entire class of ten students whether they passed their exams. If my sample is all ten people, I can claim knowledge with complete rational certainty. If my sample size is smaller – nine people, for example – it is incomplete induction, and my conclusions are rationally probabilistic, but I can be certain of the reply, customarily speaking, if I also factor in that the students are of similar intellectual ability and were all able to study for the exam.

4.1.5 Miracles

This distinction between customary and logical necessity is important for a number of reasons: 1. it allows for the literal interpretation of reports of miraculous events in scripture since they are deemed rationally coherent and are not taken as merely allegorical or figurative language; 2. eschatological events, such as the afterlife, can also be taken literally since they are categorised as logically possible; and 3. if natural laws are not equated with rational laws, this allows a more open scope of scientific inquiry since research is not necessarily bound by the scientific convention of the time (e.g., human flight was once deemed scientifically impossible, although it is rationally possible).

---

[478] Ibid, 5.

[479] Dārdīr and Shinnār, *Sharḥ al-Kharīda al-Bahīyya*, 31.

[480] Ghazālī briefly discusses the possible problems of incomplete induction as part of what he calls commonly known things (*mashhūrāt*) that do not necessarily give certain knowledge. See: Ghazālī, *Miʿyār al-ʿIlm*, 126-127.

Two questions then arise as to the veracity of the reports and scientific nature of miracles. Even if accounts of them are taken literally, could they be extremely rare natural occurrences that are still within the sphere of scientific explanation? In other words, may they still follow natural laws? For example, take the phenomena of the red rain in Kerala, India in July 2001, said to be formed by red spores in the air and red algae from the sea.[481] This rare event is by no means a supernatural occurrence, although it may be argued that had it been witnessed during pre-modern times, it may be viewed as a miraculous event since people lacked the scientific knowledge to enable them to explain what happened.

The answer to this, according to the *Ashʿarī*s is two-fold. The first is related by the fifteenth-century scholar Sanūsī, who poses this very question, stating,

> It is common knowledge that there are extraordinary, hidden phenomena in existent entities. As such, a person who does not know the ability of the magnet to attract iron would be amazed at first and would propose that this occurrence is a breaking of natural convention. So, what makes you certain that a claimant to prophecy has attained knowledge of these [hidden] things such that if he were to show them, they would be perceived as breaking of natural convention? [482]

Sanūsī responds to this question by stating that prophetic miracles are clearly breaking natural conventions because they are so extraordinary that no person can claim that they are subtle or are based on tricks and subterfuge. For example, no one would doubt that raising the dead and turning a stick into a snake are anything but miraculous events. Additionally, he posits that prophetic miracles must be understood within their historical and societal context. So, for example, a person living away from any centres of civilisation who is also unlettered is incapable of learning from scholars and reading books. So, their claim, along with their moral uprightness, of revelatory knowledge is much more believable.[483]

The second and most crucial point regarding the *Ashʿarī* understanding of miracles is related to the ontological paradigm used by the *Ashʿarī*s known as occasionalism. According to them, what we perceive to be natural *laws* are in fact natural *conventions,* which nearly always

[481] "BBC News | SOUTH ASIA | Coloured rain falls on Kerala". *News.bbc.co.uk*. 2001. Accessed, 2 June 2023. http://news.bbc.co.uk/2/hi/south_asia/1465036.stm.

[482] Muḥammad Ibn-Yūsuf al-Sanūsī, and Yūsuf, Aḥmad. *Sharḥ al-ʿAqīda al-Kubrā: al-Musammāh ʿAqīdat Ahl al-Tawḥīd*. 1st edition. (Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2006), 382. (Author's translation).

[483] Ibid, 382-3.

provide an accurate prediction of how the universe works. They are viewed as habits relating to natural order, and so the breaking of a customary action is the breaking not of a law but of convention. Additionally, the aim of prophetic miracles is to function as a sign of the truthfulness of a claimant to prophecy. It is a breaking of customary convention (*kharq li-al-ʿāda*) by which a prophet makes a direct challenge to the people to whom he was sent to replicate the miracle. Jesus curing the sick merely by touching them with no medicine was miraculous since it was outside the conventions of the natural order. Thus, the question of whether miracles can be understood as rare natural occurrences that follow other unknown natural laws is missing the point since it assumes a naturalistic epistemology and ontology. For the *Ashʿarī*s, God can act in creation as He wills. This is usually within the means of natural convention, but it need not be. *Ashʿarī*s would not accept the understanding that any occurrence, whether miraculous or not, falls outside the domain of divine will and power.

This leads us to the final question: If we are to assume miraculous events can happen according to the *Ashʿarī* paradigm, how are we to ascertain whether they did actually happen? Could they perhaps be misinterpreted, changed, exaggerated, or fabricated? The next section offers an answer by discussing the third cause of knowledge according to the *Ashʿarī*s, true reports.

4.1.6 Reported Knowledge

Reported knowledge are accounts from reliable sources (i.e., they come from one or more trustworthy persons).[484] The level of certainty in the reliability of the report is dependent on the trustworthiness of the individuals, contiguity of the report, circumstance of the report, and number of corroborators.[485] A widely transmitted report (*mutawātir*) from a multitude of sources is seen as the most veracious type of account, which reaches the level of complete certainty.[486] The conditions of such reports include 1. that the number of narrators be great enough (in each level of narration – from the firsthand account to the listener) that it would be customarily inconceivable to assume the narrators to have colluded to fabricate a report; 2. that the report is a narration of knowledge attained through sense perception (i.e., an event witnessed firsthand); and 3. contiguous transmission from the source (*ʾitiṣāl al-sanad*).[487]

---

[484] Taftāzānī, et. al, *A Commentary on the Creed of Islam*, 19.

[485] See: Jonathan A. C. Brown. *Hadith: Muhammad's Legacy in the Medieval and Modern World*. Foundations of Islam. (Oxford: Oneworld, 2009), 67-122.

[486] Ghazālī, *Maḥak al-Naẓar,* 121.

[487] ʿAbd Allah Sirāj al-Dīn, and, ʿUmar Bayqūnī. *Sharḥ al-Manthūma al-Bayqūniyya*, (Aleppo: *Dār al-Falāḥ,* 2009), 97-99.

Reported knowledge may be worldly knowledge, such as historical occurrences or current events. For example, when we sit down to read the news, we are receiving knowledge of events not through direct sense perception of the events, nor through purely rational means. We may use our rational faculties to verify the veracity of the news, but we ultimately rely on reports for attaining the information. The same can be said for accounts of historical events. Take for example, the battle of Hastings in 1066 CE. It is one of the most famous historical events in English history. There are six main written sources that date back to the period.[488] One of the most important is the account by William of Poitiers, who describes the event second hand from those who fought in the battle. It is noteworthy that none of the written primary sources are firsthand accounts, yet the battle's occurrence and outcome are essentially undisputed because it was so widely reported orally by those who witnessed it.[489]

Similarly, the failed invasion of Mecca by an army with elephants led by the Himyarite king Abraha in 570 CE is another event whose knowledge is verified through widely transmitted reports. During the attack, birds flew above and pelted the soldiers with pebbles.[490] The account is related in the *Qurʾān*, although it is corroborated through the mass transmission of oral accounts.[491]

True reports may also come in the form of revelatory knowledge, such as *Qurʾān*ic scripture or prophetic tradition. The *Qurʾān* is narrated through massively transmitted reports, heard directly from the Prophet Muḥammad. For a Muslim who hears of eschatological accounts in the *Qurʾān* or the *ḥadīth*, such as the existence of heaven and the hell fire, the account is verified on two levels. First, it may be ascertained that the source is widely transmitted from trustworthy sources and is reliably corroborated.[492] Second, such accounts are not rationally impossible (even if they may be customarily impossible). So, belief in life-after-death or the existence of angels is not irrational nor is it perceived as belief in myth. Because once the

---

[488] "Battle of Hastings 1066, Battle - 1000013 | Historic England". English Heritage. *Historicengland.org.uk*. Accessed, 15 July 2021. https://historicengland.org.uk/content/docs/listing/battlefields/hastings

[489] Ibid.

[490] The difference between the battle of Hastings and the birds over Mecca is that the latter is an example of a supernatural event. If an account is corroborated through massive transmission of many eyewitnesses, then it is acceptable whether it is supernatural or not, according to *Ashʿarī* thought. See chapter 6 and 7 for further elaboration on this topic.

[491] Mustansir Mir. "Elephants, Birds of Prey, and Heaps of Pebbles: Farāhī's Interpretation of *Sūrat al-Fīl*", Journal of Quranic Studies, 7, no. 1 (2005): 33-47. Accessed August 19, 2021. http://www.jstor.org/stable/25728163.

[492] Brown, *Hadith: Muhammad's Legacy,* 80-1.

veracity of Prophet Muḥammad's claim to prophecy is verified, any reliable account from him is taken as true. Belief in the battle of Hastings as a historical fact, Muslims would argue, is as believable as a massively transmitted ḥadīth since both are widely recounted from reliable sources.[493]

The overwhelming majority of the ḥadīth do not fall under that category of mass transmission but are instead reported by a smaller number of narrators (āhād ḥadīth). Their authenticity is studied in the science of ḥadīth criticism (ʿilm al-jarḥ wa al-taʿdīl). Ḥadīth are broadly classified with regards to their authenticity as either sound (saḥīḥ), good (ḥasan), or weak (ḍaʿīf).[494]

Prophetic revelation through widely transmitted reports is accepted as the ultimate source of sacred knowledge. However, revelation defers to rational inquiry to objectively verify its claims of divinity. Thus, a prophet demonstrates a miracle to substantiate his claim to prophecy. Arguments in the Qurʾān may be referred to as a means to rationally justify God's existence, but pointing to the Qurʾān as the word of God as a given would be a form of circular reasoning and a logical fallacy.

4.2 Ontology

Ontology is the study of the nature of existence.[495] This section explains how Ashʿarī ontology can be categorised as realist, essentialist and occasionalist.[496] Ashʿarī ontology may be divided into 1. Purely philosophical discourse independent of reference to scripture. They are either included in works on logic or act as a prolegomenon to theological works. Topics discussed

---

[493] For examples of widely transmitted hadith, see: Jaʿfar Muḥammad. *Naẓm al-Mutanāthir Min al-Ḥadith al-Mutawātir,* (Cairo: *Dār al-Kutub al-Salafiyya*, n.d.), 104-5, 210.

[494] Brown, *Hadith*, 100-3.

[495] Understood as *existential* ontology. See: Roberto Poli and, Johanna Seibt, eds. *Theory and Applications of Ontology. Philosophical Perspectives.* (Dordrecht; London: Springer, 2010), 1. For an overview of the technical language used to explain *Ashʿarī* ontology see: Richard Frank. "The Ašʿarite Ontology: I Primary Entities." *Arabic Sciences and Philosophy* 9 (1999): 163 – 231; Richard M. Frank. "Attribute, Attribution, and Being: Three Islamic Views: Philosophies of Existence, Ancient and Medieval", Ed. P. Morewedge. New York, NY: Fordham University Press, 1982; Richard M. Frank, and Dimitri Gutas. *Texts and Studies on the Development and History of Kalām.* Variorum Collected Studies Series CS833, 835. (Burlington, VT: Ashgate, 2005), 258-278. On the nature of existence and non-existence see:, Richard M Frank. "The non-existent and the possible in classical Ashʿarīte teaching". *In Classical Islamic Theology: The Ashʿarites.*

[496] Realism and essentialism are the general terms used in philosophy and apply to a great variety of different interpretations. This section will specify the type of realism and essentialism that *Ashʿarī*'s subscribe to and why.

included the concepts of existence, essence, and causation. 2. Scriptural and philosophical discourse. These are primarily included in theological works. Topics discussed include the contingent nature of created things, the physical and metaphysical worlds, and divinity, including divine action within the world (occasionalism).[497]

4.2.1 Realism

Realism is a philosophical position that holds that entities and their properties are existent outside of the mind, (i.e., the external world is mind independent).[498] There are many variations and characterisations of realism.[499] The realism form recognised by the *Ashʿarī*s is of a moderate kind, meaning they affirm the extra-mental existence of particulars but not of universals, such as Platonic forms. *Ashʿarī*s acknowledge objects such as trees, buildings, cars, and so on exist independently of our own perception of them. They also recognise that our perception of the accidents or changes that are undergone by these entities are also mind independent. *Ashʿarī* thought assumes realism as self-evident.[500]

Existence (*wujūd*) is known immediately to us since our own existence is directly experienced by us and thus undeniable.[501] It is also necessarily known, since to know that things either exist or do not exist in reality is a pre-requisite to basic rational thinking (e.g., the principles of

---

[497] See: Bayḍāwī, et. al, *Ṭawāliʿ al-anwār*, 77-146, 174; Ghazālī, *Miʿyār al-ʿIlm*, 381-437. Ibn al-Tilimsānī, et. al. *Sharḥ Maʿālim Uṣūl Al-Dīn,*101-161; Jurjānī, and al-Ījī, *Sharḥ al-Mawāqif,* vol. 1,2; Taftazānī, *Sharḥ al-Maqāṣid,* vol. 1,2,3.

[498] Khlentzos explains that metaphysical realism is the understanding that 'the structure of the world' including entities and their relations, are independent of the mind. Stuart and Mares state two factors that identify realism: 1. There are facts or things that exist within their own domain. 2. They are mind independent. See: Drew Khlentzos. "Challenges to Metaphysical Realism", *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2021/entries/realism-sem-challenge/>; Brock, Stuart, and Edwin D. Mares. *Realism and Anti-Realism*. 1. publ. Central Problems of Philosophy. (Chesham: Acumen, 2007), 2-5, 6-47; Simon Blackburn. *Truth: A Guide*. (Oxford ; New York: Oxford University Press, 2005), 117; B. Hale. "Realism" Encyclopedia Britannica, November 19, 2020. https://www.britannica.com/topic/realism-philosophy.

[499] Ibid.

[500] *Ashʿarī*s were explicit in their affirmation of the self-evident nature of existence. Specifically meaning extramental existence. We can see for example, in *Sharḥ al-Mawāqif* in the discussion on extramental existence, the author explains that our cognition of extramental existence is without doubt. Jurjānī, and Ījī, *Sharḥ al-mawāqif,* 2:169; Taftazānī, et. al, *A Commentary on the Creed of Islam*, 11-12; Taftazānī, *Sharḥ al-Maqāṣid*. (Beirut: ʿĀlam al-Kutub, 1998), 1:342, 351; Ibn al-Tilimsānī, et. al. *Sharḥ Maʿālim Uṣūl Al-Dīn*, 101-3; Bayḍāwī, et. al, *Ṭawāliʿ al-Anwār,* 77-8.

[501] Ibid; Taftazānī, *Sharḥ al-Maqāṣid*. (Beirut: ʿĀlam al-Kutub, 1998), 1:295, 297-8.

logic).[502] The law of non-contradiction and the law of identity assume an implicit understanding of existence and non-existence. In other words, comprehending the concepts of existence and non-existence is a pre-condition to affirming the basic axioms of rational reflection. If I say, 'there is a cat in front of me'. By affirming this I must through *a priori* knowledge understand the meaning of the existence of the cat and the meaning of it not existing.

Existence, according to *Ashʿarī*s, may be divided into 1. External entities existent in the world which are independent of the mind. 2. Mental existence, through which abstract concepts are formed. Some scholars include verbal and written existence, though they are nominal representations of the first two.[503] Ghazālī explains that the first two are examples of existence as universal but the latter two are placed through human convention (hence different languages, scripts, and synonyms). The first type (externally existent entities) can be likened to a body and the second type (conceptual or mental existence) can be likened to a shadow. One cannot exist without the other.[504] This would suggest that *Ashʿarī*s believe rational thought is independent of language, since its function is perceived as a signifier of meaning.[505]

Mental existence takes the form of mental concepts (*iʿtibār*) that are created in the mind. Real existence is that which is realised in external reality. When these two are identical then one can attain a type of true knowledge. Just as when a picture looks like the object it represents, it is not identical to it, rather it is a representation of it.[506] Existent entities are either contingent, or necessary. Contingent entities encompass all created things, and the necessarily existent is God.

---

[502] Ibid.

[503] Abū-Ḥāmid Muḥammad Ibn-Muḥammad al-Ghazālī. *Fayṣal al-Tafriqa Bayn al-Islām wa al-Zandaqa,* (Damascus: *Dār al-Bayrutī*, 1993), 27-39; Taftazānī, *Sharḥ al-Maqāṣid*. (Beirut: *ʿĀlam al-Kutub*, 1998), 1:342.

[504] Ghazzālī, *Fayṣal al-Tafriqa,* 27-39.

[505] Another way this is manifest is in books of logic where scholars divide the significations of verbal or written expressions into complete, partial, and implicative meanings. In other words, they recognise that logic is ultimately a mental exercise through which language is a vehicle for transmission. See: Ghazālī, *Miʿyār al-ʿIlm*, 67-8.

[506] Taftazānī, Masʿūd Ibn-ʿUmar. *Sharḥ al-Maqāṣid*. (Beirut: *ʿĀlam al-Kutub*, 1998), 1:342-3. Some *Ashʿarī*s, namely Bāqillānī and Juwaynī, put forth a theory of abstract states (*aḥwāl*), first articulated by *Muʿtizilī* scholar Abū Hāshim, which argues that there is an intermediate position between existence and non-existence that would explain the ability of the mind to universalize particulars via positing an abstract mode through which a universal may subsist. This idea was entirely rejected by the great majority of *Ashʿarī* scholars because of the logical contradictions it entails. See: Jan Thiele. *Abū Hāshim Al-Jubbāʾī's (d. 321/933) Theory of 'States' and its Adaption by Ashʿarīte Theologians*. Edited by Sabine Schmidtke. Vol. 1. Oxford University Press, 2014. https://doi.org/10.1093/oxfordhb/9780199696703.013.021; Abdurrahman Mihirig. "Classical *Kalām*

Existence may also be divided into particulars and universals. A *particular* is a name which refers to an individual entity that can only be predicated of a single thing (such a specific tree or a particular building, car, person, etc.).[507] A *universal* is a name which may refer to more than one entity, and which hold certain characteristics in common, (such as the concept of what constitutes a tree, building, car, etc.).[508]

Athīr al-Dīn al-Abharī's primer on logic, the *Isagoge,* provides a concise definition of both concepts:

> An expression is universal when its mere conception does not prevent its predication to multiple instances, such as the expression, 'human'. An expression is singular when its mere conception prevents its predication to many instances, such as the proper-noun expression, 'Zayd'.[509]

Closely related to the topic of particulars and universals is an important point of discussion for *Ashʿarī*s which has significant implications when regrading contemporary atheism and that is the differentiation between essence and existence.[510] They are, according to the great majority of *Ashʿarī*s, two unique concepts.[511] The essence of thing are the characteristics which define it. Its existence is independent of what makes it what it is.[512] Rāzī argues this point through two propositions that illustrate the difference between existence and essence. [513] He proposes that when we say that *blackness is black* and *black exists,* we explicitly understand two different meanings and do not equate the two propositions. We may also correctly say *the world can exist, or it cannot exist,* but it would be meaningless to say, *existence may exist, or it may not.* If existence and essence were synonymous, the first statement would be just as superfluous as the second.

and the Laws of Logic." Maydan, April 23, 2021. https://themaydan.com/2021/04/classical-*kalām*-and-the-laws-of-logic/; Frank. "The Ašʿarite Ontology: I Primary Entities.", 163; Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 3:3.

[507] Taftazānī et. al, *Sharḥ al-Shamsiyya,* 138.

[508] Ibid; Ghazālī, *Miʿyār al-ʿIlm*, 424-6.

[509] Karamali, Hamza. "*The Isagoge of Athir al-Din al-Abharī*".

[510] See the section on *Ashʿarī* critiques of the ontological argument in chapter 6.

[511] Ghazālī, *Maḥak al-Naẓar,* 184; Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 1:146-7; Taftazānī, *Sharḥ al-Maqāṣid*, (Beirut: ʿĀlam al-Kutub, 1998), 1:303-6.

[512] Ibn al-Tilimsānī et. al., *Sharḥ Maʿālim Uṣūl Al-Dīn*, 109; Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998)*,* 1:310-11; Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 2:147.

[513] Ibid.

When discussing *Ashʿarī* realism, it is necessary to examine their stance on non-existence. This topic was debated by both *Muʿtazilī* and Arab philosophers with whom they were engaging. It is often referred to by contemporary atheists and is a significant idea when discussing modern physics.[514]

*Ashʿarī*s, such as Taftazānī, Rāzī, and others, hold the position that non-existence is not subsistent (*alwujūd laysa bithābit*), meaning it has no reality.[515] They argued against the position that nothingness has some sort of reality which is called subsistence (*thubūt*).[516] Proponents of subsistence, argue that non-existent entities are different from one another since they may be referred to and delineated. This would suggest that they must have a type of reality, which they refer to as subsistence. For example, the phoenix and a unicorn are non-existent creatures. However, since I may differentiate a phoenix from a unicorn and refer to both mentally, that means that they must be subsistent since it is impossible for the mind to refer to nothingness.

Taftazānī critiques the argument of those who hold that non-existence is subsistent by positing that it suffices that the differentiation and delineation of non-existent things are in the mind alone. Knowledge of what they are does not entail that they are subsistent outside of the mind, because this would entail that all rationally impossible and imaginary entities may exist. Rāzī argues that if non-existence was subsistent (it has a reality outside the mind) then it would mean that the essences of all possible things cannot be without existence, which means that they are pre-eternally real. As was discussed however, essence and existence are two distinct concepts, and the latter is not part of the former. For Rāzī and others, ultimately, there is no difference between saying non-existent things are subsistent and saying non-existent things exist. The reason for this is that if essences were subsistent in some way, that would mean that this subsistence were a common attribute of all essences. And this would entail their pre-eternal

---

[514] See: Lawrence Maxwell Krauss. *A Universe from Nothing: Why There Is Something Rather than Nothing*. First Atria Books trade paperback edition. (New York: Atria Paperback, 2013), 19-21.

[515] Bayḍāwī, et. al, *Ṭawāliʿ al-Anwār*, 80; Taftazānī, *Sharḥ al-Maqāṣid,* 1:360-4; Ibn al-Tilimsānī, et. al, *Sharḥ Maʿālim Uṣūl*, 113.

[516] Nineteenth century Austrian philosopher, Alexuis Meinong, holds a similar position to the one critiqued by *Ashʿarī*'s. "Meinong distinguishes between two ontological notions: subsistence and existence. Subsistence is a broad ontological category, encompassing both concrete objects and abstract objects. Concrete objects are said to exist and subsist. Abstract objects are said not to exist but to subsist." Yagisawa, Takashi, "Possible Objects", *The Stanford Encyclopedia of Philosophy* (Summer 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2020/entries/possible-objects/> .

reality, which is rationally impossible, since they are contingent.[517] Taftazānī and Ījī provide similar arguments supporting their position and it suffices to mention these two ideas in this section.[518]
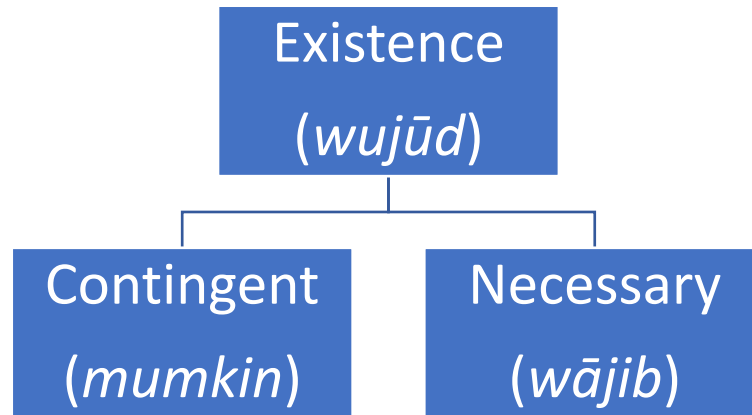
Figure 1. *Ashʿarī* categorisation of existence as it pertains to dependence and non-dependence.

4.2.2 Essentialism

Essentialism is a philosophical position that holds that things have a common set of properties that make them what they are.[519] From an epistemological context, Taftazānī states that the essence (or quiddity) of something is the answer to the question: what is it? Essence therefore does not include the efficient cause that bought it into being, rather it only includes the properties that constitute what something is.[520] In other words, its defining characteristics. Ījī defines the essence of a thing, from an ontological perspective, as that through which an entity is what it is. Affirming the essence of a thing is an application of the law of identity, that a thing is identical to itself.

---

[517] Ibn al-Tilimsānī, et. al, *Sharḥ Maʿālim Uṣūl,* 209, 114.

[518] See: Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998)*,* 1:360-4

[519] Ishii, Robertson and, Atkins, Teresa and Philip, "Essential vs. Accidental Properties", *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2020/entries/essential-accidental/>.

[520] Bayḍāwī, et. al, *Ṭawāliʿ al-anwār*, 83; Ghazālī, *Maḥak al-Naẓar,*182; Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 1:399-400.

This signification is important as it differentiates *Ashʿarī* essentialism from other types. [521] An entity may be divided into substance or essence (*jawhar*) and accidents (*aʿrāḍ*). A physical book has many characteristics such as shape, size, colour, type of cover, topic, etc. Some of the characteristics are essential to what makes it a book. If it was bigger or smaller, a different colour, was hardback or paperback, a change in those traits does not change the fact that it is a physical book. These are known as accidental properties and are not essential to its *bookness*.[522] However, should I remove all the pages inside the book, or remove the binding the holds the pages together, it ceases to be a book, since these are essential properties of a physical book. *Ashʿarī*s hold that our cognition of these essential characteristics may be in the form of particulars or universals.[523] The previous example of the essential nature of a book was an example of the essence of a universal concept that may be predicated of multiple instances (applies to many things). Essences may also refer to particulars, such as the essential characteristics of my brother Hashim or essential characteristics of the fig tree in my garden. They are the character traits that make them who or what they are as individual things. This is known as something's identity (*hawīyya or tashakhus*).[524]

Though *Ashʿarī*s affirm the ability of the human mind to ascertain universals, they acknowledge that the universalisation of particulars happens in the human mind.[525] This means they are nominalists, in the sense that they deny the existence of abstract objects but do not deny the substantiation of universals in particulars, and the conception of said universals in the human mind.[526] The essentialism of the *Ashʿarī*s therefore is markedly different from the Neo-Platonists, who affirmed the existence of essences in a Platonic sense (theory of forms), something which *Ashʿarī*s denied.[527]

---

[521] Ishii, Robertson, et. al, "Essential vs. Accidental Properties", *The Stanford Encyclopedia of Philosophy*. For example, among the different types of Essentialism argued by philosophers, maximalism, a position defended by Leibnitz, holds that all traits are essential traits even those which are accidental. This is not acceptable according to *Ashʿarī* thought.

[522] Ibid.

[523] Bayḍāwī, et. al, *Ṭawāliʿ al-Anwār*, 85; Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: *ʿĀlam al-Kutub*, 1998), 1:399.

[524] Ibid.

[525] Taftazānī, *Sharḥ al-Shamsiyya*, 169.

[526] Ibid. For an explanation of the two types of Nominalism, see: Rodriguez-Pereyra, Gonzalo, "Nominalism in Metaphysics", *The Stanford Encyclopedia of Philosophy* (Summer 2019 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2019/entries/nominalism-metaphysics/>.

[527] Bayḍāwī, *Ṭawāliʿ al-Anwār,* 83.

As Jurjānī, Ījī, and Taftazānī state, essences may be externally existent in particulars (existent things, such as a tree or a horse), they may only have conceptual existence (such as a phoenix, or a unicorn), or they may be in neither since there are things both existent and non-existent of which we have no knowledge of.[528] However, as a completely abstracted entity, essence is non-existent.[529]

This view is related to realism in that whilst the essential properties of entities extra-mentally are discovered through the mind they are substantiated in the world. Through induction, by sampling the common traits of humans, I may conclude that the essential properties that define humans is that they are rational animals.[530] Other properties such as being bi-pedal or being able to laugh are accidental and non-essential characteristics that may be shared by other animals. Essential properties may also exist independently of the human mind's ability to correctly identify them. Which means that it may be that the definition of a human being as a *rational animal* is not a completely essential definition, which does not mean that a human being has no essential properties. Possibly existent essences are known to God, and some are willed by him into existence.[531]

4.2.3 Occasionalism

Occasionalism is the belief that God is the efficient cause of all entities and events in the universe at every instant of time.[532] God creates objects, such as human beings, trees, and galaxies, but also accidents, including actions and events, such as the movement of planets or the molecular vibrations of atoms.[533] For *Ashʿarī*s to suggest otherwise would be to imply that

---

[528] Jurjānī, and al-Ījī, *Sharḥ al-Mawāqif,* 2:132-4; Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 1:400-3. Closely related is the understanding that universals may be mentally or extra-mentally existent, see: Taftazānī, *Sharḥ al-Shamsiyya*, 162.

[529] See: Omar Qureshi. "Dr. Omar Qureshi - Universals in Islam." YouTube. Bayan Islamic Graduate School, December 20, 2022. https://www.youtube.com/watch?v=h-iRT6hkfLc&ab_channel=BayanIslamicGraduateSchool.

[530] Ghazālī, *Maḥak al-Naẓar,* 186-7; Ghazālī goes through similar steps in his passage on how to create a definition and uses a top-down approach by identifying the proximate genus and specific difference.

[531] Universals that are properly comprehended correspond to reality since they correspond to the knowledge of God. See: Qureshi, Omar. "Dr. Omar Qureshi - Universals in Islam." YouTube; Bilal Ibrahim. *Causing an Essence*. In Shihadeh, Ayman, and Jan Thiele, ed. Philosophical Theology in Islam: Later *Ashʿarī*sm East and West. (Brill, 2020), 156-194. https://doi.org/10.1163/9789004426610 .

[532] Sukjae Lee, "Occasionalism", *The Stanford Encyclopedia of Philosophy* (Fall 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2020/entries/occasionalism/>.

[533] Laqqānī et.al*, Sharḥ al-Nāẓim ʿalā al-Jawhara,* 1:336-8, 383; Dardīr, and Fodeh, *al-Kharīda al-Bahiyya* 20-1; Bayjūrī, *Tuḥfat al-Murīd*, 114, 167-8.

something can act independently of God, which is deemed logically impossible since it negates the apparent contingency of all created things and as such undermines God's omnipotence and oneness. To this end, occasionalism is argued for in sections on divine attributes, specifically, God's oneness. *Ashʿarī* monotheism holds that God is one in his essence, actions, and attributes.[534]

This entails that just as all things are contingent upon God for their creation, so too are they contingent upon God to enact any change upon themselves or other entities.[535] Their power is contingent upon something, and that reliance cannot regress infinitely and so must be dependent on the necessarily existent. This idea is not only supported through rational discourse by the *Ashʿarī*s, it is also referenced in *Qurʾān*ic scripture: for instance, 'When it is God who has created you and all your handiwork?' [536] and 'God is the Creator of all things; He has charge of everything'.[537]

An analogy that conveys *Ashʿarī* occasionalism is that of classic video animation. The images of the characters in the films may seem to move seamlessly and continuously, but that is merely an illusion. The animation itself is a series of still and discrete drawings that must be redrawn each time with subtle differences that, when strung together, give the impression of movement and change.[538] We may imagine God's creation of the universe as similar to that. God did not merely create the universe as a one-time event billions of years ago; rather, God is continually the efficient cause of the universe in every discrete moment of time through His omnipotence in accordance with His divine will. Through His power, God can create all rationally possible things, but His will specifies and delineates his creative acts through His divine knowledge.[539] So, for the *Ashʿarī*s, God could not have created the universe like a clockmaker who winds up the clock and leaves it to work independently, since that would be logically impossible. It is impossible because the entirety of creation does not cease to be contingent upon God.

Two questions arise from this view: How does human free will fit into an occasionalist paradigm? And how can we explain natural laws and causation? *Ashʿarī* occasionalism

---

[534] Ibid.
[535] Ibid.
[536] Q. (37:96).
[537] Q. (39:62).
[538] This analogy is referenced from American Muslim scholar, Hamza Yusuf in a lecture that the author heard but was unable to locate online.
[539] Dardīr and Fodeh, *al-Kharīda al-Bahiyya*, 32.

perceives natural laws and causation as customary and predictable events created by God to allow us to interact with the physical world. As explained in the section on sensory perception and empirical knowledge, natural laws only exist in so much as they are customary habits we perceive in the cosmos. In the physical world, cause and effect, such as a fire burning, are not logically necessary occurrences. Rather, we are accustomed to seeing these things happening, so we assume they are a rationally necessary relationship. In reality, the creation of the fire and the burning are correlated events that are both caused by God. They are the direct acts of God in the world. So, when I place a piece of wood in a fire, the fire itself does not burn the wood; rather, God creates the burning of the wood when it is placed in the fire. The acts of creation of wood, fire, and combustion are all discrete events that God brings into being. The convention is that God chooses to create fire when wood is placed in the fire.

Ashʿarī occasionalism relates to God's oneness, omnipotence, omniscience, and will (*waḥdāniyya, qudra, ʿilm, irāda*). When the piece of wood is placed in the fire, God has the power to make it burn, freeze, turn into a piece of rock, disappear, and so on. There are an infinite different ways divine omnipotence may affect it. Through God's volition, will delineates and directs (*tukhasis*) His power to act in a particular way according to His knowledge.[540] In this example, God wills the wood to burn. It is important to note that the process described does not happen sequentially in time, since God is not bound either by time or space, nor is He susceptible to change.

With this in mind, how do *Ashʿarī*s explain human free will? Does occasionalism entail determinism? They would argue that it does not since determinism would be invalid, with overwhelming scriptural evidence to contrary, as well as direct human experience. Specifically, they argue for human free will through a concept called *kasb* (acquisition or gain), named as such from the *Qurʾān*ic verse relating to human accountability.[541]

Kasb (acquisition of actions) may be explained as follows. If I had a piece of chocolate and a piece of fruit in front of me, I may choose to eat either the chocolate or the fruit or both or neither. Once I have made the choice to eat the fruit and direct my intention to act upon my choice, I have acquired the act. At that point, God creates the movement of my hand to place

---

[540] Ibid, 31.
[541] See: Q. (2:286); Dardīr and Fodeh, *al-Kharīda al-Bahiyya*, 21-23; Tilimsānī, et. al, *Sharḥ Maʿālim Uṣūl Al-Dīn*, 307; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 42; Ghazzālī, et.al, *Moderation in Belief,* 92-7; Jackson, *Islam and the Problem of Black Suffering*, 87-90.

the fruit into my mouth and eat it. Thus, human beings are accountable for their actions, since they acquire them. Others, such as Ghazālī, note that it may be asked who then creates the choice, to which he concludes that the issue of divine decree, which is closely related to *kasb*, is supra-rational. It is a type of esoteric knowledge that may be comprehended through spiritual illumination and not through rational inquiry.[542]

Regarding God's command, which we are privy to through prophetic revelation, it is differentiated from God's divine will. He may command something, but His will may be in its opposite.[543] For example, God commands people to believe and worship Him and be morally upright, but His will allows people to choose not to believe, not worship, and do morally objectionable acts.

4.2.4 Infinite Regress

Infinite regress and circularity are concepts that hold great import to *Ashʿarī kalām*.[544] In verifying their logical impossibility, they are used as part of the proofs of God's existence, as well as in justifying foundationalism through *a priori* ideas. Furthermore, demonstrating the impossibility of infinite regress is even used as grounds to argue for the validity of *Ashʿarī* atomism.[545] It is not surprising to see these ideas, including philosophical objections to them, are discussed at great length in more advanced *kalām* treatises, such as *al-Mawāqif* and the *al-Maqāṣid*.[546]

The method most often used for arguing the invalidity of actual infinities (including circularity) is exhaustive investigation and successive elimination (*sabr wa-taqsīm*),[547] that is, demonstrating the invalidity of a proposition through the logical contradictions of what it entails.[548] Ultimately, these two positions are founded upon classical logic. It is argued that

---

[542] Matthew Levering. "Providence and Predestination in Al-Ghazālī." *New Blackfriars* 92, no. 1037 (2011): 55–70. http://www.jstor.org/stable/43251500.

[543] Bayjūrī, *Tuḥfat al-Murīd*, 124-5.

[544] Dardīr and Fodeh, *al-Kharīda al-Bahiyya,* 24.

[545] Ibid, 24-6; Bayḍāwī, et. al, *Ṭawāliʿ al-anwār min Maṭāliʿ al-Anẓār*, 142, 165-6; Laqqānī et.al*, Sharḥ al-Nāẓim ʿAlā al-Jawhara,* 1:323; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 86.

[546] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 2:111-31; Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 4:166-170.

[547] Frank Griffel, "*Kalām*". In Lagerlund, Henrik ed. *Encyclopedia of Medieval Philosophy: Philosophy between 500 and 1500 with 7 Figures and 12 Tables*. (London: Springer, 2011), 666.

[548] Ibid.

asserting the impossibility of circularity and infinite regress is affirming the law of non-contradiction, as I demonstrate below.

Infinity is a limitless or unbounded quantity or quality. To understand that there are an infinite number of possible natural numbers (1,2,3, …, ∞) is to know that there is no limit to their amount: whatever number I can imagine, there can always be a number that is greater. Being able to understand the meaning of saying there are an infinite number of apples is a similar idea. We can conceive of the meaning of an infinite number of apples; however, we cannot imagine an actual infinite number of apples, just as we cannot conceptualise an infinite number of natural numbers.

We also understand the possibility of counting to infinity; however, we know that this cannot be achieved since, however long and whatever number we may reach, it may be possible to count to a larger number. This example illustrates what is meant by a *potential infinity*: it may never be complete.

On the other hand, an *actual infinity* is a complete set of infinite things said to exist in reality, such as to say that an infinite amount of time has actually passed or that the universe is infinite in size. Both are actual infinites.

*Ashʿarī*s concede the existence of *potential infinites*. The never-ending nature of the afterlife in heaven and hellfire demonstrates the possibility of a potential infinity. Because however much time has passed for someone in heaven, it will always be a finite amount of time that has passed for them, with an infinite amount of time ahead of them that has yet to pass. It is impossible to traverse infinity. It cannot exist in our minds (e.g., we cannot conceive of an infinite number of apples) or in the external world – there is no set of an infinite number of things.

Unlike Aristotelian philosophy, which asserts the possibility of some infinities (e.g., conceding the possibility of temporal infinity but the impossibility of spatial infinity), *Ashʿarī*s argue that an actual infinity in whatever form is rationally impossible because it leads to logical absurdities through demonstrable contradictions.

Infinite regress refers to the idea that there are an unending number of prior events or causes in the past. The rational impossibility of this idea is discussed through a number of proofs. I explain the most important one as an example: the *proof of correspondence (burhān al-taṭābuq)*.[549]

---

[549] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 2:120-2; Jurjānī, and al-Ījī, *Sharḥ al-Mawāqif*, 4:166-170.

The proof of correspondence may be illustrated as follows.[550] Imagine that an infinite amount of time has passed. Now imagine an iron chain that, each day from the infinite past up to the present day, has had a link added to it so that it grows longer as time passes. The chain, which is infinitely long, has an infinite number of links. Now imagine a second iron chain, which has had a link added to it every single day from past eternity. However, this second chain was completed three days prior to the first chain. This means that it has three fewer links than the first chain. Now, we take both chains and match the last link in chain 1 with the last link in the chain 2, then match the second to last link in chain 1 with the second to last link in chain 2, and so on, as shown in the figure below. We start with the most recent links and work backwards because we are attempting to prove whether infinite regress of past events possible.
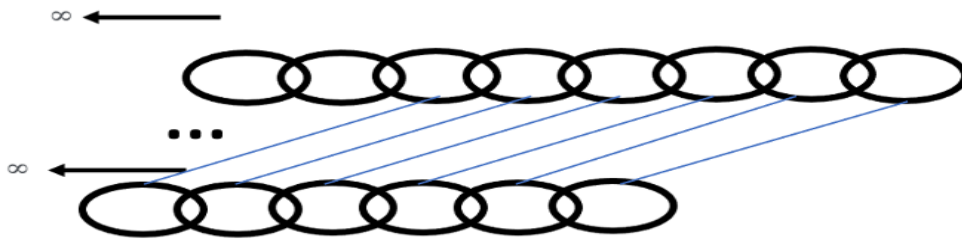
Figure 6. The infinite chains thought experiment.

There are three possible outcomes to this thought experiment. The first is that each of the links in both chains will finish at the same time. However, this is impossible since the first chain is longer than the second chain by three links. The second possibility is that the second chain finishes with the first chain having an infinite number of chains left. This is also impossible since the second chain begins in the infinite past. The third and final possibility is that the second chain ends with three links left in the first chain, which is the only logical possibility, and this proves that both chains must be finite in length. Therefore, an infinite number of successive events cannot occur, or, as the *Ashʿarī*s would say, infinite regress is not possible.

4.2.5 Circular Reasoning

Circular arguments (Latin: *circulus in probando*) are logical fallacies commonly ascribed to ideas pertaining to objections to God's necessary existence and are discussed in *Ashʿarī*

---

[550] Dardīr and Fodeh, *al-Kharīda al-Bahiyya,* 24-6.

literature.[551] Demonstrating circular reasoning in denying God's necessary attributes of negation and the attributes of meaning is prevalent as well.[552] In some instances, circular reasoning may be referred to as the begging the question fallacy. It can take subtle forms; however, in its simplest form, it may be understood as the truth of each statement being dependent on the other, such as the cause of p is q, and the cause of q is p.[553] This is rationally impossible since p is in need of q for its existence, and q is in need of p for its existence. Each must precede the other, but they cannot, since they need the other.
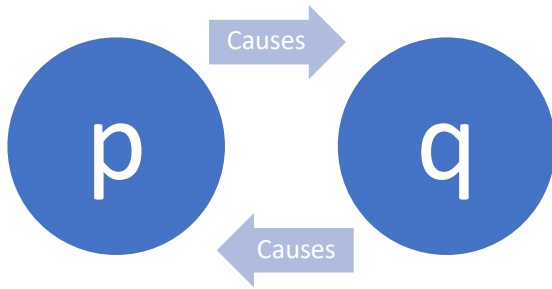
Figure 7. Representation of the circular reasoning fallacy.

An example of this fallacy would be to say that the *Qurʾān* is the word of God because God declares it is so and to conclude that God says it is the word of God because it is in the *Qurʾān*. In this, Ghazālī argues that proving the attribute of speech to God by arguing that the *Qurʾān* is evidence of God's speech is circular reasoning. Instead, he claims that such an attribute may be derived rationally through arguing the nature of God's speech through its definition as an indicator of divine knowledge.[554] For instance, in *al-Kharīda*, Dardīri argues that not concluding that the creator is eternal, everlasting, one, and utterly dissimilar from creation invariably leads to infinite regress or circular reasoning:

> If He is not attributed with such [the attributes mentioned above], then this leads to claiming
> that He is contingent and has a beginning, which is absolutely impossible; so, remain upright

---

[551] See: Dārdīr, and Shinnār, *Sharḥ al-Kharīda al-Bahīyya, 68;* Jurjānī, and al-Ījī, *Sharḥ al-Mawāqif*, 4:156-161 Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 2:111-2.

[552] Dārdīr, and Shinnār, *Sharḥ al-Kharīda al-Bahīyya,* 68; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 86; Sanūsī, *Sharḥ al-ʿAqīda al-Kubrā*, 95-110.

[553] Dārdīr and Shinnār, *Sharḥ al-Kharīda al-Bahīyya*, 68, Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 4:156-161.

[554] Ghazzālī, and Aladdin Mahmūd Yaqūb. 2013. *Al-Ghazālī's Moderation in Belief: Al-Iqtiṣād Fī al-Iʿtiqād*. Chicago; London: The University of Chicago Press. 114-116.

[upon the truth]. It is impossible because it leads to infinite regression and unending circularity, which is manifestly impossible.[555]

Circular reasoning may also be used to affirm that the universe has a beginning and as a result be used to argue against pantheism (the belief that the universe is God) or panentheism (the belief that the universe is a part of God).[556] This is done as one of the necessary conclusions of the contingency or cosmological arguments. Therefore, once the conclusion is made that the universe must have had a cause that brought it into being, it is established that it is rationally impossible that the universe must have brought itself into being since that would lead to circular reasoning.

4.3 Conclusion

Ashʿarī scholars recognised the importance of establishing a philosophical framework that could articulate, demonstrate, and defend Islam's creedal beliefs. They intentionally included epistemological and ontological introductions to their texts to correctly base their theology on sound principles.

They were foundationalists, which means they understood that all knowledge must be built upon direct, non-inferential knowledge, and they recognised the legitimacy of all human faculties as sources of knowledge. They acknowledged the limitations of each faculty and defined the domains in which they may be functional. Furthermore, *Ashʿarī* scholars aimed to create an epistemology and ontology that can accommodate the existence of both physical and metaphysical realities without entailing any contradictions.

Ashʿarī ontology assumes realism, which accepts the *a priori* existence of the world extra-mentally. The mind can conceptualise universals that do not exist independently in the mind but may be substantiated in particulars outside of the mind. In this sense, they hold to a type of essentialism. *Ashʿarī*s classified existence as either necessary or contingent. God is understood as the necessarily existent and sole efficient cause of all substances and accidents, whilst all else is contingent upon Him.

---

[555] Aḥmad al-Dārdīr, and, Ibrahim Hakim al-Shagouri. "*al-Kharīda al-Bahīyya*: *The Lustrous Untouched Pearl By Imam*" *Internet Archive,* 2018. https://archive.org/details/alKharīda-Dardīr1/mode/2up. Accessed: [24 August 2021].

[556] Dārdīr and Fodeh, *Sharḥ al-Kharīda,* 24-6.

The table below provides an overview of the ontology and epistemology of the *Ashʿarī* school and those of some modernist and post-modernist atheist philosophies.

	Ashʿarī school	Modernist atheism	Post-modernist atheism
Ontology	Realism, essentialism, occasionalism	Realism, idealism, naturalism	Nominalism, idealism
Epistemology	Foundationalism: rational, empirical, reported knowledge grounded in classical logic	Empiricism, idealism, rationalism, scientism, positivism	Relativism: subjectivism, social constructionism, nihilism

Table 4. Ontology and epistemology of the *Ashʿarī* school and of modernist and post-modernist atheism.

Now that we have established the sources of knowledge and basic ontological premises of the *Ashʿarī*s, we may now examine how they argued for God's existence and necessary attributes. We explore the arguments favoured by them and demonstrate how they were able to anticipate and engage with the critiques levelled against them.

Chapter 5: *Ashʿarī* Proofs for the Existence of God and Divine Attributes

5.0 Introduction

This chapter explores how *Ashʿarī* scholars establish the existence of God and His fundamental attributes. It is divided into three sections. The first is concerned with elucidating the methodology *Ashʿarī*s used to determine the arguments for God's existence and explaining their underlying features. The second part of the chapter puts forth the proofs used by *Ashʿarī*s to establish God's existence rationally. The third part discusses God's necessary attributes, which form an indispensable part of the *Ashʿarī* conception of God.

Because contemporary atheism questions these arguments and their basic premises, it is important to present them first before discussing critiques of the arguments. These fundamental premises are necessary for the validity of the arguments and are derived from *Ashʿarī* ontology and epistemology.

Additionally, it is essential to clarify the necessary attributes of God since these attributes are critiqued by contemporary atheist philosophies. For instance, attributing pre-eternality and dissimilarity to God is required to differentiate the necessary existence of God as the efficient cause of the universe from that of a naturalistic cause, which may not be attributed with pre-eternality or dissimilarity from created entities.

Ashʿarī theology relies primarily on two proofs for the existence of God: the argument from contingency (*dalīl al-imkān*) and, the argument from beginning (*burhān al-ḥudūth*).[557] We can discern three features or criteria of these proofs which make them viable according to *Ashʿarī* theology. The arguments a. are rationally objective, b. are founded upon immutable premises and proofs, and c. have logically necessary conclusions that follow from their premises.

Once the proof for the necessarily existent cause of the universe is established, *Ashʿarī* theologians posit a number of logically necessary attributes that the cause must hold. These are divided into the attributes of negation, which, as the name suggests, aim at negating impossible features of the necessarily existing cause. They are pre-eternality and eternality, which negate a beginning and an end; dissimilarity, which negates similitude to created entities; oneness,

---

[557] The argument from beginning is more popularly known as the *kalām* cosmological argument, I explain why I chose the name later in the chapter.

which negates a multiplicity of causes; and self-sufficiency, which negates dependence, *Ashʿarī* theologians subsequently posit seven more, which they term *real* attributes: omniscience, omnipotence, will, life, speech, hearing, and sight.

5.1 *Ashʿarī* Methodology and Criteria for Establishing the Existence of God

This section explores the method through which *Ashʿarī*s developed their arguments for the existence of God and derives from them common features or criteria that make the valid proofs according to *Ashʿarī* theology. As explained in chapter 2, the belief in the necessary, not merely the probable, existence of God was a condition for the validity of one's Islam.[558] *Ashʿarī*s sought universal acknowledgement for their proofs for the existence of God. In other words, they wanted a method of proving God's existence that was acceptable to the rational mind irrespective of religious beliefs, since establishing proof for the validity of Islam's creed (*iqamat al-hujja*) is one of the purposes of *kalām*. It is also necessary to affirm one's certainty in belief in God, since certainty is deemed as the only valid, and thus acceptable, form of faith in Islam.[559]

The two most important arguments surveyed in *Ashʿarī* literature are the *kalām* cosmological argument and the argument from contingency. Teleological arguments, whilst not infrequent in *kalām* texts, were always coupled with one of the two other proofs. The next part of the section outlines eight of the main arguments for God's existence found in the philosophy of religion. Those pertaining to *Ashʿarī* scholarly discussion are elaborated upon further below.

1. The *kalam* cosmological argument is a deductive proof based on the need of the universe for a cause that brought it into being because it had a beginning (i.e., it was in a state of non-existence prior to its existence). This argument has been used by Arab peripatetic philosophers, kalam scholars, and Christian theologians.[560]

2. The contingency argument is a deductive proof based on the premise that the existence of all entities in the universe is logically possible, and they are thus in need of a necessary cause to make them the way they are.[561] The contingency argument for God's

---

[558] Dārdīr and Shinnār, *Sharḥ al-Kharīda al-Bahiyya*, 37; Sanūsī et. al., *Tahthīb Sharḥ al-Sanūsiyya*, 30; Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998)*,* 1:165-6.
[559] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998)*,* 1:165-6.
[560] Fodeh, *al-ʾAdilla al-ʿAqliyya ʿalā Wujūd Allah,* 218-224.
[561] Ibid, 150-1, 176-7.

existence was utilised by peripatetic philosophers, post-*Ghazālī*an scholars, and Christian theologians.

3. The teleological or design argument suggests that the order, complexity, and design apparent in the universe may only be explained through positing the existence of God.[562]

4. The ontological argument originated with the Catholic philosopher and theologian Anselm of Canterbury (d. 1109), who posited that we may argue the existence of God through the definition of a necessary existent God. Since God is a maximally perfect being, He must exist.[563] This is a rather simplified version; I explore the definition in greater detail below.

5. The moral argument infers God's existence because of an intuitive understanding of moral and ethical behaviour in human beings. Morality can only be adequately explained by positing the existence of God.[564]

6. The argument from religious experience tells us that God's existence may be established through direct personal spiritual experiences of the divine.[565]

7. Popularly articulated by Blaise Pascal (d. 1662) and William James (d. 1910), the pragmatic argument is an appeal to the positive consequences of believing in God for the individual and society at large. Pascal's formulation (also known as Pascal's wager) argues that believing in God is in a person's best interest since it would entail everlasting facility in the afterlife if a person were right about God but would entail little to no repercussions if they were wrong in believing in God.[566]

8. The argument from miracles is one that suggest God's existence may be inferred because the observing of supernatural events that cannot be explained by science tell of divine intervention.[567]

---

[562] Ibid, 321-336.

[563] Ibid, 90-1, 95-8.

[564] Ibid, 370-6.

[565] D. G. Attfield. "The Argument from Religious Experience." *Religious Studies* 11, no. 3 (1975): 335–43. http://www.jstor.org/stable/20005259.

[566] Fodeh, *al-ʾAdilla al-ʿAqliyya ʿalā Wujūd Allah,* 396-403; Jeff Jordan. "Pragmatic Arguments and Belief in God", *The Stanford Encyclopedia of Philosophy* (Fall 2022 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/fall2022/entries/pragmatic-belief-god/>.

[567] Richard Swinburne, 'Arguments from History and Miracles', *The Existence of God*, 2nd edn (Oxford, 2004; online edn, Oxford Academic, 1 Sept. 2007), https://doi.org/10.1093/acprof:oso/9780199271672.003.0013, accessed 28 June 2023.

The table below lists the types of arguments for the existence of God found in the most important works in *Ashʿarī* literature.[568]

Argument	Discussed by
Kalām cosmological argument (argument from beginning)	• Taftazānī, *Sharḥ al-Maqāṣid* • Jurjānī and al-Ījī, *Sharḥ al-Mawāqif* • Sanūsī and Fodeh, *Tahthīb Sharḥ al-Sanusiyya* • Al-Dardīr and Shinnār, *Sharḥ al-Kharīda al-Bahiyya* • Bayḍāwī et al., *Ṭawāliʿ al-Anwār* • Laqqānī, *Sharḥ al-Naẓim ʿAlā al-Jawhara* • Ibn al-Tilimsānī et al., *Sharḥ Maʿālim Uṣūl al-Dīn Lil-Imām Fakhr al-Dīn al-Rāzī* • Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād* • Bāqilānī, *Kitāb al-Tamhīd*
Argument from contingency	• Taftazānī, *Sharḥ al-Maqāṣid* • Jurjānī and al-Ījī, *Sharḥ al-Mawāqif* • Bayḍāwī et al., *Ṭawāliʿ al-Anwār* • Laqqānī et al., *Sharḥ al-Naẓim ʿalā al-Jawhara* • Ibn al-Tilimsānī et al., *Sharḥ Maʿālim Uṣūl al-Dīn Lil-Imām Fakhr al-Dīn al-Rāzī*
Design argument	• Ghazālī, *Al-Ḥikmah fī Makhlūqāt Allāh*[569] • Rāzī, *Al-Tafsīr al-Kabīr* • Al-Dardīr and Shinnār, *Sharḥ al-Kharīda al-Bahiyya*[570]
Ontological argument	None
Religious experience	None

---

[568] See: Fodeh. *Al-ʾAdila al-ʿAqliyya ʿalā Wujūd Allah.*

[569] While not explicitly stating that he is trying to prove God's existence in the book, Ghazālī offers the work as a means for the reader to properly contemplate design in creation so as to increase their certainty (*yaqīn*) in God. See: Abu Ḥāmid Muḥammad al-Ghazālī. *Al-Ḥikmah fī Makhlūqāt Allāh*. Beirut: *Dār Ihyāʾ al-ʿUlūm*, 1978.

[570] Shinnār, a contemporary scholar, includes a form of the design argument after an exposition on the argument from beginning.

Moral argument	None
Pragmatic argument	None
Argument from miracles	None

Table 3. Arguments for God's existence in *Ashʿarī* works.

As the table demonstrates, *Ashʿarī*s favoured deductive proofs for establishing the existence of God. Their arguments did not appeal to spiritual experiences, miracles, or to internal, *a priori* knowledge of God based upon a human being's natural constitution (*fiṭra*).[571]

They were seeking an objective method of persuasion that would appeal to all people. The common denominator for their audience, whether Muslim or not, was the intellect and its capacity for rational thought. It is not surprising to see *Ashʿarī*s take a critical stance towards methods of establishing God's existence that were argued on the basis of spiritual illumination, moral ground, social good, pragmatism, or utility, at the exclusion of other more concrete, rational means.

As covered in the previous chapter, treatises on logic and *kalām* describe types of knowledge and the means via which they may be attained.[572] A short exposition of these ideas gives a clearer idea of how *kalām* scholars formed their arguments for God's existence and how they compare with other types of inference. Knowledge is divided into either *conceptualisation* (*taṣawwur*) or *assent* (*taṣdīq*) to truth. Knowledge may be attained immediately without inference, such as awareness of the existence of the self, or acquired via a means of empirical or logical proof. A concept may be understood unequivocally through definitions (*ḥad*) that are exhaustive and exclusive, or less explicitly through descriptions (*rasm*), such as the listing all or some of the objects that fall into that definition. These are known as *intensional* and *extensional* definitions. Assent (*taṣdīq*) may be achieved through deduction, induction,

---

[571] Taftazānī critiques the positions denying the need for rational inference to believe in God, such as those of heterodox esoteric Sufis and Shia imamate doctrine. See: Taftazānī, *Sharḥ al-Maqāṣid*. (Beirut: ʿĀlam al-Kutub,* 1998), 1:266-7. This position is also in contrast with followers of Ibn Taymiyya's opinion that God is known directly, through the human *fiṭra*, without recourse to rational argument. See: Wael B. Hallaq. "Ibn Taymiyya on the existence of God." *Acta Orientalia* 52 (1991): 49-69.

[572] For a survey of the different methods of proving the existence of God in the Islamic tradition as a whole, see: Hannah Christine Erlwein. *Arguments for God's Existence in Classical Islamic Thought: A Reappraisal of the Discourse*. Berlin Boston (Mass.): De Gruyter, 2019. See also: Shihadeh, "The Existence of God." In *The Cambridge Companion to Classical Islamic Theology*.

abduction, or analogy.[573] When arguing for the existence of God, *Ashʿarī*s used deductive reasoning to achieve assent (*taṣdīq)* and to provide the necessary, though not exhaustive, conception (*taṣawwur*) of God.

According to the *Ashʿarī*s, the premises of their arguments are immutable, and the conclusions necessarily follow from them. They preferred deductive to inductive or abductive arguments, as is demonstrated below in greater detail.

*Ashʿarī*s employed rational propositional statements and syllogisms to form their arguments and seemed averse to using customary propositions to deliver their arguments (e.g., arguments based on empirical evidence). They resorted to logical inference, specifically categorical deductive syllogisms, for the form of their arguments. Similarly, the matter, or content, of their arguments was constructed with major and minor premises that were based on either self-evident or demonstrably evident propositions. The conclusions of these deductive syllogisms follow necessarily from the premises.

*Ashʿarī*s would also argue that their proofs are the most effective and perhaps the sole method of arguing God's existence rationally.[574] A look at the approaches of Rāzī, Taftazānī, Ījī, and Jurjānī demonstrates two primary means of proving God's existence rationally: the argument from contingency and the *kalām* cosmological argument.[575] The latter is known as *burhān al-ḥudūth* in Arabic, an accurate translation of which is the *proof from beginning*. I refer to it by this translation. Contemporary *Ashʿarī*s are critical of the ontological argument and modern forms of the teleological argument.[576] The ontological argument has its origins in the thought of St. Anselm (d. 1109), a Catholic theologian, and was later developed by other Christian thinkers such as Descartes.[577] As such, it is largely alien to *Ashʿarī* thought. Saʿīd Fodeh argues that *kalām* scholars and philosophers wishing to prove the existence of God claim common ground, in that they agree upon 1. accepting basic *a priori* knowledge, 2.

---

[573] See chapter four for more information.
[574] Rāzī, *Kitāb al-Arbaʿīn fī Uṣūl Al-Dīn*, 103.
[575] The name was popularised by William Lane Craig who revived Ghazālī's form of the argument in Christian theology. See: William Lane Craig. *The Kalam Cosmological Argument*. Library of Philosophy and Religion. New York: Barnes & Noble Books, 1979.
[576] For example, Mustafa Sabri is critical of the ontological argument. Fodeh comments on Sabri's refutation includes positions of Taftazānī and others on the correct understanding of an affirmative proposition in formal logic and how that affirms Sabri's argument. See: Fodeh, *al-ʾAdilla al-ʿAqliyya ʿalā Wujūd Allah,* 129-132; Malik, Karamali, Khalayleh. "*Does Criticizing Intelligent Design (ID) Undermine Design Discourse in the Qurʾān?*," 490–513.
[577] Graham Oppy, "Ontological Arguments", *The Stanford Encyclopedia of Philosophy* (Winter 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2021/entries/ontological-arguments/>.

methods of rational inference (e.g., deduction and induction), and 3. adherence to rationality and a belief in realism.[578]

Rāzī, Taftazānī, Ījī, and Jurjānī and later *Ashʿarī*s reason that to prove the existence of a creator of the universe, one must provide a cause (*ʿilla*) that necessitates the need of the universe for a creator.[579] 'Universe' here is a translation of the word *ʿālam,* defined by scholars as all existent things other than God. They argued that there can only be two possible reasons that necessitate a need for a creator of the universe: the contingency of the universe and that it had a beginning to its existence.[580] *Ashʿarī*s took four positions regarding these two ideas. The first position argued that it was contingency alone that necessitates the need for a creator. The second claims its origination from nothing (i.e., that the universe's non-existence preceded its existence). The third position is that both beginning and contingency are reasons that necessitate the need of the universe for a creator. The fourth is that it is contingency but that beginning was a necessary condition of its contingency (i.e., everything contingent must have a beginning).[581]

As Rāzī states,

> The only method of proving the existence of a creator is by establishing the want of all existent composite sensible bodies for a non-sensible existent being. The source of this need according to some is contingency and to others is beginning. A third opinion claims that it [the need] stems from both contingency and beginning.[582]

Similarly, Taftazānī states in *Sharḥ al-Maqāṣid*,

> The first topic of [theological] discussion is proving His existence [the creator of the universe]. There are two methods via which scholars of *kalām,* and philosophers approach this task, and they may be summarised as follows: 1. Contingent entities must have a necessarily existent creator, 2. Those entities

---

[578] Fodeh, *al-ʾAdila al-ʿAqliyya ʿalā Wujūd Allah,* 64.
[579] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: *ʿĀlam al-Kutub*, 1998), 4:15-17; Rāzī, *Kitāb al-Arbaʾīn fī Uṣūl al-Dīn,* 1:103; Jurjānī, and Ījī, *Sharḥ al-Mawāqif,* 8:3-4.
[580] Ibid.
[581] There are various ways *Ashʿarī*s have categorised the methods of proving God's existence, such as those who include the methods of proof of contingency and beginning in their categorisations, and so divide them into six or eight ways. Ultimately, they all go back to the four mentioned here as discussed in: Ibn al-Tilimsānī's *Sharḥ Maʿālim Uṣūl Al-Dīn*, 192.
For a detailed exposition of this distinction, See: Sanūsī, et. al., *Sharḥ al-ʿAqīda al-Kubrā*, 73-75; Ibn al-Tilimsānī, et. al. *Sharḥ Maʿālim Uṣūl al-Dīn*, 192.
[582] Rāzī, *Kitāb al-Arbaʾīn fī Uṣūl al-Dīn,*1:103. (Author's translation)

with a beginning must have a pre-eternal creator. This is the case because [assuming otherwise would entail circularity or infinite regress and] circularity and infinite regress are impossible.[583]
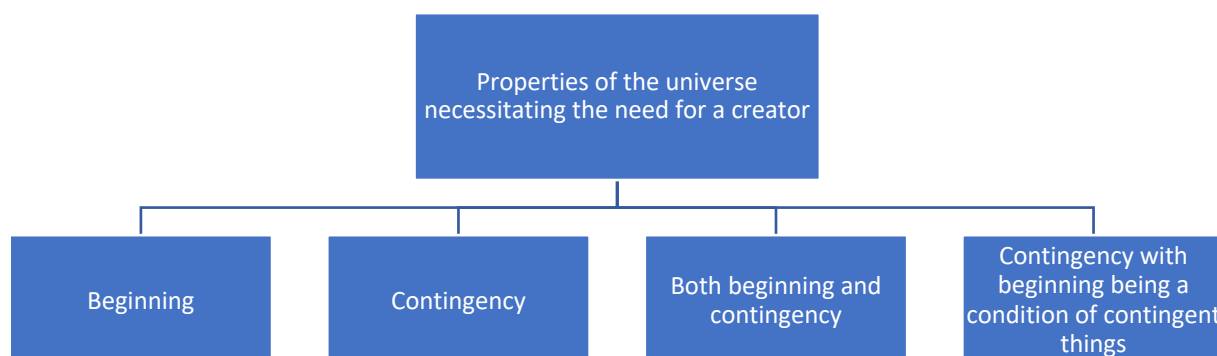
Figure 8. Positions of *Ashʿarī*s regarding which essential properties of the universe necessitate the need for a creator.

As such, *Ashʿarī*s identified two main methods of proving God's existence: the argument from beginning and the argument from contingency. Indeed, these two arguments feature most prominently in their texts.[584] The design argument is alluded to in some texts, such as Ghazālī's *al-Ḥikma fī Makhlūqāt Allah* and Abu al-Ḥasan al-Ashʿarī's *Risāla Ilā Ahl al-Thaghr*. Nonetheless, it is ancillary to the proofs of beginning and contingency.[585]

I conclude that from the need to establish a universally accepted method for affirming certainty in the necessary existence of God, *Ashʿarī* proofs sought 1. rational objectivity, 2. immutable premises, and 3. conclusions of arguments that followed necessarily from the premises.

Common features of *Ashʿarī* arguments for the existence of God	Derived from
Rational objectivity	• Use of rational arguments based on epistemic logic

---

[583] Taftazānī, *Sharḥ al-Maqāṣid*, 4:15. (Author's translation).
[584] Sanūsī, et. al. *Sharḥ al-ʿAqīda al-Kubrā,* 73-75.
[585] See: Abu al-Ḥasan al-Ashʿarī. *Risāla Ilā Ahl al-Thaghr* (Madina: *Maktabat al-ʿUlūm wa al-Ḥikam*, 2002), 147-151; Fodeh, *Al-Adila al-ʿAqliya ʿala Wujūd Allah,* 323-325.

	• Do not appeal to subjective religious experiences
Immutable premises	• Major and minor premises are either *a priori* or are based on *a priori* propositions • Refrain from use of scientific theories as evidence
Conclusions follow necessarily from the premises	• Use of categorical deductive syllogisms

Table 6. Attributes of the most common *Ashʿarī* arguments for the existence of God.

The next two sections examine each of these arguments in more detail. The last section then demonstrates how the *Ashʿarī*s identify the fundamental attributes of the necessarily existent creator, as concluded from the two proofs.

5.2 Proofs for God's Existence

Existence is categorised as the essential attribute of God by *Ashʿarī*s (*al-ṣifa al-nafsīyya*) because it is referring to God as Himself rather than describing a specific attribute of God (such as the omnipotent, omniscient, etc.).[586] *Kalām* scholars initiate theological discourse by first establishing God's necessary existence through demonstrating the contingency of the world and its origination from non-existence.

5.2.1 Contingency Argument (*dalīl al-imkān*)

This section describes two ways *Ashʿarī*s have explained the contingency argument and how they argued, through their exegetical works, that the contingency argument is alluded to in the *Qurʾān*. Something is contingent when there is nothing that prevents it from existing or not existing.[587] An event or an entity is contingent when its existence or non-existence are both equally logically possible.

---

[586] Bayjūrī, *Tuḥfat al-Murīd*, 107.
[587] Rāzī, *Kitāb al-Arbaʿīn fī Uṣūl Al-Dīn*, 1:101.

Put simply, the argument from contingency contends that the universe and its constituent parts are contingent and thus must be dependent necessarily on something other than themselves to make them in the way they are.[588] This *something* must itself be independent since assuming otherwise would be rationally impossible; it would entail infinite regress or circularity.[589]

A longer explanation may be understood as follows. There are infinite possible ways that the universe could have existed, through different laws, structures, initial conditions, and so forth, each of these being logically possible. For instance, I may conceptualise a universe in which the gravitational constant was greater or the ratio of matter to energy was smaller. I can equally conceptualise smaller changes, such as a universe where Aristotle had never existed, one where the earth had a slightly greater mass, or one where my coffee cup this morning was placed two inches to the right of where it was. This idea – that the events and entities in the universe are logically possible and not necessary, as the *Ashʿarī*s suggest – is known without need for inference (*ḍarūrī*) and is apparent in all of creation.[590] When seeing a natural phenomenon, a scientist searches for an explanation for it. A child will look up at the sky and wonder why it is blue. The child intuitively knows that it is not necessary that it be blue; otherwise, they would not ask the question.

The difference between a scientist and a theologian in this regard is that the scientist is concerned with natural causes, whilst the theologian is looking for the ultimate cause of all natural phenomena, since all natural causes, however many one may find, are contingent in themselves. For example, a coffee mug on a desk, from a classical Newtonian perspective, does not fall to the ground because it is held in place by the normal force acting on it by the surface of the desk, which counteracts the force of gravity pulling down on it. Note that this is only one of myriad reasons why the mug is and remains in its place. Some of these causes precede the event, like one applying force to the mug to move it to where it was. Others are concurrent reasons, such as the balance of forces explained earlier. A scientist may continue to probe the nature of gravity, the molecular bonds holding the table together, or the source of energy required to place the mug where it was. Mass, according to the 'standard model', the particle physicist would suggest, may be explained by the discovery of the Higgs Boson in 2012, a sub-atomic particle produced by the Higgs Field. Whilst these are acceptable ideas to the *Ashʿarī* theologian, they are contingent facts and are themselves in need of an explanation since they

---

[588] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 4:19; Ibn al-Tilimsānī, *et. al.*, *Sharḥ Maʿālim Uṣūl Al-Dīn*, 193-6.

[589] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 4:15-16; Ibn al-Tilimsānī *, et. al. Sharḥ Maʿālim Uṣūl Al-Dīn*, 193-6.

[590] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 4:22-23.

are also logically possible, not necessary. The only way out of the rabbit hole of infinite causes is by concluding that there must be a rationally necessary reason for all of these contingent facts. No contingent entities could exist if the chain of causes continued forever (infinite regress), nor could they cause themselves (circularity).

Option A   Option B   Option C
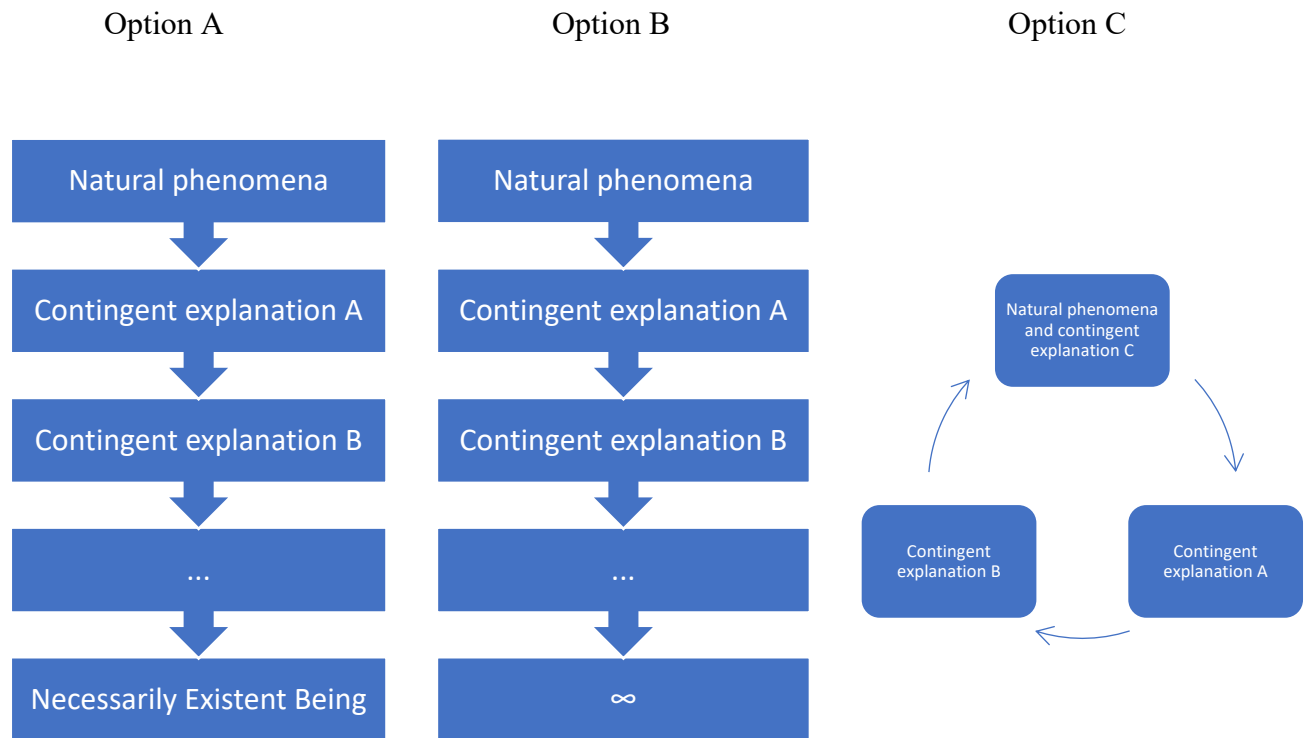
Figure 9. Three options for explaining the existence of the universe; *Ashʿarī*s argue that B and C are rationally impossible, leaving A as the only possible alternative.

According to *Ashʿarī*s, option A is the only logically sound explanation since options B and C entail logical absurdities. See the previous chapter for further discussion on why circularity and infinite regress are not possible.

Another way *Ashʿarī*s explain the contingency argument is through the concept of the need for a *selectively determining feature or factor* (*murajjiḥ*).[591] Put plainly, existent things in the universe are susceptible to change. This change may be associated with their movement, state of matter, colour, existence, and non-existence. There is no logical necessity for their existence in a specific way; each contingency is equally possible. However, they do exist in a particular

---

[591] Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 8:5-6; Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 1:481.

state and not in another because of a *selectively determining factor* that made them that way. Object A may exist, or it may not exist. Both options are equally logically possible propositions. It is therefore necessary that there be a *selectively determining factor* (SDF) that preferred one option over others. This SDF must ultimately be a necessarily existent being since assuming otherwise would lead to infinite regress or circularity, both of which are logically impossible.[592]

The contingency argument may be summarised as follows:

1. There are an infinite number of rationally possible ways that entities in the universe may exist.

2. Entities in the universe exist in a particular way.

3. Anything that exists in a particular way must have an SDF that allows it to exist that way; otherwise, this would lead to circularity, which is impossible.

4. The SDF cannot be logically possible since that would mean that there is an infinite regress of SDFs, which is impossible.

5. Therefore, a logically necessary SDF exists.

Beyond purely philosophical discourse, *Ashʿarī* scholars and *Qurʾān*ic exegetes argue that the contingency argument maybe found in the *Qurʾān*.[593] The essence of the *Qurʾān*ic argument is that change, differences, and the variety of created entities in the universe are signs of God's existence because they signify the contingency of created things. One example is found in Sura *al-Baqarah* (2:164), which states,

> In the creation of the heavens and earth; in the alternation of night and day; in the ships that sail the seas with goods for people; in the water which God sends down from the sky to give life to the earth when it has been barren, scattering all kinds of creatures over it; in the changing of the winds and clouds that run their appointed courses between the sky and earth: there are signs in all these for those who use their minds.

According to Rāzī and Bayḍāwī in their exegetical works, this verse and others like it are indicating change is a sign of God by demonstrating the various manifestations of the contingency of the universe.[594] As Bayḍāwī states,

---

[592] Jurjānī, and Ījī *, Sharḥ al-Mawāqif*, 8:6; Būṭi, *Kubrā al-Yaqīnīyāt al-Kawniyya*, 79-80.
[593] Rāzī, *al-Tafsīr al-Kabīr*, 4:206-7.
[594] Rāzī, *Al-Tafsīr al-Kabīr,* 4:206-7.

> Know that the signs in these verses for the existence and oneness of God are many and will take long to explain. However, to summarise, these [phenomena] are contingent, each being created in a particular way out of many possibilities. For instance, it is rationally possible that the heavens [celestial bodies] do not move, or that the earth rotates in the opposite way… therefore it is necessary that there exist a wise and powerful creator who brought them into being out of His own volition in accordance with His wisdom.[595]

In this section, I have established the first method *Ashʿarī*s have used to explain God's existence: contingency. The next section explores the second method, the argument from beginning.

5.2.2 Argument from Beginning (*burhān al-ḥudūth*)

The argument from beginning (*burhān al-ḥudūth*) as proposed by the *Ashʿarī*s states that establishing the need for a creator of the universe may be achieved by demonstrating that it has a beginning. In other words, non-existence preceded the universe's existence.[596] In the absence of a more appropriate word, I use *preceded* not in the temporal sense, meaning to come before, since time is a measure of relative change in existent entities and is not part of the essential nature of something having a beginning, according to *Ashʿarī*s.[597]

The argument is considered a type of cosmological proof since it infers from the particular nature of existent things in the universe their need for a creator. This last point is significant since it relates to Kant's critique of this and other arguments of God relying on the ontological argument.[598] The argument from beginning maybe summarised as follows:[599]

1. Anything that began to exist had an efficient cause that brought it into existence.
2. The universe (*ʿālam*) began to exist.
3. The universe has an efficient cause that brought it into existence.

---

[595] Bayḍāwī, *Anwār al-Tanzīl,* 1:155. (Author's translation).
[596] Taftazānī, *Sharḥ al-Maqāṣid*, 4:16-17; Rāzī, *Kitāb al-Arbaʿīn fī Uṣūl Al-Dīn*, 1:101.
[597] Fodeh, *al-Adilla al-ʿaqliyya ʿala Wujūd Allah,* 219.
[598] See the section on *Ashʿarī* responses to Kant in the next chapter.
[599] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 4:16-17. Christian theologian William Lane Craig's work on this argument is an important development in contemporary theological discourse. See: Craig, *The Kalam Cosmological Argument*.

The major premise tells us that anything that begins to exist has an efficient cause. *Ashʿarī*s have two opinions regarding how to defend this claim. The first proposes that it is an *a priori* proposition that has no need for arguing as stated by Ghazālī in his *Moderation in Belief.* Everyone, even young children and simpletons, are aware of this fact intuitively.[600]

The second opinion, held by Rāzī and others, suggests that whilst this fact may be easily understood and accepted, it nevertheless may be inferred through contingency. The second group of scholars argue that the proposition *everything that began to exist must have had a creator that brought it into existence* is understood because both the existence of something and its non-existence are rationally possible. As such, it is necessary for an efficient cause to have influenced the outcome one way or the other. In other words, this argument is in fact a manifestation of the contingency argument and the SDF.[601]

The minor premise that *the universe began to exist* is proved through philosophical arguments. Rather than refer to scientific evidence, such as the theory of the Big Bang or the Second Law of Thermodynamics, as with modern defences of the second premise, *Ashʿarī*s infer the beginning of the universe through ontological inquiry influenced by Aristotelian metaphysics because it was necessary to establish the existence of God based on what they viewed as immutable proof rather than ones based on the scientific understanding of the time.

This is done by categorising existent entities in the universe into substances (*ajsām*) and accidents (*ʿarāḍ*). A substance constitutes the essence of a thing, and accidents are properties of a thing that are not inherent in its essence. For example, a human being is a rational animal with a physical body. The movement or stillness of a human, their size, and the colour of their skin or hair are all accidental properties. Since accidental properties attributable to a substance are always changing or susceptible to change, they are, by their nature, contingent.

With these two concepts in mind, one can infer that all substances must never be without accidental properties. For instance, a substance is either moving or still; it cannot be both, and it cannot be neither.[602] Modern interpretations of quantum mechanics notwithstanding (see chapter 8), it is impossible to conceive of a substance without accidental properties. With this being the case, one may now infer that those substances must also be contingent and must have a beginning because all accidental properties have a beginning. Since the universe is nothing more than the sum of all substances and accidents, the universe must have a beginning. The

---

[600] See Jurjānī and Ījī, *Sharḥ al-Mawāqif*, 4:104; Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād*, 92.
[601] Sanūsī, et. al. *Sharḥ al-ʿAqīda al-Kubrā,* 74-75; Ibn al-Tilimsānī*, et. al. Sharḥ Maʿālim Uṣūl Al-Dīn*, 192.
[602] This is substantiated non-inferentially through the law of non-contradiction and law of excluded middle.

conclusion then follows necessarily that the universe must have an efficient cause that brought it into being.[603]

Another way of proving beginning is by arguing the impossibility of an infinite amount of time passing by proving the impossibility of the completion of an actual infinity. The *Ashʿarīs*, when arguing what we would understand as the impossibility of an infinite amount of time passing, are arguing against an infinite number of accidents having occurred in the past. The difference here is subtle but nevertheless important. According to Taftazānī, *Ashʿarīs* had a non-essential definition of time; they considered it a measure of the relative change between two accidents occurring in contingent entities.[604] This may mean they viewed time merely as a mental abstraction (*amr iʿtibārī*), with no extra-mental existence.

In this section, we have established the second method *Ashʿarīs* used to explain God's existence: the argument from beginning. The next section discusses the necessary attributes of God entailed by His existence.

5.3 Divine Attributes

Once *Ashʿarīs* established the necessity of the existence of an efficient cause of the universe from the proofs of beginning and contingency, they looked to logically delineate what is necessary, conceivable, and inconceivable regarding this efficient cause. They identify 13 fundamental attributes – and 20, if I include the entailed attributes. Each of these is logically necessary. The attributes form a necessary and sufficient logical description of the necessarily existing cause of the universe.

Demonstrating the existence of these divine attributes is done to establish what is legally incumbent (according to Islamic law) upon on a morally accountable individual to know about God. In other words, it is to understand what is logically necessary, possible, and impossible about the creator of the universe. It is not possible to have a sound understanding of God, according to *Ashʿarīs*, without attributing the necessary properties to Him in addition to His existence; therefore, they must be defined and their proofs explained.[605]

They substantiate their arguments for God's attributes through two means. The first is with scriptural evidence from the *Qurʾān* and *ḥadīth*. The second is through logical inference by examining the contradictions entailed by infinite regress and circularity and through this define

---

[603] Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād,* 91-4.
[604] Taftazānī, *Sharḥ al-Maqāṣid*, (Beirut: ʿĀlam al-Kutub, 1998), 2:188.
[605] Fodeh, et. al. *Tahthīb Sharḥ al-Sanūsiyya*, 29-32.

some of the attributes of the necessary cause that avoids these contradictions.[606] In this section, I focus on the latter because it is related to the critiques of contemporary atheism that I engage with.

The divine attributes are classified by *Ashʿarī*s into three or four categories:[607] the attribute of *essence* (*al-ṣifa al-nafsiyya*), attributes of *negation* (or privative attributes, *al-ṣifāt al-salbiyya*), and *real* attributes (*ṣifāt wujūdiyya* or *ṣifāt al-maʿānī*). Some *Ashʿarī* scholars include the *abstract* or *entailed* attributes (*al-ṣifāt al-maʿnawiyya*).[608] The table below provides a summary of categories of God's necessary attributes as identified by *Ashʿarī*s. Understanding divine attributes is indispensable to correctly being able to identify and critique contemporary atheist arguments because the belief in the existence of an efficient cause that brought the universe into being does not suffice as belief in God. The reason for this is that one may misattribute the existence of an efficient cause to contingent natural causes. One example is what we see with some multiverse hypotheses, which posit that this universe is created through the changes in the multiverse expansion.[609]

Category	Definition	Attribute
Attribute of essence	Also translated as the Essential attribute, it is the property that God cannot be conceived without	Existence
Attributes of negation	Also translated as privative attributes, they negate attributes that are	1. Pre-eternal (*qidam*), which negates beginning

---

[606] This is called a disjunctive proof (*burhān al-khulf*) where a proposition is affirmed by proving the impossibility of its negation. Two dichotomies are first established as the only possible positions.

[607] Fodeh, et. al. *Tahthīb Sharḥ al-Sanūsiyya,* 32.

[608] Ibid. This additional category is associated with whether a given scholar adheres to the theory of modes (*aḥwāl*), see the section on abstract attributes for more information.

[609] See chapter 8 where this idea is explored in detail.

	logically impossible for the necessary creator of the universe	2. Everlasting (*baqā*), which negates end 3. Self-sufficient (*ghinā*), which negates need 4. One (*waḥdāniya*), which negates plurality in God's essence, attributes, and actions 5. Dissimilarity (*mukhālafa li al-ghayr*), which negates similitude
Real attributes	Also translated as existent attributes; unlike the attributes of negations, these are existent and are described as neither the same as His essence nor independent of His essence (*laysat ʿayn al-thāt wa-lā ghayr al-thāt*)	1. Knowledge (*ʿilm*) 2. Power (*qudra*) 3. Will (*irāda*) 4. Life (*ḥayā*) 5. Hearing (*samʿ*) 6. Sight (*baṣar*) 7. Speech (*kalām*)
Entailed attributes	Follow necessarily from real attributes and have no existence in and of themselves but rather are conceived of when conceptualising real attributes	1. Being knowledgeable 2. Being powerful 3. Willing 4. Living 5. Hearing 6. Seeing 7. Speaking

Table 7. A summary of God's necessary attributes according to the *Ashʿarī*s.

Just as God's perfections are infinite, His attributes are infinite and not limited. Additionally, the *Qurʾān* and *ḥadīth* ascribe to God many more than these. However, *Ashʿarī*s argue that only these 20 may be deduced rationally. They are the foundational attributes, and their

meanings encompass others found in scripture.[610] As contingent creatures working within the confines of human cognition, humans cannot fully comprehend any of God's attributes and are thus only required to know that which is in their capacity to know, as is stated in the *Qurʾān*.[611]

The divine attributes may also be divided into those that refer to the essential nature of God (attribute of essence), those that do not refer to God's essential nature (attributes of negation, and God's acts [*ṣifāt al-afʿāl*] since they are temporal), and those that refer neither to God's essential nature nor to other than God's essential nature (real attributes – which are existent – and entailed attributes – which are merely conceptually existent because they are necessitated by the real attributes). The following sections explain the rational arguments for the existence of the 20 divine attributes.

5.3.1 Attribute of Essence *(al-ṣifa al-nafsiyya)*

The first divine attribute is *existence,* understood to be God's essential attribute. In other words, it is the attribute that is necessarily conceived of when conceptualising the uncaused creator of the universe. This means that the existence of God is not contingent upon anything, nor is God's existence contingent upon Himself.[612]

Here manifests a debate among *Ashʿarī* scholars on whether an entity's existence is different or equal to its essence. As discussed in the previous chapter, the dominant opinion amongst *Ashʿarī*s is that they are said to be different. Abu al-Ḥasan al-Ashʿarī believed essence and existence are synonymous, whilst others held the contrary opinion.[613]

Existence, according to Bayjūrī, Rāzī, Taftazānī, and others, is thus understood to be conceptually existent (*amr iʿtibari*) with no independent reality outside the essences of existent things.[614] Whilst this is a subtle distinction, it does have significant theological implications because those who hold to the doctrine of *oneness of being* (*waḥdat al-wujūd*) – a heterodox belief according to *Ashʿarī*s, akin to panentheism – argue that since existence is an essential attribute of God, it is impossible for any other entity to also share in that attribute. As such, they hold that nothing else exists other than God.[615] However, as Bayjūrī notes, this argument is founded on a misinterpretation of the meaning of existence, since to say a tree or a bird exists

---

[610] Fodeh, et. al. *Tahthīb Sharḥ al-Sanūsiyya*, 32.
[611] Ibid; Q. (2:286).
[612] Fodeh, et. al., *Tahthīb* Sharh *al-Sanūsiyya,* 33.
[613] Bayjūrī, *Tuḥfat al-Murīd*, 106.
[614] Ibid, 105-6; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 33-4.
[615] Ibid.

and that God exists are homonymous expressions, since the necessary existence of God is not the same as the contingent existence of birds and trees.[616]

5.3.2 Attributes of Negation (*al-ṣifāt al-salbiyya*)

1. Pre-eternal (*qadīm)*

Pre-eternality means that God's existence was not preceded by non-existence.[617] This is because if we assume that the necessary cause had a beginning, it must itself be in need of a cause to bring it into being and thus be contingent, since it would mean infinite regress or circularity.[618] Thus, the necessary cause must be pre-eternal, meaning it has no beginning. The word *qidam*, translated as pre-eternality, does not refer to pre-eternality in a temporal sense (*zamānī*), as in infinitely old, since that would imply God's contingency. This is because since time is understood as a measure of change, temporal pre-eternality would imply change in the necessarily existent which is logically impossible.

Nor does it refer to pre-eternality in reference to the existence of another entity (*ʾiḍāfī*) such as father in comparison to his son, since God is one.[619] Establishing God's pre-eternality technically suffices as a proof for all the attributes of negation, since they are necessarily entailed once God is proved to be beginningless, according to Bayjūrī.[620]

Pre-eternality is a privative attribute in that it negates a beginning to God's existence with no existence in and of itself. If it was conceived as existent, it would be necessary to predicate the attribute of pre-eternality with another attribute of pre-eternality, and so on, in infinite regress, which leads to logical absurdity and is thus impossible.[621]

2. **Everlasting (*baqāʾ*)**

Everlasting means that God's existence will not end.[622] Since the creator is pre-eternal, He must also be eternal because if it were logically possible that He could not exist, it would mean that He was contingent. This means He would need an SDF to maintain his existence which is

---

[616] Bayjūrī, *Tuḥfat al-Murīd*, 105-6; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 34.
[617] Bayjūrī, *Tuḥfat al-Murīd*, 107; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 35; Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād,* 143.
[618] Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 88.
[619] Ibid*,* 36.
[620] Bayjūrī, *Tuḥfat al-Murīd*, 111, 113.
[621] Ghazālī, *Al-Iqtiṣād fī al-Iʿtiqād,* 143.
[622] Sanūsī, et. al, *Sharḥ al-ʿAqīda al-Kubrā,* 111; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 88.

impossible since He is necessarily existent. Again, the meaning of everlasting is to be understood a-temporally. In other words, God is not bound by time, since time is a measure of relative change between accidental properties. *Ashʿarī*s therefore include this oft-repeated statement regarding proof of God's everlasting existence: non-existence is impossible for what is proven to be pre-eternal (*mā thabata qidamuh istaḥāl ʿadamuh*).[623]

3. Self-sufficient (*al-qiyām bi-al-nafs/al-ghinā*)

Self-sufficient means that God is independent of a locus and a determiner for His existence.[624] That which is dependent on other than itself for its existence or its subsistence must be contingent because if God was in need of a locus, He would have a contingent attribute, and it would be impossible for Him to be simultaneously attributed with the necessary real attributes (knowledge, power, etc.) and limiting attribute of place. Additionally, the locus that God would hypothetically reside in would necessitate He be a body since place, according to *Ashʿarī*s, is an arbitrary construct.

If God needed a determiner (*mukhaṣiṣ*), it would lead to infinite regress of causes or circularity. It is therefore impossible for God to reside in anything or need something to determine anything about Him. Therefore, the necessarily existent cause must be self-sufficient.[625]

4. Dissimilar (*al-mukhālafa li-al-ghayr*)

Dissimilarity means that God does not resemble contingent things.[626] This is because an entity that has no beginning and no end cannot be like any created thing and so must be utterly different to them.[627] If a beginningless entity shared the qualities of created thing (physicality, movement, susceptibility to change, etc.), it would be contingent, and the entailed contradictions of this are clear. The contingency and beginning of created things are established through the proof for God's existence. Dissimilarity entails God is genderless, He cannot be described as male or female. The pronoun *huwa* (He) in Arabic when used in relation to God is therefore not meant to ascribe gender.

---

[623] Bayjūrī, *Tuḥfat al-Murīd,* 108*;* Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 89; Sanūsī, et. al, *Sharḥ al-ʿAqīda al-Kubrā*, 111.
[624] Bayjūrī, *Tuḥfat al-Murīd*, 113; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 90-1; Sanūsī, et. al, *Sharḥ al-ʿAqīda al-Kubrā,* 117.
[625] Bayjūrī, *Tuḥfat al-Murīd,* 113.
[626] Ibid*,* 110; Fodeh, *Tahthīb Sharḥ al-Sanūsiyya,* 89-90.
[627] Bayjūrī, *Tuḥfat al-Murīd,* 111.

5. Oneness (*al-waḥdānīyya*)

The necessarily existent cause of the universe must also be one. This oneness has a three-fold meaning. The first is oneness in divinity. In other words, God has no pre-eternal partner, nor is He composed of parts, neither discrete nor continuous.[628] The reason He cannot be composed of parts is because that would negate His self-sufficiency and dissimilarity to contingent things.

The reason He has no partner is because if He had a partner, it would lead to His impotence, which is not possible.[629] A thought experiment (derived from the *Qurʾān* (21:22)) is used to explain this. Assume there exist two gods: one god wishes for an object to move, and the other wishes it to remain still. They can either agree to this or disagree. It is inconceivable that the object moves and remains still at the same moment since that entails a logical absurdity. It is equally inconceivable that the object neither moves nor remains still since that is a negation of the law of excluded middle. If they disagree, and the object moves or remains motionless, then one god is omnipotent, and thus is actually the necessarily existent God, and one is not.

If the two gods agree, it is still conceivable, even potentially, that they disagree, and the issue remains. As such, whatever happens is a sign of the limitation of the power of one of these gods and the necessity that there is only one God.[630]

The second meaning of oneness is that God is one in reference to His attributes, that is, He has one attribute of knowledge, one will, hearing, sight, and speech (e.g., God cannot simultaneously will an event to occur and not to occur).

The third meaning is that God is the only existent efficient cause.[631] This is because an event is an act of creation (bringing something into being from nothing). If we were to ascribe actions to other than God occurring independently of Him, it would entail that a contingent entity can bring something into existence from nothing, which leads to an infinite regress of causes or circularity. Therefore, we must conclude that God is the efficient cause of everything.[632] This last point is explained in more detail in the occasionalism section in the previous chapter. *Ashʿarī*s believe that human beings acquire their actions but do not create them. When they choose something and wish to make it happen, God creates that action upon their acquiring of

---

[628] Ibid, 114.
[629] Fodeh, *Tahthīb Sharḥ al-Sanūsiyya*, 92.
[630] Ibn al-Tilimsānī, et. al, *Sharḥ Maʿālim Uṣūl Al-Dīn,* 419-21.
[631] Bayjūrī, *Tuḥfat al-Murīd,* 114; Dārdīr, and Fodeh, *Sharḥ al-Kharīda*, 21-22.
[632] Sanūsī, et. al. *Sharḥ al-ʿAqīda al-Kubrā*, 111-12.

it. Typically, after affirming God's transcendence through negating what God is not through the privative attributes, *Ashʿarī* works move on to discuss the existent or real attributes.

5.3.3 Real Attributes (*al-ṣifāt al-wujūdiyya*)

Unlike the attributes of negation, the real attributes are existent, hence their name (*wujūdīyya*). They are also referred to as attributes of meaning (*ṣifāt al-maʿāni*).[633] The predication of these to the creator of the universe is logically necessary. To maintain the oneness of God, the attributes are described as being neither the essence of God nor other than the essence God (*laysat ʿayin al-thāt walā ghayr al-thāt*).[634]

For example, God has the attribute of knowledge. However, God is not equal to knowledge, nor is the attribute of knowledge other than God. It is commonly explained using the analogy of the digit *10*; the number one written to the left of the zero neither refers to the ten nor does it refer to anything other than ten. This understanding is entailed through the necessity of oneness of the divine. Affirming divine attributes is a point of contention between *Ashʿarī*s and other sects, such as the *Muʿtazilī*s, philosophers (*falāsifa*), and Shia. The latter two believe in God but deny the existence of divine attributes, stating that God knows, acts, hears, and sees directly through His essence. The *Muʿtazilī*s have two opinions; the later *Muʿtazilī* position denies divine attributes, whilst earlier scholars affirm that God's attributes are in a state between existence and non-existence, which they named *aḥwal,* discussed in the previous chapter.[635]

Note that the definitions of the real attributes are all non-essential since it is impossible to know their real nature, according to *Ashʿarī*s because of God's dissimilarity to contingent things. We may, however, explain the attributes as they relate to contingent things.

All of the real attributes are pre-eternal and everlasting and subsist in God. The predication of the opposite of any of these attributes to God is logically impossible because it would entail God's contingency and thus lead to infinite regress of causes or circularity of causes.[636]

---

[633] Bayjūrī, *Tuḥfat al-Murīd,* 120.

[634] This is a point of disagreement between *Ashʿarī*s and *Muʿtazilī*s who believed that the predication of the real attributes to God leads to affirming the co-existence of multiple pre-eternal entities with God and so is a negation of true monotheism. Therefore, they deny the existence of the real attributes. Instead their position is that God is knowledgeable without an attribute of knowledge, wills without the attribute of will, sees without sight, and so on. See: Sanūsī, et. al. *Sharḥ al-ʿAqīda al-Kubrā,* 167.

[635] Jurjānī, and Ījī, *Sharḥ al-Mawāqif,* 8:52.

[636] Bayjūrī, *Tuḥfat al-Murīd*, 163-5.

1. Knowledge (ʿilm)

God's knowledge is a beginningless and everlasting attribute that subsists in God via which all that is necessary, possible, and impossible is unveiled.[637] God's omniscience uncovers knowledge of all that is knowable, be it existent or non-existent.[638]

Divine knowledge pertains to contingent entities (both substances and accidents) and God's knowledge of Himself and His attributes. Since God is the originator of all things, it is necessary that He knows everything in creation that exists.[639]

Consequently, He must know all that is logically possible and impossible since His will selects from every contingent possibility that which occurs. God's knowledge is thus infinite and is not acquired, meaning it is not subject to change. It is necessary to believe that God's knowledge is of both universals and particulars. This article of belief is mentioned explicitly so as to deny the claims of the philosophers (falāsifa), who affirm God's knowledge of universals alone.[640]

2. Power (qudra)

God's power is a beginningless and everlasting attribute that subsists in God, via which he may bring all that is rationally possible into or out of existence.[641] God's omnipotence works in accordance with His will. This, and all other definitions of divine attributes, are non-essential definitions (rasm).[642] This is because it is impossible to fully encompass the reality of divine attributes. It is understood that God has the attribute of power because an organised, precise, and perfected (muḥkam) entity is caused by a powerful actor. The universe is a precise and perfected entity; therefore, it must have been produced by a powerful agent.[643] Additionally, since the powerful agent could create any equally possible world, His power is unlimited, and so He is omnipotent because there are an infinite possible configurations of logically possible states of created things and that power is capable of all of them and so is infinite.[644]

---

[637] Dārdīr, and Fodeh. *Sharḥ al-Kharīda*, 28.
[638] Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād*, 227.
[639] Ibid.
[640] Bayjūrī,. *Tuḥfat al-Murīd ʿAlā Jawharat al-Tawḥīd,* 126.
[641] Dārdīr, Aḥmad ibn Muḥammad, et al. *Sharḥ al-Kharīda al-Bahiyya*, 30.
[642] Bayjūrī, *Tuḥfat al-Murīd*, 120
[643] Ghazālī, Abū-Ḥāmid Muḥammad Ibn-Muḥammad. *Al-Iqtiṣād Fī al-Iʿtiqād,* 205-6.
[644] Ibid.

This is necessarily understood (*ḍarurī*) because the universe is contingent and in need of a powerful creator.[645] It is also necessary since the sustaining of the world and the changes in it also require a necessary being with power to enact change since assuming that a contingent creation can do so leads to an infinite regress of causes or a circularity of causes which is impossible.

God's power applies to the creation of the logically possible; it does not apply to the rationally impossible.[646] That is because anything logically impossible is by definition incoherent. It is therefore meaningless to ask the question of whether God can create a stone so large that He is incapable of moving it. This is a meaningless request that entails logical contradictions. It is akin to asking whether God is powerful enough to be impotent.

God's omnipotence is not ascribed with modality. This indicates that God acts directly without the need for a means to act, such as natural laws.[647]

For the *Ashʿarī*s, God's power does not diminish if it is not manifest. God's omnipotence exists before the creation of the universe and is manifest in accordance with His pre-eternal will in the particular time of His choosing. This conception of God's power and will is important to distinguish it from emanationism, where the universe is viewed as an unwilled outflowing from God. [648]

3. Will (*irāda*)

God's will is a beginningless and everlasting attribute that subsists in God, via which He determines the creation, destruction, and specific properties that possible entities may be characterised by (*ṣifat takhṣīṣ*).[649] Everything that has ever been in existence or will ever be in existence is thus willed by God since they are contingent and in need of a determiner to create them in the particular way they are.[650] God's attribute of will is *the selectively defining factor* (*murajjiḥ*) that chooses from an infinite logically possible alternatives and His power brings what is willed into being. This process is not temporally bound with God's will making a choice

---

[645] Ibid.

[646] Bayjūrī, *Tuḥfat al-Murīd*, 121.

[647] This is not to deny the existence of physical laws, rather to negate their necessity. See chapter seven for more information.

[648] Britannica, T. Editors of Encyclopaedia. "emanationism." *Encyclopedia Britannica*, July 20, 1998. https://www.britannica.com/topic/emanationism.

[649] Dārdīr, and Fodeh. *Sharḥ al-Kharīda al-Bahiyya*, 31.

[650] Sanūsī, et. al., *Sharḥ al-ʿAqīda al-Kubrā,* 126; Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād,* 230.

147

and then His power enacting it, like a cause and effect. Rather, His will and His power are pre-eternal and immutable.[651]

According to *Ashʿarī*s, God may will anything logically possible, and there is nothing to compel Him to act. This conception of will is linked to the *Ashʿarī* understanding of morality, which views it as divinely ordained by God. Thus, God is not subject to external standards since He determines and defines the principles of upright moral behaviour.[652]

Ashʿarī affirmation of the divine attributes of will, power, and knowledge affirm a deep theism that guards its theology from a deistic conception of God. As discussed in chapter 3, a common understanding in the literature on the development of contemporary atheism suggests that deism was an interim step towards atheism because deism asserts the existence of an impersonal deity that created the world and left it to run independently according to the laws of nature (akin to a clock that is wound up and set in motion). This is incompatible with the *Ashʿarī*s' affirmation of a necessarily existent, willing, omniscient, and omnipotent God. It is inconceivable because any created action is contingent and needs a determiner (*mukhaṣiṣ*). This *mukhaṣiṣ* must have will and be aware of what He is bringing into existence. As mentioned above, *Ashʿarī*s affirm that no contingent entity can act of its own accord, meaning that a universe running autonomously according to natural laws would be impossible without God's direct intervention at every moment. Through this discussion we understand why it is not possible to divorce the *Ashʿarī* conception of a necessarily existent God from His attributes. For them, a misconceived understanding of God's attributes can lead to un-orthodox creedal beliefs and may even jeopardise the validity of a person's faith. This is why discourse in *kalām* works is often directed towards refuting *Muʿtazilī* ideas and claims of the philosophers (*falāsifa*).[653]

4. Life (*ḥayā*)

God's life is a beginningless and everlasting attribute that subsists in God and is a necessary condition for the validity of His other real attributes.[654] Since God has knowledge, will, power, hearing, sight, speech, He must be living.[655] As with all attributes, His life is dissimilar to the life of contingent things since it is independent and pre-eternal.

---

[651] Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād,*
[652] Jackson, *Islam and the Problem of Black Suffering*, 75-98.
[653] See for instance: Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād, 232-7.*
[654] Dārdīr, and Fodeh, *Sharḥ al-Kharīda,* 27.
[655] Bayjūrī, *Tuḥfat al-Murīd*, 129; Ghazālī, *Al-Iqtiṣād fī al-Iʿtiqād,* 229.

5. Hearing (*samʿ*) and 6. Sight (*baṣar*)

God's hearing and sight are beginningless and everlasting and perfectly reveal everything in existence. Divine hearing differs from His sight, and they both differ from God's omniscience.[656] There are unequivocal scriptural proofs for the affirmation for the attributes of hearing and sight.[657]

The rational proof for their existence is that if God had not the attributes of hearing and sight, that would be a sign of imperfection since it would necessitate His incapacity to see and hear. Following this rationale, Juwaynī and Bāqilāni affirm another pre-eternal divine attribute they call perception (*idrāk*), which gives God an awareness of touch, taste, and smell.[658] As with the attributes of hearing and sight, perception is affirmed because its opposite would entail imperfection of God's attributes. Because the attribute of perception (*idrāk*) is not explicitly affirmed in the *Qurʾān* or *ḥadīth*, nor is its rational proof perceived as particularly convincing, it is not acknowledged by many *Ashʿarī*s. Some deny the attribute altogether, whilst others take a non-committal (*tawwaquf*) stance, neither affirming nor denying the existence of such an attribute.[659] Some scholars note that the scriptural proof of God's attributes of hearing and sight (found in numerous places in the *Qurʾān*) is stronger than the rational proof.[660] This is because it may be argued that what is determined as a sign of perfection in a contingent entity is not necessarily so for God.[661]

7. Speech (*kalām*)

God's speech is a beginningless and everlasting attribute that indicates God's knowledge: the logically possible, necessary, and impossible.[662] God's speech is utterly dissimilar from human speech. It is not comprised of sounds or letters and is not bound by time.[663] The *Qurʾān* and other revelatory scriptures may be correctly referred to as the words of God, but their written words are, strictly speaking, indications of His pre-eternal speech, since the sounds of the spoken words are created.[664] *Ashʿarī* theologians affirm that God's speech is known via

---

[656] Dārdīr, and Fodeh, *Sharḥ al-Kharīda*, 32.
[657] Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād,* 240.
[658] Bayjūrī, *Tuḥfat al-Murīd,* 135-6.
[659] Ibid.
[660] Sanūsī, et.al., *Tahthīb Sharḥ al-Sanūsiyya*, 95-96.
[661] Ibid, 96.
[662] Dārdīr, and Fodeh, *Sharḥ al-Kharīda,* 32; Fodeh, et. al. *Tahthīb* Sharh *al-Sanūsiyya,* 53.
[663] Ibid, 54; Bayjūrī, *Tuḥfat al-Murīd*, 129; Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād,* 251-2.
[664] Bayjūrī, *Tuḥfat al-Murīd,* 130.

prophetic consensus and mass transmission (*tawātur*).[665] As with the attributes of hearing and sight, the rational proof for God's speech is that if God could not speak, it would be an imperfection since it would necessitate muteness, which is not possible. Additionally, as argued by Ghazālī, the belief in divine revelation and the existence of messengers sent by God necessitates belief in the divine attribute of speech. This is because a messenger is one who delivers the speech of the one who sent him.[666] As scholars note, the word used for speech in Arabic is *kalām*, which can denote both the spoken and unspoken word. This negates any claims that God's speech is created or discrete (i.e., comprised of sounds and letters).[667]

5.3.4 Entailed Attributes (*al-ṣifāt al-wujdāniyya*)

The entailed attributes are named as such because the mind conceives of them when conceptualising the real attributes. They are that God actually is powerful, wills, knows, hears, sees, speaks, and is living.[668]

A difference of opinion exists among scholars about the need for including the entailed attributes in a separate category.[669] Abu al-Ḥasan al-Ashʿarī and others (the dominant *Ashʿarī* school opinion is this) believed entailed attributes were superfluous since their meaning was included in the real attributes because they denied the existence of intermediate states (*aḥwāl*) between existence and non-existence. Baqillānī and Sanūsī include the entailed attributes in their works. [670]

5.4 Conclusion

Ashʿarī theology affirms the existence of God through the argument from contingency and the argument from beginning. Its proofs sought to establish God's existence with complete certainty, so scholars relied on what they viewed as objective methods. Furthermore, *Ashʿarī*s based their arguments on immutable premises and looked for necessary conclusions to their proofs via the use of deductive syllogisms.

The divine attributes are considered an essential part of the Islamic conception of God by the *Ashʿarī*s. They categorise them as attributes of essence, negation, and existent attributes. Affirmation of all of these is a requirement for sound belief. Furthermore, a denial of any of

---

[665] Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 8:103.
[666] Ghazālī, *Al-Iqtiṣād Fī al-Iʿtiqād,* 249-50.
[667] Bayjūrī, *Tuḥfat al-Murīd,* 130.
[668] Saʿīd, Fodeh, et. al*. Tahthīb Sharḥ al-Sanūsiyya,* 58-9.
[669] Ibid.
[670] Sanūsī, et. al. *Sharḥ al-ʿAqīda al-Kubrā,* 164-5.

the attributes takes one out of the fold of Islam, from the *Ashʿarī* perspective. This is because it entails a negation of the necessary existence of God and a rejection of explicit statements in the *Qurʾān* about the nature of God.

As discussed in chapter 3, atheism is defined as a lack of certainty in the proposition 'God, the necessarily existent, exists'. It is therefore important to outline the exact conception of God so that we can properly understand *Ashʿarī* objections towards contemporary atheist philosophies and their critiques of the argument from contingency and the argument from beginning. The following chapter explores how *Ashʿarī*s address the most important critiques of the arguments for the existence of God put forward in contemporary atheist literature.

Chapter 6: A Survey of *Ashʿarī* Critiques of Contemporary Atheism

6.0 Introduction

Ashʿarī theology relies primarily on two proofs for the existence of God: the argument from contingency (*dalīl al-imkān*) and the argument from beginning (*burhān al-ḥudūth*). Contemporary atheism questions these arguments and their underlying premises, which are necessary for their validity. This chapter explores how contemporary *Ashʿarī* scholars have responded to these critiques and how classical *Ashʿarī* works, particularly through expositions on epistemology and ontology, may be used to respond to these critiques. Given the limitations of incorporating all material on the topic, the chapter aims to be demonstrative rather than an exhaustive account of recent *Ashʿarī* scholarly work. The objective is to showcase the capacity of *Ashʿarī* theology to engage with contemporary atheist refutations of the classical arguments used by the *Ashʿarī*s.

The chapter identifies and addresses four areas of contention between the philosophies of contemporary atheism and *Ashʿarī* proofs for the existence of God: the nature of causation and the *selectively defining factor* (*murajjiḥ*), the impossibility of infinite regress (*al-tasalsul*), the validity of logical syllogisms (*al-qiyās al-mantiqī*), and epistemic doubt in Islamic scripture.

For each of these areas, I select one or two notable philosophers whose ideas represent contemporary atheist critiques in each philosophical system and engage with them. It is clearly not possible to encompass all the variations of positions in a given school of philosophy by addressing the work of one or two thinkers. Nevertheless, it is possible to give a single response to a particular philosophical idea within a particular school of philosophy. This is sufficient as a demonstration of how *Ashʿarī* thought has responded to or may be used to respond to a variety of positions within the philosophies of contemporary atheism.

As mentioned, the responses to many of these critiques are addressed directly through the scholarship of contemporary *Ashʿarī*s. I refer in the chapter to the works of Mustafa Sabri, Muḥammad Saʿīd Ramaḍān al-Būṭī, Saʿīd Fodeh, and Hamza Karamali.[671] Additionally, I

---

[671] Other contemporary scholars who engage with critiques of contemporary atheism include Ḥamzeh al-Bekrī and ʿAlī Maḥmūd al-ʿOmarī. See: Hamzeh al-Bekri. "*ʿIlm al-Kalām al-Jadīd Taʿrīf wa Taqīīm* 1" YouTube. YouTube.com, July 6, 2021. Accessed, 5 June 2023. https://youtu.be/j9nFLZzIIes; Ali

reply to the critiques by engaging with them through the works of classical *Ashʿarī* scholarship, such as those of Ghazālī, Rāzī, Taftazānī, Jurjānī, Ījī, and others, using the epistemology and ontology framework outlined in chapter 4. Whilst the work of earlier *Ashʿarī*s preceded the philosophies of contemporary atheism by centuries, their ideas include concepts that are still relevant in engaging with contemporary atheism because classical *Ashʿarī*s were addressing some similar critiques to their theology.

The contemporary philosophical arguments of atheism that challenge *Ashʿarī* theology may be divided into those that relate to whether we are able to know that God exists and those related to the nature of existence and whether God has a place in reality.

6.1 Categorising the Critiques of Contemporary Atheism

Contemporary atheism offers a range of critiques of the arguments for God's existence. This section identifies those pertaining to the *Ashʿarī* arguments from contingency and from beginning (*dalīl al-imkān wa burhān al-ḥudūth*).

Critiques of the arguments from contingency and beginning can be categorised as those questioning the actuality of God's existence (ontological objections) and those questioning the knowability of God's existence (epistemological objections). Ontological objections encompass the questions of the existence of anything other than the physical universe (e.g., naturalism), the reliance of entities for their existence on the mind (ontological idealism), the discoveries and interpretations of quantum physics, and the existence of actual infinities. Epistemological objections include questioning the nature of causality (e.g., must everything that begins to exist have a cause?), the human mind's capacity to comprehend reality (idealism and relativism), and the validity of classical logic. Additionally, objections include epistemic doubt about the veracity of scripture (*Qurʾān* and *ḥadīth*) as it relates to real-world claims. This engenders scepticism regarding the contingency of the world upon God, as is understood by some. Whilst only indirectly related to the argument from contingency, epistemic doubt is one of the reasons for unbelief as related by ex-Muslims.

The above-mentioned ideas are relevant because they conflict with the premises of the arguments from contingency and beginning. The epistemological and ontological objections to these may be narrowed down to the following areas: the impossibility of infinite regress, causality, the selectively defining feature (described in the contingency argument), and the validity of deductive syllogisms as a source of knowledge.

Mahmoud al-Omari. "*Durūs fī al-Falsafa* 1." YouTube, June 28, 2019. Accessed, 5 June 2023. https://youtu.be/CpDhOFf-DA0.

Immanuel Kant argues that the ontological argument for God's existence is foundational for the arguments from beginning and contingency. He goes on to refute the ontological argument, thus concluding that the arguments from contingency and beginning are invalid. The chapter includes a section dedicated to this topic, as well as *Ashʿarī* responses to Kant's claims. I begin by investigating *Ashʿarī* responses to modern arguments proposing the possibility of the existence of actual infinities through modern set theory, devised by German mathematician Georg Cantor.

Area of contention	Explanation	Relevant fields/ philosophies	Philosophy/ philosopher(s)/ thinker(s)
The impossibility of infinite regress	Actual infinities exist extra-mentally (in the real world).	• Modern set theory • Idealism • Scientism	Georg Cantor's work on modern set theory
Causality/ the selectively determining feature	• Causation is not universally applicable. • Cause and effect are constructions of the mind.	• Idealism • Post-modernism and existentialism • Scientism	• David Hume • Immanuel Kant

		Relativism	Post-modernism
	• *Selectively determining features* may be explained through modern science. • *Selectively determining features* are not required to explain the universe. • *Selectively determining features* are constructions of the mind. • The universe did not have a beginning. • Our universe is part of a multiverse which can sufficiently explain its beginning.	• Relativism • Materialism	• Post-modernism • Dialectic materialism • Scientism
Deductive syllogisms	• Deductive syllogisms produce invalid conclusions. • They are not reliable sources of rational inference.	• Idealism • Post-modernism and existentialism • Scientism	• Immanuel Kant
Epistemic doubt in the veracity *Qurʾān* and *ḥadīth*	• Real and perceived contradictions between Islamic scripture and scientific, historical, or cultural norms.	• Ex-Muslims • New Atheism	• Ex-Muslims

Table 8. Areas of contention between contemporary atheism and *Ashʿarī* theology pertaining to arguments for God's existence.

6.1.1 Infinite Regress and Modern Set Theory

Modern set theory, pioneered by Georg Cantor (d. 1918) and built upon the work of Richard Dedekind (d. 1916), was hugely influential in the world of mathematics.[672] In his *Foundations of a*

---

[672] Joan Bagaria, "Set Theory", *The Stanford Encyclopedia of Philosophy* (Winter 2021 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/win2021/entries/set-theory/; Erich Reck, "Dedekind's Contributions to the Foundations of Mathematics", *The Stanford Encyclopedia of*

General Theory of Sets, Cantor strongly argued for the use of actual infinities in mathematics and their real existence.[673]

Cantor posits that sets of infinite objects are not necessarily equal and argues that one may prove that a set is infinite in size if placed in one-to-one correspondence with a subset of itself (as shown in the figure below).[674] Through one-to-one correspondence, he proposes that different kinds of sets have different sizes. Therefore, there is more than one size of infinite sets.[675] Cantor denotes a complete set of infinite objects using the Hebrew letter aleph (א).

1, 2, 3, … א

↓ ↓ ↓

2, 4, 6, … א
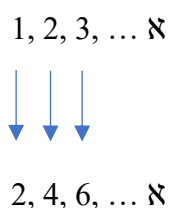
Figure 10. One-to-one correspondence between two sets: the set of all natural numbers and the set of even numbers, which is a subset of natural numbers. This suggests that they have the same size, according to Cantor.

Both Saʿīd Fodeh and Hamza Karamali have addressed the claims that set theory may suggest that actual infinities exist.[676] Fodeh claims that whilst Georg Cantor's mathematical conceptual model may be correct, it does not correspond to extra-mental reality. In other words, it is not applicable to the world outside of the mind.[677] He argues that the use of infinities in mathematics is based on mathematical axioms, which are used to build internally coherent mathematical systems. Even in

Philosophy (Winter 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2020/entries/dedekind-foundations/> .

[673] Joseph Warren Dauben. *Georg Cantor: His Mathematics and Philosophy of the Infinite*. (Princeton, N.J: Princeton University Press, 1990), 120,125-6.

[674] Ironically, as we saw in chapter four, *Ashʿarī*s use similar one-to-one correspondence examples between sets to demonstrate the impossibility of the existence of actual infinities.

[675] Bagaria, "Set Theory", in *The Stanford Encyclopedia of Philosophy.*

[676] Saʿīd Fodeh. "Georg Cantor *wa al-Malanihayāt, wa Asbaqiyyat al-Muslimīn fī Thalik* - Saʿīd Fodeh" YouTube. Saʿīd Fodeh, June 14, 2015. https://www.youtube.com/watch?v=ocYJvtUdl0I&t=606s&ab_channel=SaʿīdFodeh. Accessed, 4 January 2022; Karamali, Hamza. "08: Infinity Is an Imaginary Concept - Why Islam Is True with Shaykh Hamza Karamali." YouTube. SeekersGuidance: The Global Islamic Seminary, August 23, 2017. Accessed, 4 January 2022. https://www.youtube.com/watch?v=tTlMoLNHKl4&ab_channel=SeekersGuidance%3ATheGlobalIslamicSeminary.

[677] Fodeh, "Georg Cantor *wa al-Malanihayāt.*"

mathematical applications that use infinities (such as integration in calculus), they do not entail the completion of an actual infinite set of mathematical processes.[678]

Cantor's discussion of the use and existence of actual infinites refers, therefore, to their mathematical existence. In other words, it does not pertain to their existence in the world outside of the mind. Furthermore, Cantor's conception of the existence of actual infinites in the real world was based on his philosophical position that if infinite sets are proved to be mathematically consistent, they may be established as real extra-mentally.

Karamali explains this concept further and argues that modern mathematics is founded upon internal coherence rather than correspondence to external reality. In contrast with modern mathematics, classical mathematics is concerned with operations on physical quantities that exist extra-mentally.[679] A medieval farmer is concerned with the quantity of grain, a merchant with the amount of money, a builder with the size of a structure. As such, classical mathematics was designed to interpret and be used in reality for physical quantities.[680]

He goes on to explain that the subject of foundations of mathematics is a branch of mathematics which is concerned with the topics of infinite sets. This branch is more the concern of philosophers of mathematics rather than mathematicians, since their field of study is the underlying basis of mathematics including the meaning of concepts studied including mathematical objects. It is not concerned with describing physical quantities.[681]

Cantor recognised that it was impossible to construct an actual infinite set of anything. For example, enumerating the set of real numbers would never yield an infinite amount since it may always be increased. Rather, he used one-to-one correspondence to describe infinite sets of things, such as the infinite sets of natural and real numbers. There is also no way of knowing or observing an infinite number of things.[682] Human observation is limited to finite things. We can only observe and memorise a finite number. For example, to assume an infinite amount of time has elapsed has neither empirical nor philosophical evidence. Additionally, even assuming that we can present an actual infinity of objects, we may never demonstrate that it was an infinite set, since we would be epistemologically blind to the fact.[683]

---

[678] Ibid.
[679] Karamali, "08: Infinity Is an Imaginary Concept."
[680] Ibid.
[681] Ibid.
[682] Ibid.
[683] Ibid.

As demonstrated in the previous chapter, one-to-one correspondence was used by the *Ashʿarī*s (*burhān al-taṭābuq*) to prove the contradictions involved in assuming actual infinities. If we are to infer the existence, in the real world, of actual infinites based on their mental conception, we are falling into circular reasoning. Since we assume extra-mental existence based on a mathematical definition without recourse to any evidence to support it, the fact that we can imagine these concepts does not entail that they are real. Imagining and defining a coherent set of relations is not enough to assume they are real without substantive proof, whether logical or empirical.

Lastly, Karamali argues that sizes of infinite set ($\aleph_0$, $\aleph_1$, $\aleph_2$, …) do not fulfil the necessary characteristics of physical quantities, so it is thus impossible to attribute real-world existence to them.[684] The characteristics of infinite sets if they have real-world existence are as follows:

1. Divisible. This is understood as either divisible, discrete, or continuous physical quantities (*al-kam al-munfaṣil* and *al-kam al-mutaṣil*). For example, I may divide a discrete number of apples, say six apples, into two groups of three, whereas a litre of water is a continuous physical quantity that may be divided by volume into two half-litre containers. An infinite size of something ($\aleph$) cannot be divided this way. Dividing an infinite set with size ($\aleph_0$) into two would still yield two infinite sets, each with an infinite size ($\aleph_0$).

2. Composed of units. An infinity ($\aleph$) is not composed of units in the physical sense, meaning it cannot be placed anywhere on the number line.

3. Physically larger, smaller, or equal than another quantity. He argues that when the objects of mathematical operations change, the meaning of those operations also changes. If we were to apply these criteria to modern mathematical objects, such as an infinite set ($\aleph$), they would not fulfil any of them. What is meant by one infinite being larger or smaller is not the same as a physical quantity is larger or smaller since if we were to assume it has the same meaning, it would be incoherent.[685]

To summarise, according to *Ashʿarī*s infinite sets cannot exist extra-mentally. The *Ashʿarī* position used to support this is the differentiation between essence and existence; our conceptualisation of a given idea does not equate to its existence in the real world unless there is sufficient logical, empirical, or scriptural evidence to the contrary. More importantly, they demonstrate that even positing the real existence of infinite sets is logically incoherent, which, *ipso facto,* precludes it from any kind of substantiation in the external world.

---

[684] Ibid.
[685] Ibid.

The topic of the existence of actual infinities is pertinent to contemporary atheism because it is used as a means to justify God's non-existence by arguing for an infinite regress of causes (e.g., infinite multiverse, infinite time). This would mean that a necessary, pre-eternal efficient cause is not required to explain the existence of the cosmos. By demonstrating the impossibility of actual infinities in contingent entities, *Ashʿarī* theologians are addressing this issue.

6.1.2 David Hume on Causation

The principle of causality is a fundamental axiom in arguments for the existence of God. Causation (*ʿilla*) is defined by Taftazānī and Jurjānī as *that which an entity requires for its existence*.[686] This is a broad definition which includes the four causes as categorised in Aristotelian philosophy: formal, efficient, material, and final.[687] According to *Ashʿarī*s, causation, the conceptualising (*taṣawwur*) and assent (*taṣdīq*) of the need of something other than itself for its existence is considered a type of non-inferential knowledge.[688]

Empiricist philosopher David Hume argued that our conception of causation is derived through induction (i.e., human experience).[689] That which we confidently determine to be causal effects are no more than observed correlations which we assume is evidence of causation.[690] There is no way to differentiate between the two. For instance, when we see fire burn a piece of paper, all we are certain of is the paper burning when it comes into contact with the fire. We may never know whether it was the fire that actually caused the burning, since we do not see a causal effect; we only perceive one event following another. Our conclusion that fire is the cause is, according to Hume, unfounded. We make an epistemological leap of faith by that conclusion. Hume goes further by asserting that since this principle is a mere observation of

---

[686] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: *ʿĀlam al-Kutub*, 1998), 1:77; Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 4:103-4.

[687] Causation is a difficult concept to define precisely. It is therefore noteworthy to mention that in contemporary epistemology causation has no fixed definition. For example, Ducasse gives a definition of cause that it is an event that happens at the same time and place as another change that immediately precedes it. See: Curt John Ducasse. *Truth, Knowledge and Causation* (Oxford and New York: Routledge, 2015), 1-4. While there is some merit to this definition, it is somewhat limiting for our purposes in this section since when discussing cause here we may also be referring to the agent that brought that change into effect which is outside of the object in question: the efficient cause. Hence, we are using the broader definition. Jurjānī and Taftazānī discuss the differences between conditions and necessary and sufficient causes (*ʿilla tāmma* and *ʿilla nāqiṣa*), and other related topics in their referenced works.

[688] Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 4:104; Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: *ʿĀlam al-Kutub*, 1998), 1:77.

[689] David Hume, and P. F. Millican. *An Enquiry Concerning Human Understanding*. Oxford World's Classics. (Oxford; New York: Oxford University Press, 2007), 19-20.

[690] Ibid, 43.

correlation with physical entities in the universe, it cannot be applied to the universe itself. It is even rationally possible to conceptualise something coming into being without a cause. We may imagine, for example, an object suddenly appearing inside an empty room. If this was not rationally possible, we would not be able to conceptualise it. As Hume posits,

> I shall venture to affirm, as a general proposition, which admits of no exception, that the knowledge of this relation is not, in any instance, attained by reasonings à priori; but arises entirely from experience, when we find, that any particular objects are constantly conjoined with each other.[691]

Fodeh and Sabri directly address Hume's arguments.[692] They state that causation is a non-inferential, *a priori*, rational principle but that it may be observed through experience and may be derived from it. They argue that causation is a universal concept that is not only understood from empirical evidence but also taken from *a priori* knowledge. Rather than only addressing the specific causation problem offered by Hume, Fodeh counters the more fundamental issue: by arguing against his purely empirical stance as a philosophical foundation for knowledge. He does this by appealing to demonstrable examples by asserting that in the history of scientific discoveries, knowledge is commonly inferred through reason first then is verified later through empirical evidence. In other words, causes of effects are often predicted rationally in the absence of and without reference to empirical data. He gives a number of examples, including Paul Dirac's mathematical postulation for the existence of antimatter from mathematical equations.[693] It was more than a decade later that American physicist Carl Anderson confirmed this by being the first to detect a positron.[694] Einstein's special relativity and the existence of black holes were also predicted through rational means first before empirical evidence was found to support them later.[695] It is through these examples that we see cases of cause and effect inferred not empirically but rather mathematically through the language of mathematics, then

---

[691] Ibid, 19.

[692] Fodeh, Saʿīd. "*Al-Naẓariyyat al-ʿIlmiyya wa shubhat Hume hawl al-Sababiya* – Saʿīd Fodeh" YouTube. Saʿīd Fodeh, March 16, 2016. Accessed, Accessed 7 January 2022. https://www.youtube.com/watch?v=Mtrnz1QvokQ; Fodeh, *Al-Adilla al-ʿAqliyya ʿala Wujūd Allah,* 78, 293-4.

[693] Ibid; Rosy MonDardini. "Antiproton Decelerator - History of Antimatter - CERN." The History of Antimatter. CERN. Accessed January 7, 2022. https://espace.cern.ch/AD-site/What%20is%20antimatter/History%20of%20Antimatter.aspx

[694] Ibid.

[695] Nola Taylor Tillman, and Ben Biggs. "What Are Black Holes? Facts, Theory & Definition." Space.com. December 4, 2021. Accessed, 7 January 2022. https://www.space.com/15421-black-holes-facts-formation-discovery-sdcmp.html

found to exist in reality through empirical evidence later. Hence, causation is *a priori*; were it to be otherwise, we would not have the capacity to make purely rational predictions which are then found to be empirically accurate.

Hume's understanding of natural causation as fundamentally an observation of correlations shows similarities with the *Ashʿarī* understanding of logical and empirical propositional knowledge, but with a subtle though critical difference. As discussed in chapter 4, natural causes are understood to be logically possible but empirically necessary. However, *Ashʿarī*s still affirm them but understand that due to their contingent nature, they are not logical necessities. Instead of denying causation, as Hume did, they use this to affirm God's omnipotence and oneness by asserting that it is necessary that God is the primary cause of all things through which natural causes are secondary means via which we can perceive and interact with the world.[696]

As is stated in *Sharḥ al-Mawāqif*, even children are able comprehend cause and effect.[697] Indeed, modern research affirms this by suggesting that infants as young as eight months begin to develop causal reasoning.[698]

Rather than draw a conclusion that denies the intuitive experience of all human beings and leads to scepticism in the mind's ability to interpret reality, the *Ashʿarī*s assert causation in the secondary sense through natural causes and in the primary sense through occasionalism, with God being the ultimate efficient cause of everything.[699] This, they would perhaps argue, is quite literally the only logical conclusion, since assuming otherwise would entail contradictions and a denial of the ability of the mind to ascertain any type of knowledge. The denial of causation is a line of reasoning that leads to relativism and circular reasoning. If we are using our rational faculties to conclude that we cannot trust our rational faculties, we cannot know that this claim or any other is correct.

To summarise, causality for *Ashʿarī*s is non-inferential. We may perceive causality empirically and can utilise the principle to infer knowledge about the world and the existence of the creator of the world.

---

[696] Dārdīr, and Shinnār, *Sharḥ al-Kharīda al-Bahiyya*, 63-5. See also Fodeh's discussion on scientific laws which echoes similar ideas discussed in this chapter: Fodeh, *Tafnīd al-ʾUsūs al-Naẓarīyah wa-al-ʿAmalīyah li al-ʾIlhād,* 101-2.

[697] Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 4:104.

[698] David M. Sobel, and Natasha Z. Kirkham. "Blickets and Babies: The Development of Causal Reasoning in Toddlers and Infants." *Developmental Psychology* 42 (2006), (6): 1103–15. https://doi.org/10.1037/0012-1649.42.6.1103.

[699] This is related to privative attribute of oneness, in which God is understood as one in his essence, actions and attributes. See: See: Dārdīr, and Shinnār, *Sharḥ al-Kharīda al-Bahiyya*, 61.

6.1.3 Immanuel Kant and Transcendental Idealism

Inferential knowledge is founded on our ability to deduce conclusions from basic premises. Deductive syllogisms are usually formed of two premises and a conclusion and are the means via which may ascertain the existence of God, according to *Ashʿarī* theology. Scientism, transcendental idealism, and post-modernism deny that deductive knowledge may offer certain knowledge of any kind, let alone any certainty pertaining to the existence of God.[700]

This section examines Mustafa Sabri's and Saʿīd Fodeh's responses to Immanuel Kant's transcendental idealism. Sabri dedicates a number of sections in his opus magnum, *Mawqif al-ʿAql wa al-ʿIlm wa al-ʿAlim min Rabb al-ʿAlamīn wa Ibadihī al-Mursalīn* (*The Position of Reason, Knowledge, and the Scholar in regards to the Lord of the Worlds and His Divinely Sent Servants*), to address transcendental idealism and Kant's rejection of the logical arguments for the existence of God.[701] Fodeh briefly addresses Kantian philosophy in a number of lectures, and whilst he does not offer detailed explanations, he presents an overview of his position rejecting Kant's idealism.[702]

Transcendental idealism has had an extraordinary influence on modern philosophy. It is subject to many contentious interpretations, from those that claim that Kant's epistemology is subjectivist and anti-realist to others that suggest that he was an advocate for empirical realism.[703]

As explained in chapter 3, Kant's epistemology relies on his conception of human thought as that which is reliant on *a priori categories* that are created by the mind.[704] Kant proposed that

---

[700] Simon Blackburn. *The Oxford Dictionary of Philosophy* (New York: Oxford University Press, 1996), 368-9; Günther Patzig. *Aristotle's Theory of the Syllogism: A Logico-Philogical Study of "Book A" of the "Prior Analytics."* Synthese Library. (Dordrecht: D. Reidel, 2010), 1-3.

[701] Mustafa Sabri. *Mawqif al-ʿAql wa al-ʿIlm wa al-ʿAlim min Rabb al-ʿAlamīn wa Ibadihī al-Mursalīn.* (Cairo: Dār Ihya' al-Kutub al-Arabiyya,1981), 2:205-10, 229-33.

[702] Saʿīd Fodeh. "*Mulakhaṣ Falsafat Kant wa Sabab Tamassuk Dakatirat al-Jamiʿāt bihā - Saʿīd Fodeh*" YouTube. Saeed Fodeh, December 5, 2014. Accessed, 28 February 2023. https://www.youtube.com/watch?v=HN7SC6FTsmo&ab_channel=SaeedFodeh; Fodeh, Saʿīd. "*Al-Shaykh Saʿīd Fodeh... Min al-Nuqud li-Falsafat* Immanuel Kant" YouTube. Saeed Fodeh, January 1, 2020. Accessed, 28 February 2023. https://www.youtube.com/watch?v=vflSvPreDPQ&ab_channel=%D8%AD%D9%85%D8%A7%D8%A9%D8%A7%D9%84%D8%AF%D9%8A%D9%86.

[703] See for example: Karl Ameriks. "The critique of metaphysics: Kant and traditional ontology" in, Paul Guyer ed., *The Cambridge Companion to Kant* (Cambridge: Cambridge University Press, 1992), 249-79; Roger Scruton. *Modern Philosophy: A Survey*. Repr. (London: Arrow, 1997), 261; Hicks, *Explaining Postmodernism*, 28-9; Sabri, *Mawqif al-ʿAql wa al ʿIlm,* 2:229-31.

[704] Ibid.

the mind is limited to viewing the external world through a set of what can best be described as mental filters.[705] He divides them into formal and material categories, among which are cause and effect, necessity and contingency, and existence and non-existence.[706] Through these, the mind is restricted in its capacity to comprehend the external world and indeed is unable to attain knowledge beyond its interpretation of sense experience.[707] According to Kant, our minds do not objectively interpret sense data as a pure reflection of the external world; rather, they are processed through such things as time and space.[708] He makes a distinction between things in themselves (what we might call extra-mental reality) and things as they are perceived. He calls our conception of reality the *phenomenal* world. Extra-mental reality, the world as it is, is the *noumenal* world. The key point here is that these cognitive filters are products of the mind.

We cannot conceptualise anything beyond these, and any attempt to do so is fruitless. This understanding suggests that our conception of reality is mind dependent, meaning that, to a certain extent, our minds create the world we experience, and we do not have objective access to extra-mental reality.[709]

From this, we may understand Kant's distinction between what he termed synthetic and analytic statements. An analytic statement is one which is either true by definition, (e.g., all unmarried men are bachelors) or may be true *a priori* without reference to empirical evidence, such as mathematics (Euclidian axioms, the basis of geometry, are one such example). A synthetic statement is true with respect to how the phenomenal world is, or in other words, how it corresponds to our experience.[710]

With these concepts now reviewed, we may turn our attention to how Kant assessed proofs for God's existence. Kant proposes that there only three possible ways of arguing God's existence logically, all of them invalid: the cosmological proof, physico-theological argument (e.g., the proof from design), and the ontological proof. The first two, he claims, rest on the ontological

---

[705] Matt McCormick. "Immanuel Kant: Metaphysics." Internet encyclopedia of philosophy. Accessed January 11, 2022. https://iep.utm.edu/kantmeta/.

[706] T. K. Seung. "Kant's Conception of the Categories." *The Review of Metaphysics* 43, no. 1 (1989): 107–32. http://www.jstor.org/stable/20128836.

[707] Scruton, *Modern Philosophy: A Survey*, 261-2.

[708] Yaron M. Senderowicz. *The Coherence of Kant's Transcendental Idealism*. Studies in German Idealism, v. 4. (Dordrecht ; New York: Springer, 2005) 97-8.

[709] Hicks, *Explaining Postmodernism*, 29.

[710] Georges Rey. "The Analytic/Synthetic Distinction", *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2020/entries/analytic-synthetic/>.

argument, which he viewed as erroneous.[711] His argument for the foundation of the cosmological and design argument on the ontological proof is discussed in the *Critique of Pure Reason*.

Kant explains that the premise of the cosmological argument is that it is founded on empirical knowledge such as that all things that begin to exist have a cause. We understand this from our experience of the phenomenal world through our grasp of cause and effect as it is a category of the mind. Kant also accepts that we can reliably prove that the universe must have had a necessary cause that brought it into being. However, Kant does not accept that we can identify the attributes of this necessary cause, since we can no longer rely on sense experience to do so. Rather, purely logical inference is needed, which is not reliable according to Kant.[712]

For the proof from design, Kant proposes an analogous idea. He states that we are able to observe causation in the universe in myriad ways. It is reasonable to conclude that just as every effect needs a cause, we may also conclude that the totality of all effects that comprise the universe are contingent upon an ultimate cause that creates and sustains everything. Therefore, a necessary being that fulfils this role exists. It is at this point that Kant argues that the argument goes a step too far in establishing that this necessarily existent cause is also necessarily maximally perfect. There is no evidence of this, and it is an assumption founded on the conception of the ultimately perfect being.[713]

Therefore, according to Kant, should one succeed in dismantling the ontological argument, one has effectively cut all the avenues for proving God's existence rationally. Ironically, *Ashʿarī*s *themselves* are known to critique the ontological argument, and they reject the claim that other arguments are reliant on upon it.[714] If we are to identify the point of contention in Kant's thought process, it is that whilst he acknowledges that both arguments logically lead us to the existence of a necessary cause, they do not necessitate that this cause be the supremely perfect being that it is God. Proponents of these arguments, according to Kant, jump to this conclusion by defining the cause as being a supremely perfect entity, since we cannot infer from the

[711] Immanuel Kant, Paul Guyer, Allen W. Wood. *Critique of Pure Reason*. The Cambridge Edition of the Works of Immanuel Kant. (Cambridge; New York: Cambridge University Press, 1998), 563.
[712] Ibid, 571.
[713] Ibid, 578-9.
[714] Fodeh, *al-Adila al-ʿAqliya ʿala Wujūd Allah,*129-33; Saʿīd Fodeh. "*Al-Dalīl al-Ontologi ʿala Wujūd Allah dalīl Sakhīf – Saʿīd Fodeh*" YouTube. *Al-Sāda al-Ashāʿira*, June 30, 2020. Accessed, 8 January 2022. https://www.youtube.com/watch?v=pCdStmHOe7A&ab.

particular nature of created things in the universe that there exists a being with these maximally powerful attributes.[715]

According to Sabri, Kant's epistemology is said to question the validity of deductive knowledge as a whole and includes a critique of all rational arguments for God's existence. Sabri also claims that Kant was a sceptic (despite those who suggest otherwise, as he says), since Kant believed in a coherence theory of truth. This is evident in that he did not believe it was possible to attain certain knowledge because the human mind had no objective connection to the external world. The mind could not arrive at certainty, even with knowledge based on direct experience. Kant believed that the veracity of a proposition was based on its coherence with other propositions rather than its correspondence to external reality. According to Sabri's interpretation, transcendental idealism is no more than a type of philosophical scepticism.[716]

Sabri explains that Kant rejects the validity of formal deductive logic and only accepts the validity of inductive logic. It seems to Sabri that Kant limits non-inferential (ḍarurī) propositions to basic *a priori* knowledge (*badahīyāt*). Propositions that are validated through logical proof are not valid unless they are proven through empirical means, and for this reason, he rejected proving God's existence through deductive syllogisms. Kant would have been inclined towards proving God's existence empirically if it were possible, but as Sabri notes, Kant unjustifiably limits the principle of causation to empirical phenomena. Sabri rejects this position and argues that inferential deductive knowledge attained with certainty is possible through basic *a priori* ideas, which are universal truths that may be applied to attain particular knowledge about the world and God.[717] From this, we may understand that Sabri did not accept that Kant's categories (e.g., time, space, cause, and effect) are products of the mind; rather, they are reflections of aspects of reality. Meaning that they are understood because they reflect realities in the external world rather than the mind superimposing them on the world.

Let us examine two other examples of Sabri's critiques of Kant. He states,

> From among Kant's more peculiar objections – which do not reflect his eminent position in philosophy – is that the necessarily existent entity, which is proven in the cosmological argument, (it is the argument which we have explained and rely upon [to prove God's existence]), does not denote the necessarily existent who is the most perfect being. This is

---

[715] John D Caputo. "Kant's Refutation of the Cosmological Argument." *Journal of the American Academy of Religion* 42, no. 4 (1974): 686–91. http://www.jstor.org/stable/1461135.
[716] Sabri explains that Kant is unable to affirm any type of certain knowledge about the world. See: Sabri, *Mawqif al-ʿAql wa al ʿIlm,* 2:231.
[717] Sabri, *Mawqif al-ʿAql wa al ʿIlm,* 2:210.

because it is possible that the necessary being be the sum-total of all existent things: i.e., matter. This is understood [by arguing] that if the totality of existent things does not have a beginning [to its existence] then that totality is comprised of entities that have a beginning, and that which is comprised of both things which have a beginning and those that do not can never be pre-eternal [beginningless], however, they may be necessarily existent.[718]

After his exposition of Kant's argument, Sabri then responds,

As for matter, for even before the latest theory stating its evanescence, materialists have claimed it to be both pre-eternal and eternal [beginningless and endless] and we did not accept their claim. Notwithstanding the fact that pre-eternality and eternality do not necessitate necessary being, there is in it [matter] that which negates necessity. This [that which negates necessity] is the form [formal cause of matter] and its inseparability from it. So how can the most perfect [being] be that which is in need? Additionally, matter is receptive, not active, and the point of proving the necessarily existent is to search for the first efficient cause of all entities and their origin. And what benefit is there in proving the necessary existence of matter which has no ability to create and form [things].[719]

Here, Sabri is saying that Kant is incorrect in his assessment that the necessarily existent being proven in the cosmological argument can be matter itself, since the necessarily existent cause must be self-sufficient, and matter is evidently not self-sufficient. Assuming that the necessarily existent cause is matter itself, this leads to an infinite regress of causes, which is impossible.

A second critique from Sabri follows:

From among Kant's more peculiar objections is his claim that if the proposition 'God exists' is an analytic proposition then its predicate adds nothing to the meaning of its subject, as it is mere repetition and there is no use [in attempting] establishing a proof for it. And if it is a synthetic proposition which requires proof then it is not unreasonable to deny the predicate's relation to the subject since no contradiction is entailed, since contradictions are entailed when denying predicate-subject relations in synthetic statements.[720]

---

[718] Ibid. (Author's translation from Arabic).
[719] Ibid, 2:210-11. (Author's translation from Arabic).
[720] Ibid, 2:208. (Author's translation from Arabic).

Sabri refutes this point by explaining that Kant is merely critiquing the proposition that *God exists*, not the proofs that would make this statement true. In other words, Kant is attacking the form of the proposition and not the matter of the proposition. He is claiming that by Kant's own definition of what can and cannot be justified, the proposition that *God exists* is not knowable. This definition is by no means accepted by Sabri because it is unsubstantiated.

Fodeh explains how Kant's epistemology is founded upon the assumption of the separation between the mind and external reality. Independently, the mind is unable to attain objective truth about the world outside of itself. According to Kant, empirical evidence is necessary to provide sufficient evidence about the external world, but since there may be no empirical way of proving God's existence, we cannot rationally justify His existence.[721]

Fodeh holds a similar position to Sabri and posits that Kantian philosophy is based on mere conjecture: Kant provides no evidence to support his positions. Additionally, his ideas are neither apparent nor have they achieved unanimous acceptance and therefore cannot be regarded without substantiation. Additionally, transcendental idealism as articulated by Kant has not withstood the test of time. Had it been valid, it would see continued widespread acceptance and adoption amongst thinkers and philosophers.[722]

If we were to examine *Ashʿarī* reasoning for the attributes of the efficient cause that created the universe, we would observe that they do indeed conclude that there must be a necessarily existent cause. For a being to be necessarily existent, however, it must fulfil certain conditions that are logically founded; they would argue that the arguments do not begin with a conclusion in mind but rather end as a result of them. Indeed, they begin to ask, what can this necessary cause not be for us to justify its necessity? In other words, what attributes must we negate from this cause to substantiate its necessity? For Kant, since this cannot be achieved through empirical reasoning (they are not synthetic propositions), we are unable to reach a certain conclusion. The *Ashʿarī*s would suggest that the laws of non-contradiction and causality suffice as *a priori* truths to prove the necessity of the ultimately perfect necessary cause, as described through their arguments, negating the possibility of infinite regress and circular reasoning. Direct intuition informs us that these *a priori* ideas are not mind dependent; rather, they affirm objective reality.

---

[721] Fodeh, "*Mulakhas Falsafat* Kant"; Fodeh, "*Al-Shaykh Saʿīd Fodeh... min al-Nuqud li-falsafat Immanuel Kant*".
[722] Ibid.

From the examples above, we can gain a general understanding of *Ashʿarī* criticisms of Kantian metaphysics. What Sabri, Fodeh, and it would seem other *Ashʿarī*s would argue (based on a common epistemology and ontology), is that the fundamental claims of transcendental idealism are themselves problematic as they do not seem to go beyond mere assertions. Rather than deny our direct experience of what our senses, mind, and basic intuition tell us about the world, the *Ashʿarī*s would argue that the burden of proof falls upon transcendental idealists to provide sufficient justification for their position. According to Sabri and Fodeh, they have failed to do so. Given the foundationalist and realist underpinnings of their worldview, *Ashʿarī*s seem to consider transcendental idealism a negation of the very notion of rational thought and a destructive rather than constructive philosophical system.

6.1.4 Critiques of the Ontological Argument

The ontological argument states that since God is an entity that can be conceptualised as the most perfect being in every conceivable way, He must exist. So, imagine a being that is maximally omnipotent, omniscient, perfectly good, perfectly wise, and so on. Now, another property of this maximally perfect being should be existence. If the being does not exist, it is not maximally perfect and thus necessarily exists extra-mentally since it is a perfect being.[723] This is the quintessence of the ontological argument.

Compare this approach with the way of *Ashʿarī* theologians. Rather than starting by defining God and His properties and then seeing how God could exist, they begin with the phenomenal world by finding the reason for the universe's need for a creator and work their way up. They start with what is known and infer from it what is unknown: the existence of God and His fundamental attributes.

As discussed previously, *Ashʿarī* epistemology divides knowledge into conceptualisation and assent (*taṣawwur and taṣdīq)*. Our ability to conceptualise something, however rigorous the concept, can never justify extra-mental existence. In other words, our assent to a given proposition is independent of our ability to conceptualise it. We assent to the truth of a statement about reality if it corresponds to it. Assent is accepted through the means of inferential and non-inferential knowledge explained previously. They include empirical, scriptural, and purely rational sources.[724] As Sabri states,

---

[723] Jonathan Barnes. *The Ontological Argument*. (London: Palgrave Macmillan Limited, 1972), 4, 19.
[724] See chapter four on the epistemology and ontology of the *Ashʿarī* school.

We accept that the maximally perfect being cannot be conceived in the mind except that we may conceive of the existence of that which is maximally perfect. For indeed the conceptualisation of the maximally perfect being in the mind is correlated with its existence extra-mentally. In other words, it is correlated with the conception of its extra-mental existence, since the place of this link is conceptualisation [the mind] which has the potential for both [conceptualising] the existent and the non-existent as well as two correlated existent concepts, and two correlated non-existent concepts. However, this does not necessitate both the conceptualising of the maximally perfect [being] and the conceptualising of its existence extra-mentally together as inseparable [truths], from their actual existence extra-mentally. As our scholars have said, 'there are no limits to conceptualisation'. For the mind, because of its conceptualising God as the maximally perfect [being] must add another concept to the first, that the maximally perfect exists extra-mentally. Without these two concepts that were born out of each other, having any effect on reality. To summarise, obtaining the proof of God's existence from those who state that the concept that he is the being with maximally perfect attributes, which includes [his] existence, is a purely fanciful illusion as it begs the question.[725]

What Sabri is saying is that when we posit the maximally perfect being needing to exist, that necessity is present in the mind alone. Both the concept of the being's perfection and the necessity of its existence because of its perfection, are purely imaginary.[726] Verification for the actualisation of the existence of the maximally perfect being in the external world is then required.

The ontological argument has been strongly criticised by other *Ashʿarī* theologians. According to Fodeh, who shares a similar view to Sabri, the argument commits a logical fallacy in its inclusion of the conclusion of the argument in its premise.[727]

Contemporary Western theologians have offered their own versions of the ontological argument, including Alvin Plantinga, Charles Hartshorne, John Findlay, Kurt Gödel, and Norman Malcom. Fodeh mentions these theologians, discusses Plantinga's formulation, and considers objections to it.[728] The argument's major flaw is that even if we are to accept its premise, the move from conception to external reality is reliant on the cosmological proof or

---

[725] Sabri, *Mawqif al-ʿAql wa al ʿIlm wa al-ʿAlim,* 2:225-6. (Author's translation from Arabic).

[726] For instance, the conceptualization of a unicorn as a horse with a horn does not suffice in justify its existence. Proof is needed to substantiate its existence.

[727] Fodeh, *al-Adila al-ʿaqliyya ʿala Wujūd Allah,*129-33; Saʿīd Fodeh. "*al-Dalīl al-Ontologī ʿalā Wujūd Allah dalīl sakhīf – Saʿīd Fodeh*" YouTube. *Al-Sāda al-Ashāʿira*, June 30, 2020. Accessed, 8 January 2022. https://www.youtube.com/watch?v=pCdStmHOe7A&ab.

[728] Fodeh, *al-Adila al-ʿAqliya ʿala Wujūd Allah,*135-7.

the proof from contingency. Ultimately, however it is formulated, the ontological argument is based on the same mistake, according to *Ashʿarī*s, and it is a circular argument.

6.1.5 The Selectively Defining Feature

The selectively defining feature or factor is essential in the contingency argument for the *Ashʿarī*s. Atheist philosophies have either dispensed with it entirely through relativism or offered naturalistic explanations for it through materialism and scientism. This section examines how Muḥammad Saʿīd Ramaḍān al-Būṭī responds to dialectic materialism and how Taftazānī's exposition on sophistry may be used to respond to the relativism present in post-modern and existentialist philosophies.

6.1.5.1 Dialectic Materialism

Būṭī, in his book *Naqd Awhām al-Madīyya al-Jadaliyya*, addresses the contentions of dialectic materialism.[729] Whilst his critiques are extensive, I limit my analysis of his discussion on topics with direct theological implications on the existence of God.

Marxist dialectic materialism is founded on Engels', Feuerbach's, and Hegelian philosophy.[730] Its worldview is distinctly materialistic (in the ontological sense), and it interprets human historical, social, and religious change in light of this perceived reality. Thus, the existence of God is not a subject that is directly addressed; rather, its atheism is assumed without recourse to much philosophical debate. Religion as a whole is conceptualised as a man-made idea utilised to satisfy an individual's desires and aspirations.[731] It may also be interpreted as a means of social repression of the proletariat, the working class, by the bourgeoisie, those who control the means of production.[732] It is therefore safe to contend that religion is seen as a

---

[729] Muḥammad Saʿīd al-Būṭi,. *Naqd Awhām al-Madiyya al-Jadalīyya.* Damascus: *Dār al-Fikr*, 1985.
[730] Allen W. Wood. "Dialectical Materialism." In *Routledge Encyclopedia of Philosophy*, 1st ed. London: Routledge, 2016. https://doi.org/10.4324/9780415249126-N013-1.
It may also be argued that Hegel was a sceptic. He believed in coherentism, the belief that truth is that which conforms to other ideas within the mind rather than a reflection of external reality, which is objective. He claimed the mind has no accesses to objective knowledge of external reality. See: Leighton, J. A. "Hegel's Conception of God." *The Philosophical Review* 5, no. 6 (1896): 601–18. https://doi.org/10.2307/2176135.
[731] Roland N. Stromberg. "Marxism and Religion." *Studies in Soviet Thought* 19, no. 3 (1979): 209-17. http://www.jstor.org/stable/20098834.
[732] Thompson, "Marxism" in *the Oxford Handbook of Atheism*, 293-306.

symptom or a stage in societal development, with an underlying socio-economic cause. Marx believed that with the progress of society, religion would atrophy.[733]

German philosopher and co-developer of Marxist thought, Fredrich Engels, also reframed the conversation surrounding religion in a strictly materialist sense. Religion is a by-product of economic, political, and societal conditions. Marxism and dialectic materialism dismiss the truth claims of religion without much debate of its foundational arguments because materialism is regarded as an ontological premise.[734]

Therefore, in the realm of *kalām*, such interpretations of religion are secondary to the underlying contention of this ideology: materialism. This is the foremost philosophical concern regarding the existence of God. *Ashʿarī*s may propose that, should the ontological claims of dialectic materialism be successfully engaged with, other contentions may be addressed. The position that matter is the *selectively defining factor* that is sufficient in explaining the universe's existence is that which must be addressed. In other words, when Būṭī argues against materialism, he is attempting to prove that matter alone is an insufficient efficient cause for the universe. Būṭī affirms his understanding of materialism, saying,

> We have made it clear that this idea [that matter is the foundation of existence and the only source of true knowledge] is the corner stone of materialist philosophy and from this concept the following ideas arise:
>
> 1. That matter is the oldest of existent things. Matter is either an essential part, an effect, or a product of all other entities (e.g. the soul, thought, senses)
>
> 2. Matter is independent of human consciousness and perception, and not what idealists affirm that matter is a product of the mind or that is an illusion with no existence in thought.
>
> 3. Matter is not narrowly defined within certain borders or particular properties or phenomena. Rather, when studied it can be found to have infinite features…[735]

Matter and motion are inseparable, according to dialectic materialists.[736] The notion of external causal relationships is born out of a mechanistic understanding of the universe, one that imposes its own dogmas and thus reinforces unfounded biases. The necessary external cause-

---

[733] Ibid.
[734] Ibid.
[735] Būṭi, *Naqd Awhām al-Madīyya al-Jadalīyya,* 97-8. (Author's translation from Arabic).
[736] Maurice Campbell Cornforth. "Materialism and the Dialectical Method." In *Dialectical Materialism: An Introduction*. Vol. 1. (New York: International Publ, 1975), 42.

and-effect argument only holds true if we assume the universe and its constituent parts are, in a sense, machine-like.[737] The change in one part is brought about from a change in another. The motion of matter is indeed part of its essential nature and there need not be an external cause beyond it. The formation of matter into what it is today is born out of a prior organisation of matter, and so on, backwards in time. Matter in motion always has been and thus has no need for a creator.[738]

Būṭī continues to respond to these ideas. He states,

> As for the first point, it is but a bare claim with no evidence to support it. I may make any claim which contradicts the intellect and sound knowledge in the same way, neglecting argument and proof, and it is self-evident that I may not oblige any rational person to accept.[739]

He goes on to say that the claim that matter is infinitely existent because the universe has existed for an infinite amount of time is a circular argument by the standards of dialectic materialism (at least by some interpretations), since one of its claims is that time and space are born out of matter in motion, not the other way around.[740] In other words, Būṭī is arguing that dialectic materialists offer ontological explanations without any legitimate proofs to substantiate their claims. There is no empirical or rational evidence to support their worldview. Indeed, as he later notes, current scientific understanding negates their claim of the infinite nature of matter. The universe is proven to be finite in space and time. Būṭī goes beyond this and suggests that even without appealing to modern science, we merely see that the eternality of matter is plainly impossible since it leads to circular reasoning.[741] Additionally, dialectic materialism dispenses with the *selectively determining factor* being necessarily existent as it argues that matter and motion are sufficient explanations (*tarīḥ bilā murajjiḥ*).

6.1.5.2 Post-modernism

As discussed in chapter 3, post-modernism is a particularly difficult branch of philosophy to define.[742] This is partly because of the nature of post-modernist works, which are often abstruse

---

[737] Ibid, 40-5.
[738] Ibid.
[739] Būṭi, *Naqd Awhām al-Madīyya al-Jadalīyya,* 97-8. (Author's translation from Arabic).
[740] Ibid, 117-18.
[741] Būṭi, *Naqd Awhām al-Madīyya al-Jadalīyya,* 117-119.
[742] Gellner, *Postmodernism, Reason and Religion*, 22.

and circumlocutory, and partly because of the many variations of post-modernist thought.[743] Nevertheless, we may still glean a broad understanding of the defining characteristics of post-modernism that pertain to *Ashʿarī* proofs of the existence of God. These are scepticism and relativism.[744]

According to post-modernism, truth is perceived as either a subjective individual creation driven by human will or a societal construct that we use to create shared narratives through which we define ourselves, our history, culture, morality, and religious beliefs.[745] The particulars of these complex, nuanced, and wide-ranging schools of thought notwithstanding, they do share a fundamental belief in the subjective nature of truth. We cannot make such bold claims about the necessary existence of God when knowledge itself if founded on communal agreement and societal convention.

Classical *Ashʿarī* theology does engage with the similar ideas of the Sophists. In *Sharḥ al-Maqāṣid*, Taftazānī explains,

> And from among them [those who deny objective truths] are those who criticise all [truths]. The most apparent of them are the sceptics who say that they doubt and that they doubt that they doubt. They cling to the arguments of doubt of both parties to affirm scepticism. The rightful action is to burn them with fire so that they admit [to the existence of certain truths, since they cannot deny their sense perception]…[746]

Rather than taking Taftazānī's words at face value, here he is explaining how the strongest of sensory experiences – pain – may be used as an undeniable proof against scepticism. This is to say that one of the ways that the denial of reality and our ability to understand it is negated is through our direct sensory experience of the world. He goes on to divide sceptics into three groups:[747]

    1. The obstinate (*al-ʿinādiyya*): those who deny any objective truths;

---

[743] Ibid, 22-3

[744] Max J. Charlesworth. *Philosophy and Religion: From Plato to Postmodernism*. (Oxford: Oneworld, 2002) 155; Steven Connor, ed. 2004. *The Cambridge Companion to Postmodernism*. Cambridge Companions to Literature. (Cambridge, UK; New York: Cambridge University Press), 20; Gellner, *Postmodernism, Reason and Religion*, 24, 30; Lawrence E. Cahoone, ed. *From Modernism to Postmodernism: An Anthology* (Cambridge, Mass: Blackwell Publishers, 1996), 482.

[745] Cahoone ed., *From Modernism to Postmodernism*, 482; Connor, *The Cambridge Companion to Postmodernism,* 21, 24; Gellner, *Postmodernism, Reason and Religion*, 24.

[746] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 1:223. (Author's translation from Arabic).

[747] Ibid.

2. The subjectivists (*al-ʿindiyya*): truth is relative to personal opinion; and

3. Absolute sceptics (*al-lāʾadrīyya*): those who hold that we are unable to know anything with certainty. *Al-lāʾadriyya* literally translators to *those who do not know*. Whilst the word is often referenced to mean agnostics, here Taftazānī is using it in the more general sense.

The first and third positions, claims Taftazānī, may be argued against by noting that the absolute assertions of both are self-refuting since they are in themselves claims to objective truths. Both are circular arguments, for how can a universal statement be made without a claim to objective understanding? The third position of general agnosticism is only answered by appeal to innate understanding of primary knowledge such as feelings of pain, hunger, thirst, and knowledge of causality. He notes that debating with absolute sceptics is futile since there is no common ground on which to engage with them. Rather, he suggests basic intuitive knowledge must first be admitted by a sceptic.[748] One way may be by subjecting them to firsthand irrefutable evidence of experience of their own senses. It is undeniable that a person feels pleasure and pain and, in so doing, internally acknowledges the reality of knowledge of one's own existence, identity, internal senses, law of non-contradiction, and so on. Nevertheless, one area which has given some credence to sceptics' arguments are the discoveries and interpretations of modern science, discussed in the following section.

6.1.6 Modern Science

The truly astounding advances made over the past 200 years in the fields of natural science and modern technology have had an indelible effect on human civilisation.[749] Through the exponential expansion of human knowledge and its applications, things that were once inconceivable to the average person at any other time in history are a part and parcel of everyday life. The scientific revolution demonstrates the power and utility of the scientific method.

These changes have posed some significant challenges to the truth claims made by traditional faiths, including Islam.[750] Contemporary philosophers, scientists, and public intellectuals

---

[748] Ibid.

[749] John Henry. *The Scientific Revolution and the Origins of Modern Science*. 2nd ed. Studies in European History. (Houndmills, Basingstoke, Hampshire; New York: Palgrave, 2002), 9.

[750] Muzaffar Iqbal. *Science and Islam*. Greenwood Guides to Science and Religion. (Westport, Conn: Greenwood Press, 2007),160.

reflecting on the discoveries of modern science call into question the existence of God and the validity of the claims of religious scripture.[751]

For example, in the field of biology, the theory of evolution and its implication on human origins have challenged the *Qurʾān*ic and Biblical account of the creation of Adam with no biological ancestors. Recent engagement with the theory of evolution and Islam, primarily through the work of Shoaib Malik and his utilisation of a *Ghazālī*an, *Ashʿarī* framework, synthesises the *Qurʾān*ic account with evolution, whilst maintaining scriptural integrity and orthodox interpretation of human creation.[752]

However, the existence of God according to the *Ashʿarī* proofs is not directly challenged here. *Ashʿarī* ontology, through the concept of occasionalism, holds that God is the efficient cause of everything. Secondary causes are acknowledged but are not deemed rationally necessary. Thus, regardless of the types of natural causes acting in the world, they are all ultimately contingent upon, the necessarily existent. Whilst there are significant implications to the particular revelatory truth claims in the Islamic tradition, the arguments from contingency and beginning hold true regardless of the methods through which life originated.[753] In other words, the premises of the arguments are in no way effected by the biological origins of life because they are based on deductive syllogisms, which in turn are founded on *a priori* concepts. There is no recourse to science to prove their conclusions of the necessarily existent God.

However, when we turn to modern physics, particularly the areas of quantum mechanics and cosmology, several direct challenges to the premises of these arguments are found. In *A Universe from Nothing: Why there is Something Rather Nothing*, physicist and outspoken atheist Lawrence Krauss argues that modern physics, through our understanding of quantum vacuums, has done away with the notion of God.[754] The spontaneous creation of particles is empirically proven and demonstrates that the antiquated arguments of God's existence are no

---

[751] Of the most evident examples of this is the rise of New Atheism. Public intellectuals such as Richard Dawkins, Daniel Dennett, Christopher Hitchens, and Sam Harris, argue that modern science dispenses with the idea of God. See: Dawkins, *The God Delusion*; Harris, Sam. *The End of Faith*; Dennett, *Breaking the Spell.* For a detailed exposition on the discussion on the relation between science and religion, see: Jeffrey Koperski. *The Physics of Theism: God, Physics, and the Philosophy of Science.* (Hoboken, New Jersey: Wiley Blackwell, 2015), 32-50; Ian G. Barbour. *Religion in an Age of Science: The Gifford Lectures, Volume One*. Place of publication not identified: HarperOne, 2014.

[752] Malik, *Al-Ghazālī and the Modern Evolutionary Paradigm*.

[753] Nevertheless, it is notable that ex-Muslims do cite divergence between scriptural and scientific claims to be a reason for their non-belief.

[754] Krauss, *A Universe from Nothing*, 22-33, 153.

longer valid.[755] In his book *The Grand Design*, celebrated physicist Steven Hawking offers a similar argument. He says,

> According to M-theory, ours is not the only universe. Instead, M-theory predicts that a great many universes were created out of nothing. Their creation does not require the intervention of some supernatural being or God. Rather, these multiple universes arise naturally from physical law. They are a prediction of science. Each universe has many possible histories and many possible states at later times, that is, at times like the present, long after their creation.[756]

Indeed, certain interpretations of quantum mechanics seem to ignore the laws of epistemic logic. The laws of non-contradiction and excluded middle appear to be bypassed by these ideas. As foundationalists whose arguments for God's existence rest upon the immutable axioms of logic, *Ashʿarī* thinkers are faced with some weighty questions.

The scientific revolution included the findings of classic Newtonian physics, which describes an ordered and mechanistic universe.[757] Its laws are inherently deterministic and follow relatively logical processes. To this day, their applications are ubiquitous, and so brilliant and wide-ranging have been the subsequent discoveries, that the Newtonian model was believed to have finally solved the mysteries of the universe.

By the beginning of the twentieth century, these minor scientific inconsistencies grew to become gaping holes in the edifice of classical physics and would ultimately lead to the generation of a new physics.[758] The experimental observations that classical physics did not account for in its models were black body radiation (also known as the *ultraviolet catastrophe*), the photoelectric effect, and the nature of atoms (specifically, correctly explaining the hydrogen atom). Individually, none of these ideas held any particular significance for the arguments of the existence of God. However, when faced with empirical data that cannot be accounted for in a physical model, scientists must either abandon the prevailing model or revise it. Collectively, these three observations were to prove a decisive blow to classical mechanics.[759] The behaviour of subatomic particles, the nature of light, and our conception of time and space

---

[755] Ibid.

[756] Stephen Hawking, and Leonard Mlodinow. *The Grand Design* (New York: Bantam Books, 2010), 21.

[757] Henry, *The Scientific Revolution and the Origins of Modern Science*, 68-9.

[758] Muḥammad Saleem. "The Failure of Classical Physics and the Advent of Quantum Mechanics." *Quantum Mechanics*. 2053-2563. IOP Publishing, 2015. https://doi.org/10.1088/978-0-7503-1206-6ch1.

[759] Ibid.

were to be radically altered with the advent of quantum mechanics and special relativity in the first half of the twentieth century.[760]

Schrodinger's equations explaining the probabilistic nature of quantum events and their interpretations have significant implications on the premises of the arguments of God's existence. This is because, according to some interpretations, superposition, one of the outcomes of the equations, entails paradoxical events that seem to break the law of excluded middle and may negate the validity of philosophical realism.[761]

No clearer are these challenges to religion manifest than in the New Atheism movement established at the start of this century. It is characterised by its outspoken criticism of belief in God and religion as a whole, as well as the use of modern science to argue for atheism. It is spearheaded by academics and public intellectuals (known as the four horsemen of New Atheism): Richard Dawkins, Sam Harris, Christopher Hitchens, and Daniel Dennett.[762] Consequently, when considering the questions and suggested implications posed by modern science, one must question whether *Ashʿarī* proofs for the existence of God are still valid.

Here we must look at the concept of scientific realism, which posits that our scientific understanding of the world is an accurate description of reality and is not mind dependent. Scientific realism means that our understanding of the observable and unobservable world through the natural sciences describes the world as it is.[763] The extent to which modern science tells us about the nature of reality and the place of God in it is based on one of two possible ideas:

1. The physical and life sciences provide a sufficient explanation for the existence of the universe, such that God is not necessary in explaining the creation of the universe.

2. *Interpretive models* used by researchers in the physical and life sciences explain empirical observations that provide a sufficient explanation for the universe, such that God is not a necessary part of the creation of the universe.

---

[760] Ibid.

[761] Amit Goswami. "*The Paradox of Schrödinger's Cat*." In *The Physicists' View of Nature*, by Amit Goswami, 139–46. Boston, MA: Springer US, 2001. https://doi.org/10.1007/978-1-4615-0527-3_15.

[762] Amarnath ed., *Religion and the New Atheism*, 125.

[763] There are varied and nuanced definitions of scientific realism, but this one gives an approximate meaning that we can use to home in on the possible *Ashʿarī* position. See: Anjan Chakravartty, "Scientific Realism", *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2017/entries/scientific-realism/; For further discussion on the arguments of scientific realism and anti-realism See: Koperski, *The Physics of Theism*, 247-57.

The difference is subtle but nevertheless important. Here, we are differentiating between empirical observations of natural phenomena and the models and theories used to explain these phenomena. One illustration of this idea can be found in the difference between Newton's and Einstein's conceptions of gravity. The classical Newtonian understanding describes gravity as a force between two masses proportional to their magnitude and inversely proportional to the square of the distance between them. Alternatively, Einstein interpreted gravity in a radically different way. Rather than thinking of gravity as a force, Einstein envisioned it as a product of the curvature of space–time that was affected by mass and energy. Both understandings explain the same physical phenomena but using different interpretive models. The falling apple is being pulled down by a force in one and following the curvature of space and time in the other.[764] Both of these are abstractions that aim to produce models that mirror reality and are endowed with accurate predictive power.

As such, if the claim of contemporary atheism that modern science eliminates the need for a creator of the universe is true, we must know whether these opinions are based upon unadulterated observations or founded upon interpretive models. These interpretations would themselves be founded on their own epistemologies and ontologies. If it is the latter, one must ask what role *Ashʿarī* epistemology and ontology can play in understanding or even guiding such interpretations.

An example of an epistemology that is often used implicitly in the argument that science renders the existence of God unnecessary is scientism. As covered in chapter 2, scientism is a form of positivism, or radical empiricism, and has been developed and popularised within the scientific community.[765] It is the philosophical position that holds that sound knowledge is limited to empirical verification.[766] This position echoes some previously mentioned ideas of Hume and Kant. Therefore, a scientistic frame of reference provides no consideration to any metaphysical claim since it either limits existence to the natural world (ontological scientism) or limits our claim to sound knowledge to the scientific method (epistemic scientism).[767]

Here, let us look at one brief example where a particular interpretive model is used to argue for atheism and how *Ashʿarī* ontology can provide a divergent understanding of the same phenomenon. Aforementioned physicist Lawrence Krauss follows a similar line of thought to

---

[764] See: Timothy Clifton. *Gravity: A Very Short Introduction*. First edition. Very Short Introductions 512. Oxford, United Kingdom: Oxford University Press, 2017.

[765] Sorell, *Scientism Philosophy and the Infatuation with Science*, 1.

[766] Ibid.

[767] Daniel N. Robinson, and Richard N. Williams, eds. *Scientism: The New Orthodoxy*. (London; New York: Bloomsbury Academic, an imprint of Bloomsbury Publishing Plc, 2014), 5-7.

the New Atheists and has argued that modern physics eliminates the need for God. He argues that modern physics has discovered states in which matter and energy can spontaneously emerge from nothing.[768]

*Ashʿarī*s have explored the concept of non-existence or nothingness (*al-ʿadam*). As demonstrated in the previous chapter, they argue that it is not subsistent in and of itself. One can imagine the likes of Taftazānī or Rāzī arguing that using the word 'nothing' in the sense of a quantum vacuum is an equivocation fallacy.[769] For the claim made by theologians that nothing can be brought into existence (from nothing) without an efficient cause is not what is argued when we claim that particles can be produced from a quantum vacuum, since a quantum vacuum is not nothing.[770] Therefore, the claim of a scientist such as Krauss that something is empirically shown to have been created from nothing is without merit, since 'nothing' here does not refer to *no thing*, as in the absence of existence.

Additionally, even if we were to take the spontaneous creation of subatomic particles in a quantum vacuum at face value, it would not negate the fact that God is the efficient cause behind the act. In other words, the contingency of these particles remains, but they are created. One could imagine an *Ashʿarī* scientist seeing the same phenomenon and perceiving it as yet another manifestation of divine omnipotence, nothing more. The fact that these particles seemingly appear randomly out of quantum fluctuations is due to a limitation in our understanding rather than being evidence of something appearing out of nothing without an efficient cause. The seemingly random nature of this event is due to epistemic restraints rather than an event happening without cause. This is not a *God of the gaps* argument since it does not suggest that God did not create another natural cause that may explain this phenomenon.

Krauss' explanation, on the other hand, is akin to the spontaneous generation theory of the origin of living things out of inanimate entities.[771] At the time, microorganisms such as bacteria and the like had yet to be discovered, so a prevailing theory existed that, for instance, rotting meat produced maggots, or cheese and bread left in a dark place would produce mice.[772] The

---

[768] Krauss, *A Universe from Nothing,* 22-33, 153.

[769] A quantum vacuum is a space which has a minimal amount of quantum energy and no particles, see: Christopher Ray. *Time, Space, and Philosophy*. London; New York: Routledge, 1991. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=76538. For *Ashʿarī* definitions of nothingness, see: Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: ʿĀlam al-Kutub, 1998), 1:361-4; Ibn al-Tilimsānī, et. al, *Sharḥ Maʿālim Uṣūl*, 113.

[770] Ibid.

[771] Britannica, T. Editors of Encyclopaedia. "spontaneous generation." Encyclopedia Britannica, December 4, 2022. https://www.britannica.com/science/spontaneous-generation.

[772] Ibid.

same may be true of quantum particles: there may very well be hidden variables we are yet unaware of. That, according to *Ashʿarī* epistemology, would be a much more rational explanation than assuming that something came out of nothing.

As explained in the previous chapter, *Ashʿarī*s are realists. Their understanding is that the world we perceive exists extra-mentally and is independent of our conscious experience of it. Their conception of truth is that it is that which corresponds to things as they are in reality or as they are in and of themselves. Empirical knowledge (*ʿilm tajrībī*) and inference to the best explanation (*ḥads*), which are epistemic sources of natural science, are all acceptable means of knowledge for the *Ashʿarī*s. However, they are not the only ones. *Ashʿarī*s also consider logical inference and revelatory knowledge as methods of understanding. They are also foundationalists who believe that knowledge is based on basic *a priori* truths. As such, any *Ashʿarī* compatible natural science must consider these other sources of knowledge.

6.1.7 Epistemic Doubt in the Veracity of the *Qurʾān* and *Ḥadīth*

As covered in chapter 4, *Ashʿarī* epistemology is predicated on three sources: reason, sense experience, and reported knowledge. Of the most important expressions of reported knowledge is divine revelation, which is manifest in the *Qurʾān* and the *ḥadīth* tradition. The *Qurʾān* is believed to be the unaltered word of God, the creator and the one who sustains the cosmos. All of creation is understood as being contingent upon Him. As such, any revealed knowledge that includes claims about the physical world should mirror reality. If there is a clear contradiction between revealed knowledge and sensible or rational knowledge, it would entail the falsity of the *Qurʾān*'s claim of divine origin. This perceived contradiction between scientific discoveries and *Qurʾān*ic scripture is a reason why some Muslims leave Islam.[773] Such discrepancies could lead to doubt about the existence of God, since this would entail evidence of the non-contingent nature of the universe. A God that is not aware of the reality of the created world must be limited and thus contingent and not necessarily existent. The same may be said of moral or ethical standards set by scripture; that is, ex-Muslims often cite the incompatibility of the moral system outlined in the *Qurʾān* and *ḥadīth* with modern moral and ethical norms.

Epistemic doubt in the veracity of scripture, especially of the first kind, is closely linked to the use of modern science as a method to argue against the claims of religious traditions. This topic

---

[773] See the section on ex-Muslims in chapter 2.

is addressed in the next chapter as I outline a suggested framework for an *Ashʿarī* philosophy of science. This framework includes methods of scriptural exegesis.

6.2 Conclusion

In this chapter, I have demonstrated that *Ashʿarī* epistemology and ontology have indeed been used by scholars to engage with contemporary atheistic arguments. Additionally, I have demonstrated the potential *Ashʿarī* metaphysics has to address a wide range of philosophical views pertaining to the nature of existence and knowledge as they relate to the existence of God. Modern science is often utilised to argue for atheism and, as such, offers a novel challenge to *Ashʿarī* thought. This is the field that has been addressed the least in *Ashʿarī* literature and is therefore the area of focus in the last two chapters.

I have described the need to differentiate between natural phenomena and experimental data on the one hand and the interpretive models used to universalise such observations into scientific theories on the other. In the next chapter, I explore a possible *Ashʿarī* framework for engaging with modern science. To demonstrate its applicability, I apply the framework to a case study. This is the exploration of the multiverse hypothesis, that is, the proposed existence of multiple universes outside of our own. This topic engages both the philosophical and scriptural interpretive positions of the *Ashʿarī* school.

Chapter 7: Towards the Formulation of an *Ashʿarī* Philosophy of Science

7.0 Introduction

In this chapter, I utilise the theological, epistemological, and ontological conceptual paradigms articulated in the previous three chapters to propose an outline of an *Ashʿarī* philosophy of science. In the following chapter, I apply this framework to discuss the compatibility of four main multiverse hypotheses in modern physical cosmology.

As discussed previously, modern science is often used by atheists to argue for God as either a non-existent or superfluous entity. Notable scientists and renowned atheists, such as Lawrence Krauss, Richard Dawkins, Daniel Dennett, and even Stephen Hawking, use scientific ideas to contend with the premises of the logical arguments of God's existence via an appeal to naturalistic explanations for the *selectively defining factor*. Examples include, evolutionary theory, and appeals to evidence of logically impossible phenomena, such as some interpretations of quantum events or the existence of actual infinities.[774] The theorised existence of multiple universes is a popular example of a scientific hypothesis that is employed to argue for atheism.[775]

---

[774] D. C. Dennett. *Darwin's Dangerous Idea: Evolution and the Meanings of Life*. (New York: Simon & Schuster, 1995), 66, 153-4; Richard Dawkins. *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe without Design*. Reissued. (London: Penguin books, 2016), XIII; Hawking, and Leonard, *The Grand Design*, 180; Alan Boyle. "'I'm An Atheist': Stephen Hawking on God and Space Travel". *NBC News,* 2014. Accessed, 28 July 2022. https://www.nbcnews.com/science/space/im-atheist-stephen-hawking-god-space-travel-n210076; Lawrence Krauss. "All Scientists Should Be Militant Atheists". *The New Yorker*, 2015. https://www.newyorker.com/news/news-desk/all-scientists-should-be-militant-atheists; Krauss, *A Universe from Nothing,* 175-7.

[775] Jamie Boulding. *The Multiverse and Participatory Metaphysics: A Theological Exploration*. 1st ed. (London: Routledge, 2021),16-17; Krauss, *Why There Is Something Rather than Nothing*, 119, 125-29; Stenger, Victor J. *God and the Multiverse: Humanity's Expanding View of the Cosmos*. Amherst, New York: Prometheus Books, 2014; Mark Vernon. "Mark Vernon: God Or A Multiverse?". *The Guardian,* 2008. https://www.theguardian.com/commentisfree/belief/2008/dec/08/religion-philosophy-cosmology-multiverse.; Simon Friederich, "Fine-Tuning", *The Stanford Encyclopedia of Philosophy* (Summer 2022 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2022/entries/fine-tuning/; Simon Friederich. "A New Fine-Tuning Argument for the Multiverse". *Foundations of Physics* 49, no. 9 (September 2019): 1011–21. https://doi.org/10.1007/s10701-019-00246-2; Klaas J. Kraay. "Theism, Possible Worlds, and the Multiverse". *Philosophical Studies* 147, no. 3 (February 2010): 355–68. https://doi.org/10.1007/s11098-008-9289-y; Don N. Page. "Does God So Love the Multiverse?" In

The previous chapter determined the areas of contention between the *Ashʿarī* logical arguments for God's existence and contemporary atheism's critiques of these arguments. They were attributed to an atheistic assertion of the existence of actual infinities in the world, a rejection of causation or an affirmation of the existence of naturalistic causation alone, and the belief in the invalidity of deductive logic as a source of certain knowledge. Multiverses, when posited in their various forms, are used to argue for all but the last of the above contentions.

These positions demonstrate that it is difficult if not impossible to divorce scientific inquiry from one's own philosophical assumptions.[776] Indeed, many contemporary Muslim thinkers argue that modern science comes with its own metaphysical baggage.[777] Physics is not equal to metaphysics, but the two are often conflated. Modern science is practised *de facto* with an assumed ontological or methodological naturalism and reductionism, which is employed as a means to argue for the validity of atheism.[778] It is thus necessary to form a *kalāmic* perspective on science in order to show how Muslims can engage in scientific research in a way that does not undermine their theological beliefs and, according to them, affirms an accurate interpretation of reality. The chapter outlines the *Ashʿarī* alternative to a naturalist and reductionist philosophy of science. The relationship of *Qurʾān* and *ḥadīth* as they relate to other types of knowledge is addressed by articulating the *Ashʿarī rule of interpretation (qanūn al-taʾwīl)* as expressed by Ghazālī. Furthermore, I identify several authoritative exegetical works recognised in the *Sunnī* tradition.

This chapter and the next form the principal original contribution of the thesis. The work here articulates one possible expression of an *Ashʿarī* philosophy of science as understood within the context of contemporary religious and scientific discourse. It builds upon some of the broader ideas of Naqib al-Attas and Seyyed Hosain Nasr (those that are compatible with

Science and Religion in Dialogue, edited by Melville Y. Stewart, 380–95. Oxford, UK: Wiley-Blackwell, 2010. https://doi.org/10.1002/9781444317350.ch29; Jason Waller. *Cosmological Fine-Tuning Arguments: What (If Anything) Should We Infer from the Fine-Tuning of Our Universe for Life?* (New York: Routledge, Taylor & Francis Group, 2020), 223.

[776] For example: Michael Shermer argues that the naturalism, a philosophical position, is equated with sound science and reason. See: Shermer, "Scientific Naturalism: A Manifesto for Enlightenment Humanism", 220–30.

[777] See: Muhammad Naquib al-Attas. *Prolegomena to the Metaphysics of Islam: An Exposition of the Fundamental Elements of the Worldview of Islām*. 2. ed. (Kuala Lumpur: International Institute of Islamic Thought and Civilization, 2001), 114; Seyyed Hosain Nasr. "*Islam and Science*". In Clayton, Philip, and Zachary Simpson, eds. *The Oxford Handbook of Religion and Science*. 1. publ. in paperback, Reprint. Oxford: Oxford Univ. Press, 2009.

[778] Attas, *Prolegomena to the Metaphysics of Islam,* 114; Victor J. Stenger. *The New Atheism: Taking a Stand for Science and Reason*. Amherst, N.Y: Prometheus Books, 2009; Robinson, and Williams, eds. *Scientism: The New Orthodoxy*; Shermer, "Scientific Naturalism: A Manifesto for Enlightenment Humanism", 220–30.

Ashʿarī theology), who have expressed their own conceptions of how to construct a philosophy of science that is metaphysically rooted in an Islamic worldview.[779] Nasr's work is focused on critiquing the philosophical assumptions of modern science and outlining valuable but broad suggestions on ways to establish an Islamic philosophy of science and nature. Attas' work is more detailed and provides a more thorough articulation that includes discussions on cosmology, epistemology, ontology, and methodology. Attas' work is grounded in orthodox *Sunnī* Islam as he leverages *Ashʿarī*, *Māturīdī*, and Sufi ideas.[780] Whilst there are shared themes between this chapter and Attas' and Nasr's work (since they draw upon similar sources), five key differences distinguish this work as a unique contribution. The first is that this chapter is directed towards developing a philosophy of science based on *Ashʿarī* ideas in particular. The second is that it includes an attempt to try to demarcate the boundaries of natural science through an Islamic dichotomy rooted in the *Qurʾān*ic cosmology. The third is that it brings the question of the relationship of religion and science into dialogue with Ian Barbour's typology and suggests a new categorisation, 'incorporation', that is compatible with *Ashʿarī* thought. The fourth is that the proposed framework attempts to resolve a significant challenge present in contemporary philosophy of science, the problem of induction. Fifth is that this and the subsequent chapter aim to demonstrate practical applications through which the efficacy of the *Ashʿarī* model is demonstrated.

Using my proposed *Ashʿarī* philosophical framework for engagement with science, I examine *Ashʿarī* theology's compatibility with the multiverse hypothesis. The discussion of multiverse theory from the perspective of the *Ashʿarī* school has yet to be properly addressed in academic work.[781] The following chapter examines four types of multiverses and uses the framework established in this chapter to discuss their compatibility with *Ashʿarī* theology.

7.1 Muslim Engagement with Science

---

[779] See: Setia, Adi. "The Philosophy of Science of Syed Muhammad Naquib al-Attas", *Islam & Science,* 1, 2003, 165-214; Attas, *Prolegomena to the Metaphysics of Islam,* 111-142; Nasr, "Islam and Science" in *The Oxford Handbook of Religion and Science*.

[780] Attas' extraordinary contribution to the field notwithstanding, his articulation of an overarching metaphysical system in which science is a part does not properly distinguish between the natural sciences which deal with the material world and other Islamic sciences. As I argue in this chapter, natural science is one that is predicated on rational faculties (*ʿulūm ʿalqliyya*). Additionally, Attas includes in his discussion knowledge attained through spiritual practice and the refinement of the soul, it being the pinnacle of human knowledge. While ethical and spiritual wellbeing is undoubtedly an important factor, it may too easily blur the lines between esoteric, and exoteric knowledge.

[781] See chapter 8 for more information.

According to Ibrahim Kalin, in the Muslim world there are, broadly speaking, three distinct attitudes towards modern science.[782] The first and perhaps most common is that which views science as a set of methodological instruments void of any ideological commitments. This perspective considers natural science a neutral tool that can be wielded by any civilisation to gain technological, political, and economic benefits. Bringing these sciences in line with an Islamic worldview only involves the addition of a moral dimension to guide scientific inquiry.[783] This perspective fails to consider many implicit but nevertheless antithetical views of science towards a monotheistic worldview, such as naturalism. The second view takes a more critical stance towards the epistemology of science. Influenced by the works of Thomas Kuhn (d. 1996) and Paul Feyerabend (d. 1994), this position entails that the legitimacy of science as an objective source of knowledge is in doubt.[784] The work of Muslim thinkers such as Ziauddin Sardar emphasise the social utility of science.[785] They neglect the study of ontological ramifications by focusing solely on the instrumentalisation of science as it relates to its sociocultural context. Rather than affirm the capacity of science to discern objective truth about the world, this view shares similar underlying conceptions of science as those of Kuhn and Feyerabend, who founded their instrumentalist view of science upon an anti-realist ontology.[786] Whilst it may not be the case that thinkers such as Sardar affirm this position, inattention to the anti-realist undertone of some of these ideas is problematic from an *Ashʿarī* perspective. According to Kalin, this position entails the appropriation of certain post-modernist outlooks on scientific thinking, which unfortunately leaves it with some equally unsavoury conclusions. The same critiques of modern science can equally be levelled at an Islamic science as well. Consequently, the idea of an objective understanding of the natural world is not tenable according to this view. [787]

The third view is held by many contemporary Muslim thinkers, such a Naquib al-Attas, Seyyed Hosain Nasr, Osman Bakar, and others. They argue that any truly Islamic scientific endeavour must be grounded in the metaphysical principles of Islam.[788] Modern science, according to

---

[782] See: Kalin, Ibrahim. "Three Views of Science in the Islamic World". In Iqbal, Muzaffar ed. *Studies in the Islam and Science Nexus*. London and New York: Routledge, 2016.
[783] Ibid.
[784] Kalin, "Three Views of Science in the Islamic World", 21-23; Feyerabend, Paul. *Against Method*. 4th ed. London ; New York: Verso, 2010; Kuhn, Thomas S., and Ian Hacking. *The Structure of Scientific Revolutions*. Fourth edition. Chicago ; London: The University of Chicago Press, 2012.
[785] See: Ziauddin Sardar. *Explorations in Islamic Science*. Islamic Futures and Policy Studies. London ; New York: Mansell, 1989.
[786] Kalin, "Three Views of Science in the Islamic World", 21-23.
[787] Ibid.
[788] Ibid.

Attas, is not an impartial pursuit that can be conducted without consequences. This is because science is not an activity that can be independent of a guiding metaphysics, ontology, and epistemology, whether monotheistic, pantheistic, naturalistic, or otherwise.[789] Nasr echoes these sentiments and critiques the secularisation of modern science for its scientism, materialism, and a loss of higher metaphysical principles.[790] In his prescient work *Scientism, Man, and Religion,* Derwyn R. G. Owen (d. 1947) argues similarly that certain dogmas are necessitated by placing science as the sole arbiter of truth. Empiricism, materialism, and a quantitative and mechanical view of the universe led to a restrictive ontological and epistemological matrix. Additionally, any moral or ethical systems must be grafted onto such a worldview since it lacks an inherent metaphysical framework from which to extract moral principles.[791]

Tartīb al-ʿUlum (The Ordering of the Sciences) by Ottoman scholar Muḥammad al-Marʿashī (d. 1145/1732) offers an in depth look at how the Ottoman scholarly tradition conceived of knowledge and classified different disciplines. This allows us to relate the natural sciences to other subjects. Franz Rosenthall's *Knowledge Triumphant* is another useful study of the concept of knowledge in the medieval Muslim world. Osman Bakar's *Classification of Knowledge in Islam* offers an insightful look at a number of Muslim thinkers' ideas, most importantly Ghazālī. Ebrahim Moosa's *What is a Madrasa?* offers insights into the centuries old Indian Islamic school curriculum. Additionally, Hamza Karamali's *The Madrasa Curriculum in Context* also presents an overview of the Ottoman *madrasa* curriculum from the sixteenth century, which he argues is largely unchanged in present times in *madrasa*s around the Muslim world. Ahmad Shamsy's *Rediscovering the Islamic Classics* offers a study of the dissemination of Islamic scholarship in the Muslim world after the adoption of the printing press and how some printed books gained popularity because of their proliferation.[792]

In the traditional *madrasa* curriculum and in scholarship on the classification of knowledge, the multitude of disciplines that span the breadth of human knowledge were understood to be an interlinked structure in which all subjects of study were related to each other, rather than thought of and studied discretely.[793] The *Ashʿarī* school offers a robust foundation for the

---

[789] Attas, *Prolegomena to the Metaphysics of Islam*, 111-142.

[790] Kalin, Ibrahim. "The Sacred Versus the Secular*:* Nasr on Science". In Iqbal, Muzaffar ed. *Contemporary Issues in Islam and Science*. London: Routledge, 2016.

[791] Owen, Derwyn R. G. *Scientism, Man, and Religion.* Philadelphia: Westminster Press, 1952; See also: Sorell, *Scientism Philosophy and the Infatuation with Science*.

[792] Ahmed El Shamsy. *Rediscovering the Islamic Classics: How Editors and Print Culture Transformed an Intellectual Tradition*. Princeton, NJ: Princeton University Press, 2020.

[793] Karamali, *The Madrasa Curriculum in Contex*t, 1-2.

formulation of a philosophy of science (or *metaphysics for science*, to distinguish it from a pure epistemology, as is the case with how the term *philosophy of science* is sometimes used). This is because it has a well-articulated theology, epistemology, and ontology that can be applied to define natural science, ascertain its functions and objectives, and determine its epistemological sources. Just as importantly, it may clarify its position in relation to other disciplines.

7.2 The *Ashʿarī* School's Relationship with Natural Science

To properly understand what we mean by an *Ashʿarī* relationship with science, it is useful to frame the conversation within four possible schemas that describe how science and religion may interact. These were identified and discussed by famed philosopher of religion Ian Barbour. The relationship between religion and science may be understood as that of either conflict, independence, dialogue, or integration.[794]

*Ashʿarī*s would argue that it is impossible for a conflict to arise between certain knowledge about the natural world and revelation, since they are both authored by God.[795] God created the universe and sent divine revelation to His messengers; it is therefore not possible for there to be a discrepancy between science and religion. Any perceived conflict would be because of a misunderstanding of science or revelation.

The second position related to science and religion articulated by Barbour is 'independence' (i.e., science as a secular discourse).[796] This is the view that perceives science and religion as occupying separate domains. This separation of science and religion is also not possible for the reasons discussed above. Additionally, there are truth claims that overlap between science and revelation. Religion explores issues pertaining to cosmology, the natural order, and human behaviour and offers teleological reasons for natural events. These are areas in the natural sciences which intersect with religious ideas. Examples include evolutionary biology and physical cosmology (e.g., the Big Bang and multiverse theory).[797]

Barbour's third and fourth positions, 'dialogue' and 'integration', both assume that science and revelation are on an equal footing in terms of metaphysical importance. The former suggests

---

[794] See: Ian G. Barbour. *When Science Meets Religion*. 1st ed. San Francisco: Harper San Francisco, 2000.
[795] Jurjānī and Ījī, *Sharḥ al-Mawāqif*, 8:3-17.
[796] Barbour, *When Science Meets Religion*, 8-9.
[797] See for example: Basil Altaie. *God, Nature, and the Cause: Essays on Islam and Science.* S.L.: Kalam Research & Media, 2016; Koperski, *The Physics of Theism*; Malik, *Islam and Evolution*; Malik, Karamali, and Khalayleh. "Does Criticizing Intelligent Design (Id) Undermine Design Discourse in the Qurʾān?".

that science and religion should be in a conversation. Through this discourse, a middle ground may be found and a synthesis between the two views can be reached.[798] Each side respects and acknowledges the other's perspective and claim as sound sources of knowledge. 'Dialogue' is problematic because, as discussed in the previous section, the natural sciences as they are practised today are founded upon philosophical positions, such as naturalism and positivism, that are incompatible with the metaphysical foundations of religion. The contemporary study of natural science is not an impartial method of research. For dialogue to occur, there needs to be common ground through which there can be mutual understanding.

I posit that the *Ashʿarī* position does not align with any of these; rather, it maintains a fifth position: 'incorporation'. Natural science can be incorporated under the larger Islamic hierarchy of knowledge and assume its place within an overarching epistemological and ontological system which defines and guides it. This differs from the 'integration' position in that incorporation places natural science under the umbrella of *Ashʿarī* thought.[799] This entails that the natural sciences are subordinate to *Ashʿarī* creedal positions and the underlying epistemology and ontology upon which they are founded (i.e., Islamic scripture). On the other hand, the 'integration' position sees natural science on an equal footing with and able to influence religion. Put more simply, the 'incorporation' position views the relationship between *Ashʿarī* creed, epistemology and ontology, and natural science as a one-way street. *Ashʿarī* thought, through this understanding, forms the metaphysical foundation for natural science, not the other way around.

Conversely, the 'integration' position views the relationship between science and religion as symbiotic, with each dependent on the other. Integration posits that neither science nor religion have a legitimate claim to an all-encompassing metaphysical system; rather, both should be used to shape each other. Barbour suggests process philosophy and his own theology of nature as examples of how to begin integration.[800]

Within the *Ashʿarī* schema, science has a place in furthering human understanding of relationships within the material world. According to *Ashʿarī* cosmology, however, the material world is merely one part of a larger reality that encompasses both the physical (or seen) world (*ʿālam al-shahāda*) and the unseen world (*ʿālam al-ghayb*).[801]

---

[798] Ibid.

[799] See: Seyyed Hossein Nasr, 'Islam and Science' in Clayton, Philip, and Zachary Simpson, eds. *The Oxford Handbook of Religion and Science*, 74.

[800] Ibid, 9, 34-35.

[801] See section 7.3 on the *ghayb* and *shahāda* dichotomy.

There are problems with both 'dialogue' and 'integration' as models from an *Ashʿarī* perspective. Natural science and *Ashʿarī* theology are not equal claimants to our understanding of reality. The *Ashʿarī* position is that creedal beliefs (*ʿaqīda*) are beyond the realm of scientific investigation.[802] The existence of God, angels, the last day, and other articles of faith can never be disproved through empirical methods,[803] whereas revelation, whilst its function is not to provide scientific knowledge, can provide guidance as to the veracity of scientific propositions (such as the existence of a multiverse). The *Ashʿarī* relationship with science is that of incorporation. *Ashʿarī* theology provides the bedrock upon which all other knowledge can be understood. The underlying principle for all of creation is God, the only logically necessary entity in existence.[804] An ordered, predictable, and comprehensible universe cannot be conceived of without affirming the existence of an underlying causal reality completely dissimilar from the material world that provides a basis for its existence. The denial of which, implies *Ashʿarī* theology, is an abandonment of rational thought concerning God's existence.[805] The natural sciences are subject to the basic principles of *Ashʿarī* theology, epistemology, and ontology. This is further justified by examining the classification of the sciences according to Ghazālī.[806] The disciplines concerning what he calls *fundamental principles* (*al-uṣūl*) are religious in nature and pertain to basic creed. They are the sciences of divine oneness (*illāhiyyāt*), prophethood (*nubuwwāt*), and eschatology (*ghaybiyyāt*), basically creedal beliefs that are found in all *Ashʿarī* theological treatises.[807] Natural science (*al-ʿilm al-ṭabīʿī*) was categorised as a rational (*ʿulūm ʿalqliyya*) and worldly science (not mutually exclusive classifications) in contrast with religious and other other-worldly sciences.[808] Ghazālī differentiates between natural sciences, on the one hand, and metaphysical sciences, including ontology and knowledge of the unseen or subtle worlds, on the other. The natural sciences were

---

[802] This is because the arguments for establishing God's existence are deductive arguments rather than inductive as was discussed in chapter five on *Ashʿarī* arguments for the existence of God. Other articles of faith (e.g., belief in angels, eschatology) are discerned through revelation alone without recourse to deductive or inductive means.

[803] For two reasons, they either refer to non-material entities or their existence is known through prophetic revelation alone. The veracity of prophets, on the other hand, may be inferred empirically through observation of miracles or through mass transmission of firsthand accounts. See: Bayjūrī, *Tuḥfat al-Murīd*, 220-22.

[804] See: Bayjūrī, *Tuḥfat al-Murīd*, 104.

[805] Ibid.

[806] See: Alexander Treiger. "Al-Ghazali's Classifications of the Sciences and Descriptions of the Highest Theoretical Science". Dîvân: Disiplinlerarası Çalışmalar Dergisi 16.1 (30): 1-32, 2011.

[807] Bakar, Osman. *Classification of Knowledge in Islam: A Study in Islamic Philosophies of Science.* (Cambridge, U.K: Islamic Texts Society, 1998), 207.

[808] Ibid, 209, 217-218.

comprised in large majority of subjects that we would consider part of modern science today, including meteorology, minerology, and medicine.[809] Astronomy was categorised as a mathematical science. Today, the natural sciences, particularly physics, are inextricably linked to mathematics. We would perhaps categorise mathematics as an ancillary subject to the study of the natural sciences, just as scholars considered grammar an ancillary subject to the study of jurisprudence or Qurʾānic exegesis (*tafsīr*).

If the natural sciences, as Ghazālī suggests, are a purely rational branch of knowledge with no recourse to divine revelation, what is purpose of discussing them in relation to *Ashʿarī kalām*, which covers topics wholly separate from the physical and life sciences? There are three reasons for this. The first is that Islamically, *kalām* and natural science both serve the same overarching purpose: knowledge of God and sound stewardship of the world.[810] The second is that they follow the same logical axioms applicable to all human knowledge. Logic after all was a general application ancillary subject used in the *madrasa* curriculum as a means to develop critical thinking and is considered the principal tool for attaining sound knowledge independent of the discipline one was studying.[811] The third is that they both pertain to a study of God's actions in the world: *kalām* through the study of divine attributes, prophethood, and eschatology, and the natural sciences through the study of the universe, which is a reflection of God's attributes.

7.2.1 Epistemological Considerations

An *Ashʿarī* epistemology of science must be founded upon two principles. First, scientific investigations must be logically coherent and not entail any logical absurdities. Second, scientific conclusions cannot directly contravene unequivocal claims in the *Qurʾān* or *ḥadīth*. *Ashʿarī* epistemology of science allows for a variety of methods of rational inference, including top-down and bottom-up scientific inquiry.

---

[809] Karamali, *The Madrasa Curriculum in Context*, 8,

[810] See Rāzī's interpretation of '*I have only created Jinns and men, that They may serve Me.*' Q. (51:56): Rāzī, *Al-Tafsīr al-Kabīr*, 28:231-4. Knowledge and worship of God are stated as the purpose for creating mankind. The concept of *khilāfa* or stewardship is a *Qurʾānic* one and is understood as the responsibilities humans have to the earth and its inhabitants. See: Bayḍāwī, *Anwār al-*Tanzīl, 1:82.

[811] Rosenthal, *Knowledge Triumphant*, 94-5, 203-4; Karamali, *The Madrasa Curriculum in Context*, 3,6.

According to *Ashʿarī* theology, God's actions fall within the category of the logically possible.[812] It would be meaningless to propose that God can do the logically impossible. Divine omnipotence applies to all that is rationally conceivable, meaning that He is capable of doing anything that is logically possible. God is free to do what He wills with no constraints, neither physical, moral, or otherwise.[813] God as the ultimate authority defines morality and is not answerable for His actions.[814] So long as a scientist is working within the realm of that which is logically possible, they are free to pursue any and all possible scientific explanations. If we were to allow for logically contradictory explanations in science, it would call into question the fundamental assertions we have about reality, which is that it is intelligible, rendering the whole scientific endeavour and indeed all human knowledge meaningless. This is understood because of the absurdities entailed in the breaking of logical axioms, which leads to a collapse of the possibility of rational thought. For instance, we see the circular reasoning entailed if we use rational thought to determine that the laws of rational thought cannot be valid. An *Ashʿarī* philosophy of science would therefore need to uphold the law of identity, of non-contradiction, and of excluded middle.[815]

The second epistemological consideration is a scientific claim's compatibility with unequivocal scriptural information. For *Ashʿarī*s, the creator of the world is also the source of prophetic revelation. Any divergence between scientific findings and revelation is due either to a misunderstanding of scripture or incorrect science. The *Qurʾān* is understood to be a revelation directly from God and to signify the speech of the creator of the universe.[816] Additionally, there is prophetic guidance through the reported actions, words, and tacit approval of the Prophet Muḥammad. Prophetic traditions are viewed as another source of revelation.[817] The *Ashʿarī*s have developed a methodology of scriptural interpretation that avoids extreme scriptural literalism on the one hand and an unguided metaphorical interpretation on the other. The former extreme leads to an unnecessary hobbling of scientific research, and the latter extreme leads to a dilution of the revelatory message, rendering it superfluous. For *Ashʿarī*s, this problem is solved via the *rule of interpretation* (*qanūn al-taʾwīl*), articulated by Ghazālī and later expounded upon by Rāzī.

---

[812] Bayjūrī, *Tuḥfat al-Murīd*, 142-3.

[813] Ibid, 144.

[814] Ibid, 185.

[815] See the section on *Ashʿarī* epistemology in chapter four.

[816] Ibid, 160.

[817] Osman Bakar. *Classification of Knowledge in Islam,* 208.

At the heart of all scientific pursuits is an effort to understand God's actions in the physical world. God's actions usually manifest in highly predictable ways, to the extent that we refer to them as physical laws or scientific theories. A critical point to understand within the *Ashʿarī* model is that the variety of means via which God chooses to interact with the physical world is unknown to us. We can only know about God's actions in the created world as much as revelatory, rational, or scientific inquiry tells us, no more. The absence of evidence on a particular subject is not to be mistakenly considered as evidence of its absence.[818] As such, for the vast majority of scientific discoveries, revelation holds a neutral position with regards to scientific findings. In other words, theology is not committed to either their affirmation or denial. For instance, it is of no theological consequence whether the earth is four billion years old or a few million years old. It is irrelevant to an *Ashʿarī* theologian whether there were pre-historic animals, such as dinosaurs, roaming the earth. This stance of theological non-committal is possible because of a position in *Qurʾān*ic exegesis (*tafisr*) called *tawaqquf*, meaning to withhold judgement or acknowledge ignorance in the event no evidence exists either confirming or denying a particular proposition.[819] Theologically, *tawaqquf* is exercised when an exegete finds in scripture no mention of something in the *Qurʾān* or *ḥadīth* tradition. In this case, an exegete would reserve judgement (i.e., suspend belief). *Tawaqquf* affirms the idea that absence of evidence is not to be understood as proof of non-existence. It may be understood as a state of epistemological agnosticism.

In a more general sense, *tawaqquf* is utilised in both Islamic law and theology. In Islamic jurisprudence, when a scholar is faced with insufficient information to provide a ruling about a particular subject, they will withhold judgement (exercise *tawaqquf*) until more evidence is

---

[818] This position is expressed by Rāzī. See: David Solomon Jalajel. *Extraterrestrials and Moral Accountability: A Novel Question Viewed Through the Lens of Classical Islamic Theology.* In Malik, Shoaib A. and, Determann, Jörg Matthias ed. *Islamic Theology and Extraterrestrial Life: New Frontiers in Science and Religion.* London: I.B. Tauris, forthcoming.

[819] Ashʿarī, Rāzī, and Taftazānī define *tawaqquf* as one of these two meanings. See: Zaʿatra, Ayman Isa. *Maʿnā al-Tawaqquf ʿind al-Uṣūliyyīn.* Amman: Jordan University, *Dirāsāt*, 2019. Accessed, 8 August 2022. <https://journals.ju.edu.jo/DirasatLaw/article/viewFile/103959/10148 >; Shoaib A. Malik. *Islam and Evolution: The Curious Case of David Solomon Jalajel.* In Muslim 500. (Amman: Royal Islamic Strategic Studies Society, 2021), 251-255.

uncovered or a scholar gains further insight.[820] This stance is temporary and is in contrast with *tawaqquf* in theology, which is a theological position that holds true indefinitely.[821]

We conclude that there are two epistemological principles to uphold for viable scientific research to happen: 'logical coherence' and 'scriptural compliance'. This means that a scientific proposition is valid if it does not a. lead to incoherence by violating an axiom of logic or b. negate a verified, unequivocal position in the *Qurʾān* or *ḥadīth*. Within *Ashʿarī* epistemology, deduction, induction, and abduction, or *inference to the best explanation*, (*naẓar, tajrīb or istiqrāʾ,* and *ḥads*) are recognised as valid forms through which knowledge may be attained.[822]

Scientific knowledge may be direct and certain: through direct experience, induction, or logical deduction. Scientific research can include this type of knowledge, although it also includes probabilistic knowledge such as partial induction and abduction based on partial evidence. *Ashʿarī*s acknowledge parts of reality as experienced firsthand directly through sensory experience. Moving further away from firsthand experience, they may explain abductively natural phenomena through an *inference to the best explanation*.[823] Going a step further still, a scientist may need to collect data through a mediated system, such as photon detectors. This data may then be abstracted to create models that offer a probable understanding of that physical system. They would also acknowledge that such theories offer a probabilistic understanding and may prove to be false.

7.2.2 Ontological Considerations

An *Ashʿarī* ontology of science assumes the external world exists independently of our minds. It holds the entities have fundamental attributes, essences, and that these attributes exist in particulars extra-mentally, and they are intelligible. Finally, an *Ashʿarī* ontology of science holds that God is the only efficient cause in creation but that He has created a predictable

---

[820] For a more detailed look at how *tawaqquf* is implemented in Islamic law, see: Aasim, Padela, I; Ali, Mansur; Yusuf, Asim. 'Aligning Medical and Muslim Morality: An Islamic Bioethical Approach to Applying and Rationing Life Sustaining Ventilators in the COVID-19 Pandemic Era'. *Journal of Islamic Ethics*, 15 April 2021, 1–36. https://doi.org/10.1163/24685542-12340061; Othman, Roslina BT; Noordin, Mohamad Fauzan Bin; Ahmed, Mahfooz; Ahmad, Nadzrah Binti; Kassim, Salina Bt. 'How Do Muslim Scholars and Experts Posit Cryptocurrencies in Social Media'. *Journal of Theoretical and Applied Information Technology*. Vol.100. No 21 (15 November 2022).
[821] Malik, *Islam and Evolution: The Curious Case of David Solomon Jalajel*, 251-255.
[822] See chapter 5 on *Ashʿarī* epistemology and ontology.
[823] Ibid.

system of corollary events, which we may call secondary causes (*asbāb*). The domain of inquiry for natural science is secondary causes.

When engaging in scientific exploration, *Ashʿarī*s must posit five axiomatic ontological principles: realism, the contingency of the world and its constituent parts, essentialism, occasionalism, and creation *ex nihilo*.[824] The first two ontological positions they hold as self-evident. The latter two are argued deductively through proving their logical necessity but also their affirmation in scripture. We briefly examine each in more detail.

1. Realism

Realism holds that the extra-mental world really does exist and is not mind reliant.[825] Whilst *Ashʿarī*s affirm metaphysical realism, they still understand that certain perceptions of the world are affected by the mind. Conceptual existence (*wujūd iʿtibarī*), like our perceptions of colours, is a construction of the mind. Although we can sense the existence of a physical object as well as its dimensions, its colour does not exist extra-mentally. A good example of this in *kalām* is the *Ashʿarī* (and even the *Māturīdī*) conception of time. Time is understood by scholars to be an abstract concept that is a measure of relative change between accidents (e.g., the movement of the earth around the sun in a solar year). This means that time has conceptual existence but does not exist extra-mentally. Rather, time is what we label as the change between two events relative to a known frame of reference.[826] In other words, according to *Ashʿarī* realism, our perceptions of reality are objective, and our senses are reliable. However, in certain ways, our experience may be influenced by abstract concepts in the mind. For example, if two people look at a tree, they both may ascertain its existence extra-mentally; however, its size and shape may appear to differ depending on where they stand in reference to it.

The further removed an entity is from our direct perception, the more it may be shaped by our mental perceptions of it. A good example of this is the subatomic world, which cannot be

---

[824] These are referenced and elaborated upon further in chapter 5: *Ashʿarī* epistemology and ontology.

[825] Ladyman explains the meaning of *direct realism* which is the closest conception of *Ashʿarī* realism. However, it is difference in that *Ashʿarī* scholars acknowledge the effect of conceptual existence on our experience of the world, in a limited sense. See: James Ladyman. *Understanding Philosophy of Science*. (London; New York: Routledge, 2001), 139-140.

[826] See: Hamza El-Bekri. "*Mā Huwa al-Zamān ʿind al-Mutakalimīn*." YouTube. Dr. Hamza el-Bekri, February 5, 2019. https://www.youtube.com/watch?v=mMgfgPfAdyY&ab_channel=Dr.Hamzael-Bekri%D8%A7%D9%84%D8%AF%D9%83%D8%AA%D9%88%D8%B1%D8%AD%D9%85%D8%B2%D8%A9%D8%A7%D9%84%D8%A8%D9%83%D8%B1%D9%8A.

perceived directly. Thus, our understanding of how it functions is still debated among scientists.[827]

2. Essentialism

Ashʿarī essentialism holds that we can in fact understand the world by discovering essential aspects of entities that are required for their identity. We may then create universal concepts from our observations of their common features.[828] These essential characteristics are made and understood by man. They may be discerned empirically but are posited by God through His will and known through knowledge (*al-māhiyyāt majʿūla*).[829] In this sense, *Ashʿarī*s are nominalists, in that they deny the existence of abstract entities extra-mentally (such as the Platonic forms) but do not deny the existence of universals as objective concepts.[830] Science is then a means via which to discover the essential nature of the physical world and the relationships that govern physical entities. A scientist then creates universals from their investigations (through a top-down or bottom-up approach) that best describe the physical world.

3. Occasionalism and 4. Contingency

Occasionalism and contingency of the world are two ontological foundations in the *Ashʿarī* paradigm. Occasionalism holds that the only efficient cause in reality is God[831] because everything is contingent or in need of *a selectively defining factor* to determine its state. This *selectively defining factor* must be necessarily existent (i.e., God).

What humans perceive as causes in the scientific sense are mere conventions that God has created in the universe, through which His attributes and actions are manifest. These correlations that God has created in the natural world (*asbāb*; singular: *sabab*) we henceforth refer to as secondary causes, with the understanding that the term is used metaphorically and refers to correlations associated with God's actions. Thus, science works within the realm of

---

[827] Max Jammer. *The Philosophy of Quantum Mechanics: The Interpretations of Quantum Mechanics in Historical Perspective*. New York: Wiley, 1974.

[828] Ghazālī. *Miʿyar al-ʿIlm*, 64.

[829] Taftazānī, *Sharḥ al-Maqāṣid* (Beirut: *ʿĀlam al-Kutub*, 1998), 1:427-8; Mihrig, Abdurrahman. "The Myth Of Intellectual Decline: A Response To Shaykh Hamza Yusuf – Maydan," *Maydan,* 2017. https://themaydan.com/2017/11/myth-intellectual-decline-response-shaykh-hamza-yusuf/.

[830] For a more on Nominalism, see: Rodriguez-Pereyra, "Nominalism in Metaphysics", *The Stanford Encyclopedia of Philosophy*; For an example of this: Jurjānī and Ījī refute the platonic forms and affirm the existence of essences and their universalization conceptually. See: Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 2:169-179, 3:18-27.

[831] See chapter four.

'secondary causation'. A scientist searches for secondary causes to explain and predict changes in the physical world and create practical applications for them.

This understanding of science is important in two fundamental ways: the first is that it allows for the existence of events outside of natural laws made possible through secondary causation, such as miracles. This allows for scriptural accounts of events that break natural convention to be taken literally. The contravention of scientific laws is viewed as an action of God, just as secondary causation is an action of God, the only difference being that the former is predictable, and we have been habituated to expect its occurrence, whilst the latter is an extremely rare occurrence that is usually performed by a prophet by God's permission and associated with a claim to divine revelation.[832] An action of God, as discussed in chapter 5, is always logically coherent. It is not rationally impossible. Miracles are therefore logically possible and do not entail any absurdities; however, the study of the nature of miracles falls outside the domain of natural science, since they do not follow predictable patterns or laws. They are, by definition, a breaking of natural convention (*kharq li-al-ʿāda*). This is not to say that natural science cannot study singular anomalous events; rather, it is to say that miracles (*muʿjizāt*), which are performed by prophets, are not empirically explainable phenomena and thus not under the purview of natural science. This understanding is in contrast with the 'independence' position regarding the relationship between science and religion. This is because we are merely demarcating the function of natural science rather than arguing for a complete separation between science and religion.

The second benefit of understanding scientific events through occasionalism is that it addresses the *God of the gaps* argument often levelled at religion.[833] The *God of the gaps* argument states that the existence of God is predicated on unexplained natural phenomena. Whenever there is an observation of something in the universe that we cannot explain, such as the variations we see in living creatures, we attribute it to God. However, when scientists find a natural explanation for such an event, God is found to be redundant. In the previous example, a *God of the gaps* proponent would argue that the large variety of biological life may be attributed to natural selection and random mutation, rather than God. As science becomes more advanced, the places the God is said to have a role in are diminished, suggesting that God is merely a mark of our own ignorance of the natural world.

---

[832] Bayjūrī, *Tuḥfat al-Murīd,* 220-1.
[833] Richard Dawkins. *The God Delusion*. (London: Bantam Press, 2006), 125-134.

God, in the *Ashʿarī* sense, is not inserted as a place filler for any materially unexplained phenomena. Rather, the secondary causes that God creates are there to be discovered in the world. Both known and mysterious natural occurrences are made by God. This does not prevent the *Ashʿarī* scientist from trying to understand them on a material level. The magnitude of order and complexity in the world is, in a sense, unbounded by our own conceptions. Occasionalism perceives God as directly *producing* cause and effect. When electromagnetic waves bend around bodies with large gravitational forces, it is divine power that is creating the electromagnetic wave, the gravitational force (or curvature of space–time in the Einsteinian sense), and divine power that is making the wave change direction. In the occasionalist sense, these basic ideas do not diminish the fact that secondary causes (*asbāb*) may be discovered. *Ashʿarī* scientists would not derive God's existence from unexplained natural events, since for them, all natural events are manifestations of God's omnipotence.

This allows for an exceptionally broad understanding of the physical world and how it works. For instance, *Ashʿarī*s need not abide by a mechanistic understanding of the cosmos, nor are they bound to a particular scientific paradigm. God does everything. What is to be discovered is the manifestation of His actions, and He allows effects to occur materially. The paradigm through which secondary causation is understood is thus not necessarily mechanistic; there is latitude for broader conceptions of the physical world that need not be reductionist in nature.

Ashʿarī ontology also addresses the problem of induction as posited by Hume because it affirms causation, but from a singular source, and simultaneously affirms empirical relations between accidents, which still allows for scientific reasoning. It removes scepticism and allows for a logical understanding of the universe that avoids naturalist reductionism on the one hand and anti-realism and idealism on the other. For Hume, it is not possible to affirm induction as a cause-and-effect relationship because only correlation is perceived between a cause and the subsequent effect. The *Ashʿarī* conception accepts this idea, in so much as it affirms that secondary causes are not necessary relations in and of themselves; rather, they rely on divine will and power to bring them into being.

An *Ashʿarī* philosophy of science does not abandon efficient causation because it establishes it through non-empirical means.[834] Rather it acknowledges that scientific discovery is confined within a framework of empirical corollaries (*asbāb*) and does not reduce reality to the material. *Ashʿarī*s assert that physical reality is only part of the existent world. Working from the

---

[834] See chapter four.

assumption that the universe is rationally comprehensible, they can exercise a great deal of freedom whilst engaging in scientific research.

5. Creation *ex nihilo*

This is a fundamental article of faith and refers to the concept that the cosmos was created from nothing. [835] It entails that all created entities were in a state of non-existence and are not pre-eternal. This is understanding is founded upon scriptural proof in the *Qurʾān* and *ḥadīth* tradition.

7.2.3 Scriptural Considerations

For *Ashʿarī*s, there is objective meaning to the *Qurʾān* and *ḥadīth*.[836] They established methodologies to ensure sound reasoning is used to accurately ascertain divine intent.[837] The nature of language and the scriptural context of a given statement make this a tricky task that has led to differences between theological schools in Islam. Ibn *Taymiyya*, for instance, famously only affirms a contextual theory of meaning to *Qurʾān*ic verses and denies metaphorical interpretation (*taʾwīl*) of God's attributes.[838] He has been accused of corporealism by the *Ashʿarī*s.[839] In order to maintain God's oneness and dissimilarity, the *Muʿtazilī*s deny the existence of all divine attributes, including the outward meaning of the verses alluding to the beatific vision that believers experience in the afterlife.[840] The *Ismāʿīlī Bāṭiniyya* affirm no

---

[835] Abu Ḥāmid Muḥammad Ibn-Muḥammad al-Ghazālī, and Michael E. Marmura. *The Incoherence of the Philosophers: Tahāfut al-falāsifa*. 2. ed. Islamic translation series. (Provo, Utah: Brigham Young Univ. Press, 2009), 7.

[836] As we shall see from Ghazālī's and Rāzī's, *Rule of Interpretation*. Related to this are the clear and ambiguous verses dichotomy in the *Qurʾān*. In theological texts, is common to relate these verses to the understanding of outwardly anthropomorphic language used to describe divine attributes. See: Bayjūrī, *Tuḥfat al-Murīd*, 156-160.

[837] As an example, legal theory (*uṣūl al-fiqh*) offers a sophisticated methodology to extract religious rulings from primary sources.

[838] Hoover explains that Ibn Taymiyya's is often labelled as a literalist which is not accurate, rather he takes a pragmatic and contextual approach to exegesis. I believe that this is a subtle difference that does not negate his literal understanding of the meaning of God's attributes, as was explained in Chapter 4. See: Jon Hoover. *Ibn Taymiyya*. Makers of the Muslim World. (London: Oneworld Academic, 2019), 111-115, 118.

[839] Ibid.

[840] William Montgomery Watt. *The Formative Period of Islamic Thought*. (Edinburgh: Edinburgh University Press, 1973), 242-8. For a detailed discussion on the difference between *Ashʿarī* and *Muʿtazilī* position on permissibility of seeing God in the afterlife, see: Jurjānī, and Ījī, *Sharḥ al-Mawāqif*, 8:130-135.

literal meaning to the *Qurʾān* but rather attribute the correct understanding of scripture to esoteric meanings.[841] The *Ashʿarī*s hold a position which includes both literal and metaphorical interpretations of revelation. This is explained through Ghazālī's rule of interpretation (*qanūn al-taʾwīl*), described in the table below.[842]

Levels of meaning in revelation as they correspond to ontological categories	Definition	Examples in *Qurʾān* and *ḥadīth*
Extra-mental or real existence (*wujūd dhatī*)	Exists in reality, independent of the mind	• The existence of the divine throne and footstool (the ʿarsh and *kursī*) • The seven heavens
Sensible existence (*wujūd ḥissī*)	Experienced through the senses alone with no outward reality	• Prophet Muḥammad seeing paradise displayed in front of him • Death being shown to people in the afterlife in the form of a ram
Imagined existence (*wujūd khayālī*)	Exists in the imagination	• The Prophet saying, 'It is as if I see' such and such
Conceptual existence (*wujūd ʿaqlī*)	Sharing in the underlying meaning or spirit of that which exists in reality	• God creating Adam with his hands. As in the essence of a hand which means having

---

[841] M.G.S. Hodgson, "Bāṭiniyya", in: Encyclopaedia of Islam, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs, 2012. Consulted online on 04 August 2022 <http://dx.doi.org/10.1163/1573-3912_islam_SIM_1284>
[842] Definitions and examples of the rule of interpretation taken from: Abū Ḥāmid al-Ghazālī. *Fayṣal Al-Tafriqah Bayna al-Islām Wa-al-Zandaqah*. (Jeddah: *Dār al-Minhāj*, 2017), 61-66.

		power to give and take away
Metaphorical existence (*wujūd shibhī*)	Sharing one or more similar characteristics	• God's contentment, wrath, happiness; alluding to God's reward and punishment

Table 9. A summary of the levels of meaning in scripture according to Ghazālī, with examples.

He states five possible levels of meaning relating to two ontological states: extra-mental (or real) existence and mental existence (*wujūd haqīqī and wujūd aʿqlī*). This may be then divided into three categories, which also include the term *wujūd ʿaqlī* but which refer to a specific type of mental existence.[843] The default position is that any *Qurʾān*ic verse or *ḥadīth* is to be understood literally (i.e., is said to refer to extra-mental existence unless there is evidence to suggest otherwise).[844] If it is proven impossible to affirm a literal meaning, one moves to the second category of existence: sensible experience (i.e., that is what is seen by a Prophet). If this meaning is also not possible, it is said to be an imagined existence. If it cannot be imagined, it is an abstract or conceptual meaning. If not, it must be metaphorical. These five positions exist in a hierarchy.[845] By affirming the literal meaning, one also may affirm all the other meanings in addition to the first. One may only negate a type of meaning through conclusive proof, either scriptural, logical, or both.

Discerning correct interpretations of *Qurʾān*ic scripture may be done through the study of *Sunnī* exegetical works (*tafāsīr*). Scholars with notable contributions in this field include many *Ashʿarī*s. Of those authoritative in *Sunnī* Islam are the works of Abū al-Suʿūd (d. 951/1574), Baghawī (d. 516/1122), Bayḍāwī (d. 719/1319), Qurṭubī (d. 671/1273), Rāzī, and Nasafī (d. 710/1310), to name but a few.[846] In the event a scholar is required to look beyond classical exegetical works to discern the meaning of scripture, they must follow a set of hermeneutic

---

[843] Ghazālī, *Fayṣal Al-Tafriqah* (Jeddah: *Dār al-Minhāj*, 2017), 57-60; Abū Ḥāmid al-Ghazālī, Mahmud Bejo, ed. *Qanūn al-Taʾwīl.* 1993. *Accessed at:* https://www.quranicthought.com/ar/books/%D9%82%D8%A7%D9%86%D9%88%D9%86-%D8%A7%D9%84%D8%AA%D8%A3%D9%88%D9%8A%D9%84/ ; Griffel, *Al-Ghazālī's Philosophical Theology*, 106-8.

[844] Ghazālī, *Fayṣal Al-Tafriqah*, 61-66; Griffel, *Al-Ghazālī's Philosophical Theology*, 106-8; Malik, *Islam and Evolution*, 281-2.

[845] Ibid.

[846] See: Gomma, *al-Kutub al-Muqawwina*, 11-25.

guidelines to ensure accurate understanding. Ghazālī offers a brief explanation of some these in his *Fayṣal al-Tafriqah*.[847] To put it into context, Ghazālī is listing a set of standards that should be followed to ascertain whether a verse or ḥadīth has been properly interpreted in a way that does not contradict Islamic creed so as to constitute a person leaving the fold of Islam. These include conformity to classical Arabic and that the interpretation be contextualised (i.e., a verse is to be understood with the meanings of the *Sura* it is situated in). Interpretating a ḥadīth, for instance, must consider the context in which it was reported, as well as other related ḥadīth narrations.[848] Whilst all are important, the most relevant of these ideas for our purposes is 'the rule of interpretation'.

The 'rule of interpretation', henceforth referred to as RI, establishes a method of interpretation via which contradictions between revelation and natural science may be resolved without compromising the validity of revelation and science as sources of certain knowledge. If a scientific claim is seen to conflict with a scriptural claim, the contradiction is either due to incorrect understanding of scripture or a misunderstanding of the science. Using RI, we avoid diluting the content of revelatory knowledge such that it becomes a malleable tool able to fit within the metaphysical constraints of a particular scientific worldview. This consequently allows scientific inquiry to work within logically and revelatory permissible areas of inquiry which ensures science reflects reality. For the *Ashʿarī*s, revelation and reason, whether through scientific inquiry or otherwise, both lead to certain knowledge about the world and therefore cannot contradict each other.[849]

Let us take the theory of evolution as an example of how RI and *tawaqquf* may be used. According to the normative *Sunnī* interpretation, Adam was the first human being and was created *ex nihilo*. As such, a human evolutionary theory which does not take this into account is incompatible with an *Ashʿarī* paradigm. In current 'evolution and Islam' discourse, we have a case study that demonstrates a range of perspectives which attempt to reconcile human evolutionary theory with the creation of Adam according to the *Qurʾān*. In *Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm,* Malik presents a number of

---

[847] Jackson et. al., *On the Boundaries of Theological Tolerance in Islam: Abū Ḥāmid al-Ghāzalī's Fayṣal al-Tafriqa Bayna al-Islam Wa al-Zandaqa*, 116-120.

[848] Further exposition of these points. See: Malik, *Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm,* 267-295, 296-7.

[849] Ghazālī affirms the importance and validity of drawing on both reason and revelation as a means of correct inference. Without reason one is unable to ascertain the truth of revelation, and without revelation one is prone to confuse that which is reasonable with that which is familiar. See: *Al-Ghazālī, Qanūn al-Taʾwīl, 1993.*

Muslim interpretations.[850] One view, held by evolutionary biologist Rana Dajani, is that human evolutionary theory should be taken at face value. She believes the scientific evidence is irrefutable that human beings evolved from other humanoids.[851] Dajani holds that verses regarding Adam's creation should be interpreted figuratively because they contradict an established scientific discovery.[852] Using RI, however, one cannot assign metaphorical meaning to a verse without scriptural justification. According to normative *Sunnī* exegesis, the *Qurʾān* and *ḥadīth* tradition express literal meanings. They explicitly state that God created Adam without a mother or a father.[853] Malik offers two positions compatible with Ghazālī's *Ashʿarī* worldview.[854] One is to acknowledge evolutionary theory, including the existence of humanoid creatures, such as Neanderthals. Because scripture does not refer explicitly to this, one should reserve judgement (exercise *tawaqquf*) and accept scriptural neutrality on the topic. However, position that is compatible with a Ghazālī's worldview treats the creation of *Homo sapiens* in isolation of the evolutionary path of other creatures.[855] This *Ghazālī*an compatible position is substantiated by *Qurʾān*ic evidence of the Adamic descension (*hubūṭ*) from heaven. It indicates that Adam and Eve were created outside of earth and then brought to it. Note that this position is incompatible with Dajani's naturalist stance since it allows for the breaking of natural convention (*kharq li-al-ʿāda*). Occasionalism allows for the scripturally compatible interpretation because it accepts the primacy of divine omnipotence and divine free will, as opposed to that of natural law.

7.2.4 Ethical Considerations

What follows is a brief section on ethical considerations. Since the prime focus of the research is on theology, the discussion of jurisprudence is limited to a few general points. Legislating ethical practices in the sciences falls within the domain of jurisprudence in the *Sunnī* tradition. *Ashʿarī* theology entails following revelation as a source of ethical and moral guidance.[856] The ultimate objective of this guidance is the preservation of religion, life, intellect, dignity,

---

[850] Malik, *Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm*.
[851] Ibid, 137.
[852] Ibid, 147.
[853] Ibid, 133.
[854] Ibid, 296-330, 341.
[855] Ibid, 296-330.
[856] Bayjūrī, *Tuḥfat al-Murīd,* 247-51.

progeny, and property.[857] *Ashʿarī* scholars Laqqanī and Bayjurī state that it is incumbent upon a Muslim to follow one of the four *Sunnī* schools of law: *Ḥanafī, Malikī, Shafiʿī, or Ḥanbalī*.[858] These schools offer acceptable methodologies to derive religious rulings regarding novel situations which are presented in modern science.

In other words, the schools of law provide a method through which ethical guidelines are set for the practice of scientific research. Generally speaking (there are some minor differences between schools), human action falls into seven categories in relation to Islamic law: obligatory (*wājib*), desirable (*mandūb*), permissible (*mubāḥ*), disliked (*makrūh*), prohibited (*ḥarām*), valid (*ṣaḥīḥ*), and invalid (*bāṭil*).[859] For a scientific practice to be compatible in the *Ashʿarī* sense, it must be legal according to Islamic law. Islamic bioethics is a prime example of how Islamic jurisprudence may be utilised to guide scientific practices.[860]

7.3 Demarcating the Boundaries of Natural Science

One challenge of constructing a philosophical framework for the study of natural science is the demarcation of the limits of natural science. Its definitions are a topic of great debate among philosophers.[861] There are descriptive definitions, or examples, of what science is (*rasm*), but there are no essential definitions (*ḥad tām*). In this section, I attempt to explore a conceptualisation of science that may provide some avenues for arriving at an essential definition of natural science in the future that includes all exhaustive and exclusive traits for science as it pertains to Islam.

Within the context of religion, as we have previously seen, it is difficult to draw a clear line between science and religion, since their truth claims sometimes overlap. An *Ashʿarī* compliant model would involve incorporating science within the overarching schema of *Ashʿarī* thought. In this section, we explore how two concepts in Islamic cosmology may be utilised to create a

---

[857] Muḥammad Ali al-Bar, and Hassan Chamsi-Pasha. "The Origins of Islamic Morality and Ethics". In *Contemporary Bioethics*. (Cham: Springer International Publishing, 2015), 49–74. https://doi.org/10.1007/978-3-319-18428-9_3.
[858] Bayjūrī, *Tuḥfat al-Murīd,* 247-51.
[859] ʿAbd al-Malik al-Juwaynī, and Tāj al-Dīn al-Fazārī. *Sharḥ Matn al-Waraqāt*. Beirut: *Dār al-Bashāʾir al-Islāmiyya*, n.d.), 89-103.
[860] See for instance: Muhammad Mansur Ali. Organ-ised rejection: An Islamic perspective on the dead donor rule in the UK- Revisited. *Journal of British Islamic Medical Association* 7(3), 2021, 12-20; Ma. M. Ali. "Can neuroscience aid in establishing an Islamic view of death?" University of St Andrews, 2022. Available at: https://www.theo-puzzles.ac.uk/2022/03/15/mali/.
[861] Ladyman, *Understanding Philosophy of Science,* 4.

typology through which we can navigate which areas may be considered science and which are outside of its domain.

One method of demarcating the limits of scientific knowledge is the utilisation of two concepts: that of the 'seen' (*shahāda*) and the 'unseen' (*ghayb*). These two categories of created entities are identified in a number of places the *Qurʾān*.[862] For instance, 'He knows what is <u>not seen</u> as well as what is <u>seen</u>; He is the Great, the Most High'.[863]

The seen (*shahāda)* pertains to that which is accessible to human senses, and the unseen (*ghayb*) pertains to that which is not accessible to human senses.[864] We may further conceive of the *shahāda* as that which is intrinsically possible to be empirically ascertained and the *ghayb* as that which is intrinsically impossible to be empirically ascertained. The *shahāda* thus refers to that which may, even potentially, be established through empirical means, even if we cannot observe directly (e.g., microorganisms, gravitational waves), whereas the *ghayb* can never be established, even potentially, through empirical means either directly or indirectly.

Three sources of knowledge are accepted by the *Ashʿarī*s: purely rational knowledge, empirical or sensible knowledge, and reported knowledge. Each of these may tell us something objective about reality. The *ghayb–shahāda* dichotomy may be understood within this context. The contention here is that scientific knowledge does not pertain to the *ghayb* (i.e., that which may never be empirically verified). To ascertain what falls under the category of the *ghayb,* we may look to *Ashʿarī* creedal texts for guidance. *Ashʿarī* theology is divided into the study of God and His divine attributes, prophecy, and lastly, those tenets of belief that are known only through revelation. These are known literally as 'those things that are unseen' (*ghaybiyyāt*) or 'those things that are heard' (*samʿiyyāt*). This refers mainly to eschatological matters but also includes belief in entities beyond human perception, such as angels. The *ghaybiyyāt* or *samʿiyyāt* are types of reported knowledge whose source is the *Qurʾān* and *ḥadīth*. Using the *samʿiyyāt* as a reference, we can then demarcate areas of study that are outside the domain of science.

Conversely, what is not explicitly mentioned in scripture, whether affirmed or negated, if logically coherent, may be considered within the domain of scientific study. For instance,

---

[862] See: Q. (59:22), (32:6), (64:18), (23:92).

[863] Q. (13:9).

[864] While there differing scholarly opinions of their exact meaning, the one illustrated above pertains more closely to our topic. Other meanings include: the unseen as a that which is known to created entities and the unseen is that which is unknown to them. Another opinion holds that the seen is that which exists, and the unseen is unknown to creation. See: Rāzī, *Al-Tafsīr al-Kabīr,* 19:17-18; Bayḍāwī, *Anwār al-Tanzīl wa-Asrār al-Taʾwīl*, 2:200.

Islamic scripture does not include any mention of the existence of pre-historic creatures such as dinosaurs.[865] The proposed existence of dinosaurs does not entail any logical absurdities. Additionally, the evidence of dinosaurs is soundly established through empirical means. Numerous fossilised remains provide sufficient evidence for their existence. There is no objection to Muslims believing in the existence of dinosaurs even though there is no scriptural proof for their existence. The same can be said of the belief in the existence of microorganisms such as germs. Whilst they are not alluded to in the *Qurʾān* or *ḥadīth*, the proposed existence of microorganisms is firmly verified through observation after the invention of the microscope, and thereby there are no objections to Muslims accepting the existence of such microorganisms.

The same may be said of the posited existence of extraterrestrial life, which pertains to the realm of the *shahāda.* There is no empirical or any purely rational evidence that would allow us to confidently infer the existence of life elsewhere in the universe. Islamic scripture does not include any explicit references to alien life either.[866] However, should evidence of extraterrestrial life ever be found, there would be no objections in Muslims accepting their existence.[867] It is also noteworthy that in popular culture, reports of encounters with extraterrestrials, dubious as they may seem, do exist.

Alternatively, there are entities that exist that are beyond empirical observation and are a part of the *ghayb*. For instance, Muslims believe in angels because there is conclusive scriptural proof for their existence, even though there is no empirical evidence. The existence of paradise and hellfire, the resurrection, and the events of the day of judgement are all part of basic Islamic beliefs because of scriptural proof. There is no empirical or purely logical proof for the existence of paradise and hellfire or for the occurrence of bodily resurrection on the day of judgement, nor can there be, because they are from the *ghayb*. These things exist permanently beyond the reach of natural science, and their existence is not empirically falsifiable. They are taken entirely on faith, and the role of reason, according to the *Ashʿarī*s, is to ascertain the veracity of the revelatory source (i.e., the Prophet Muḥammad) through which their existence is posited.

Then there are areas of inquiry that exist in what we may call a quasi-*ghayb* state, affirmed in Islamic scripture but not yet confirmed empirically, although their existence may possibly be

---

[865] Malik, *Islam and Evolution: The Curious Case of David Solomon Jalajel*, 251-255.
[866] See: Moamer Y. A. Khalayleh. "Does the Qurʾān Affirm Extraterrestrial Life? A Hermeneutic Analysis of Sūrat al-Naḥl (Q. 16:8)". In *Islamic Theology and Extraterrestrial Life,* forthcoming.
[867] Ibid.

corroborated through true reports including those outside of scripture. For instance, Islamic scripture tells us of the existence of the *jinn*.[868] They are sentient creatures that live on earth but are not visible to the human eye.[869] Whilst there is no empirical evidence for their existence, there are numerous accounts of encounters with seemingly supernatural beings (that may be *jinn*, spirits, or the like) throughout the world.[870] Across cultures, there are reports of the existence of such creatures in various religions and in folklore.

The existence of the soul is an example of something posited in scripture but which is also affirmed through multitudes of firsthand reports in the form of out-of-body experiences. Perhaps the most important example of this recently is near-death experiences.[871] Whilst these examples are by no means acknowledged in mainstream science and would not meet the stringent criterion of the scientific method, reported knowledge, if corroborated by scripture and coming from a trusted source, is epistemically sound from an *Ashʿarī* perspective.

The discovery of antimatter is a good example of top-down thinking in science, where a theory is used to predict the existence of entities not yet observed empirically. British physicist Paul Dirac proposed the existence of positively charged electrons and negatively charged protons (types of antimatter) in 1928 using the equations of Einstein and Schrödinger. It was not until four years later, in 1932, that antimatter was empirically verified.[872]

In this instance, it would be possible for a Muslim to affirm the possible existence of antimatter because there was rational evidence to suggest that it existed based on mathematical models, even though prior to 1932, there was no empirical proof. There is no scriptural evidence affirming their existence, and yet there is no objection to Muslims believing in antimatter. Antimatter exists within the domain of the *shahāda*, and therefore ascertaining its existence would be subject to the standard rules of operation (both empirical and rational) used by a Muslim or non-Muslim scientist working in the natural sciences.

---

[868] See: Q. (72:1).
[869] Rāzī, *Al-Tafsīr al-Kabīr*, 14:57-8.
[870] For instance, American historian and Christian theologian Dale Allison cites studies from the Religious Experience Research Centre (RERC), established at Oxford, on accounts of personal religious or spiritual experiences that include encounters with supernatural beings and argues that these experiences are not uncommon. See: Dale C. Allison. *Encountering Mystery: Religious Experience in a Secular Age*. Grand Rapids, Michigan: William B. Eerdmans Publishing Company, 2022.
[871] Ibid.
[872] Michio Kaku, and Jennifer Trainer Thompson. *Beyond Einstein: Superstrings and the Quest for the Final Theory*. (New York: Oxford University Press, 1997), 179-180; Carl D. Anderson 'The Positive Electron'. *Physical Review* 43, no. 6 (15 March 1933): 491–94. https://doi.org/10.1103/PhysRev.43.491.

For *Ashʿarī*s, both the top-down and bottom-up approaches to scientific inquiry are valid. Microorganisms, dinosaurs, the Higgs Boson, and black holes are legitimate parts of scientific knowledge within the domain of the *shahāda* even though their existence is established through different methods. That Islamic scripture does not contain information regarding these does not constitute a reason for not believing in their existence if there is sufficient reason to do so; to reiterate, an absence of evidence should not be erroneously conflated with evidence of absence.

Then, there are ideas in modern science that are based on empirical evidence but which ostensibly seem to challenge information found in scripture. The most prominent example of this is the theory of evolution, and, referencing Malik's recent study, we have explained how *Ashʿarī* thought may be used to address seemingly contradictory claims by exercising *tawaqquf* regarding the macro process of evolution and simultaneously affirming the breaking of natural convention through divine intervention based on Ghazālī's RI to maintain fidelity to a normative reading of scripture regarding the creation of the first man and woman, Adam and Eve.

We may also examine another example of an apparent conflict between scripture and science that may be resolved using the methods outlined in the chapter. The following *ḥadīth* is found in authoritative *ḥadīth* collections and is reliably attributed to the Prophet Muḥammad:

> Abū Dharr relates, "I was with the messenger (peace and blessings be upon him) in the mosque at sunset and he said to me, 'oh Abu Dharr, do you know where the sun [goes after] it sets?'. I said, 'God and His messenger know best'. He said, 'it goes until it prostrates under the throne, and that is [the meaning of] God saying, 'The sun, too, runs its determined course laid down for it by the Almighty, the All Knowing'".[873]

The apparent contradiction between modern astronomy and the *ḥadīth* is clear. It is firmly established empirically that as the earth spins and the sun seems to us to set in one place, it rises in another. We observe no outward manifestation of prostration nor any movement in the way the *ḥadīth* suggests. *Ḥadīth* exegetes, including classical scholars (alive well before the Copernican revolution), have debated the meaning of this *ḥadīth* and offered a number of opinions that allow us to make sense of the statement in a way that resolves the perceived

---

[873] Ibn Ḥajar Aḥmad bin ʿAlī al-ʿAsqalānī and Muḥammad al-Bukhārī. *Fatḥ al-Bārī Sharḥ Ṣaḥīḥ al-Bukhārī*. (Cairo: *Dār al-Kutub al-Salafiyya*, n.d.), 8:541-2.

conflict.[874] The first opinion is that the *ḥadīth* should be taken at face value, meaning the sun actually goes beneath the divine throne and prostrates each night before being given permission to rise once more. This understanding affirms real existence to this phenomenon. A literal understanding of the *ḥadīth*, as in a belief in the physical movement of the sun and its setting and rising in the way described, is, however, impossible. A second opinion holds that its movement and prostration beneath the throne (of God) means that the sun is in a state of obedience and submission to God's will. This understanding affirms conceptual existence and is compatible with modern astronomy. This idea is grasped when examining another opinion which suggests the sun's movement and position is in God's knowledge in the preserved tablet beneath the divine throne.[875] Another position affirms that this prostration of the sun is due to a type of discernment and awareness that God endowed it with.[876] This opinion seems to indicate that the prostration of the sun beneath the divine throne is possible without any outward physical manifestation in its motion as perceived by us because all that the *ḥadīth* alludes to is affirmed but through a means that is unbeknownst to the observer.[877] Such an opinion is substantiated in the *Qurʾān*, because there are verses that explicitly mention that the mountains, trees, stars, the moon, and the sun prostrate to God.[878] Exegetes make a similar point as before, that this prostration is referring to their obedience to God's will.[879] As such, one acceptable way of resolving the ostensible conflict between the *ḥadīth* and modern science is to affirm the meanings of the *ḥadīth* by ascribing a meaning of obedience and compliance to God's will. In other words, the meaning of the *ḥadīth* is said to refer to conceptual existence, in that it shares in the underlying meaning or spirit of the literal wording of the *ḥadīth*.

---

[874] Ibn Ḥajar and Bukhārī. *Fatḥ al-Bārī*, 8:541-2; ʿAlāʾ Ibrāhīm ʿAbd al-Raḥīm. *Ḥadīth - Sujūd al-Shams Taḥt al-ʿArsh - Wurida Shubh al-ʿAqlānīyīn*. Salaf Center, 2018. Accessed 27 June 2023. https://salafcenter.org/wp-content/uploads/2018/12/%D8%AD%D8%AF%D9%8A%D8%AB-%D8%B3%D8%AC%D9%88%D8%AF-%D8%A7%D9%84%D8%B4%D9%85%D8%B3-%D8%AA%D8%AD%D8%AA-%D8%A7%D9%84%D8%B9%D8%B1%D8%B4-%E2%80%93%D9%88%D8%B1%D8%AF-%D8%B4%D8%A8%D9%87-%D8%A7%D9%84%D8%B9%D9%82%D9%84%D8%A7%D9%86%D9%8A%D9%8A%D9%86.pdf

[875] Ibn Ḥajar and Bukhārī. *Fatḥ al-Bārī*, 8:542.

[876] Yaḥyā ibn Sharaf al-Nawawī. *Al-Minhaj: Sharḥ Ṣaḥīḥ Muslim ibn al-Ḥajjāj*. (Amman: *Bayt al-Afkar al-Dawliyyah lil-Nashr wa al-Tawziʿ,* 2001), 1:193.

[877] Ibn Ḥajar and Bukhārī. *Fatḥ al-Bārī*, 8:542.

[878] Q. (22:18).

[879] Rāzī, *al-Tafsīr al-Kabīr*, 23:20-21.

	Empirically verified	Rationally verified (without clear empirical evidence)	Scripturally verified	Reports outside of scripture	*Ghayb/ Shahāda*
Angels	X	X	✓	X	*Ghayb*
Antimatter (1928–1932)	X	✓	X	X	*Shahāda*
Antimatter (After 1932)	✓	✓	X	X	*Shahāda*
Dinosaurs	✓	X	X	X	*Shahāda*
Extraterrestrial life	X	X	X	✓	*Shahāda*
Jinn	X	X	✓	✓	*Quasi-ghayb*
Microorganisms	✓	✓	X	X	*Shahāda*
Paradise and hellfire	X	X	✓	X	*Ghayb*
Souls	X	X	✓	✓	*Quasi-ghayb*

Table 10. Types of knowledge as they pertain to various existent entities.

7.4 Conclusion

The seen (*shahāda*) and unseen (*ghayb*) typologies may be used to demarcate the boundary of natural science. We acknowledge that there are areas that are in a quasi-*ghayb* state since they may be suggested through numerous firsthand accounts, even though they are not scientifically corroborated. An *Ashʿarī* approach to the formation of a philosophy of science should consider the following:

1. God's necessary existence is an unquestionable metaphysical axiom. God's existence is inferred deductively and is outside the domain of the natural sciences.

2. Three sources of knowledge are accepted by the *Ashʿarī*s: rational, empirical, and reported. Each of these may tell us something objective about reality. God revealed knowledge of Himself and other matters through His prophets. The last of these was the Prophet Muḥammad. Both the *Qurʾān* and *ḥadīth* are sound sources of reported knowledge.

3. God is the creator and sustainer of the world and the only efficient cause in creation. This includes the creation of *asbāb* (singular: *sabab*). These are corollary events, which we may refer to, nominally, as secondary causes, in that they are entirely dependent on God. God's actions in the universe are logically coherent. There can be no judgement on an action of God, either in terms of whether it has occurred or how it manifests, without reasonable justification scripturally, logically, or empirically.

4. Humans are endowed with an intellect that is able to comprehend God's existence and the existence of the world. This creation exists outside of the mind and has an independent reality. Humans are able to discover and utilise the order and predictability of the natural world to learn about secondary causes (*asbāb*) to explain, predict, and create practical applications. This operates within the realm of the *shahāda*, not the *ghayb,* which is inaccessible to empirical verification.

5. On matters on which scripture is silent, *Ashʿarī*s exercise *tawaqquf*, withholding judgement. This position may be viewed as an affirmation of epistemological agnosticism on a particular issue.

6. Natural science is the study of the physical world and the secondary causes that demonstrate its order. In extremely rare instances, secondary causes and effects may be broken (e.g., prophetic miracles). The means through which these highly unlikely events occur are unknown. Considering the above definition, the natural sciences are not concerned with these occurrences since they fall outside the purview of secondary causation (*asbāb*). Here, *Ashʿarī*s distinguish between primary causation, which is directly from God and is logically necessary, and secondary causation, which is logically possible. From here, *Ashʿarī*s justify the occurrence of miracles since they do not deem natural laws logically necessary; rather, they are only logically possible.

7. Natural science exists within a hierarchy of different disciplines. Its purpose is two-fold: the first is to act as a means via which to explore the physical world and discover the theophany of God's attributes. The sciences are a discovery of the signs of God. The second purpose is to preserve the trust given to human beings as caretakers on earth. This entails upholding the divinely ordained rights of all creatures through

upholding humanity's ethical duties through the preservation of religion, life, intellect, property, dignity, and progeny.

8. An *Ashʿarī* compatible science must fulfil three conditions:

a. It is logically coherent. If a scientific principle is logically impossible, it is rejected. As foundationalists, *Ashʿarī*s believe in the primacy of basic logical axioms. Any break in those leads to absurdities, sophistry, relativism, scepticism, and the dismantling of rational epistemology, rendering all human knowledge invalid. Therefore, it is necessary that a scientific theory not entail logical inconsistencies.

b. It is compatible with mass transmitted, unequivocal positions in the *Qurʾān* and *ḥadīth* tradition. Ghazālī's RI is a primary method used to resolve any ostensible conflict between scripture and science. Criteria used to correctly ascertain and resolve any perceived conflicts include conformity to classical Arabic and that the interpretation be contextualised within other verses and *ḥadīth*.

c. It is ethically sound, according to one of the four *Sunnī* schools of jurisprudence.

Let us now examine how we may apply the *Ashʿarī* framework to an idea in modern physics that has attracted a great deal of attention in recent years: the proposed existence of multiple universes outside of our own, also known as the multiverse.

Chapter 8: *Ashʿarī* Thought and the Multiverse

8.0 Introduction

This chapter is a case study demonstrating how we may apply my proposed conceptual model of an *Ashʿarī* philosophy of science. I discuss the compatibility of four multiverse hypotheses in modern physical cosmology with *Ashʿarī* thought.

As mentioned in the previous chapter, the theorised existence of multiple universes is a popular example of a scientific hypothesis that is employed to argue for atheism.[880] Of the four levels of multiverse under discussion, I conclude that level I and II multiverses are, in principle, compatible with *Ashʿarī* thought, while level III and IV multiverses are incompatible. A level III multiverse is incompatible from the point of view of scripture, whilst a level IV is both scripturally and ontologically incompatible with *Ashʿarī* thought.[881]

This exploration forms part of the original contribution of the thesis. Given the limited length of a chapter, this study provides a general overview of the topic and avoids focusing on the granular details. I hope that the ideas discussed open avenues for further research. The aim is to offer an overarching but concise examination of major concepts in multiverse literature and

---

[880] Boulding, *The Multiverse and Participatory Metaphysics*, 16-17; Krauss, *Why There Is Something Rather than Nothing*, 119; 125-29; Stenger, Victor J. *God and the Multiverse: Humanity's Expanding View of the Cosmos*. Amherst, New York: Prometheus Books, 2014; Vernon, "God or a Multiverse?". There have been counter arguments for God's existence based on the fine tuning of the multiverse and the metaphysical need of a multiverse also. See: Friederich, "Fine-Tuning"; Friederich, "A New Fine-Tuning Argument for the Multiverse"; Kraay, 'Theism, Possible Worlds, and the Multiverse'; Page, "Does God So Love the Multiverse?", 380–95. It is also utilised as a solution by many scholars to the fine tuning of the universe. The following work also offers a look at some of the philosophical and scientific objections to the multiverse. See: Waller, *Cosmological Fine-Tuning Arguments*, 223.

[881] This categorisation was proposed by theoretical physicist, Max Tegmark, and offers a sample of most multiverse theories though the range of proposed multiverses extends beyond these four. Many are variations of the four levels discussed (e.g., black hole cosmology being similar to a level II multiverse). Cyclic multiverses, those extending through time rather than space, do not fall under any of the categories covered in this chapter. However, the purpose of this chapter is to be a demonstrative example of how to tackle the most influential ideas in the field. An exhaustive study of multiverse theology is beyond the scope of this thesis and certainly an intriguing topic for a separate PhD thesis. For an overview of the field and a look at the range of philosophical and theological perspectives See: Boulding, *The Multiverse and Participatory Metaphysics*; Bernard Carr, ed. *Universe or Multiverse?* Cambridge: Cambridge University Press, 2007; Simon Friederich. *Multiverse Theories: A Philosophical Perspective*. First edition. New York: Cambridge University Press, 2021; Jeffrey A. Zweerink. *Who's Afraid of the Multiverse?* Cork: BookBaby, 2008; Mary-Jane Rubenstein. *Worlds without End: The Many Lives of the Multiverse.* New York: Columbia University Press, 2014; Waller, *Cosmological Fine-Tuning Arguments,* 224.

examine how, in principle, may they be accommodated within the *Ashʿarī* philosophical framework proposed in chapter 7. The discussion of multiverse theory from the perspective of the *Ashʿarī* school has yet to be properly addressed in academic work.[882]

8.1 The Four Categories of Multiverse

The existence of multiple worlds beyond our own has been postulated for millennia. Of the earliest recorded was that of the ancient Greek philosopher Democritus, who posited the possible existence of an endless number of similar worlds to our own.[883] Other traditions, including Hindu and Buddhist cosmologies, conceptualise multiple worlds and iterations of the cosmos endlessly recurring from pre-eternity, with universes being created and destroyed in a never-ending cycle.[884] All of these ideas bear some resemblance to the concept of the multiverse in physical cosmology but are not the same. Furthermore, there are a variety of postulated multiverses depending on which theory in natural science we are examining. More recently, the actual term *multiverse* was coined by British psychologist and philosopher William James, whose definition differed from the contemporary scientific understanding of the word.[885]

---

[882] Adi Setia's work is a small exception to this as he discusses Rāzī's position on the universe vs. multiverse dichotomy in a few paragraphs. See: Adi Setia, "Fakhr al-Din al-Rāzī on Physics and the Nature of the Physical World: A Preliminary Survey", *Islam & Science,* 2, (2004), pp. 161-80. More broadly, Nidal Guessoum discusses the multiverse hypothesis from an Islamic perspective, critiquing the absurdities and the un-scientific nature of the vast number of universes proposed by some theories. See: Guessoum, *Islam's Quantum Question*, 257-261, 268. Another small contribution by Faisal Quraishi attempts to match modern scientific phenomena with scripture, though the interpretive methodology is not fully explained. As such some of the suggested parallels between science and *Qurʾānic* verses are dubious. See: Faisal Qureshi. "Comparisons of Ayats of the Quran with Astrophysics, Quantum Physics, and Cosmology". *Journal of Quranic Sciences and Research* 02, no. 01 (30 June 2021). https://doi.org/10.30880/jqsr.2021.02.01.006. There are also a few articles and blog posts as well as short answers to queries posed to Muslim scholars that discuss the viability of a multiverse from an Islamic perspective. See: Sedeer El-Showk. "The Islamic View of the Multiverse". *Nautilus | Science Connected,* 2016. https://nautil.us/the-islamic-view-of-the-multiverse-10157/#:~:text=From%20a%20broader%20perspective%2C%20the,of%20fine%2Dtuning%20more%20compelling; Salman Younas. "Question: What is the Islamic Position on The Concept of Time Travel? Alternate/Parallel Worlds? Multiverse?". *Seekersguidance*, 2021. https://seekersguidance.org/answers/education/question-what-is-the-islamic-position-on-the-concept-of-time-travel-alternate-parallel-worlds-multiverse/.

[883] Rubenstein, *Worlds without End: The Many Lives of the Multiverse*, 42-44.

[884] Ibid, 149-150, 170-2; Akira Sadakata, and Hajime Nakamura. *Buddhist Cosmology: Philosophy and Origins*. Translated by Gaynor Sekimori. First English Ed. 1997, Third printing. (Tokio: *Kōsei*, 1999), 93-113, 149.

[885] James believed in a type of pantheism. See: Ibid, 3-5.

The relevance of multiverse cosmology to contemporary atheism is that it is frequently used as an argument to eliminate the need for God. As British astronomer and mathematician Bernard Carr put it, 'If you don't want God, you'd better have a multiverse'.[886] Of the reasons this is argued is that a multiverse offers a convenient solution to the fine-tuning problem. The fine-tuning problem states that it is difficult for scientists to explain, the order, complexity, and great precision found in the physical constants and initial conditions of the universe that are required for its inception.[887]

As outlined in the introduction, there are four types (or levels) of multiverse under discussion.[888] A level I multiverse refers to the existence of areas outside of our own observable universe, a 93 billion light year diameter sphere around our own planet, called the Hubble Volume.[889] Given the continual expansion of the universe, we may never have access to anything beyond the Hubble Volume, since even light from these distant places can never reach us. The level I multiverse is posited to contain multitudes of other Hubble Volume sized universes. A level I multiverse can be understood as a massive extension to our own universe. Rather than just adding space to our own universe, a level II multiverse refers to the existence of other universes outside of our own that were created with their own big bangs and initial conditions. These universes are constantly being created, with some created before our own.

A level III multiverse is based on a particular interpretation of quantum mechanics (QM) and posits that, given any possible state (quantum superposition), all possibilities are actualised into different universes. To put it more plainly, a level III multiverse suggests that a new universe branches off and is generated to allow all possible events to occur. Given any possibility, the flipping of a coin for example, rather than saying that the coin will either land heads up or tails up, what actually occurs is that another universe is generated at the point the coin lands. Rather than having one universe in which there can only be one outcome (tails up or heads up), there are two universes that exist such that both possibilities actually happen but in two separate universes.

---

[886] Ibid,1.

[887] David Sloan. "Fine-Tuning." Fine-Tuning - Philosophy of Cosmology. n.d. Accessed July 2, 2023. http://philosophy-of-cosmology.ox.ac.uk/fine-tuning.html#:~:text=First%20precisely%20described%20by%20Dicke,space%20(see%20flatness%20problem).

[888] Max Temgark. "The Multiverse Hierarchy". In Carr, Bernard, ed. *Universe or Multiverse?* (Cambridge: Cambridge University Press, 2007), 99-124.

[889] Rubenstein, *Worlds without End*, 144, 157–59.

A level IV multiverse refers to the idea that if any mathematically possible universe can be posited, which is an essentially infinite number, it does actually exist. In a level IV multiverse, anything that can exist does exist.

The first two types of multiverses are founded on a concept in Big Bang cosmology called inflation: a rapid expansion of the universe in the very early moments of its inception. The third type is founded on a particular interpretation of QM, and the fourth posits universes as mathematical postulates.[890] Multiverse cosmology blurs the lines between physics, philosophy, and theology.[891] This is because a posited multiverse is essentially empirically unverifiable with given current scientific understanding. A multiverse also has implications regarding questions that are in the domain of philosophy and theology, such as moral accountability, and the purpose of life. We begin by discussing the four types of multiverses then explore the compatibility of each with *Ashʿarī* thought.

8.1.1 The Problem of Fine-tuning: Why is the Multiverse Theory Important for Naturalist Science?

From a theological perspective, multiverses offers a naturalistic solution to the fine-tuning problem.[892] As cosmologists quickly learnt in the latter part of the twentieth century, the physical laws governing the universe dictated an extremely limited set of parameters to allow the creation and expansion of the universe and its constituent parts.[893] The cosmological constant is a profoundly specific number that is associated with the expansion of the universe and is necessary for its creation. This expansion is due to what is referred to as dark energy. The cosmological constant proposed by Einstein in 1917 as part of his general relativity

---

[890] Tegmark, "The Multiverse Hierarchy", 101, 116-20.

[891] Boulding, *The Multiverse and Participatory Metaphysics*, 1.

[892] John F. Donoghue. "The fine-tuning problems of particle physics and anthropic mechanisms" in *Universe or Multiverse?*, 236-8; Boulding, *The Multiverse and Participatory Metaphysics*, 22, 72-3. For other perspectives on the fine-tuning debate, see: Barnes, L. A. "The Fine-Tuning of the Universe for Intelligent Life". *Publications of the Astronomical Society of Australia* 29, no. 4 (2012): 529–64. https://doi.org/10.1071/AS12015; Victor J. Stenger. *The Fallacy of Fine-Tuning: Why the Universe Is Not Designed for Us*. Amherst, N.Y: Prometheus Books, 2011. For a response to Stenger's argument, see: Barnes, L. A. (2012). *The Fine-Tuning of the Universe for Intelligent Life. Publications of the Astronomical Society of Australia, 29(4), 529–564.* doi:10.1071/as12015. The Stanford encyclopedia of philosophy offers a good albeit technical overview of the arguments for and against fine tuning. See: Friederich, "Fine-Tuning".

[893] Waller, *Cosmological Fine-Tuning* Arguments, 100-111; Paul C. W. Davies. *Cosmic Jackpot: Why Our Universe Is Just Right for Life*. (Boston: Houghton Mifflin, 2007), 2-3, 139-150.

equations was assumed to be zero because the prevailing idea at the time was that the universe was in a state of equilibrium, neither expanding nor contracting.[894] Edwin Hubble subsequently discovered that this constant was in fact greater than zero since the universe was proven to be expanding.[895] In fact, to account for the rate of expansion, the constant was found to be very precise. This coefficient must be accurate within one part in 10^{90} decimal places.[896]

This level of specificity in the physical laws is seen with quite a few other constants as well.[897] Take for example, the amount of matter in the universe, which must be accurate within one part in 10^{24} Kg/m^3 to allow for life to exist.[898] Note that a variation in these constants would mean that stars, planets, galaxies, and even atoms could not form. These unimaginably precise numbers are why many have noted that the universe is in fact finely tuned. No physical processes can account for them. Famed Physicist Paul Davies comments on this, saying,

'The really amazing thing is not that life on earth is balanced on a knife-edge, but that the entire universe is balanced on a knife-edge and would be total chaos if any of the natural "constants" were off even slightly'.[899]

It is because of the fine-tuning of the universe that some have pointed to the necessity of the existence of God to account for this.[900] They conclude that a supremely vast intelligence must have set these constants and brought the universe into being. According to them, it is neigh inconceivable to assume constants were set purely serendipitously. It is here scientists have suggested a possible naturalistic explanation for this fine-tuning: the existence of a multiverse. One that is a possible consequence of cosmic inflation which happened during the early part of the Big Bang.[901]

8.1.2   Level I Multiverse: The Vast Expanse

An ever-expanding universe whose reach extends vast distances beyond our observable universe and is inaccessible to it is perhaps the most plausible and scientifically accepted type

---

[894] Rubenstein, *Worlds without End: The Many Lives of the Multiverse,*144-5.

[895] Ibid, 143-145.

[896] Stephen C. Meyer. *The Return of the God Hypothesis: Compelling Scientific Evidence for the Existence of God*. First edition. (New York, NY: HarperOne, 2020), 186.

[897] Waller, *Cosmological Fine-Tuning Arguments,* 107-110.

[898] Ibid, 107-8.

[899] Paul Davies. *The Unreasonable Effectiveness of Science*, in John Marks Templeton, Evidence of Purpose: Scientists Discover The Creator, (Continuum, 1996), 46.

[900] Waller, *Cosmological Fine-Tuning Arguments*, 2.

[901] Ibid, 223-234.

of multiverse since it only posits areas of space beyond what we can see.[902] According to modern physical cosmology, the universe began around 13.8 billion years ago in an event commonly known as the Big Bang.[903] This cosmic expansion saw the generation of matter from a singular point. Over billions of years, matter coalesced into atoms and molecules, then into galaxies, stars, and planets, allowing for the existence of life as we know it.[904]

Einstein's general theory of relativity in the early twentieth century set the stage for the discovery of the Big Bang.[905] In his field equations, Einstein described the relationship between gravity, mass, and energy as they related to the curvature of space–time. Introduced into these field equations is the cosmological constant, lambda, which denotes a repulsive force necessary to keep the universe in a static state, as Einstein initially posited, to counter the attractive force of gravity.[906] Thus, Einstein's assumed value for the cosmological constant was zero. He, and indeed many other cosmologists at the time, believed that the universe was stable and had existed for an infinite amount of time.[907]

In the 1920s, cosmologists Georges Lemaitre and Alexander Freidman, working independently, found that by using Einstein's equations they could derive a solution that showed an expanding universe.[908] Lemaitre suggested that the universe sprang forth from a 'primeval atom', an incomprehensibly small point with enormous density and energy.[909] Later, Edwin Hubble's observations of the red shift of distant galaxies confirmed that they were moving away from us, lending credence to the expanding universe hypothesis.[910] In 1964, two astronomers, Arno Penzias and Robert Wilson, made an accidental discovery that would provide strong evidence for the Big Bang theory. They found the cosmic microwave background (CMB), a weak but constant electromagnetic radiation emanating from all across the visible universe.[911]

---

[902] Max Tegmark. *Parallel Universes*. *Space.Mit.Edu*, 2003. <https://space.mit.edu/home/tegmark/PDF/multiverse_sciam.pdf >.

[903] Rubenstein, *Worlds without End*, 150.

[904] Ibid.

[905] Ibid, 145.

[906] Rubenstein, *Worlds without End*, 15, 145.

[907] Alexander Vilenkin. *Many Worlds in One: The Search for Other Universes*. 1st ed. (New York: Hill and Wang, A division of Farrar, Straus and Giroux, 2006), 18-20.

[908] Rubenstein, *Worlds without End: The Many Lives of the Multiverse*, 145.

[909] Ibid.

[910] A. S. Sharov, and I. D. Novikov. *Edwin Hubble, the Discoverer of the Big Bang Universe*. (Cambridge [England]; New York, NY, USA: Cambridge University Press, 1993), 140, 168.

[911] Mike Wall. "Cosmic Anniversary: 'Big Bang Echo' Discovered 50 Years Ago Today". *Space.Com*. 2014. https://www.space.com/25945-cosmic-microwave-background-discovery-50th-anniversary.html; "Cosmic Microwave Background (CMB) Radiation". European Space Agency.

Whilst the original form of the Big Bang theory was backed by strong evidence, it still could not account for three anomalous astronomical findings.[912] These problems are known as the flatness problem, the horizon problem, and the monopole problem. They were incompatible with the theory until, in the 1980s, Paul Steinhardt, Alan Guth, Andrei Linde, and Andy Albrecht developed the theory of cosmic inflation.[913] Inflation suggests that in the very early moments of the Big Bang (after 10^{-32} to 10^{-33} seconds), the universe underwent a short period of extreme exponential growth at a rate faster than the speed of light.[914] First, by positing this into the theory, inflation would explain why areas of the universe that were very far apart could have similar temperatures, as observed in the CMB.[915] This would not be possible to explain otherwise, since they could have no causal relationship within a non-inflationary cosmology, because light would not have had enough time to travel the vast distances required for uniformity of radiation.[916]

Second, the original Big Bang theory predicted a matter and energy density and thus the level of curvature of the universe rather different from what is observed, a flat universe as opposed to one of positive or negative curvature (spherical or in the shape of a saddle). Inflation explains this observation (known as the flatness problem).[917] Even a curved surface sufficiently large enough would seem flat on smaller scales.[918] Take the earth as an example: we may observe a perfectly flat piece of land somewhere, but it is in fact ever so slightly curved when viewed at larger scales. Because we are viewing only a miniscule part of the earth, it gives the impression that it is flat. The same may be said of the universe.

Third, the original Big Bang theory, before the 1980's, necessitates the existence of a large number of magnetic monopoles, none of which have ever been observed (the monopole

---

Accessed   14   August,   2022.
https://www.esa.int/Science_Exploration/Space_Science/Herschel/Cosmic_Microwave_Background_CMB_radiation#:~:text=The%20Cosmic%20Microwave%20Background%20(CMB,shockwave'%20of%20the%20Big%20Bang.

[912] NASA. "WMAP Inflation Theory" NASA. *Map.Gsfc.Nasa.Gov.* Accessed, 13 August, 2022. https://map.gsfc.nasa.gov/universe/bb_cosmo_infl.html; Alan H. Guth, and Paul J. Steinhardt. "The Inflationary Universe." *Scientific American* 250, no. 5 (1984): 116–29. http://www.jstor.org/stable/24969372.

[913] Ibid.

[914] Guth, and Steinhardt, "The Inflationary Universe", 116-29; Alan H. Guth. *The Inflationary Universe: The Quest for a New Theory of Cosmic Origins.* (Boston; Scranton: Addison-Wesley Longman, Incorporated HarperCollins Publishers, 2000), 184-5; Vilenkin, *Many Worlds in* One, 45-53; Waller, *Cosmological Fine-Tuning Arguments*, 225.

[915] The homogenous temperature of the universe was dubbed the 'horizon problem'.

[916] Rubenstein, *Worlds without End: The Many Lives of the Multiverse*, 154-6.

[917] Ibid, 126-7.

[918] Guth, and Steinhardt. "The Inflationary Universe.", 116–29; Guth, *The Inflationary Universe: The Quest for a New Theory of Cosmic Origins*, 176-8.

218

problem). Inflation demonstrates that whilst magnetic monopoles may exist, they are far less common and not easily detectable.[919]

The original Big Bang theory does not account for what happened at the very beginning (t=0 seconds), the exact moment of the start of the Big Bang. This is not explained by inflation but is an important impetus for multiverse theory. With these necessary ideas now covered, we can begin discussing the first two types of multiverses.

The way we can observe distant celestial objects is to detect the electromagnetic waves including visible light emitted from them.[920] These are either observed through the naked eye or through detectors, which can see wavelengths invisible to the human eye. The electromagnetic waves travel at a constant velocity through the vacuum of space (~300,000 km/s).[921] The vast distances that must be traversed means that, depending on the distance of the object, it may take millions, even billions, of years for the light from the objects to reach us. The more time passes, the further out in space we can see. But what is it that lies beyond the observable universe? The answer to this may be that there indeed are even more vast expanses of space in which other galaxies may exist. The extent of the size of the universe beyond that which we can see is debatable. Cosmologists estimate, based on inflation, that anywhere between a minimum of a thousand times the size of our visible universe to an infinite expanse of space beyond our own visible universe exists.[922]

A light year is a unit measuring the distance light travels in a year at the speed of approximately 300,000 kilometres per second and is equal to approximately 10 trillion kilometres.[923] The observable universe is about 93 billion light years in diameter.[924] The observable universe can be determined by how far away the electromagnetic waves, specifically the CMB, can be detected. Imagine a sphere surrounding earth that it is 93 billion light years in diameter and growing in size each moment as light reaches us from further away; this is known as the Hubble Volume.[925] Because the universe continues to expand ever faster, there are regions of space

---

[919] Zweerink, Jeffrey A. *Who's Afraid of the Multiverse?(*Cork: BookBaby, 2008), 12; Guth, *The Inflationary Universe: The Quest for a New Theory of Cosmic Origins*, 147-166.

[920] Liddle, Andrew R. *An Introduction to Modern Cosmology*. 3. ed. (Chichester, West Sussex: Wiley, 2015), 3.

[921] Vicky Stein. "How Fast Does Light Travel? | The Speed of Light". 2022. *Space.Com*. https://www.space.com/15830-light-speed.html .

[922] Zweerink, *Who's Afraid of the Multiverse?,* 17-18.

[923] Liddle, *An Introduction to Modern Cosmology*, 4.

[924] K. Sottosanti. "observable universe." Encyclopedia Britannica, May 5, 2023. https://www.britannica.com/topic/observable-universe.

[925] "Defining and Measuring the Observable and the Whole Universe". nd. *Encyclopedia Britannica and MinutePhysics*. Accessed August 14. https://www.britannica.com/video/185400/universe; Liddle, *An Introduction to Modern Cosmology*, 29.

that we will never be able to observe.[926] These areas of space may be separated by distances so vast and increasingly growing that they are essentially cut off from one another. Each of these hypothetical spheres (93 billion lightyears each in diameter) constitutes a separate universe.

8.1.3 Level II Multiverse: Bubble Universes

Inflation as discussed in the previous section was a miniscule period of time in which the universe during its first moments underwent a massive exponential expansion.[927] The expansion of the universe during the inflationary period then slowed, which allowed for the formation of galaxies and stars.[928] However, some physicists posit that the inflationary process occurring in a space beyond our own universe. Each time the inflation slows, a new universe is born with its own unique cosmological constants that is completely separate from other universes.[929] Theologian Mary-Jane Rubenstein uses the analogy of a block of Swiss cheese,[930] the air pockets being different universes separated by a sea of energy, the cheese itself. Jeffery Zweerink uses the analogy of a pot of water being heated on a stove; as the water comes to a boil, it produces bubbles at random interval non-uniformly in the water.[931] The level II multiverse may be viewed as such, with the bubbles being separate universes being born, through inflation, which is the boiling water creating these bubbles.[932]

The result of this is that there are countless other universes which were generated and are continually being formed, each with their own physical laws and that are completely separate from each other.[933] Some physicists postulate that there may even be an infinite number of them.[934] This idea provides an excellent naturalistic solution to the fine-tuning argument. If there are an infinite, or at least a very large number, of universes being created each with their own particular set of physical constants, it is not inconceivable that in at least one of them (ours) a universe which would allow for planets, stars, galaxies, and ultimately, life to exist should form. Thus, the fine-tuning of the universe is not as unlikely as it would initially seem.[935]

---

[926] Rubenstein, *Worlds without End: The Many Lives of the Multiverse*, 156-7.
[927] Guth, *The Inflationary Universe: The Quest for a New Theory of Cosmic Origins*, 184-5.
[928] Ibid.
[929] Waller, *Cosmological Fine-Tuning Arguments*, 225. 100-111
[930] Rubenstein, *Worlds without End: The Many Lives of the Multiverse,* 161.
[931] Zweerink, *Who's Afraid of the Multiverse?, 23-4.*
[932] Ibid.
[933] Rubenstein, *Worlds without End: The Many Lives of the Multiverse*, 161-3.
[934] Zweerink, Jeffrey A. '*Who's Afraid of the Multiverse?',* 17-18.
[935] Waller, *Cosmological Fine-Tuning Arguments*, 223-4.

This is a convincing argument, as it suggests that the intelligent design argument from fine-tuning is ultimately a 'God of gaps' fallacy. The theistic fine-tuning argument says that it is not possible for the precise physical constants in the universe to have existed by pure chance, and therefore there must be an intelligent designer that made them the way that they are. Natural laws do not suffice in explaining themselves or the generation of a coherent universe, and therefore God must be the one who brought the universe into being. The argument proves its weakness once we find a naturalistic explanation for the physical laws governing the universe, with the multiverse offering one such explanation.

8.1.4 Level III Multiverse: The Many Worlds Interpretation of Quantum Mechanics

To explain the many worlds interpretation (MWI) of QM, one must be aware of a few concepts in physics that can be explained through two ideas: the double slit experiment and Schrodinger's cat thought experiment. The Heisenberg uncertainty principle in QM tells us that it is impossible to determine a subatomic particle's position and momentum simultaneously.[936] QM also tells us that subatomic particles (such as electrons and photons) can behave both as waves and particles of matter.[937] A famous demonstration known as the double slit experiment illustrates this phenomenon.[938]

Imagine a board with two long thin rectangular slits cut out at the centre. When we send a beam of electrons towards the board and observe them, we see that some of the electrons hit the board, whilst others go through one of the two slits. Placing a screen behind the two slits to detect them, we see a pattern forming marking where the electrons land. When observing the electrons going through the slits, we see a pattern that resembles the two slits (see the diagram below).[939] This signals that the electrons are acting like particles, little bits of matter.

---

[936] Heisenberg, Werner. *Physics and Philosophy: The Revolution in Modern Science.* (Penguin Classics. London: Penguin, 2000), ix-x.
[937] See: Maudlin, Tim. *Philosophy of Physics: Quantum Theory* (Princeton and Woodstock: Princeton University Press, 2019), 10-12; Dobrijevic, Daisy. "The Double-Slit Experiment: Is Light a Wave Or A Particle?". *Space.Com.* 2022. https://www.space.com/double-slit-experiment-light-wave-or-particle.
[938] Maudlin, *Philosophy of Physics: Quantum Theory*, 10-17; Dobrijevic, "The Double-Slit Experiment: Is Light A Wave Or A Particle.
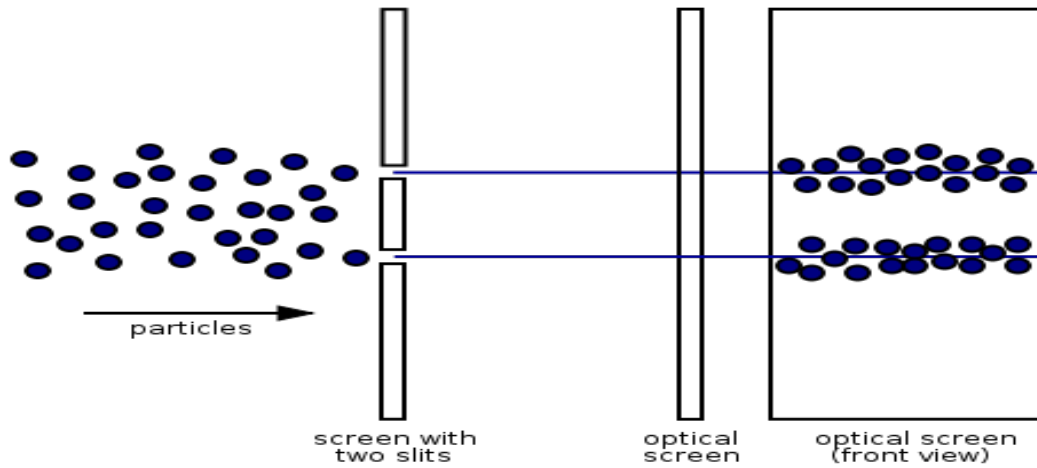[939] Ibid.

Figure 2 The double slit experiment when the electrons are observed.[940]

However, if we perform the exact same experiment but do not observe which slit the electrons go through, we get an entirely different result. The pattern on the screen, rather than showing two horizontal slits as one would assume, shows an interference pattern.[941] This signifies, counter-intuitively, that as they went through the slits, the electrons were in fact acting like waves (similar to waves that form when dropping a pebble in still water). See the diagram below.
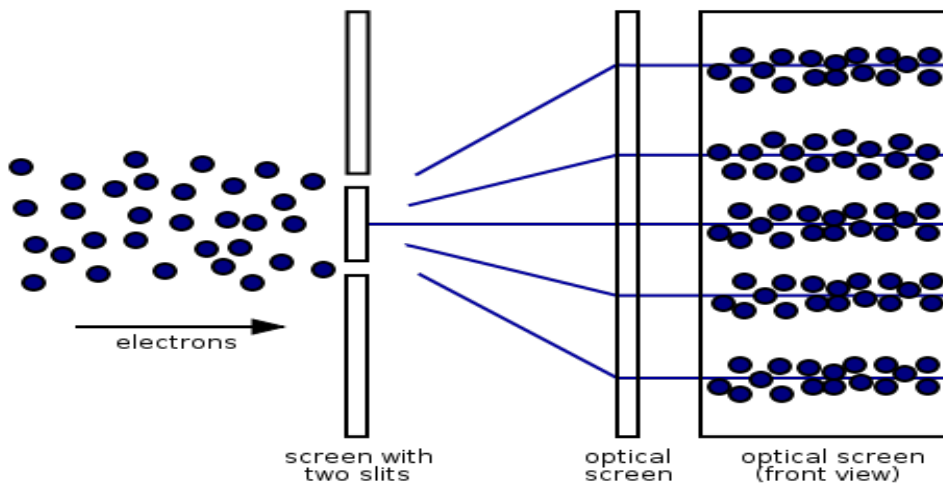
Figure 3 The double slit experiment when the electrons are not observed.[942]

---

[940] Image from: Wikimedia Commons. Two-Slit Experiment Particles image. https://commons.wikimedia.org/wiki/File:Two-Slit_Experiment_Particles.svg
[941] Maudlin, *Philosophy of Physics: Quantum Theory*, 10-17; Dobrijevic, Daisy. "The Double-Slit Experiment: Is Light a Wave or a Particle?".
[942] Image from: Wikimedia Commons. Two-Slit Experiment Electrons image. https://commons.wikimedia.org/wiki/File:Two-Slit_Experiment_Electrons.svg.

In one instance, an electron behaves like a small particle, as we would expect; in another, merely by not observing which hole it entered, it acts like a wave of potentiality.[943] What is it then that actually determines the collapse of the wave function? Is it observation, or are there hidden variables and occurrences unknown to us? These are some of the questions that are still hotly debated by physicists.

Another famous idea that tries to pose these questions and demonstrates the counter-intuitive and seemingly paradoxical nature of QM is the Schrödinger's cat thought experiment.[944] Imagine a cat is placed in a sealed box. Inside the box is a radioactive substance that has a 50% chance of emitting a particle through atomic decay and a 50% chance of not doing so. If it emits a particle, that triggers a mechanism that releases poisonous gas into the box, which kills the cat. If the radioactive substance does not decay, the gas is not released, and the cat stays alive.[945] Is the cat dead or alive? When does the wave function collapse? In other words, when is the decay of the atom determined? Is it before or after the box is opened?

According to the most popular interpretation of QM (the Copenhagen interpretation), what determines whether atomic decay has occurred and consequently whether the cat is alive or dead is observation of the fact.[946] As such, prior to opening the box, the particle is in a superposition, a wave function, which includes all possible states the particle can be in.[947] The cat is said to be both dead and alive simultaneously until we open the box.

Complex discussions regarding the interpretation of quantum equations, the unexpected behaviour light and subatomic particles, and what they inform us about the nature of reality have been a debate among physicists and philosophers ever since. QM currently has a number of competing schools of interpretation.[948] Some try to resolve the paradox by explaining that the cat is determined to be alive or dead long before the box is opened, because they argue that

---

[943] Maudlin, *Philosophy of Physics: Quantum Theory*, 10-17; Dobrijevic, "The Double-Slit Experiment: Is Light a Wave or a Particle?".

[944] Jeffrey Bub, and Tanya Bub. *Bananaworld: Quantum Mechanics for Primates*. First edition. (Oxford, United Kingdom: Oxford University Press, 2016), 208-215.

[945] Ibid, 215, 218.

[946] Jan Faye, "Copenhagen Interpretation of Quantum Mechanics", *The Stanford Encyclopedia of Philosophy* (Winter 2019 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/win2019/entries/qm-copenhagen/; Clark, Josh.. "How Quantum Suicide Works". *Howstuffworks*. Accessed, 17 August, 2022. https://science.howstuffworks.com/innovation/science-questions/quantum-suicide4.htm.

[947] Ibid.

[948] Collins, Graham. "The Many Interpretations of Quantum Mechanics". *Scientific American*. 2007. https://www.scientificamerican.com/article/the-many-interpretations-of-quantum-mechanics/; Lewis, Peter J. "Interpretations Of Quantum Mechanics" in the *Internet Encyclopedia Of Philosophy*. *Iep.Utm.Edu*. Accessed August 17. https://iep.utm.edu/int-qm/ .

the collapse of the wave function is determined by other objective physical factors rather than observation.[949] Another interpretation suggests the wave is merely epistemic in function and is only a measure of our own lack of knowledge.[950] Other interpretations are deterministic, such as Bohmian mechanics, which posits the existence of unknown variables that scientists have yet to detect.[951]

Of the more unusual interpretations – and the one directly related to the existence of a multiverse – is the MWI of QM, first expressed by Hugh Evertt in 1957.[952] This explanation has been heavily criticised by some physicists, who argue that the theory is non-falsifiable.[953] Critics also argue that the MWI breaks Occam's razor, a scientific rule that argues that elements of a scientific explanation should not be added unnecessarily.[954] This entails that the simpler explanation of a given problem is the most likely. Some scientists argue that the MWI is on the fringes of what reasonably can be called science.[955] Nevertheless, it has some ardent supporters in the scientific community and has seen increased attention recently.

The MWI tells us that whenever we have a superposition of states, each possible reality is actualised.[956] In one reality, or universe, the atom decays, and the cat is dead. In another, the atom does not decay, and the cat remains alive. Rather than a wave function that collapses into one possibility, reality splits into multiple universes in which all the possibilities of the wave function exist.[957] Going back to the double slit experiment, according to MWI, when observing which slit the electron goes into, we have caused the universe to split into all the possible outcomes the electron can go. The wave function only seems to collapse for us, when in reality, it has not. Rather, our own observation is that of a single universe that has branched off. On the macro level, this would entail that any quantum changes occurring anywhere in the physical universe and to any particle results in the creation of an exponentially increasingly number of

---

[949] Ibid.

[950] Ibid.

[951] Such as the existence of pilot waves which are posited to explain particle wave duality and claims that particle positions may always be known. Originally worked on by Louis de Broglie in 1927 and then development further by David Bohm in 1952. See: Maudlin, *Philosophy of Physics: Quantum Theory*, 138-9.

[952] Boulding, *The Multiverse and Participatory Metaphysics*, 13.

[953] George Ellis, and Joe Silk. 'Scientific Method: Defend the Integrity of Physics'. *Nature* 516, no. 7531 (December 2014): 321–23. https://doi.org/10.1038/516321a.

[954] Vaidman, Lev, "Many-Worlds Interpretation of Quantum Mechanics", *The Stanford Encyclopedia of Philosophy* (Fall 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2021/entries/qm-manyworlds/>.

[955] See: Ball, Philip. *Beyond Weird: Why Everything You Thought You Knew about Quantum Physics Is Different*. (Chicago: The University of Chicago Press, 2018), 288-305.

[956] Boulding, *The Multiverse and Participatory Metaphysics*, 13.

[957] Ibid.

universes. There are a myriad of them, many essentially copies of our own, others differing slightly, whilst many others are utterly different.[958] To understand the implications from our vantage point, MWI tells us that there are universes where Germany and Japan won the second world war, others where I decided on a different career path, and a universe where I decided to have tea instead of coffee this morning. The implications of such a multiverse are mind boggling, although according to Max Tegmark, there is in fact not much that separates a level III quantum multiverse with a level I or II. The only difference, he says, is the place where these universes are located.[959]

8.1.5 Level IV: All Possible Worlds

The level IV multiverse hypothesis is founded on a Platonist conception of reality.[960] Rather than viewing mathematics as a means to express the physical laws governing the universe, proponents of the level IV multiverse invert this perception of reality. They understand the cosmos to be fundamentally a mathematical entity.[961] This top-down view assumes that the physical world is merely an expression of a mathematical structure because mathematics very accurately describes the world around us through scientific laws. It may also be argued that it is capable of describing all aspects of reality. The physical world is seen as a derivative of a higher mathematical reality.[962]

To be better understand the idea of a mathematical reality, we can contrast it with the Aristotelian paradigm. Aristotelian ontology can best be described as a bottom-up view of reality, which sees that the physical world is that which is real and that mathematical relations are abstracted from the world through the laws of science.[963] Mathematical relations are seen as a derivative of physical reality, not the other way around.

A level IV multiverse posits that any universe that can be expressed as a mathematical structure exists.[964] We do not create but rather uncover these universes through our discovery of mathematical structures that describe them. In a level IV multiverse, an infinite number of all

---

[958] Tegmark, "The Multiverse Hierarchy", 102.
[959] Boulding, *The Multiverse and Participatory Metaphysics*, 13. I would disagree with Tegmark because the implications of a level III multiverse are not necessarily entailed in a level I or II multiverse since the latter two can still potentially be smaller and finite in size.
[960] Tegmark, "The Multiverse Hierarchy", 114-116.
[961] Ibid.
[962] Ibid.
[963] Ibid, 114.
[964] Ibid, 118.

conceivable types of universes exists.[965] In principle, level I, II and III multiverses are included in a level IV multiverses, since they are all mathematically possible.[966]

8.2 Compatibility with *Ashʿarī* Thought

Using the epistemological, ontological, and scriptural parameters of *Ashʿarī* philosophy of science outlined in the previous chapter, the first two types of multiverses are entirely unproblematic from an *Ashʿarī* stance, with the stipulation that no actual infinitudes in space or time are postulated, as they would entail logical impossibilities. Creation *ex nihilo* must also be assumed since it is scripturally necessary. However, this does not preclude potential infinities from existing within a proposed multiverse.[967]

A level III multiverse, whilst not strictly demonstrating any logical or ontological violations, is problematic from a scriptural perspective since it does allude to vainness in God's actions. A reality such as this would render prophetic guidance, questions of moral accountability, reward, and punishment in the afterlife meaningless – all of which are non-negotiable touchstones of an *Ashʿarī* worldview. A level IV multiverse holds that the fundamental nature of reality is mathematical. It means that if a universe is mathematically viable, it exists.[968] This position is ontologically incompatible with the *Ashʿarī* paradigm because it equates essence (also known as quiddity) with existence and assumes the extra-mental existence of abstract entities.[969] It also violates the logically necessary divine attribute of will, by stating that God is compelled to create all that is rationally coherent.

8.2.1   Epistemological and Ontological Compatibility

Let us now examine the epistemological and ontological compatibility of these four types of multiverses from an *Ashʿarī* perspective. With two notable exceptions, level I and II multiverses are acceptable within the *Ashʿarī* paradigm, while levels III and IV are not compatible.

A level I multiverse raises some of the same issues of a level II multiverse. The existence of areas of space in which there are other galaxies, stars, and planets that are inaccessible to use

---

[965] Rubenstein, *Worlds without End: The Many Lives of the Multiverse*, 203-6.
[966] Ibid.
[967] Since potential infinites are always finite and do not entail logical absurdities. See chapter 4.
[968] Tegmark, "The Multiverse Hierarchy", 116-20.
[969] Ibid.

is not logically objectionable. There is no evidence to suggest a limit to the size and scope of the created world either philosophically or scripturally (the latter is explored below). It is logically conceivable to have a cosmos that is any finite size since there are no contradictions entailed in the proposition that the cosmos is a particular volume. A multiverse that is 10^{500} times larger than the size of our own observable universe does not break the law of identity, law of contradiction, or law of excluded middle.[970]

Therefore, if *inference to the best explanation* (abduction) through the equations of inflation, induction by extrapolating the existence of a similar distribution of matter and energy in space beyond the observable universe, and empirical evidence through astronomical observations confirm an inflationary beginning to the universe, it would behove the *Ashʿarī* cosmologist to accept the possible existence of such a cosmos.[971] Rather than being a threat to their theology, the existence of such a multiverse would be yet another manifestation of the symphony of divine attributes to be contemplated.[972]

There are two exceptions to the compatibility of level I and II multiverses with the *Ashʿarī* paradigm. The first is that it is not possible that the multiverse be spatially or temporally infinite,[973] because *Ashʿarī* ontology denies the possible existence of actual infinities in contingent entities. The first reason for this is that it would not be logically possible to attain an actual infinity through successive addition or to assume an infinitely old multiverse. In this case, it would be the continual expansion of the universe (however fast that may be) through pre-eternal cosmic inflation. As demonstrated in chapter 5, the addition of more space to the universe cannot give us an infinity of space,[974] nor can the addition of more level II universes. Additionally, a multiverse stretching infinitely into the past is problematic from a scriptural perspective.[975] The second reason, also argued in chapter 5, is that an actual infinity entails logical contradictions that would not be viable with rational thought and would lead to absurdities.[976] It is logically coherent to hold that the universe is growing perpetually, however – that it is a potentially infinite expanse that is always finite because at any point in time, a

---

[970] Some physicists posit up to 10^{500} universes in a level I or II multiverse. See: Rubenstein, *Worlds without End: The Many Lives of the Multiverse,* 165-6.

[971] As we saw in chapter 5, abduction, induction, and empirical evidence are all acceptable sources of knowledge for the *Ashʿarī*s.

[972] See as an example: Rāzī's interpretation of the verse: "Say: 'Behold all that is in the heavens and on earth'; But neither Signs nor Warners Profit those who believe not." Q. (10:101). Rāzī, *Al-Tafsīr al-Kabīr,* 17:176-7.

[973] See the section on infinities in Chapter 5.

[974] Ibid.

[975] Ibid.

[976] Ibid.

multiverse that is potentially infinite in size is still in fact limited. It is of no consequence if the universe is a billion, trillion, or some other unfathomably enormous size larger than our observable universe, that multiverse would still be finite.[977] However, if we do assume a multiverse that is of such grand scale, we run into some existential questions that see *Ashʿarī* ontology raise its second notable objection.

In a level I or II multiverse of sufficient size containing a perplexingly large number of universes, it is conceivable to assume that at least some will have the same initial conditions as our own.[978] The observable universe contains a large but finite amount of matter in the form of galaxies, stars, planets, and living things. They all comprise a set number of atoms that are ordered and distributed in a particular way. Given a sufficiently large level I or II multiverse (e.g., containing 10^{500} universes), it is conceivable that there may exist identical earths, solar systems, and even entire Hubble Volumes to our own,[979] because there are a limited number of ways the matter inside each Hubble Volume may be distributed and a limited number of initial conditions to arrange said matter.[980] MIT theoretical physicist Max Tegmark estimates that in such a multiverse, each person would have an identical copy of themselves living on an identical planet to our own at least $10^{10^{28}}$ metres away. Stranger still, he posits that about $10^{10^{118}}$ metres away is an entire universe that is identical to our own Hubble Volume.[981] To give a perspective to the size of these numbers, it is estimated that there are only approximately 10^{80} atoms in the visible universe.[982]

It is logically coherent to posit the existence of galaxies, solar systems, and even earths identical to ours. It is even logically possible to assume the existence of people that look exactly like us. Since it is logically possible, God is capable of it.[983] Whether it is in fact the case that these things exist is a question to be verified empirically or denied scripturally. This topic is explored in greater detail in the section on scriptural compatibility as it overlaps with some of the ideas discussed here.

---

[977] Additionally, we shall see in the section on scriptural considerations that the Qurʾān and hadith are silent on affirming an actual size to the cosmos.

[978] Tegmark, *Parallel Universes*.

[979] Tegmark, "The Multiverse Hierarchy", 99-124.

[980] Ibid.

[981] Ibid.

[982] John D. Barrow. *The Constants of Nature: From Alpha to Omega--the Numbers That Encode the Deepest Secrets of the Universe*. 1st American ed. (New York: Pantheon Books, 2002), 85.

[983] Bayjūrī, *Tuḥfat al-Murīd,* 144.

Speaking more broadly, the existence of multiverses such as these is based on hypothetical assumptions. From what we have explored in *Ashʿarī* epistemology, all four types of multiverses are without verifiable empirical evidence and are not proven to be metaphysically existent. They fall within the realm of the logically possible but are not substantiated through observation nor do they seem at present, falsifiable. On the other hand, there is perhaps some scriptural evidence that is relevant, namely two *ḥadīth*s and a number of verses that could be related to these issues surrounding the existence of a level I or II multiverse that are commented upon in the section on scriptural considerations.

Here, we come to some theological implications regarding the level II multiverse and fine-tuning argument for God's existence. It is within the realm of possibility that God has created more than one universe.[984] A level II multiverse does not undermine any argument for God's existence. According to *Ashʿarī*s, God's existence is founded on purely rational grounds; the arguments are logically deduced and have necessary conclusions. They do not appeal to the natural sciences for their substantiation through a particular physical cosmology.[985] This means even if we were to affirm the existence of a level II multiverse through an inflationary mechanism via which our universe's fine-tuning is explained through natural laws, *Ashʿarī* ontology affirms the contingency of this and any other physical process.[986] The existence of a wider multiverse still requires arguably a more complex explanation than the existence of a single universe. All of them require an efficient cause to bring them into being since they are all contingent. Hence, a level II multiverse has, as it were, merely kicked the cosmological can down the road. Whilst it provides a contingent naturalistic solution, it does not offer a final explanation that is itself not contingent.[987] From an *Ashʿarī* perspective, a level II multiverse may be a mechanism via which God manifests the creation of the universe. God could create our universe through any logically permissible method, whether from a Big Bang, an inflationary multiverse, or some other mechanism. Purpose and design observed in the beauty, order, and complexity of the physical world are affirmations of God's divine attributes and the contingency of the world.

---

[984] As was explained in Chapter 5 on God's existence and attributes, God's power and will pertain to the logically permissible.

[985] *Ashʿarī* theology appeals to change in the world as a sign of contingency and that it must have been created *ex-nihilo*. See: Bayjūrī, *Tuḥfat al-Murīd*, 84-88.

[986] The contingency argument is valid for all physical entities including universes outside of our own. The are all in need an efficient cause. See chapter 5.

[987] Similarly, it is argued that the multiverse offers a probabilistic reason for fine tuning rather than a causal one. See: Waller, *Cosmological Fine-Tuning Arguments*, 184-5.

Take, for example, the *Qurʾānic* verse (67:19), 'Do they not observe the birds above them, spreading their wings and folding them in? None can uphold them except (Allah) Most Gracious: truly it is He that watches over all things'.

Rāzī explains that this verse signifies God's direct creation of both voluntary and involuntary motion.[988] This is despite the fact that the *asbāb*, secondary causes, of flight are apparent. On one level, the physical means of flight are the wings of the bird. On a second level, the beating of its wings and the use of air currents to glide are other *asbāb* that birds use to fly. Most of these are apparent to a casual observer. On a deeper level, fluid dynamics and action–reaction forces can explain in greater detail how it flies, and so on. There is no 'God of gaps' argument to be made here because all *asbāb* are contingent upon God. Science is a process of discovering contingent relationships between contingent entities; as such, God's existence is outside of its remit.

Unlike level III and IV multiverse, level I and level II multiverses do not by necessity need to include a boundless number of universes. For instance, we have seen that a viable level I multiverse need only be composed of a cosmos that is a thousand times larger than our own universe. The same may be said of a level II multiverse; we do not need to posit an infinite number of universes for a level II multiverse to be realised.

Level III and IV multiverses are however, by their nature, unrestricted in their possibilities. Additionally, the level IV multiverse, which posits that mathematically possible universe exists, mirrors the ontological essence and existence debate between *Ashʿarī*s and peripatetic philosophers.[989] The essence of an entity, in this case, the mathematical objects that govern the existence of a particular universe, do not equate to the actual existence of such a universe. It is logical and empirical verification that ascertains its extra-mental existence. The mathematical multiverse is another contemporary manifestation of Platonic idealism, which is strongly denied by *Ashʿarī* scholars.[990] As we saw in Chapter 6, *Ashʿarī* objections to the ontological argument demonstrate that the definition or concept of an entity does not suffice as evidence for its existence. The logically possible may be existent or non-existent; unless there is a selectively defining factor (*murajjiḥ*) which brings it into existence, it does not exist. The mere conceptualisation of an idea does not make it manifest in reality. Epistemologically, it would be necessary to find evidence to substantiate the claim of the existence of a level IV multiverse, of which there is none.

---

[988] Rāzī, *al-Tafsīr al-Kabīr*, 30:71-2.
[989] See Chapter four.
[990] See chapter four and also: Tegmark, "The Multiverse Hierarchy", 114, 116.

Another problem with a level IV multiverse is that it makes it incumbent upon God to create everything that is possible, which is in itself logically impossible since it would necessitate a compelling force that would negate God's freedom of will.[991] This argument mirrors the emanation of the universe argument that was critiqued by Ghazālī in his *tahāfut*, discussed above. If we posit that anything that could possibly exist does so, this means that God must bring them into existence. It would require that God manifest His power without specificity (*takhṣīṣ*), which is what divine will does.

8.2.2 Scriptural Compatibility

Scripturally, the *Qurʾān*'s and *ḥadīths*' descriptions of the cosmos provide a basic understanding of the creation of the heavens and earth but do not confer a particular preference on one cosmological model.[992] There are three categories of scriptural evidence that may shed some light on the compatibility of the *Qurʾān* and *ḥadīth* with the multiverse hypothesis in its various forms. This is not an exhaustive discussion of all scripture pertaining to the topic; however, it covers the most evident passages pertaining to cosmology.

I contend that the *Qurʾān* and *ḥadīth* are compatible with level I and II multiverses, within the limits of logical permissibility expressed in the previous section (that is which maintains the impossibility of an infinitely large multiverse). Level III and IV multiverses are incompatible with *Qurʾān* and *ḥadīth* claims about the nature of reality regarding moral accountability, eschatology, and prophecy. A level IV multiverse negates divine will, which is both a logically necessary and a scripturally necessary attribute of God.[993]

The existence of a level I multiverse applies to the extension of space beyond our observable universe. The seven firmaments are mentioned multiple times and are a part of *Qurʾān*ic cosmology.[994] They include paradise, and above the heavens are the divine throne and

---

[991] God's power only necessitates the creation of that which divine will specifies out of all that is logically possible. See: Bayjūrī, *Tuḥfat al-Murīd*, 143-4.

[992] The exception here is the understanding that the universe was created *ex nihilo*.

[993] See the section on the real diving attributes in chapter five.

[994] See the following verses which mention to the existence of seven heavens: "It was He who created all that is on the earth for you, then turned to the sky and made the seven heavens; it is He who has knowledge of all things." Q. (2:29); "The seven heavens and the earth and everyone in them glorify Him. There is not a single thing that does not celebrate His praise, though you do not understand their praise: He is most forbearing, most forgiving." Q. (17:44); "Say: 'Who is the Lord of the seven heavens, and the Lord of the Throne (of Glory) Supreme?'" Q. (23:88); "and in two Days He formed seven heavens, and assigned an order to each. We have made the nearest one beautifully illuminated and secure. Such is the design of the Almighty, the All Knowing." Q. (41:12); "It is God who created seven

footstool.[995] What we know about their structure, as mentioned in the *Qurʾān*, is that they are created *ṭibāqa,* a term which has several possible interpretations, meaning the heavens are either stacked on top of each other, identical to one another, or made complete with no imperfections.[996] The opening chapter of the *Qurʾān,* the *Fātiḥa* (1:2), includes a reference to God as the lord of the ʿ*ālamīn* (worlds). Rāzī and *kalām* scholars define ʿ*ālamīn* (worlds) as everything other than God.[997]

Other than the verses referenced, little else is known about the nature of the heavens or the worlds referred to in the *Qurʾān*. Even verses that allude to stars adorning the first heaven (*al-samāʾ al-dunyā*) are open to interpretation.[998] How they relate to a posited level I or II multiverse is therefore purely conjectural. They may refer to levels of existence that are beyond our conceptions of time and space and so are outside the scope of scientific inquiry. As such, rather than attempting to affirm the existence of a multiverse in scripture, it is better to use a counter-argument by trying to determine whether there is any *Qurʾān*ic evidence that suggests it is not scripturally possible that a multiverse exists.

The absence of evidence of a multiverse in the *Qurʾān* or *ḥadīth* does not equate to evidence of absence. If this were so, I would abstain from affirming or denying the existence of a multiverse (*tawwaquf*) on scriptural grounds and consign the issue to scientific inquiry.

Additionally, we can take scriptural evidence to affirm that God did not disclose the full scope of the created world, as stated in *Surat al-Nahl* (16:8), 'And (He has created) horses, mules, and donkeys, for you to ride and use for show; and He has created (other) things of which ye have no knowledge'.[999] According to the most dominant opinion of exegetes, the sentence 'and He has created (other) things of which ye have no knowledge' is an unqualified categorical statement, the meaning of which is applicable in perpetuity. It states that God has created that

---

heavens and a similar [number] of earths. His command descends throughout them. So you should realize that He has power over all things and that His knowledge encompasses everything." Q. (65:12); "who created the seven heavens, one above the other. You will not see any flaw in what the Lord of Mercy creates. Look again! Can you see any flaw?" Q. (67:3); "Have you ever wondered how God created seven heavens, one above the other," Q. (71:15).

[995] ʿAbd Allāh al- Bayḍāwī. *Ṭawaliʿ al-Anwār wa Mataliʿ al-Anẓār*. (Beirut and Cairo: *Dār al-Jīl and al-Maktaba al-Azhariyya li-al-Turāth*, 1991), 223; Bayjūrī, *Tuḥfat al-Murīd,* 296.
[996] Rāzī, *al-Tafsīr al-Kabīr*, 30:57.
[997] Ibid, 1:233.
[998] Ibid, 30:59-61.
[999] Abdullah Yusuf Ali. *The Meaning of the Holy Qurản*. New ed. with Qurảnic text (Arabic), rev. Translation, Commentary, and Newly compiled comprehensive index. (Beltsville, Md: Amana Publications, 1997), 638.

which mankind is ignorant of.[1000] This would include the physical size and content of the created worlds. Since there is no evidence to the contrary, we can consign investigation of such matters to scientific research and conclude the *Qurʾān* is compatible with level I and II multiverses in a general sense. The exception to this, discussed in the section on epistemological compatibility, is to posit these multiverses are infinite in both size and age. The latter point is scripturally incompatible with *Qurʾān*ic cosmology and is one of the areas of difference Ghazālī identified between Islamic theology and the Neo-Platonists of his day, who assumed an infinitely old cosmos. In his *Incoherence of the Philosophers* (*tahāfut al-falāsifa*), he argues that the creation of the universe out of nothing is a necessary belief in Islam.[1001] A denial of this fact, therefore, would take one out of the fold of Islam.

It may be argued that *Qurʾān*ic eschatology affirms an everlasting afterlife for people in heaven or hellfire. An infinite time in the next world would seem to contradict the idea of the impossibility of actual infinities. However, as discussed in chapter 4, this is an example of a potential infinity and, as such, does not constitute the actualisation of infinite time because at any point in the future of a person's life in heaven, only a finite amount of time may have passed for them. They may never reach infinity.

One of the possible entailments of a level I or II multiverse, but by no means a necessary one, is that if these multiverses are as vast as is suggested, there may exist other living beings as well as duplicate copies of the earth and, by extension, duplicate copies of ourselves. This raises some important questions about human identity, moral agency, and eschatology. Is the person $10^{10^{28}}$ metres away – as posited by theoretical physicist by Max Tegmark above – actually the same person as myself? What about the same person living in an identical Hubble Volume $10^{10^{118}}$ metres away? Do their histories mirror our own? How does Islamic scripture shed light on these questions?

According to Tegmark's multiverse hypothesis, if duplicate copies of us exist, it would be a reference to physical copies of ourselves. His main ontological assumption that would be problematic for the *Ashʿarī*s is naturalism. To conclude that there is an identical version of the person reading this sentence in another universe is reached from a purely naturalist ontology. This view assumes that all that exists is solely the result of physical laws. It is a reductionist view of reality, especially since it also pertains to the nature of what it means to be a human

---

[1000] See: Khalayleh, "Does the Qurʾān Affirm Extraterrestrial Life? A Hermeneutic Analysis of Sūrat al-Naḥl (Q. 16:8)"; Rāzī, *al-Tafsīr al-Kabīr*, 19:236; Bayḍāwī, *Anwār al-*Tanzīl, 2:253; Qurṭubī, Muhammad ibn Ahmad. *Al-Jāmiʿ li-Aḥkām al-Qurʾān*. 23 vols. (Beirut: *al-Risāla*, 2006), 12:288.
[1001] Ghazālī, and Marmura, *The Incoherence of the Philosophers: Tahāfut al-falāsifa*, 7.

being. Additionally, naturalism sometimes assumes a deterministic stance, in which free will is interpreted as an illusion experienced by the mind.[1002] Therefore, if we assume physicalism and a strict materialistically deterministic universe, it is necessarily the case that these carbon copies are indistinguishable from us in literally every way and share duplicate histories.

An *Ashʿarī* ontology would find fault in this interpretation. They of course are not physicalists, nor do they hold to the logical necessity of natural laws. They do not equate human existence with bodily existence alone. According to *Ashʿarī*s, human consciousness cannot merely be explained by natural laws. Scriptural evidence posits the existence of an ineffable soul or spirit, which is the source of life and consciousness.[1003] The *Qurʾān* affirms this.[1004]

One possible way out of this problem is to perceive such copies as we would identical twins. Twins share the same genetic code but are two separate individuals who live independent and often divergent lives. Mere physical resemblance does not constitute the same personhood.

A closely related question to the issue of identity is one regarding the shared histories and events of identical universes. Again, this assumption is based on a physicalist and materially deterministic ontology, which is not accepted in *Ashʿarī* theology. *Ashʿarī* thought assumes an immaterial element of human consciousness and volition. These ideas may be ways to approach such questions that would allow for compatibility with *Ashʿarī* thought.

Is the existence of physically identical copies of people permitted scripturally? The short answer is yes, since it is within the realm of God's power, and there is seemingly no evidence to suggest otherwise. The caveat here is that this does not necessarily entail strict materialist determinism.

There are other verses in scripture pertaining to the topic of multiple worlds that are worth consideration. Here, Rāzī's commentary on the meaning of 'worlds' in Q. (1:2) proves quite insightful. He rejects the position of peripatetic philosophers, who claim the necessary

---

[1002] There are diverging views on this topic, but we can see that there are strong arguments to be made that free will as an illusion. Harris argues that materialism is not a necessary condition for the validity of his argument but then proceeds to treat the hypothetical existence of a physical soul as if it were subject to material laws because he assumes a human soul would be beholden to the same processes as the brain. See: Sam Harris. *Free Will*. 1st Free Press trade pbk. ed. New York: Free Press, 2012; See also: Dennett, D. C., and Gregg D. Caruso. *Just Deserts: Debating Free Will*. Medford: Polity Press, 2021. For an exploration of an *Ashʿarī* understanding regarding free will see Ghazālī's views on the subject see: Maria De Cillis. *Free Will and Predestination in Islamic Thought: Theoretical Compromises in the Works of Avicenna, al-Ghāzālī and Ibn ʿArabī*. 1. publ. Culture and Civilization in the Middle East 42. London: Routledge, 2014.

[1003] See the hadith narrated in: Yaḥyā ibn Sharaf al-Nawawī. *Al-Nawawī's Forty Hadith: An Anthology of the Sayings of the Prophet Muḥammad*. (Riyadh: International Islamic Publishing House, 1997), 37.

[1004] Bayjūrī, *Tuḥfat al-Murīd,* 268-71.

existence of only one world.[1005] Indeed, he states categorically that it is possible for God to create a billion worlds, each with their own seven heavens and earths and divine throne and footstool (ʿarsh and kursī).[1006] Adi Setia states that Rāzī here is referring to extra-cosmic (ghayb) rather than intra-cosmic existence (shahāda), which certainly seems clear from his mentioning of separate heavens.[1007]

It is noteworthy that Rāzī goes against Jurjānī, Ghazālī, and Fodeh, and according to Jurjānī, the dominant opinion of kalām scholars in that he affirms the existence of the void (khalāʾ) at the edge of the world that extends infinitely.[1008] Jurani, Ghazālī, and Fodeh affirm that the khalāʾ, which can be defined as a space or void which has no particles nor any other created thing, is only a mental conception and describes the imagined space taken up by a body.[1009] The khalāʾ they are referring to is a real vacuum, in the sense that it is truly empty; in other words, it holds no waves or particles, which is not the case in what we think of as a vacuum, as in the space between galaxies and stars.[1010] They are also not referring to nothingness (al-ʿadam).[1011] Regardless, it does not negate the fact that we may conclude that it is logically and scripturally permissible for there to exist level I and II multiverses.

What about our hypothesised duplicates in other universes? Here, we find a striking athar, a tradition, referred to as the 'seven-earths ḥadīth', which is attributed to one of the Prophet Muḥammad's companions, scholar and exegete ʿAbd Allah ibn ʿAbbās.[1012] Qurʾān exegetes Muḥammad ibn Jarīr al-Ṭabarī (d. 310/923), Ismāʿīl bin ʿUmar Ibn Kathīr (d. 774/1373), and Maḥmūd al-Alūsī (d. 1270/1854) include it in their interpretation of Surat al-Ṭalāq (65:12),

---

[1005] Adi Setia. **"Fakhr Al-Dīn Al-Rāzī on Physics and The Nature of the Physical World: A Preliminary Survey".** In Iqbal, Muzaffar, ed. *Contemporary Issues in Islam and Science.* Islam and Science: Historic and Contemporary Perspectives 2. (Burlington, VT: Ashgate, 2012), 124-44.

[1006] Ibid, 141.

[1007] Ibid.

[1008] Setia, **"Fakhr Al-Dīn Al-Rāzī on Physics and The Nature of the Physical World"**,140-2.

[1009] ʿAli bin Muḥammad al-Jurjānī. *Muʿjam al-Taʿrīfāt.* (Cairo: *Dār al-Fāḍila*), 88-9; Ghazālī, and Marmura. *The Incoherence of the Philosophers*, 33; Fodeh, Saʿīd. *Bayn al-ʿAdam wa al-Khalāʾ wa al-Khalṭ Baynahumā.* *Aslein* forum. http://www.aslein.net/archive/index.php/t-16357.html. (Accessed 28 July 2022).

[1010] Ibid.

[1011] Fodeh, *Bayn al-ʿAdam wa al-Khalā.*

[1012] Britannica, T. Editors of Encyclopaedia. "ʿAbd Allāh ibn al-ʿAbbās." Encyclopedia Britannica, January 11, 2016. https://www.britannica.com/biography/Abd-Allah-ibn-al-Abbas.

It is God who created seven heavens and a similar [number] of earths. His command descends throughout them. So you should realise that He has power over all things and that His knowledge encompasses everything.[1013]

When ʿAbd Allah ibn ʿAbbās was asked about the interpretation of the verse, he responded to the questioner by saying,

'What certainty do you have that I were I to inform you of its interpretation you would apostate?' Then he said, 'Seven earths, in each earth is a prophet like your prophet, and an Adam like your Adam and a Noah like your Noah and an Abraham like your Abraham and a Jesus like your Jesus'.[1014]

Whilst not technically a *ḥadīth*, sayings from companions that include statements about the *ghayb* (the unseen), that which cannot be rationally or empirically known, are sometimes ascribed to the Prophet Muḥammad. Those who assume these statements are taken from information heard from the Prophet Muḥammad would argue that it is not conceivable that such a statement be made without prophetic revelation, and the companions according to *ḥadīth* scholars are ruled to be trustworthy in their proclamations on matters of the unseen.[1015] That said, many exegetes, such as Ibn Kathīr, do make the argument that the statement may be attributed to non-Muslims sources, namely the *isrāʾīliyyāt* (narrations from Jewish and Christian references), which may or may not be accurate.[1016]

Alūsī states that the saying refers to beings similar to humans that come from a single ancestry, like humans do from Adam, and that their communities include chosen people that are like prophets that humans have, such as Ibrahim and Jesus.[1017] He concludes that if the narration is valid, it is logically and theologically permissible.[1018] In a lecture entitled *The Seven-Earths*

[1013] Ibn Kathīr, Ismāʿīl bin ʿUmar, *Tafsīr al-Qurʾān al-ʿAẓīm* (Beirut: *Dār Ibn Ḥazm*, 2000), 1889-1890; Maḥmūd, al-Alūsī, *Tafsīr al-Alūsī. Al-Maktaba Al-Shāmela Al-Ḥadītha*. Accessed 26 August, 2022. <https://al-maktaba.org/book/22835/5962#p1>, https://al-maktaba.org/book/22835/5962#p2.

[1014] Ibn Kathīr, *Tafsīr al-Qurʾān al-ʿAẓīm*, 1889-1890.

[1015] See the section on *mawqūf* traditions in: Sirāj al-Dīn, *Sharḥ al-Bayquniyyah*, 72-77.

[1016] Roberto Tottoli. "Origin and Use of the Term *Isrāʾīliyyāt* in Muslim Literature." *Arabica* 46, no. 2 (1999): 193–210. http://www.jstor.org/stable/4057496; Karamali, Hamza. "*The Seven-Earths Ḥadīth, Human Specialness, And Intelligent Extraterrestrials*". Basira Education. 2022. YouTube.com. https://www.youtube.com/watch?v=5vQcxcot-2I&ab_channel=BasiraEducation.

[1017] Alūsī, *Tafsīr al-Alūsī*. <https://al-maktaba.org/book/22835/5962#p1>, https://al-maktaba.org/book/22835/5962#p2; See also: Karamali, "*The Seven-Earths Ḥadīth, Human Specialness, And Intelligent Extraterrestrials*".

[1018] Ibid.

Ḥadīth, Human Specialness, and Intelligent Extraterrestrials, Karamali concludes that the existence of intelligent creatures outside of earth is both religiously and metaphysically compatible with Islam.[1019]

In a similar position taken by Rāzī in one of his suggested interpretations of the following verse, 'And among His Signs is the creation of the heavens and the earth, and the living creatures that He has scattered through them: and He has power to gather them together when He wills',[1020] he posited that it would not be inconceivable that God would have created in the heavens creatures that walk as humans do on the earth. Rāzī, Karamali, and Alūsī do not explicitly discuss this *ḥadīth* in the context of level I and II multiverses. However, their conclusion still holds true, since the *ḥadīth* is not committed to a particular cosmological model. Indeed, a literal interpretation of the *ḥadīth* and verses discussed would seem to be compatible with the existence of level I and II multiverses.

The aim of this discussion is not to prove or endorse a particular interpretation; rather, it is merely to demonstrate compatibility of Islamic scripture interpreted through an *Ashʿarī* lens with a level I or II multiverse, should it be scientifically verified. Qualifications notwithstanding, we may conclude that religious scripture takes a non-committal (*tawwaquf*) stance towards the first two types of multiverses, and so a scholar may reserve judgement on this issue. The same cannot be said for level III or IV multiverses.

A level III multiverse is scripturally incompatible with the *Qurʾān* and *ḥadīth* because it entails a vainness and frivolity in God's actions with regards to human moral accountability.[1021] Human agency entails eschatological consequences of reward and punishment based on belief and righteous action.[1022] In level III and IV multiverses, a morally accountable individual would not be making a single moral choice; rather, they would be making all possible choices. For instance, in one universe, a person would be a trustworthy business partner, while in another, they would be engaged in corrupt practices. It would be meaningless to hold people

---

[1019] Karamali also concludes that human specialness is preserved whether or not there exists extra-terrestrial intelligence. This is because the prophet Muhammad is by scholarly consensus, considered the best of creation in Islamic belief. Human beings, by extension, are therefore the best of creatures in the eyes of God. See: Karamali, "*The Seven-Earths Ḥadīth, Human Specialness, And Intelligent Extraterrestrials*".

[1020] Q. (42:29). Ali, *The Meaning of the Holy Qurǎn*, 1254-5.

[1021] The *Qurʾān* negates vainness in God's actions. Rāzī explains that the creation of human beings in vain is meant to refer to a denial moral accountability in the afterlife. See: Rāzī, *al-Tafsīr al-Kabīr*, 23:128-9.

[1022] Bayjūrī, *Tuḥfat al-Murīd*, 282-3.

accountable for what is essentially not a choice, but a single possibility taken out of myriad others.

Lastly, according to *Ashʿarī* theology, in any proposed multiverse, the Prophet Muḥammad would still be considered the best of creation and the final prophet sent as a mercy to all the worlds.[1023] According to a level III multiverse, there are many versions of the Prophet; in some universes, he would conceivably not be a messenger. This would negate his unique status as the best of creation, and more broadly it would negate the claim of any revelatory message to objective truth.

8.3 Conclusion

In this chapter, I apply the philosophical framework outlined in the previous chapter to a particular case study: the proposed existence of multiple universes outside of our own. The focus of the study was narrowed to a discussion of four multiverses theorised by modern science. I explored whether each type of multiverse was viable with *Ashʿarī* thought, epistemologically, ontologically, and scripturally.

Each of the four multiverse theories discussed was found to be logically coherent if each multiverse is assumed to be finite in size. Only the first two types of multiverses, levels I and II, are said to be compatible with *Ashʿarī* thought. Level III and IV multiverses are entirely incompatible with *Ashʿarī* thought. A level IV multiverse is ontologically impossible since it equates essence or quiddity with existence. Furthermore, it entails a negation of God's attribute of will, meaning that, according to this theory, God would be obliged to create all that is coherently possible.

The most appropriate theological stance towards the question of whether level I or II multiverses that are finite in size exist is that of being non-committal (*tawwaquf*) to any one opinion. An acceptable position would be to consign the issue to scientific research which, as an extension of knowledge derived through sensory and rational means, is a valid form of epistemology according to *Ashʿarī* thought (as described in chapter 4). The following table summarises the compatibility of *Ashʿarī* thought with the four types of multiverses described in this chapter:

[1023] Bayjūrī says that this is a matter of scholarly consensus. See: Bayjūrī Ibrahim, *Tuḥfat al-Murīd*, 214-5.

Multiverse	Epistemological and ontological compatibility	Scriptural compatibility
Level I	Possible with the exception of infinite size	Compatible with the exception of a pre-eternal multiverse
Level II	Possible with the exception of infinite size	Compatible with the exception of a pre-eternal multiverse
Level III	Possible with the exception of infinite size	• Incompatible, as it entails frivolity and meaninglessness to revelatory claims about moral accountability and reward and punishment in the afterlife • Negates the station of the Prophet Muḥammad as the best of creation
Level IV	Not compatible because it equates essence with existence and negates divine will	• Incompatible as is it negates the attribute of divine will • Incompatible, as it entails frivolity and meaninglessness to revelatory claims about moral accountability and reward and punishment in the afterlife • Negates the station of the Prophet Muḥammad as the best of creation

Table 11. The compatibility of the four types of multiverses discussed with *Ashʿarī* thought.

Chapter 9: Discussion and Conclusion

9.0 Introduction

The objective of this thesis is to explore the capacity of the *Ashʿarī* school to engage with the ideas of contemporary atheism, which offers some considerable challenges to traditional Islamic theism. Engaging with its underlying philosophies is therefore a necessary pursuit. This chapter offers a summary of the research undertaken, explains its implications and contributions to the field of Islamic studies, philosophy, and theology, outlines the limitations of the study, and makes recommendations for future research.

9.1 Summary

Ashʿarī scholars perceived their work as a means to preserve orthodox *Sunnī* doctrine. Through a set of theological challenges throughout its history, the *Ashʿarī* school developed, growing in sophistication and scope. Its initial intellectual confrontation was with *Muʿtazilī* thought, which displayed a complex and rational theology. This was the catalyst that spurred the *Ashʿarī* school's eponymous founder, Abu al-Ḥasan al-Ashʿarī, to establish it. Later, Greek philosophy would provide another significant hurdle that challenged points of creed in *Ashʿarī* theology, such as the pre-eternality of the world and the denial of bodily resurrection. Ghazālī's work refuting these ideas and his systematic use of classical logic marked the beginning of a revival for *Ashʿarī* theology. In the centuries after Ghazālī, thinkers such as Rāzī, Ījī, and Taftazānī saw the need to establish a firm epistemological and ontological basis for their theology to elucidate and defend *Sunnī* creed. In doing this, they created a sophisticated epistemology rooted in classical logic and an ontology founded on rational and scriptural sources. This served as a means to subvert any attempts to cast doubt on *Ashʿarī* doctrine. The most pressing intellectual challenge to *Ashʿarī* thought today is contemporary atheism, which is present in modern and post-modern Western philosophy and science.

In order to properly represent *Ashʿarī* thought, I employed in chapter 2 three criteria to affirm *Ashʿarī* works as primary sources for the study. The first is that the community of scholars accepts that the work is part of the *Ashʿarī* school. The second is that the works are relevant

today and form part of the references to contemporary Islamic education in Muslim colleges and institutions around the world. The third is that the works are sufficiently advanced so as to include at least some references to epistemology and ontology. Contemporary *Ashʿarī* scholars with whom I have engaged include Mustafa Sabri, Muḥammad Saʿīd Ramaḍān al-Būṭī, Saʿīd Fodeh, and Hamza Karamali. These scholars were chosen based on two criteria. The first is that they demonstrate commitment to *Ashʿarī* epistemology, ontology, and theology. The second is that they have engaged with the critiques of contemporary atheism in their works.

Chapter 3 explores the philosophical foundations of contemporary atheism. I define atheism as 'a lack of certainty in the veracity of the proposition: God, the necessarily existent creator, exists'. This definition is particular to the Islamic understanding of sound belief in God, which emphasises the necessity of certainty in belief. I define contemporary atheism as 'the ideas in modern and post-modern philosophy which lead to a lack of certainty in the veracity of the proposition, God, the necessarily existent creator, exists'. More specifically, the philosophies of Cartesian rationalism, empiricism, idealism, analytic philosophy, existentialism, Marxism, and post-modernism. *Ashʿarī* epistemology affirms the validity of empirical data, logical reasoning, and true reports as sound sources of knowledge. The philosophies of contemporary atheism under discussion limit the purview of human knowledge to one particular source of knowledge or prefer one epistemological source over others (e.g., scientism) or one ontological reality over others (e.g., materialism). This understanding of contemporary atheism is related to the concept of *kufr* in the Islamic lexicon. The word *kufr* is used to refer to non-belief and is derived from its root meaning, to cover or conceal. I argue that according to *Ashʿarī* metaphysics, because the philosophies under discussion deny the validity of a particular epistemological or ontological source, they can argue for either God's non-existence or the inability of the human mind to ascertain God's existence.

Even though some of the thinkers whose philosophies are marked as sources of contemporary atheism were believers in God, their philosophies do allow for the validity of atheism in the Islamic sense. For instance, whilst Immanuel Kant believed in God, his transcendental idealism denied the possibility of affirming God's existence rationally and with certainty. Descartes affirmed God's existence, but his rationalist philosophy, born out of systematic doubt, cast suspicion on the trust we may have in the most intuitive of knowledge. This type of scepticism leads to a lack of certainty about the necessary existence of God and fails to meet the high benchmark delineated by the *Ashʿarī*s for whom various types of doubt (*jahl*, *wahm*, *shak*, *ẓan*) all constitute forms of disbelief.

After exploring the development of the *Ashʿarī* school in chapter 2 and the epistemological and ontological foundations of contemporary atheism in chapter 3, chapter 4 provides an overview of the epistemology and ontology of the *Ashʿarī* school. *Ashʿarī*s are foundationalists in that they recognise that knowledge must be founded upon non-inferential *a priori* ideas that are known immediately to the intellect. They affirm the validity of the mind, true reports, and sensory experience as sources of knowledge and define the domain through which each source is valid. The domain in which sense experience functions is material existence. The mind may ascertain knowledge of both material and non-material entities, existent and non-existent. The domain of true reports is that which is existent and verified through a trusted source. *Ashʿarī*s affirm the validity of deduction, induction, and abduction as sound methods of reasoning.

Ashʿarī ontology is founded upon realism, essentialism, and occasionalism. *Ashʿarī* realism is the belief that the world exists independently of our own minds. This is understood to be an *a priori* belief. Essentialism in the *Ashʿarī* sense is the belief that the mind can ascertain universal concepts. Whilst universals are abstracted through the mind, they may be substantiated in particulars extra-mentally. The belief in the necessary existence of God is foundational to *Ashʿarī* doctrine. Occasionalism, a manifestation of this understanding, holds that God is the sole efficient cause in the universe. *Ashʿarī*s view that all created entities are entirely contingent upon God for their existence and for any changes occurring in them.

Chapter 5 provides an explanation of the rational arguments *Ashʿarī* theology depends upon to establish God's existence and fundamental attributes. These proofs are the argument from contingency (*imkān*) and the argument from beginning (*ḥudūth*). Arguments appealing to religious experience, moral imperative, and the like are not found in *Ashʿarī* theology since they do not lead to certain conclusions. *Ashʿarī* proofs attempt to a. be rationally objective, b. be founded upon immutable premises and proofs, and c. have logically necessary conclusions that follow from their premises. To conceptualise what is meant by God, *Ashʿarī* theology follows with an exposition of necessary divine attributes. The first is necessary existence. The next five functions negate the impossible attributes of the necessarily existent. These attributes of negation have no existence in themselves; rather, they eliminate an impossible understanding of God. God is 1. beginningless, which negates a beginning; 2. eternal, which negates an end; 3. self-sufficient, which negates dependence; 4. dissimilar to created things, which negates similarity; and 5. oneness, which negates plurality. The existent or real attributes are seven: 1. power, 2. knowledge, 3. will, 4. life, 5. hearing, 6. speech, and 7. sight. These entail that God is powerful, knowing, wills freely, is living, hears, sees, and speaks. Each

attribute may be established rationally, although all are found in the *Qurʾān* and *ḥadīth* tradition.

Chapter 6 offers a survey of *Ashʿarī* responses to the critiques of contemporary atheism. It juxtaposes contemporary atheism with *Ashʿarī* theology by identifying the main areas of contention between the two. *Ashʿarī* arguments for God's existence have been critiqued in the philosophies of contemporary atheism in four ways: 1. arguing for the possibility of actual infinities, 2. doubting the necessity of causality and the nature of causality, 3. claiming the invalidity of deductive inference, and 4. casting doubt on the veracity of the *Qurʾān* and *ḥadīth*. The chapter describes how contemporary *Ashʿarī* scholars deployed the epistemological and ontological principles of the *Ashʿarī* school to defend against contemporary atheist critiques.

Chapter 7 is an attempt to formulate an *Ashʿarī* philosophy of science. *Ashʿarī* theology, epistemology, and ontology, discussed in chapters 4, 5, and 6, are used to articulate this. Science may be incorporated into the philosophical foundations of *Ashʿarī* thought. The seen (*shahāda*) realm, that which may potentially be empirically observable and the unseen (*ghayb*) realm, that which can never be empirically observed, is a central *Qurʾān*ic dyad which I use to demarcate the boundaries of natural science. I acknowledge that there are areas that are in a quasi-*ghayb* state since they are attested to through numerous firsthand accounts, even though they are not scientifically corroborated. An *Ashʿarī* approach to the formation of a philosophy of science should consider as axiomatic the necessary existence of God, the reality and intelligibility of the world existing beyond the mind, and the prophethood of Muḥammad. Whilst affirming occasionalism, *Ashʿarī* thought makes room for the belief in scientific laws through the acknowledgment of *asbāb*, ostensibly called secondary causes, which are predictable corollary events that occur in the natural world. It is within secondary causation that natural science operates. From an *Ashʿarī* perspective the natural sciences serve 1. as a means to explore the physical world to discover the theophany of God's attributes and 2. to preserve the trust given to human beings as caretakers on earth. Finally, an *Ashʿarī* compatible science must 1. be logically possible and not entail any absurdities; 2. conform with mass transmitted, unequivocal positions in the *Qurʾān* and *ḥadīth* traditions; and 3. be ethically sound, according to one of the four *Sunnī* schools of law.

Chapter 8 evaluates the compatibility of the four multiverse theories with *Ashʿarī* thought using the philosophical framework developed in chapter 7. The multiverse is often cited as a naturalistic solution to the fine-tuning of the universe. The existence of a vast number of universes beyond our own offers a possible explanation, in scientific terms, of the incredibly

precise physical constants leading to the formation of our own universe. Proponents of atheism argue that a multiverse thus negates the necessity of God.

According to *Ashʿarī* thought, this is not the case. Each of the four multiverse theories discussed is found to be logically possible if each multiverse is limited to a finite size. A multiverse is also congruent with the necessary existence of God since a multiverse is a collection of contingent universes that require an efficient cause. Only the first two types of multiverses, levels I and II, were found to be compatible with *Qurʾān*ic scripture, however. Level III and IV multiverses were found to be entirely incompatible with basic *Qurʾān*ic propositions. A level III multiverse entails vainness in God's actions since it leads to the meaninglessness of moral accountability, whilst a level IV multiverse is ontologically impossible since it equates essence with existence. It also necessitates that God is obligated to create all that is logically possible, which negates the attribute of divine will. The chapter is a hypothetical discussion intended to illustrate the application of an *Ashʿarī* philosophy of science, rather than an affirmation of the existence of a particular variation of multiverse theory.

9.2 Contributions

Three research questions have guided this thesis. The final question provided the primary original contributions of the study, with the first two offering some significant original insights.

1. What is contemporary atheism, and how can its core intellectual strands be categorised and understood? What are its main arguments?

Chapters 3 and 6 provide the main answers to the first question. Atheism and 'contemporary atheism' are defined so as to be compatible with the conceptions of belief and non-belief according to *Ashʿarī* theology. These definitions are original contributions. The adoption of the concept of a lack of certainty about God's existence as grounds for atheism is a marked departure from previous definitions of atheism in academic literature. It sets a much higher expectation for acceptable belief and widens the scope for philosophies that entail atheism, according to the *Ashʿarī*s.

Another original contribution is the use of the Islamic concept of *kufr*, meaning concealment (but also used to refer to unbelief), as a means of identifying philosophies that entail atheism

in their epistemologies or ontologies. Each of the contemporary atheist philosophical traditions discussed led to or allowed for the justification of atheism because of a concealment or lack of acknowledgement of what *Ashʿarī*s perceive as sound and universally acceptable forms of knowledge or *a priori* beliefs about the world. Further categorisation of contemporary atheist arguments critiquing rational proof of God's existence is found in answer to question 3.

2. Is there a unified structure and methodology to *Ashʿarī* theology when arguing for God's existence and His necessary attributes? Does *Ashʿarī*sm form a cohesive conceptual model of a theory of knowledge and an ontology that is then used to establish God's existence and his necessary attributes? If so, what is it?

Chapters 2, 4, and 5 address this question. I argue for a cohesive epistemology, ontology, and methodology exist for *Ashʿarī* theology. The elucidation of *Ashʿarī* epistemology and ontology in chapter 4 forms an original contribution in terms of its organisation and classification. Whilst some expositions of both exist in academic literature, the study offers comprehensive and relevant information that is tailored specifically to engage with atheism.

3. Can this hypothesised *Ashʿarī* conceptual model be used to address contemporary atheistic ideas? If so, how?

This question is addressed in chapters 6,7, and 8. *Ashʿarī* theology, epistemology, and ontology have been used and may still be utilised to address all the critiques of contemporary atheism. The work of three contemporary *Ashʿarī* thinkers, as well as classical scholarship, is used to demonstrate this. For instance, *Ashʿarī* occasionalism offers a solution to the problem of induction as articulated by David Hume. Using *Ashʿarī* epistemological and ontological principles, I have developed an outline of the principles of an *Ashʿarī*-based philosophy of science and used this model to address the theological implications of the existence of the multiverse by exploring their compatibility with *Ashʿarī* thought. These are original contributions.

Ashʿarī thought provides a system or methodology just as much as it explains a set of doctrinal beliefs. This thesis demonstrates how it is an open system with the capacity to accept new ideas and respond to, accept, or assimilate them into its own metaphysical system. *Ashʿarī* thought affirms an immutable set of beliefs at its core. These form the necessary points of doctrine that

differentiate Islamic from non-Islamic beliefs. However, *Ashʿarī* thought includes secondary and tertiary elements, which allows for flexibility in terms of what it may incorporate in its system of thought. Thus, scientific research has space to function, and hypothesised ideas such as the multiverse can be compatible with *Ashʿarī* epistemology and ontology.

Rather than being viewed as a living school of thought, *Ashʿarī* theology is primarily engaged through a historical lens in Western academic literature. Through this, an ill-conceived idea of it as an ossified pre-modern tradition that is not applicable to the contemporary world may exist. This thesis argues the contrary by illustrating how *Ashʿarī* thought has been applied to respond to new ideas and how it contains the conceptual resources to be perpetually applied to solve novel challenges in the future.

9.2 Limitations

Given that the objective of the study is to survey the engagement of the *Ashʿarī* school as a whole with contemporary atheism, some limitations naturally arise due to the wide scope of the study. Due to the limited length of a doctoral thesis, the focus has been placed on the most fundamental ideas in *Ashʿarī kalām* as they pertain to contemporary atheism. This means that the treatment of some concepts is restricted to that of an overview.

Another limitation in the study is due to a part of the research methodology. The choice of references was directed towards shedding light upon the most pertinent and agreed-upon opinions within the *Ashʿarī* school. This was necessary since the study has aimed to demonstrate the consensus surrounding the foundations of *Ashʿarī* theology, epistemology, and ontology. Nevertheless, through this, differences between scholars on secondary and tertiary issues were either not mentioned or only briefly discussed. This again relates to the limited scope of a thesis. Some differences of opinion not directly related to basic *Ashʿarī* beliefs and engagement with contemporary atheism were not discussed.

The proposed outline of an *Ashʿarī* philosophy of science in chapter 7 contains two limiting factors due to the length of the chapter. The first is the proposed *ghayb* and *shahādah* dyad for the demarcation of scientific and non-scientific domains. Only an overview of this idea was possible. The second relates to the nature of scientific reasoning through abduction (*ḥads*), which requires further scrutiny in future research.

9.3 Implications and Recommendations for Future Research

I believe two broad implications for the field of Islamic theology emerge from the research undertaken in this thesis. The first is a move towards engaging in the practice of prescriptive rather than descriptive theology. Anglophone academic literature is largely focused on the study of Islamic theology through a historical and descriptive lens. This study demonstrates that Islamic theology can indeed provide important perspectives on contemporary issues as well. Meaning that the conceptual tools developed by *Ashʿarī* scholars may still be utilised to engage in the practice of theology today. Just as there is considerable scholarly engagement with contemporary Christian theological discourse, I hope that my research demonstrates how Islamic theology continues as a living tradition capable of grappling with modern challenges. The second implication of the research is that it demonstrates an Islamic perspective on modern and post-modern Western philosophy. Though Western intellectuals have frequently viewed the Orient through the perspective of their own cultural heritage, as famously shown by Edward Said, Islamic assessments of Western intellectual thought are less common.[1024]

My research reveals Islamic scholarly views on the limitations of Western philosophy, as well as identifying areas of agreement, carving out a space for further engagement in the future.

The thesis has provided a survey of *Ashʿarī* perspectives on contemporary atheism that includes engagement with many schools of Western philosophy. It is not difficult to see that this opens many avenues for further research. I would suggest these fall under five categories: 1. further engagement with the particular philosophies of contemporary atheism discussed in the thesis and that of *Ashʿarī* theology; 2. exploring and conceptual resources of other schools of Islamic theology, such as the *Māturīdī* and *Atharī* schools to engage with contemporary atheism; 3. deeper research into the contributions of contemporary and classical *Ashʿarī* theologians; 4. research into the particulars of an *Ashʿarī* philosophy of science, which was only outlined in the thesis; 5. the application of my proposed *Ashʿarī* philosophy of science to other contemporary fields of study, such as the anthropic principle, biological evolution, and the hard problem of consciousness.

The philosophies of contemporary atheism discussed in chapter 3 and the *Ashʿarī* engagement with them discussed in chapter 6 offer general overviews. Many of the philosophies under discussion warrant further investigation in more specialised works. One suggestion is an exploration of post-modernism and *Ashʿarī* theology. The treatment of post-modernism in the

---

[1024] Edward W. Said. *Orientalism*. 1st Vintage Books ed. New York: Vintage Books, 1979.

thesis has focused on atheism, and I argued that post-modernist ideas mirror those of what classical *Ashʿarī* works refer to as sophistry. Whilst relativism and anti-objectivity are starting points for many ideas in post-modernism, they by no means fully encompass the many subjects and themes that philosophy covers. Future research may examine topics of human subjectivity and how they pertain to moral accountability from the perspective of *Ashʿarī* theology and *Sunnī* jurisprudence.

The contributions of *Ashʿarī* scholars have been surveyed in chapter 6 but only focused on their defence of critiques of contemporary atheism. A deeper study of the contributions of recent *Ashʿarī* thinkers, such as Būṭī's critique of dialectic materialism or Sabri's critiques of Immanuel Kant, is warranted and may form the subject of a standalone doctoral thesis.[1025]

The area that is perhaps of most interest, however, is the bringing of *Ashʿarī* epistemology and ontology into dialogue with modern philosophical discourse. Chapter 5 provides the most pertinent ideas in *Ashʿarī* thought as they pertain to arguing for God's necessary existence. A tremendous amount of untranslated material exists that may be brought into discussion with modern philosophy. Particular examples include a translation of Taftazānī's *Sharḥ al-Maqāṣid* and Jurjānī's commentary on *al-Mawāqif*. In addition to translation, what may be required is the development of technical language that can properly convey the nuances of the concepts discussed in that literature. This is necessary because, as chapter 5 demonstrates, whilst grafting *Ashʿarī* epistemological and ontological ideas directly onto those of modern philosophy, they are usually followed by qualifications and conditions. For instance, *Ashʿarī* essentialism holds a distinctly different meaning from Platonic essentialism. Establishing original terms for these ideas would help avoid ambiguity and allow for more rigorous academic research.

Chapter 7 provides a general framework for an *Ashʿarī* philosophy of science. This should be further discussed and elaborated upon since it forms only a starting point for research into the relationship between Islamic theology and natural science. The demarcation between what is natural science and what is not is a perennial question in the philosophy of science. The *ghayb* and *shahādah* dichotomy through which *Ashʿarī* theology is used to differentiate between that which is empirically accessible and that which is not is useful. However, whilst the proposal

---

[1025] We have started to see however, the beginnings of studies into Sabri's engagement with Kant. See: Emir Faruk Kayahan. "East Meets West: Kant and Mustafa Sabri Efendi (Part 1)." YouTube. Blogging Theology, September 28, 2022. https://www.youtube.com/watch?v=t4-bcKEAAGQ&ab_channel=BloggingTheology.

identified guidelines for what to include under the purview of natural science, a more specific and rigorous methodology is needed to properly differentiate between *ghayb* and *shahādah*. The categorisation also leaves some ambiguity regarding the quasi-*ghayb* designation, which must be addressed in greater detail.

The epistemology of an acceptable *Ashʿarī* philosophy of science must also be further researched. The conception of *ḥads*, or 'inference to the best explanation', is a highly important concept that is often utilised in modern science and that requires closer examination. What are the parameters that constitute correct *ḥads*? What are the criteria that would make one explanation more viable than another? How does the *Ashʿarī* concepts of *ḥads* compare with a contemporary philosophy of science conception of 'inference to the best explanation'?

The rapid pace at which the natural sciences are progressing necessitates continual engagement. As such, further research into contemporary scientific ideas, such as the multiverse discussed in chapter 8, is recommended. Further engagement with the implications of multiverse cosmology should be explored. Other areas with direct theological implications should be at the forefront. Examples of current research include my own into the scriptural compatibility of the possible existence of extraterrestrial life.[1026] Future research into string theory and its implications for cosmology would provide fertile ground for academic discussion. Classical *Ashʿarī*s were atomists with their own understanding of the physical universe. How their ideas relate to modern physics and how they may be understood in light of modern discoveries in physics and chemistry is necessary work for future scholars.

[1026] See: Khalayleh, "Does the Qurʾān Affirm Extraterrestrial life? A Hermeneutic Analysis of the of Sūrat al-Naḥl (Q. 16:8)", (forthcoming).

Bibliography

Arabic sources are placed in alphabetical order in accordance with the beginning of the last name after the Arabic article 'al' also spelled 'el' (e.g., 'Al-Rāzī' is under the letter 'R' not 'A').

Abdel Haleem, M. A., ed. *The Qur'an*. Oxford World's Classics. New York: Oxford University Press, 2005.

———. *The Qurʾān*. 2010 reprint with corrections. Oxford: Oxford University Press, 2008.

Abdelnour, Muhammad Gamal. *The Higher Objectives of Islamic Theology*. 1st ed. AAR Reflection and Theory Stu Religion. New York: Oxford University Press, 2022.

ʿAbd al-Raḥīm, ʿAlāʾ Ibrāhīm. *Ḥadīth - Sujūd al-Shams Taḥt al-'Arsh - Wurida Shubh al-'Aqlānīyīn*. Salaf Center, 2018. Accessed 27 June 2023. https://salafcenter.org/wp-content/uploads/2018/12/%D8%AD%D8%AF%D9%8A%D8%AB-%D8%B3%D8%AC%D9%88%D8%AF-%D8%A7%D9%84%D8%B4%D9%85%D8%B3-%D8%AA%D8%AD%D8%AA-%D8%A7%D9%84%D8%B9%D8%B1%D8%B4-%E2%80%93%D9%88%D8%B1%D8%AF-%D8%B4%D8%A8%D9%87-%D8%A7%D9%84%D8%B9%D9%82%D9%84%D8%A7%D9%86%D9%8A%D9%8A%D9%86.pdf

Al-Abharī, Athīr al-Dīn, *Sharḥ Matn Īsāghūjī*, Damascus: *Dār al-Fikr*, 2003.

Abraham, William J. *The Existence of God*. Oxford University Press, 2007. https://doi.org/10.1093/oxfordhb/9780199245765.003.0002.

Abrahamov, Binyamin. *Islamic Theology: Traditionalism and Rationalism*. Edinburgh: Edinburgh University Press, 1998.

———. 'Necessary Knowledge in Islamic Theology'. *British Journal of Middle Eastern Studies* 20, no. 1 (January 1993): 20–32. https://doi.org/10.1080/13530199308705567.

Adamson, Peter, and Richard C. Taylor, eds. *The Cambridge Companion to Arabic Philosophy*. Cambridge, UK ; New York: Cambridge University Press, 2005.

Adler, Mortimer Jerome. *How to Think about God: A Guide for the 20th-Century Pagan*. New York: Collier Books, 1991.

Agar, Jon. *Science in the Twentieth Century and Beyond*. History of Science. Cambridge, UK; Malden, MA: Polity Press, 2012.

Agostini, Igor. 'Descartes's Proofs of God and the Crisis of Thomas Aquinas's Five Ways in Early Modern Thomism: Scholastic and Cartesian Debates'. *Harvard Theological Review* 108, no. 2 (April 2015): 235–62. https://doi.org/10.1017/S0017816015000152.

Ahmad, Saiyad Fareed, and Saiyad Salahuddin Ahmad. *God, Islam, and the Skeptic Mind: A Study on Faith, Religious Diversity, Ethics, and the Problem of Evil*. Berlin: Blue Nile Pub., 2004.

Ahmed, Shahab, and Nenad Filipovic. "The Sultan's Syllabus: A Curriculum for the Ottoman Imperial Medreses Prescribed in a Fermān of Qānūnī I Süleymān, Dated 973 (1565)." *Studia Islamica*, no. 98/99 (2004): 183–218. http://www.jstor.org/stable/20059215

Ahsan, Abbas and Gnomon Center for the Humanities. 'The Logical Inconsistency in Making Sense of an Ineffable God of Islam'. *Philotheos* 20, no. 1 (2020): 68–116. https://doi.org/10.5840/philotheos20202016.

Akhtar, Shabbir. *The Quran and the Secular Mind: A Philosophy of Islam*. London; New York: Routledge, 2008.

Albert, David Z. *Quantum Mechanics and Experience*. Cambridge, Mass: Harvard University Press, 1992.

Algar, Hamid. *Wahhabism: A Critical Essay*. 1st ed. Oneonta, NY: Islamic Publications International, 2002.

Ali, Abdullah Yusuf. *Koran: An English Interpretation of the Holy Qurʾān with Full Arabic Text.* Lahore: Muhammad Ashraf, 1992.

Ali, Abdullah Yusuf. *The Meaning of the Holy Qurǎn*. New ed. with Qurǎnic text (Arabic), rev. Translation, Commentary, and Newly compiled comprehensive index. Beltsville, Md: Amana Publications, 1997.

Ali, Abdullah Yusuf and Islamic Foundation (Great Britain). *The Meaning of the Holy Qur'än: Complete Translation with Selected Notes*, 2012.

Allais, Lucy. 'Kant's Transcendental Idealism and Contemporary Anti-realism'. *International Journal of Philosophical Studies* 11, no. 4 (December 2003): 369–92. https://doi.org/10.1080/0967255032000136489.

———. 'Kant's Transcendental Idealism and Contemporary Anti-realism'. *International Journal of Philosophical Studies* 11, no. 4 (December 2003): 369–92. https://doi.org/10.1080/0967255032000136489.

Allison, Dale C. *Encountering Mystery: Religious Experience in a Secular Age*. Grand Rapids, Michigan: William B. Eerdmans Publishing Company, 2022.

Allison, Henry E. *Kant's Transcendental Idealism*. Rev. and Enlarged ed. New Haven (Conn.): Yale university press, 2004.

Altaie, Basil. *God, Nature, and the Cause: Essays on Islam and Science.* S.L.: Kalam Research & Media, 2016.

Al-Alūsī, Mahmūd. *Tafsīr al-Alūsī. Al-Maktaba Al-Shāmela Al-Ḥadītha*. Accessed, 26 August, 2022. <https://al-maktaba.org/book/22835/5962#p1>, https://al-maktaba.org/book/22835/5962#p2.

Al-Ashʿarī, Abū al-Ḥasan ʿAlī ibn Ismāʿīl, and Richard Joseph McCarthy. *The Theology of al-Ashʿarī : the Arabic texts of al-Ashʿari's kitāb al-lumaʿ and Risālat Istiḥsān al-Khawḍ fī ʿilm al-kalām* with briefly annotated translations, and appendices containing material pertinent to the study of al-Ash'ari. Beirut: Impr. catholique, 1953.

Al-Ashʿarī, Abu al-Ḥasan. *Risāla Ilā Ahl al-Thaghr.* Madina: *Maktabat al-ʿUlūm wa al-Ḥikam*, 2002.

Amarnath Amarasingam, ed. *Religion and the New Atheism : A Critical Appraisal*. Studies in Critical Social Sciences, Studies in Critical Research on Religion, v. 25. v. 1. Leiden ; Boston: Brill, 2010.

———. *Religion and the New Atheism : A Critical Appraisal*. Chicago, Ill.: Haymarket Books, 2012.

Amir-Moezzi, Mohammad Ali, Christian Jambet, Kenneth Casler, and Eric L. Ormsby. *What Is Shiʿi Islam? An Introduction*. Routledge Persian and Shiʿi Studies Series, v. 3. London ; New York: Routledge, Taylor & Francis Group, 2018.

American Humanist Association. 'Definition of Humanism'. Accessed 31 March 2019. https://americanhumanist.org/what-is-humanism/definition-of-humanism/.

Ameriks, Karl. *Interpreting Kant's Critiques*. Oxford University Press, 2003. https://doi.org/10.1093/0199247315.001.0001.

Ameriks, Karl. "The critique of metaphysics: Kant and traditional ontology" in Guyer, Paul ed., *The Cambridge Companion to Kant* (Cambridge: Cambridge University Press, 1992), 249-79.

Anderson, Carl D. 'The Positive Electron'. *Physical Review* 43, no. 6 (15 March 1933): 491–94. https://doi.org/10.1103/PhysRev.43.491.

Anderson, Tawa J. *An Introduction to Christian Worldview: Pursuing God's Perspective in a Pluralistic World*. Downers Grove: InterVarsity Press, 2017.

Anjum, Ovamir. 'Islam as a Discursive Tradition: Talal Asad and His Interlocutors'. *Comparative Studies of South Asia, Africa and the Middle East* 27, no. 3 (1 December 2007): 656–72. https://doi.org/10.1215/1089201x-2007-041.

Arabic Academy Cairo. *Al-Muʿjam Al-Wasīṭ*. Cairo: *Maktabat al-Shurūq al-Dawlīyya,* 2008.

'Arabs Without God: Introduction – Brian Whitaker – Medium'. Accessed 10 November 2018. https://medium.com/@Brian_Whit/arabs-without-god-introduction-cbdbacd13e9f.

Armstrong, Benjamin F. "Hume's Actual Argument against Belief in Miracles." *History of Philosophy Quarterly* 12, no. 1 (1995): 65–76. http://www.jstor.org/stable/27744648.

Armstrong, Karen. *A History of God: The 4000 Year Quest of Judaism, Christianity and Islam*. New York: Knopf, 1993.

———. *Islam: A Short History*. Modern Library ed. Modern Library Chronicles. New York: Modern Library, 2002.

———. *The Case for God*. New York: Anchor Books, 2010.

Asad, Talal. *Formations of the Secular: Christianity, Islam, Modernity*. Cultural Memory in the Present. Stanford, Calif: Stanford University Press, 2003.

Ashimi, Tijani Ahmad. 'The Classification of Knowledge in Islam by Imam Al-Ghazālī and Al-Farabi: A Comparative Study'. *International Journal of Advanced Research in Islamic and Humanities*, 1 November 2022. https://doi.org/10.55057/ijarih.2022.4.3.7.

Al-ʿAsqalānī, Ibn Ḥajar Aḥmad bin ʿAlī, and Muḥammad al-Bukhārī. *Fatḥ al-Bārī Sharḥ Ṣaḥīḥ al-Bukhārī*. (Cairo: *Dār al-Kutub al-Salafiyya*, n.d.), 8:541-2.

Al-Attas, Muhammad Naquib. *Islam and Secularism* Kuala Lumpur, Malaysia: International Institute of Islamic Thought and Civilization, 1993.

———. *Prolegomena to the Metaphysics of Islam: An Exposition of the Fundamental Elements of the Worldview of Islām*. 2. ed. Kuala Lumpur: International Institute of Islamic Thought and Civilization, 2001.

Attfield, D. G. "The Argument from Religious Experience." *Religious Studies* 11, no. 3 (1975): 335–43. http://www.jstor.org/stable/20005259.

Audi, Robert. *Epistemology: A Contemporary Introduction to the Theory of Knowledge*. 3rd ed. Routledge Contemporary Introductions to Philosophy. New York: Routledge, 2011.

Aydüz, Salim, Leonard B. Abbey, Thomas R. Williams, Wayne Orchiston, Hüseyin Topdemir, Christof A. Plicht, Margherita Hack, et al. 'Abharī: Athīr Al-Dīn Al-Mufaḍḍal Ibn ÇUmar Ibn Al-Mufaḍḍal Al-Samarqandī Al-Abharī'. In *The Biographical Encyclopedia of Astronomers*, edited by Thomas Hockey, Virginia Trimble, Thomas R. Williams, Katherine Bracher, Richard A. Jarrell, Jordan D. Marché, F. Jamil Ragep, JoAnn Palmeri, and Marvin Bolt, 7–8. New York, NY: Springer New York, 2007. https://doi.org/10.1007/978-0-387-30400-7_9.

Ayres, Lewis, Medi Ann Volpe, and Oxford University Press, eds. *The Oxford Handbook of Catholic Theology*. First edition. Oxford, United Kingdom ; New York, NY, United States of America: Oxford University Press, 2019.

Bagaria, Joan, "Set Theory", *The Stanford Encyclopedia of Philosophy* (Winter 2021 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/win2021/entries/set-theory/

Baggini, J. G. *Atheism: A Very Short Introduction.* Oxford: Oxford University Press, 2003.

Baird, Forrest E., ed. *From Plato to Derrida*. 6th ed. Upper Saddle River, N.J: Pearson Prentice Hall, 2010.

Ball, Philip. *Beyond Weird: Why Everything You Thought You Knew about Quantum Physics Is Different*. Chicago: The University of Chicago Press, 2018.

Ballarin, Roberta, "Modern Origins of Modal Logic", *The Stanford Encyclopedia of Philosophy* (Winter 2022 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/win2022/entries/logic-modal-origins/>.

Bano, Masooda, ed. *Modern Islamic Authority and Social Change*. Edinburgh: Edinburgh University Press, 2018.

———, ed. *Modern Islamic Authority and Social Change*. Edinburgh: Edinburgh University Press, 2018.

Al-Bāqilānī, Abu Bakr. *Kitāb al-Tamhīd*. Beirut: *al-Maktaba al-Sharqīyya*, 1957.

Al-Bar, Muḥammad Ali, and Hassan Chamsi-Pasha. 'The Origins of Islamic Morality and Ethics'. In *Contemporary Bioethics*, by Muḥammad Ali Al-Bar and Hassan Chamsi-Pasha, 49–74. Cham: Springer International Publishing, 2015. https://doi.org/10.1007/978-3-319-18428-9_3.

Barbour, Ian G. *Religion in an Age of Science: The Gifford Lectures, Volume One*. Place of publication not identified: HarperOne, 2014.

———. *When Science Meets Religion*. 1st ed. San Francisco: HarperSanFrancisco, 2000.

Barnes, Jonathan. *The Ontological Argument*. London: Palgrave Macmillan Limited, 1972. https://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=5652560.

Barnes, L. A. 'The Fine-Tuning of the Universe for Intelligent Life'. *Publications of the Astronomical Society of Australia* 29, no. 4 (2012): 529–64. https://doi.org/10.1071/AS12015.

Barrow, John D. *The Constants of Nature: From Alpha to Omega--the Numbers That Encode the Deepest Secrets of the Universe*. 1st American ed. New York: Pantheon Books, 2002.

Bassham, Gregory. *The Philosophy Book: From the Vedas to the New Atheists: 250 Milestones in the History of Philosophy*. New York: Sterling, an imprint of Sterling Publishing Co., Inc, 2016.

Al-Bayḍāwī, ʿAbd Allāh. *Ṭawaliʿ al-Anwār wa Mataliʿ al-Anẓār*. Beirut and Cairo: *Dār al-Jīl and al-Maktaba al-Azhariyya li-al-Turāth*, 1991.

———. *Anwār al-Tanzīl wa Asrār al-Taʾwīl wa bi Hāmishihi Ḥāshiyat-al-Kāzarūnī*. 4 vols. (Damascus: *Dār al-Rashīd*, 2000),

Al-Bayjūrī, Ibrahīm. *Tuḥfat al-Murīd Sharḥ Jawrahat al-Tawḥīd*. 6th ed. Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2013.

Al-Bayhaqī, Aḥmad ibn al-Ḥusayn. *The Creed of Imam Bayhaqī*. Translated by Nasir Abdussalam. London: Turath, 2017.

Beaney, Michael. *Analytic Philosophy: A Very Short Introduction*. New York, NY: Oxford University Press, 2017.

———, ed. *The Oxford Handbook of the History of Analytic Philosophy*. First published in paperback. Oxford: Oxford Univ. Press, 2015.

Bekri, Hamza, El-. "*Mā Huwa al-Zamān ʿind al-Mutakalimīn*." YouTube. Dr. Hamza el-Bekri, February 5, 2019. https://www.youtube.com/watch?v=mMgfgPfAdyY&ab_channel=Dr.Hamzael-Bekri%D8%A7%D9%84%D8%AF%D9%83%D8%AA%D9%88%D8%B1%D8%AD%D9%85%D8%B2%D8%A9%D8%A7%D9%84%D8%A8%D9%83%D8%B1%D9%8A.

———. "*ʿIlm al-Kalām al-Jadīd Taʿrīf wa Taqīīm* 1" YouTube. YouTube.com, July 6, 2021. Accessed, 5 June 2023. https://www.youtube.com/watch?v=j9nFLZzIIes&ab_channel=Dr.Hamzael-Bekri%D8%A7%D9%84%D8%AF%D9%83%D8%AA%D9%88%D8%B1%D8%AD%D9%85%D8%B2%D8%A9%D8%A7%D9%84%D8%A8%D9%83%D8%B1%D9%8A .

———. "*Masāʾil al-Ikhtilāf bayna al-Ashāʿira wa-al-Māturīdiyya* (Matters of disagreement between Ashāʿirs and Māturīdis)." YouTube. Dr Hamza el-Bekri. Accessed, April 24, 2022. https://www.youtube.com/watch?v=dunEZ76CmLs&list=PLnXQtAauTV73TppIqnVGM_yJ9CDEN9rq8&ab_channel=Dr.Hamzael-Bekri%D8%A7%D9%84%D8%AF%D9%83%D8%AA%D9%88%D8%B1%D8%AD%D9%85%D8%B2%D8%A9%D8%A7%D9%84%D8%A8%D9%83%D8%B1%D9%8A.

Berger, Lutz, "Interpretations of Ashʿarism and Māturīdism in Mamluk and Ottoman Times", in Sabine Schmidtke (ed.), *The Oxford Handbook of Islamic Theology*, Oxford Handbooks (2016; online edn, Oxford Academic, 3 Mar. 2014), https://doi.org/10.1093/oxfordhb/9780199696703.013.012, accessed 5 May 2022.

Berman, David. *A History of Atheism in Britain: From Hobbes to Russell*. London New York: Routledge, 1990 and 2013.

Bigliardi, Stefano. *Islam and the Quest for Modern Science: Conversations with Adnan Oktar, Mehdi Golshani, Mohammed Basil Altaie, Zaghloul El-Naggar, Bruno Guiderdoni and Nidhal Guessoum*. Stockholm: Swedish Research Institute in Istanbul, 2014.

Bird, Alexander. *Philosophy of Science*. Repr. Fundamentals of Philosophy. London: UCL Press, 2000.

Björkman, W., "Kāfir", in: Encyclopaedia of Islam, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 29 May 2023 <http://dx.doi.org/10.1163/1573-3912_islam_SIM_3775>.

Black, Deborah L. 'Logic in Islamic Philosophy'. In *Routledge Encyclopedia of Philosophy*, 1st ed. London: Routledge, 2016. https://doi.org/10.4324/9780415249126-H017-1.

Blackburn, Simon. *The Oxford Dictionary of Philosophy*. Oxford Paperback Reference. Oxford ; New York: Oxford University Press, 1996.

———. *The Oxford Dictionary of Philosophy*. New York: Oxford University Press, 1996. http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=12313.

———. *Truth: A Guide*. Oxford ; New York: Oxford University Press, 2005.

Blankenship, Khalid. 'The Early Creed'. In *The Cambridge Companion to Classical Islamic Theology*, edited by Tim Winter, 1st ed., 33–54. Cambridge University Press, 2008. https://doi.org/10.1017/CCOL9780521780582.003.

Boulding, Jamie. *The Multiverse and Participatory Metaphysics: A Theological Exploration*. 1st ed. London: Routledge, 2021. https://doi.org/10.4324/9781003014553.

Bradley, Darren. *A Critical Introduction to Formal Epistemology*. Bloomsbury Critical Introductions to Contemporary Epistemology. London: Bloomsbury Academic, an imprint of Bloosmsbury Publishing Plc, 2015.

Bristow, William, "Enlightenment", *The Stanford Encyclopedia of Philosophy* (Fall 2017 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2017/entries/enlightenment/>.

Britannica, T. Editors of Encyclopaedia. "ʿAbd Allāh ibn al-ʿAbbās." Encyclopedia Britannica, January 11, 2016. https://www.britannica.com/biography/Abd-Allah-ibn-al-Abbas.

———. "Defining and Measuring the Observable and the Whole Universe". nd. *Encyclopedia Britannica and MinutePhysics*. Accessed August 14 2022. https://www.britannica.com/video/185400/universe.

———. "emanationism." Encyclopedia Britannica, July 20, 1998. https://www.britannica.com/topic/emanationism.

———. "miḥnah." Encyclopedia Britannica, July 20, 1998. https://www.britannica.com/topic/mihnah.

Brock, Stuart, and Edwin D. Mares. *Realism and Anti-Realism*. 1. publ. Central Problems of Philosophy. Chesham: Acumen, 2007.

Brown, Callum G. *Becoming Atheist: Humanism and the Secular West*. London ; New York: Bloomsbury Academic, an imprint of Bloomsbury Publishing, Plc, 2017.

———. *The Twentieth Century*. Oxford University Press, 2013. https://doi.org/10.1093/oxfordhb/9780199644650.013.021.

Brown, Jonathan A. C. *Hadith: Muhammad's Legacy in the Medieval and Modern World*. Foundations of Islam. Oxford: Oneworld, 2009.

Brown, Stuart C., ed. *British Philosophy and the Age of Enlightenment*. Routledge History of Philosophy, v. 5. London ; New York: Routledge, 1996.

Brüntrup, Godehard, and Ronald K Tacelli. *The Rationality of Theism*. Dordrecht: Springer Netherlands, 1999. https://doi.org/10.1007/978-94-015-9289-5.

Bub, Jeffrey, and Tanya Bub. *Bananaworld: Quantum Mechanics for Primates*. First edition. Oxford, United Kingdom: Oxford University Press, 2016.

Buckley, Michael J. *At the Origins of Modern Atheism*. New Haven: Yale University Press, 1987.

Bukhari, Muhammad ibn Isma`il, and Muhammad Muhsin Khan. *Sahih Al-Bukhari: The Translation of the Meanings of Sahih al-Bukhari : Arabic-English*. Riyadh-Saudi Arabia: Darussalam Pub. & Distr., 1997. http://books.google.com/books?id=GdclAQAAMAAJ.

Burckhardt, Jacob. *The Civilization of the Renaissance in Italy*. Penguin Classics. London, England ; New York, N.Y., USA: Penguin Books, 1990.

Burrell, David. 'Faith and Religious Convictions: Studies in Comparative Epistemology'. *The Journal of Religion* 63, no. 1 (1 January 1983): 64–73. https://doi.org/10.1086/486987.

Butler, Christopher. *Postmodernism: A Very Short Introduction*. Very Short Introductions. Oxford ; New York: Oxford University Press, 2002.

Al-Būṭī, Muḥammad Saʿīd Ramaḍān. *Naqd Awhām al-Madiyya al-Jadalīyya.* Damascus: *Dār al-Fikr*, 1985.

———. *Al-Lāmadhhabiyya: Akhṭar bidʿa tuhaddidu al-Sharīʿa al-Islamīyya,* Damascus: *Dār al-Farābī*, 2005.

———. *Kubrā al-Yaqīnīyyāt al-Kawnīyya,* Damascus: *Dār al-Fikr*, 1997

Byun, Jiwon. 'Thomas Henry Huxley's Agnostic Philosophy of Science'. *University of British Columbia*, 2017. https://doi.org/10.14288/1.0354412.

Cahoone, Lawrence E., ed. *From Modernism to Postmodernism: An Anthology*. Cambridge, Mass: Blackwell Publishers, 1996.

Caputo, John D. 'Atheism, A/Theology, and the Postmodern Condition'. In *The Cambridge Companion to Atheism*, edited by Michael Martin, 1st ed., 267–82. Cambridge University Press, 2006. https://doi.org/10.1017/CCOL0521842700.017.

———. "Kant's Refutation of the Cosmological Argument." *Journal of the American Academy of Religion* 42, no. 4 (1974): 686–91. http://www.jstor.org/stable/1461135.

Carey, Patrick W., and Joseph T. Lienhard, eds. *Biographical Dictionary of Christian Theologians*. Westport, Conn: Greenwood Press, 2000.

Carr, Bernard, ed. *Universe or Multiverse?* Cambridge: Cambridge University Press, 2007.

Chapman, Owen. *The End of Metaphysics: Logical Positivism and Postmodernism.* Masters diss., Queen's University, 1997.

Charlesworth, Brian, and Deborah Charlesworth. *Evolution: A Very Short Introduction*. Very Short Introductions. Oxford ; New York: Oxford University Press, 2003.

Charlesworth, Max J. *Philosophy and Religion: From Plato to Postmodernism*. Oxford: Oneworld, 2002.

Chechnya International conference "Who are the Ahl al-Sunna?", 2016. https://chechnyaconference.org/material/chechnya-conference-statement-english.pdf [Accessed 31 May 2022].

Chisholm, John E. and Philosophical Studies, with support from the National University of Ireland. 'Atheism and Alienation: A Study of the Philosophical Sources of Contemporary Atheism'. *Philosophical Studies* 20, no. 0 (1971): 352–54. https://doi.org/10.5840/philstudies197120040.

Christiansen, Jessie L. 'Five Thousand Exoplanets at the NASA Exoplanet Archive'. *Nature Astronomy* 6, no. 5 (2 May 2022): 516–19. https://doi.org/10.1038/s41550-022-01661-8.

Chakravartty, Anjan, "Scientific Realism", *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2017/entries/scientific-realism/

Clark, Josh. "How Quantum Suicide Works". *Howstuffworks,* 2022. Accessed August 17, 2022. https://science.howstuffworks.com/innovation/science-questions/quantum-suicide4.htm;

Clark, Kelly James, and Jeffrey Koperski, eds. *Abrahamic Reflections on Randomness and Providence*. Cham: Springer International Publishing, 2022. https://doi.org/10.1007/978-3-030-75797-7.

Clayton, Philip, and Zachary Simpson, eds. *The Oxford Handbook of Religion and Science*. 1. publ. in paperback, Reprint. Oxford: Oxford Univ. Press, 2009.

Clifton, Timothy. *Gravity: A Very Short Introduction*. First edition. Very Short Introductions 512. Oxford, United Kingdom: Oxford University Press, 2017.

Collins, Graham. "The Many Interpretations of Quantum Mechanics". *Scientific American*. 2007. https://www.scientificamerican.com/article/the-many-interpretations-of-quantum-mechanics/

Connor, Steven, ed. *The Cambridge Companion to Postmodernism*. Cambridge Companions to Literature. Cambridge, UK ; New York: Cambridge University Press, 2004.

Cooper, John. 'Al-Rāzī, Fakhr al-Din (1149–1209)'. In *Routledge Encyclopedia of Philosophy*, 1st ed. London: Routledge, 2016. https://doi.org/10.4324/9780415249126-H044-1.

Copan, Paul, and William Lane Craig, eds. *The Kalām Cosmological Argument*. Bloomsbury Studies in Philosophy of Religoin. New York: Bloomsbury, Bloomsbury Academic, an imprint of Bloomsbury Publishing Inc, 2018.

Corbin, Henry. *History of Islamic Philosophy*. London ; New York : London: Kegan Paul International ; In association with Islamic Publications for the Institute of Ismaili Studies, 1993.

Cornforth, Maurice Campbell. *Materialism and the Dialectical Method*. 4. printing. Dialectical Materialism : An Introduction / by Maurice Cornforth, Vol. 1. New York: International Publ, 1975.

Cottee, Simon. *The Apostates: When Muslims Leave Islam*. London: C Hurst & Company, 2015.

Craig, Edward. 'Realism and Antirealism'. In *Routledge Encyclopedia of Philosophy*, 1st ed. London: Routledge, 2016. https://doi.org/10.4324/9780415249126-N049-1.

Craig, William Lane. *Reasonable Faith: Christian Truth and Apologetics*. 3rd ed. Wheaton, Ill: Crossway Books, 2008.

———. *The Kalam Cosmological Argument*. Library of Philosophy and Religion. New York: Barnes & Noble Books, 1979.

———. *The Kalam Cosmological Argument*. Library of Philosophy and Religion. Eugene, Or: Wipf and Stock, 2000.

Craig, William Lane, and Walter Sinnott-Armstrong. *God? A Debate between a Christian and an Atheist*. Point/Counterpoint Series. Oxford; New York: Oxford University Press, 2004.

Craig, William Lane, and Quentin Smith, eds. *Einstein, Relativity and Absolute Simultaneity*. London ; New York: Routledge, 2008.

Crowell, Steven. 'Existentialism'. In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Winter 2017. Metaphysics Research Lab, Stanford University, 2017. https://plato.stanford.edu/archives/win2017/entries/existentialism/.

Dajani, Rana. 'Evolution and Islam's Quantum Question'. *Zygon®* 47, no. 2 (June 2012): 343–53. https://doi.org/10.1111/j.1467-9744.2012.01259.x.

Al-Damanhūrī, Aḥmad. *Īḍāḥ al-Mubham li-maʿānī al-Sillam: Sharḥ ʿAlā Matn al-Sillam al-Manūraq fī ʿIlm al-Manṭiq*. Cairo: *Dār al-Baṣaʾir*, 2008.

Al-Dārdīr, Aḥmad ibn Muḥammad, and Shinnār Abd al-Salām. *Sharḥ al-Kharīda al-Bahīyya*. Damascus: *Dār al-Bayrutī*, 2004.

Al-Dārdīr, Aḥmad, and al-Shagouri, Ibrahim Hakim. "*al-Kharīda al-Bahīyya*: *The Lustrous Untouched Pearl By Imam*" *Internet Archive,* 2018. https://archive.org/details/alKharīda-Dardīr1/mode/2up. Accessed: [24 August 2021].

Dār al-Iftāʾ al-Miṣriyyah. "An Introduction to *Kalām*: (Islamic Theology)." Accessed May 3, 2021. https://www.Daralifta.org/Foreign/ViewArticle.aspx?ID=116.

Dauben, Joseph Warren. *Georg Cantor: His Mathematics and Philosophy of the Infinite*. Princeton, N.J: Princeton University Press, 1990.

Davies, Paul. C. W. *Cosmic Jackpot: Why Our Universe Is Just Right for Life*. Boston: Houghton Mifflin, 2007.

———. "The Unreasonable Effectiveness of Science", in John Marks Templeton, *Evidence of Purpose: Scientists Discover The Creator*. Continuum, 1996.

Dawkins, Richard. *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe without Design*. Reissued. London: Penguin books, 2016.

———. *The God Delusion*. London: Bantam Press, 2006.

———. *The God Delusion*. 1st Mariner Books ed. Boston: Houghton Mifflin Co, 2008.

De Cillis, Maria. *Free Will and Predestination in Islamic Thought: Theoretical Compromises in the Works of Avicenna, al-Ghāzālī and Ibn ʿArabī*. 1. publ. Culture and Civilization in the Middle East 42. London: Routledge, 2014.

Del Noce, Augusto. *The Problem of Atheism*. Translated by Carlo Lancellotti. McGill-Queen's Studies in the History of Ideas 84. Montreal: McGill-Queen's University Press, 2021.

Delacampagne, Christian. *A history of philosophy in the twentieth century*. Baltimore, Md.: Johns Hopkins University Press, 1999. http://catalog.hathitrust.org/api/volumes/oclc/40707006.html.

Della Rocca, Michael. *Spinoza*. Routledge Philosophers. London ; New York: Routledge, 2008.

Dennett, D. C. *Breaking the Spell: Religion as a Natural Phenomenon*. New York, NY: Penguin Books, 2007.

———. *Darwin's Dangerous Idea: Evolution and the Meanings of Life*. New York: Simon & Schuster, 1995.

Dennett, D. C., and Gregg D. Caruso. *Just Deserts: Debating Free Will*. Medford: Polity Press, 2021.

DeWitt, Richard. *Worldviews: An Introduction to the History and Philosophy of Science*. 2nd ed. Chichester, West Sussex, U.K. ; Malden, MA: Wiley-Blackwell, 2010.

Al-Dhahabī, Muḥammad Ḥusayn. *Al-Tafsīr Wa al-Mufassirūn*. 8th edition. Cairo: *Maktabat Wahbah*, 2003.

Dhanani, Alnoor. *The Physical Theory of Kalām: Atoms, Space, and Void in Basrian Muʿtazilī Cosmology*. Islamic Philosophy, Theology, and Science, v. 14. Leiden ; New York: E.J. Brill, 1994.

Douven, Igor, "Abduction", *The Stanford Encyclopedia of Philosophy* (Summer 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2021/entries/abduction/>.

Draper, Paul, "Atheism and Agnosticism", *The Stanford Encyclopedia of Philosophy* (Summer 2022 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2022/entries/atheism-agnosticism/

Drozdowicz, Zbigniew. *Cartesian Rationalism*. 1 [edition]. New York: Peter Lang, 2015.

Duby, Steven J. *God in Himself: Scripture, Metaphysics, and the Task of Christian Theology*. Studies in Christian Doctrine and Scripture. Downers Grove, Illinois: IVP Academic, an imprint of InterVarsity Press, 2019.

Ducasse, Curt John. *Truth, Knowledge and Causation,* Oxford and New York: Routledge, 2015.

Dummett, Michael. *Origins of Analytical Philosophy*. Cambridge, Mass: Harvard University Press, 1994.

Dupré, Louis K. *The Enlightenment and the Intellectual Foundations of Modern Culture*. New Haven: Yale University Press, 2004.

Durant, Will. *The Story of Philosophy: The Lives and Opinions of the Greater Philosophers*. New York: Pocket Books, 2006.

Eagleton, Terry. *Culture and the Death of God*. First published in paperback. New Haven London: Yale University Press, 2015.

Eichner, Heidrun. *Handbooks in the Tradition of Later Eastern Ashʿarīsm*. Edited by Sabine Schmidtke. Vol. 1. Oxford University Press, 2015. https://doi.org/10.1093/oxfordhb/9780199696703.013.024.

Eller, David. *Natural Atheism*. Cranford, N.J: American Atheist Press, 2004.

Ellis, George, and Joe Silk. 'Scientific Method: Defend the Integrity of Physics'. *Nature* 516, no. 7531 (December 2014): 321–23. https://doi.org/10.1038/516321a.

English Heritage. "Battle of Hastings 1066, Battle - 1000013 | Historic England". English Heritage. *Historicengland.org.uk*. Accessed, 15 July 2021. https://historicengland.org.uk/content/docs/listing/battlefields/hastings

Erlwein, Hannah Christine. *Arguments for God's Existence in Classical Islamic Thought: A Reappraisal of the Discourse*. Berlin Boston (Mass.): De Gruyter, 2019.

Ess, Josef van. *Theology and Society in the Second and Third Centuries of the Hijra. Volume 4*. Translated by Gwendolin Goldbloom. Handbook of Oriental Studies Section 1, The Near and Middle East ; Volume 116/4. Leiden Boston: Brill, 2019.

Ess, Josef van, and John O'Kane. *Theology and Society in the Second and Third Centuries of the Hijra: A History of Religious Thought in Early Islam*. Handbuch Der Orientalistik = Handbook of Oriental Studies. Section One, The Near and Middle East, volume 116/1. Leiden ; Boston: Brill, 2017.

Fabro, Corneoli. *God in Exile: Modern Atheism: A Study of the Internal Dynamic of Modern Atheism, from Its Roots in the Cartesian Cogito to the Present Day*. New York: Newman Press, 1968. https://archive.org/details/godinexilemodern0000fabr.

Al-Farhārī, Abdul Azīz. *Al-Nibrās fī Sharḥ al-ʿAqāʾid al-Nasafiyya*. Istanbul: *Maktabat Yasīn*, 2012.

Fakhry, Majid. *A History of Islamic Philosophy*. 3rd ed. New York: Columbia University Press, 2004.

———. *Al-Farabi: founder of Islamic Neoplatonism ; his life, works and influence*. Oxford: Oneworld, 2002. http://www.aspresolver.com/aspresolver.asp?TCR2;3211321.

Faraz, Shaykh. "Is the Hadith: 'the Scholars Are the Inheritors of the Prophets' Authentic? If so, What Does It Mean? - Faraz Rabbani." Seekers Guidance. Shaykh Faraz, May 9, 2022.

https://seekersguidance.org/articles/general-artices/is-the-hadith-the-scholars-are-the-inheritors-of-the-prophets-authentic-if-so-what-does-it-mean-faraz-rabbani/.

Al-Faruque, Muhammad. "The Development of the Institution of Madrasah and the Niẓāmiyah of Baghdad." *Islamic Studies* 26, no. 3 (1987): 256. http://www.jstor.org/stable/20839845

Faye, Jan, "Copenhagen Interpretation of Quantum Mechanics", *The Stanford Encyclopedia of Philosophy* (Winter 2019 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/win2019/entries/qm-copenhagen/.

Fehér, István M. and Philosophy Documentation Center. 'Heidegger's Understanding of the Atheism of Philosophy: Philosophy, Theology, and Religion in His Early Lecture Courses up to Being and Time'. *American Catholic Philosophical Quarterly* 69, no. 2 (1995): 189–228. https://doi.org/10.5840/acpq199569238.

Feser, Edward. *Five Proofs of Existence*. San Francisco: Ignatius Press, 2017.

———. *The Last Superstition: A Refutation of the New Atheism.* South Bend, Ind: St. Augustine's Press, 2011.

Feyerabend, Paul. *Against Method*. 4th ed. London ; New York: Verso, 2010.

Fodeh, Saʿīd. *Al-Adilla al-ʿAqliyya ʿAlā Wujūd Allah Bayn al-Mutakilmīn wa al-Falāsifa*. Amman: *al-Aslein*, 2013.

———. "*Mulakhas Falsafat Kant wa Sabab Tamassuk Dakatirat al-Jamiʿāt bihā - Saʿīd Fodeh*" YouTube. Saeed Fodeh, December 5, 2014. Accessed, 28 February 2023. https://www.youtube.com/watch?v=HN7SC6FTsmo&ab_channel=SaeedFodeh;

———. "*Al-Shaykh Saʿīd Fodeh... Min al-Nuqud li-Falsafat* Immanuel Kant" YouTube. Saeed Fodeh, January 1, 2020. Accessed, 28 February 2023. https://www.youtube.com/watch?v=vflSvPreDPQ&ab_channel=%D8%AD%D9%85%D8%A7%D8%A9%D8%A7%D9%84%D8%AF%D9%8A%D9%86.

———. "Georg Cantor *wa al-Malanihayāt, wa Asbaqiyyat al-Muslimīn fī Thalik* - Saʿīd Fodeh" YouTube. Saʿīd Fodeh, June 14, 2015. https://www.youtube.com/watch?v=ocYJvtUdl0I&t=606s&ab_channel=SaʿīdFodeh.

———. "*Al-Naẓariyyat al-ʿIlmiyya wa shubhat Hume hawl al-Sababiya* – Saʿīd Fodeh" YouTube. Saʿīd Fodeh, March 16, 2016. Accessed, Accessed 7 January 2022. https://www.youtube.com/watch?v=Mtrnz1QvokQ;

———. *Mukhtasar Sharḥ al-Kharīda al-Bahīyya li al-Shaykh Aḥmad al-Dardīr*. QuranicThought.com

———. *Tahthīb Sharḥ al-Sanūsiyya*. Amman: *Dār al-Rāzī,* 2004.

———. *Al-Kāshif al-Saghīr ʿan ʿAqāʾid Ibn Taymīyyah.* Amman: *Dār al-Rāzī*, 2000.

———. *Tafnīd al-ʾUsūs al-Naẓarīyah wa-al-ʿAmalīyah lil-ʾilhād..* Amman: al-Aslein, 2016.

———. *Bayn al-ʿAdam wa al-Khalāʾ wa al-Khalṭ Baynahumā*. *Aslein* forum. http://www.aslein.net/archive/index.php/t-16357.html. Accessed 28 July 2022.

———. "*al-Dalīl al-Ontologī ʿalā Wujūd Allah dalīl sakhīf – Saʿīd Fodeh*" YouTube. *Al-Sāda al-Ashāʿira*, June 30, 2020. Accessed, 8 January 2022. https://www.youtube.com/watch?v=pCdStmHOe7A&ab.

Ford, David, and Rachel Muers, eds. *The Modern Theologians: An Introduction to Christian Theology since 1918*. 3rd ed. The Great Theologians. Malden, MA: Blackwell Pub, 2005.

Frame, John M. *Systematic Theology: An Introduction to Christian Belief*. Phillipsburg, New Jersey: P&R Publishing, 2013.

Frank, Richard M. *Al-Ghazālī and the Ashʿarīte School*. Duke Monographs in Medieval and Renaissance Studies 15. Durham, NC: Duke Univ. Press, 1994.

———. "The Ašʿarite Ontology: I Primary Entities." *Arabic Sciences and Philosophy* 9 (1999): 163

———. *Classical Islamic Theology: The Ash`arites*. Edited by Dimitri Gutas. 0 ed. Routledge, 2020. https://doi.org/10.4324/9781003110392.

———. 'Knowledge and Taqlîd: The Foundations of Religious Belief in Classical Ashʿarīsm'. *Journal of the American Oriental Society* 109, no. 1 (January 1989): 37. https://doi.org/10.2307/604336.

———. 'The Science of *Kalām*'. *Arabic Sciences and Philosophy* 2, no. 1 (March 1992): 7–37. https://doi.org/10.1017/S0957423900001557.

———. "Attribute, Attribution, and Being: Three Islamic Views: Philosophies of Existence, Ancient and Medieval", Ed. P. Morewedge. New York, NY: Fordham University Press, 1982

Frank, Richard M., and Dimitri Gutas. *Texts and Studies on the Development and History of Kalām*. Variorum Collected Studies Series CS833, 835. Burlington, VT: Ashgate, 2005.

Fraser, Liam Jerrold. *Atheism, Fundamentalism and the Protestant Reformation: Uncovering the Secret Symptathy*. Cambridge ; New York: Cambridge University Press, 2018.

Fremstedal, Roe. 'Kant and Existentialism: Inescapable Freedom and Self-Deception'. In *The Palgrave Handbook of German Idealism and Existentialism*, edited by Jon Stewart, 51–75. Cham: Springer International Publishing, 2020. https://doi.org/10.1007/978-3-030-44571-3_3.

Friederich, Simon. 'A New Fine-Tuning Argument for the Multiverse'. *Foundations of Physics* 49, no. 9 (September 2019): 1011–21. https://doi.org/10.1007/s10701-019-00246-2.

———. *Multiverse Theories: A Philosophical Perspective*. First edition. New York: Cambridge University Press, 2021.

———. "Fine-Tuning", *The Stanford Encyclopedia of Philosophy* (Summer 2022 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2022/entries/fine-tuning/

Fuller, Michael, ed. *Matter and Meaning: Is Matter Sacred or Profane?* Newcastle upon Tyne: Cambridge Scholars, 2010.

Funkenstein, Amos. *Theology and the Scientific Imagination from the Middle Ages to the Seventeenth Century*. Princeton, N.J: Princeton University Press, 1986.

Al-Ghazālī, Abū-Ḥāmid Muḥammad Ibn-Muḥammad, and Michael E. Marmura. *The incoherence of the philosophers*. Provo,Utah: Brigham Young Univ. Press, 1997.

Gellner, Ernest. *Postmodernism, Reason and Religion*. London; New York: Routledge, 2013.

Gemes, Ken. 'Postmodernism's Use and Abuse of Nietzsche'. *Philosophy and Phenomenological Research* 62, no. 2 (March 2001): 337–60. https://doi.org/10.1111/j.1933-1592.2001.tb00059.x.

Al-Ghazzālī, and J. T Muckle. *Algazel's Metaphysics: A Medieval Translation*. Toronto: St. Michael's College, 1977.

Al-Ghazzālī, and Aladdin Mahmūd Yaqūb. *Al-Ghazālī's Moderation in Belief: Al-Iqtiṣād Fī al-Iʿtiqād*. Chicago ; London: The University of Chicago Press, 2013.

Al-Ghazālī, Abū Ḥāmid Muḥammad bin Muḥammad. *Tahāfut al-Falāsifa*. Cairo: *Dār al-Maʿārif*, 1966.

———. *Al-Ḥikmah fī Makhlūqāt Allāh*. Beirut: *Dār Ihyāʾ al-ʿUlūm*, 1978.

———. *Miʿyār al-ʿIlm*. Beirut: *Dār al-Minhāj*, 2016.

———. *Maḥak al-Naẓar fī Fann al-Mantiq*. Beirut: *Dār al-Minhāj*, 2016.

———. *Al-Iqtiṣād fī al-Iʿtiqād*. Beirut: *Dār al-Minhaj*, 2016.

———. *Fayṣal al-Tafriqa Bayn al-Islām wa al-Zandaqa*. Damascus: *Dār al-Bayrutī*, 1993.

———. *Fayṣal Al-Tafriqah Bayna al-Islām Wa-al-Zandaqah*. Jeddah: *Dār al-Minhāj*, 2017.

———. *Iḥyāʾ ʿUlūm al-Dīn*. Beirut: *Dār Ibn Ḥazm*, 2005.

Ghazālī, Abū Ḥāmid Muḥammad, and Mahmud Bejo, ed. *Qanūn al-Taʾwīl*. 1993. Accessed at: https://www.quranicthought.com/ar/books/%D9%82%D8%A7%D9%86%D9%88%D9%86-%D8%A7%D9%84%D8%AA%D8%A3%D9%88%D9%8A%D9%84/.

Giddens, Anthony. *The Consequences of Modernity*. 6th pr. Stanford, Calif: Stanford Univ. Press, 1997.

Gillies, Donald. *Philosophy of Science in the Twentieth Century: Four Central Themes*. Oxford, UK ; Cambridge, Mass., USA: Blackwell, 1993.

Al-Ghouz, Abdelkader, ed. *Islamic Philosophy from the 12th to the 14th Century: With 17 Figures*. Göttingen, Germany: V & R unipress, 2018.

Goldziher, Ignác, and Bernard Lewis. *Introduction to Islamic Theology and Law*. Modern Classics in Near Eastern Studies. Princeton, N.J: Princeton University Press, 1981.

Goldziher, I. and Goichon, A.M., "Dahriyya", in: Encyclopaedia of Islam, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 6 November 2022 http://dx.doi.org/10.1163/1573-3912_islam_SIM_1666.

Goswami, Amit. 'The Paradox of Schrödinger's Cat'. In *The Physicists' View of Nature*, by Amit Goswami, 139–46. Boston, MA: Springer US, 2001. https://doi.org/10.1007/978-1-4615-0527-3_15.

Graham, William A. 'Traditionalism in Islam: An Essay in Interpretation'. *Journal of Interdisciplinary History* 23, no. 3 (1993): 495. https://doi.org/10.2307/206100.

———. 'Traditionalism in Islam: An Essay in Interpretation'. *Journal of Interdisciplinary History* 23, no. 3 (1993): 495. https://doi.org/10.2307/206100.

Gray, John. *Seven Types of Atheism*. London: Allen Lane an imprint of Penguin Books, 2018.

Grayling, A. C. *Critiques of Theistic Arguments*. Oxford University Press, 2013. https://doi.org/10.1093/oxfordhb/9780199644650.013.035.

———. *Descartes: The Life and Times of a Genius*. 1. U.S. ed. New York, NY: Walker, 2006.

Grenz, Stanley J. *A Primer on Postmodernism*. Grand Rapids, Mich: William B. Eerdmans Pub. Co, 1996.

Griffel, Frank, 'Al-Ghazālī's (d. 1111) Incoherence of the Philosophers', in Khaled El-Rouayheb, and Sabine Schmidtke (eds), *The Oxford Handbook of Islamic Philosophy*, Oxford Handbooks (2016; online edn, Oxford Academic, 2 Nov. 2016), https://doi.org/10.1093/oxfordhb/9780199917389.013.8, accessed 2 May 2022.

———. *Al-Ghazālī's Philosophical Theology*. New York Oxford Auckland: Oxford University Press, 2009.

———. "Fakhr al-Din al-Rāzī." In Encyclopedia of Medieval Philosophy. Vol. 2, Philosophy between 500 and 1500. Edited by Henrik Lagerlund, 665–672. Dordrecht, The Netherlands: Springer, 2011.

———. *The Formation of Post-Classical Philosophy in Islam*. New York: Oxford University Press, 2021.

Griffel, Frank, Peter Adamson, and Charles Burnett. 'Kalām'. In *Encyclopedia of Medieval Philosophy*, edited by Henrik Lagerlund, 665–72. Dordrecht: Springer Netherlands, 2011. https://doi.org/10.1007/978-1-4020-9729-4_286.

Grunebaum, Gustave E. von, ed. *Logic in Classical Islamic Culture*. Wiesbaden: O. Harrassowitz, 1970.

Guessoum, Nidhal. *Islamic Theological Views on Darwinian Evolution*. Vol. 1. Oxford University Press, 2016. https://doi.org/10.1093/acrefore/9780199340378.013.36.

———. *Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science*. London: Tauris, 2011.

———. '*Kalām*'s Engagement with Modern Science', 2011, 20.

Gutas, Dimitri. *Avicenna and the Aristotelian Tradition: Introduction to Reading Avicenna's Philosophical Works*. Second, Revised, and Enlarged edition, Including an inventory of Avicenna's authentic works. Islamic Philosophy, Theology, and Science, v. 89. Boston: Brill, 2014.

———. *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbāsid Society (2nd-4th/8th-10th Centuries)*. London ; New York: Routledge, 1998.

———. "The Study of Arabic Philosophy in the Twentieth Century: An Essay on the Historiography of Arabic Philosophy." *British Journal of Middle Eastern Studies* 29, no. 1 (2002): 5–25. http://www.jstor.org/stable/826146.

Guth, Alan H. *The Inflationary Universe: The Quest for a New Theory of Cosmic Origins.* Boston; Scranton: Addison-Wesley Longman, Incorporated HarperCollins Publishers [distributor, 2000.

Guth, Alan H. and Paul J. Steinhardt. "The Inflationary Universe." *Scientific American* 250, no. 5 (1984): 116–29.

Guyer, Paul, and Rolf-Peter Horstmann. 'Idealism'. In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Winter 2018. Metaphysics Research Lab, Stanford University, 2018. https://plato.stanford.edu/archives/win2018/entries/idealism/.

Hacınebioğlu, İsamail Latif. *Does God Exist?: Logical Foundations of the Cosmological Argument*. Istanbul: Insan, 2008. http://books.google.com/books?id=HvHYAAAAMAAJ.

Hägglund, Martin. *Radical Atheism: Derrida and the Time of Life*. Meridian, Crossing Aesthetics. Stanford, Calif: Stanford University Press, 2008.

Hale, B. "Realism" Encyclopedia Britannica, November 19, 2020. https://www.britannica.com/topic/realism-philosophy.

Hallaq, Wael B. *A History of Islamic Legal Theories: An Introduction to Sunnī Uṣūl al-Fiqh*. Cambridge ; New York: Cambridge University Press, 1997.

———. *Ibn Taymiyya against the Greek Logicians* Oxford : New York: Clarendon Press ; Oxford University Press, 1993.

———. 'Ibn Taymiyya on the Existence of God.' *Acta Orientalia 52 (1991): 49-69.*

———. *The Impossible State: Islam, Politics, and Modernity's Moral Predicament*. New York [N.Y.]: Columbia University Press, 2013.

Halverson, Jeffry R. *Theology and Creed in Sunni Islam: The Muslim Brotherhood, Ash'arism, and Political Sunnism*. New York, N.Y: Palgrave Macmillan, 2010.

Hannay, Alastair, and Gordon Daniel Marino, eds. *The Cambridge Companion to Kierkegaard*. Cambridge ; New York: Cambridge University Press, 1998.

Harris, Sam. *Free Will*. 1st Free Press trade pbk. ed. New York: Free Press, 2012.

———. *Letter to a Christian Nation*. 1st Vintage Books ed. New York: Vintage Books, 2008.

———. *Moral Landscape: How Science Can Determine Human Values*. 1st Free Press paperback ed. New York: Free Press, 2011.

———. *The End of Faith: Religion, Terror, and the Future of Reason*. 1st Norton pbk. New York: W.W. Norton & Co, 2005.

Harrison, Edward Robert. *Masks of the Universe: Changing Ideas on the Nature of the Cosmos*. 2nd ed. Cambridge, UK ; New York: Cambridge University Press, 2003.

Harvey, Ramon. *Transcendent God, Rational World: A Māturīdī Theology*. Edinburgh Studies in Islamic Scripture and Theology. Edinburgh: Edinburgh University Press, 2021.

Hasbullah, Maisarah, and Mohd Hazim Shah Abdul Murad. 'The Rise of Modern Science: Islam and the West'. *Philosophy East and West* 68, no. 1 (2018): 78–96. https://doi.org/10.1353/pew.2018.0004.

Hashemi, Morteza. *Theism and Atheism in a Post-Secular Age*. 1st ed. 2017. Cham: Springer International Publishing : Imprint: Palgrave Macmillan, 2017. https://doi.org/10.1007/978-3-319-54948-4.

Hawking, Stephen, and Leonard Mlodinow. *The Grand Design*. New York: Bantam Books, 2010.

Hawking, Stephen, Eddie Redmayne, Kip S. Thorne, and Lucy Hawking. *Brief Answers to the Big Questions*. First U.S. edition. New York: Bantam Books, 2018.

Hawthorne, James, "Inductive Logic", *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2021/entries/logic-inductive/>.

Haykel, Bernard. 'On the Nature of Salafi Thought and Action1'. In *Global Salafism*, edited by Roel Meijer, 34–57. Oxford University Press, 2014. https://doi.org/10.1093/acprof:oso/9780199333431.003.0002.

Hasan, Ali and Richard Fumerton, "Foundationalist Theories of Epistemic Justification", in *The Stanford Encyclopedia of Philosophy* (Fall 2022 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = https://plato.stanford.edu/archives/fall2022/entries/justep-foundational/

Ḥā'irī Yazdī, Mahdī. *The Principles of Epistemology in Islamic Philosophy: Knowledge by Presence*. SUNY Series in Islam. New York: State University of New York Press, 1992.

Heidegger, Martin, and David Farrell Krell. *Basic Writings: From Being and Time (1927) to The Task of Thinking (1964)*. Rev. and Expanded ed. New York: Harper Perennial Modern Thought, 2008.

Heisenberg, Werner. *Physics and Philosophy: The Revolution in Modern Science*. Penguin Classics. London: Penguin, 2000.

Helm, Paul, ed. *Faith and Reason*. Oxford Readers. Oxford ; New York: Oxford University Press, 1999.

Henry, John. *The Scientific Revolution and the Origins of Modern Science*. 2nd ed. Studies in European History. Houndmills, Basingstoke, Hampshire ; New York: Palgrave, 2001.

Hepburn, Ronald. 'Book Review: Rational Theology and the Creativity of God'. *Theology* 86, no. 710 (March 1983): 131–35. https://doi.org/10.1177/0040571X8308600213.

Hick, John. *Between Faith and Doubt: Dialogues on Religion and Reason*. Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan, 2010.

———. *Philosophy of Religion*. 4th ed. Prentice Hall Foundations of Philosophy Series. Englewood Cliffs, N.J: Prentice Hall, 1990.

———, ed. *The Existence of God*. Nachdr. Problems of Philosophy Series. New York: Macmillan, 1995.

———. Hick, John. *What Is God? (Pt. 1) - Video Interview Series - Closer To Truth*. 2012 [online] Closertotruth.com. Available at: <https://www.closertotruth.com/series/what-god-part-1#video-2402> [Accessed 14 April 2020].

Hicks, Stephen Ronald Craig. *Explaining Postmodernism: Skepticism and Socialism from Rousseau to Foucault*. 1. ed, Expanded ed. Roscoe, Ill.: Ockham's Razor, 2011.

Hillenbrand, Carole, ed. 'Abu L-Muʿīn al-Nasafī and *Ashʿarī* Theology'. In *Studies in Honour of Clifford Edmund Bosworth, Volume II*, 318–30. BRILL, 2000. https://doi.org/10.1163/9789004491991_018.

Hitchens, Christopher. *God Is Not Great: How Religion Poisons Everything*. 1. Trade ed., Nachdr. New York, NY: Twelve, 2009.

Hodgson, Marshall G. S. *The Classical Age of Islam*. Nachdr. The Venture of Islam, conscience and history in a world civilization / Marshall G. S. Hodgson; Vol. 1. Chicago: Univ. of Chicago Press, 2005.

———. *The Venture of Islam. 2: The Expansion of Islam in the Middle Periods*. Paperb. ed., 14. pr. Chicago, Ill: Univ. of Chicago Press, 1977.

———. "Bāṭiniyya", in: Encyclopaedia of Islam, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 14 June 2022 <http://dx.doi.org/10.1163/1573-3912_islam_SIM_1284>

Hoodbhoy, Pervez. *Islam and Science: Religious Orthodoxy and the Battle for Rationality*. London ; Atlantic Highlands, N.J: Zed Books, 1991.

Hoover, Jon. *Ibn Taymiyya*. Makers of the Muslim World. London: Oneworld Academic, 2019.

Horner, Robyn, and Claude Romano, eds. *The Experience of Atheism: Phenomenology, Metaphysics and Religion*. London ; New York: Bloomsbury Academic, 2021.

Howard, Damian. *Being Human in Islam: The Impact of the Evolutionary Worldview*. Culture and Civilization in the Middle East 24. Abingdon, Oxon ; N.Y., N.Y: Routledge, 2011.

Haqiqatjou, Daniel. *The Modernist Menace to Islam*. Petaling Jaya, Selangor: Dakwah Corner Bookstore, 2020.

Huff, Peter A. *Atheism and Agnosticism: Exploring the Issues*. Religion in Politics and Society Today. Santa Barbara, California: ABC-CLIO, an imprint of ABC-CLIO, LLC, 2021.

Hume, David, and Tom L. Beauchamp. *An Enquiry Concerning Human Understanding*. Oxford Philosophical Texts. Oxford ; New York: Oxford University Press, 1999.

Hume, David, and J. M. Bell. *Dialogues Concerning Natural Religion*. Penguin Classics. London ; New York: Penguin Books, 1990.

Hume, David, and P. F. Millican. *An Enquiry Concerning Human Understanding*. Oxford World's Classics. Oxford ; New York: Oxford University Press, 2007.

Humphreys, Paul, Anjan Chakravartty, Margaret Morrison, and Andrea Woody, eds. *The Oxford Handbook of Philosophy of Science*. Oxford Handbooks. New York, NY: Oxford University Press, 2016.

Hunter, Michael Cyril William, and David Wootton, eds. *Atheism from the Reformation to the Enlightenment*. Oxford : Oxford ; New York: Clarendon Press ; Oxford University Press, 1992.

Huxley, Thomas Henry. *Essays upon Some Controverted Questions*. Cambridge: Cambridge University Press, 2009. http://dx.doi.org/10.1017/CBO9780511693113.

———. *Essays upon Some Controverted Questions*. Cambridge: Cambridge University Press, 2009.

Hyman, Gavin. *A Short History of Atheism*. Library of Modern Religion 13. London: I. B. Tauris, 2010.

Ibn ʿAsākir, ʿAlī ibn al-Ḥasan. *Tabyīn kadhib al-muftarī fī mā nusiba ilā al-imām Abī al-Ḥasan al-Ashʿarī*. Damascus: *Matbaʿat al-Tawfīq*, 1929.

Ibn al-Tilimsānī, ʿAbd Allāh ibn Muḥammad, and Nizār Ḥammādī. *Sharḥ Maʿālim Uṣūl Al-Dīn Lil-Imām Fakhr al-Dīn al-Rāzī*. Al-Ṭabʿah 1. ʿAmmān: *Dār al-Fatḥ lil-Dirāsāt wa-al-Nashr*, 2010.

Ibn Mājah, Muḥammad ibn Yazīd, Abū Ṭāhir Zubayr ʿAlī Zaʾī, Nasiruddin Khattab, Huda Khattab, and Abū Khalīl. *English Translation of Sunan Ibn Mâjah*. Riyadh: Darussalam, 2007.

———. *English Translation of Sunan Ibn Mâjah*. Riyadh: Darussalam, 2007.

Ibn Kathīr, Ismāʿīl bin ʿUmar, *Tafsīr al-Qurʾān al-ʿAẓīm*. Beirut: *Dār Ibn Ḥazm*, 2000.

Igbal, Allama Muhammed. *The Reconstruction of Religious Thought in Islam*. 10. reprint. New Delhi: Kitab Bhavan, 2008.

Iqbal, Muzaffar, ed. *Contemporary Issues in Islam and Science*. Islam and Science: Historic and Contemporary Perspectives 2. Burlington, VT: Ashgate, 2012.

———. *Contemporary Issues in Islam and Science*. London: Routledge, 2016. https://www.taylorfrancis.com/books/e/9781315259475.

———. *Science and Islam*. Greenwood Guides to Science and Religion. Westport, Conn: Greenwood Press, 2007.

———. *Studies in the Islam and Science Nexus*. London and New York: Routledge, 2016.

Ishii, Robertson and, Atkins, Teresa and Philip, "Essential vs. Accidental Properties", *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2020/entries/essential-accidental/>.

Izutsu, Toshihiko. *The Concept of Belief in Islamic Theology: A Semantic Analysis of Īmān and Islām*. Reprint of the ed. Tokyo u.a. 1965. Kuala Lumpur: Islamic Book Trust, 2006.

Jackson, Sherman A. *Islam and the Problem of Black Suffering*. Oxford ; New York: Oxford University Press, 2009.

———. *On the Boundaries of Theological Tolerance in Islam: Abū Ḥāmid al-Ghāzalī's Fayṣal al-Tafriqa Bayna al-Islam Wa al-Zandaqa*. Studies in Islamic Philosophy, v. 1. Karachi: Oxford University Press, 2002.

Jacobsen Ben Hammed, Nora. 'Meno's Paradox and First Principles in Fakhr al-Dīn al-Rāzī'. *Oriens* 48, no. 3–4 (9 June 2020): 320–44. https://doi.org/10.1163/18778372-04801101.

Jaʿfar, Muḥammad. *Naẓm al-Mutanāthir Min al-Ḥadith al-Mutawātir,* Cairo: *Dār al-Kutub al-Salafiyya*, n.d.

Jalajel, David Solomon. *Islam and Biological Evolution: Exploring Classical Sources and Methodologies*. Bellville: University of the Western Cape, 2009.

———. "Extraterrestrials and Moral Accountability: A Novel Question Viewed Through the Lens of Classical Islamic Theology" In Malik, Shoaib A. and, Determann, Jörg Matthias ed. *Islamic Theology and Extraterrestrial Life: New Frontiers in Science and Religion*. London: I.B. Tauris, forthcoming.

Jammer, Max. *The Philosophy of Quantum Mechanics: The Interpretations of Quantum Mechanics in Historical Perspective*. New York: Wiley, 1974.

Jolley, Nicholas. *Leibniz*. 2. ed. London: Routledge, 2020.

———, ed. *The Cambridge Companion to Leibniz*. Cambridge ; New York: Cambridge University Press, 1995.

Jones, W. T., and Robert J. Fogelin. *A History of Western Philosophy*. 3rd ed. Fort Worth: Harcourt Brace College Publishers, 1997.

Jordan, Jeff, "Pragmatic Arguments and Belief in God", *The Stanford Encyclopedia of Philosophy* (Fall 2022 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/fall2022/entries/pragmatic-belief-god/>.

Jung, Dietrich, and Kirstine Sinclair. *Muslim Subjectivities in Global Modernity: Islamic Traditions and the Construction of Modern Muslim Identities*. BRILL, 2020. https://doi.org/10.1163/9789004425576.

Al-Jurjānī, ʿAli Ibn- Muḥammad, al-Ījī, ʿAḍud al-Dīn, al-Siyālkūtī, ʿAbd al-Ḥakīm and Ḥasan al-Jalabī. *Sharḥ al-Mawāqif.* Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2012.

Al-Jurjānī, ʿAli Ibn- Muḥammad. *Muʿjam al-Taʿrīfāt*. (Cairo: *Dār al-Fāḍila*, nd).

Al-Jūwaynī, ʿAbd al-Malik. *Al-Irshād Ilā Qawātiʿ al-ʾAdilla fī ʾUṣul al-ʿAqāʾid*. Egypt: *Maktabat al-Khanjī*, 1950.

Al-Juwaynī, ʿAbd al-Malik, and al-Shanqītī, Muḥmmad al-Ḥasan. "*Sharḥ al-Waraqāt,*" *al-Maktaba al-Shāmila,* accessed 30 May 2023, https://al-maktaba.org/book/7689/26#p1.

Kaku, Michio, and Jennifer Trainer Thompson. *Beyond Einstein: Superstrings and the Quest for the Final Theory*. New York: Oxford University Press, 1997.

Kalin, Ibrahim. "Three Views of Science in the Islamic World". In Iqbal, Muzaffar ed. *Studies in the Islam and Science Nexus*. London and New York: Routledge, 2016.

Kant, Immanuel, Paul Guyer, Allen W. Wood, and Immanuel Kant. *Critique of Pure Reason*. The Cambridge Edition of the Works of Immanuel Kant. Cambridge ; New York: Cambridge University Press, 1998.

Kant, Immanuel, Norman Kemp Smith, and Gary Banham. *Critique of Pure Reason*. Rev. 2. ed. Basingstoke: Palgrave Macmillan, 2007.

Kant, Immanuel, Allen W Wood, George Di Giovanni, and Cambridge University Press. *Religion and rational theology*. Cambridge; New York, NY: Cambridge University Press, 2001. http://www.vlebooks.com/vleweb/product/openreader?id=none&isbn=9781316045022.

Karamali, Hamza. 2018. "The Isagoge of Athir al-Din al-Abhari". *Scribd.com*. https://www.scribd.com/document/369642018/Abharis-Isagoge-Translated.

———. "*The Seven-Earths Ḥadīth, Human Specialness, And Intelligent Extraterrestrials*". Basira Education. 2022. YouTube.com. https://www.youtube.com/watch?v=5vQcxcot-2I&ab_channel=BasiraEducation.

———. *The Madrasa Curriculum in Context*. Abu Dhabi: Kalam Research and Media, 2017.

———. "08: Infinity Is an Imaginary Concept - Why Islam Is True with Shaykh Hamza Karamali." YouTube. SeekersGuidance: The Global Islamic Seminary, August 23, 2017. Accessed, 4 January 2022. https://www.youtube.com/watch?v=tTlMoLNHKl4&ab_channel=SeekersGuidance%3ATheGlobalIslamicSeminary.

———. *Hamza Karamali's Official Website*. [online] Hamza Karamali's Official Website. Available at: <https://www.hamzakaramali.com/> [Accessed 6 June 2022].

Kayahan, Emir Faruk. "East Meets West: Kant and Mustafa Sabri Efendi (Part 1)." YouTube. Blogging Theology, September 28, 2022. Https://Www.Youtube.Com/Watch?V=t4-BcKEAAGQ&ab_channel=BloggingTheology.

Keith Fennen. '*The Plain Truth: Descartes, Huet, and Skepticism* (Review)'. *Journal of the History of Philosophy* 48, no. 1 (2009): 106–7. https://doi.org/10.1353/hph.0.0188.

Keller, Nuh. 'Evolution and Islam'. Accessed 30 April 2019. http://www.masud.co.uk/ISLAM/nuh/evolve.htm.

Kemalpaşazade, and Saʿīd Fodeh. *Masāʾil al-Ikhtilāf baina al-Ashāʿira wa-al-Māturīdiyya: = The points of disagreement between the Ashʿarīs and the Māturīdīs*. 1ˢᵗ edition. Amman: *Dār al-Fatḥ li-al-Dirāsāt wa-al-Nashr*, 2009.

Kennedy, Philip. *Twentieth-Century Theologians: A New Introduction to Modern Christian Thought*. London ; New York: I.B. Tauris, 2010.

Keogh, Gary. 'Theology After New Atheism : Theology After New Atheism '. *New Blackfriars* 96, no. 1066 (November 2015): 739–50. https://doi.org/10.1111/nbfr.12136.

Kersten, Carool. 'Review of Shabbir Akhtar, The Quran and the Secular Mind: A Philosophy of Islam: London and New York: Routledge, 2008 Ix + 400 Pp, ISBN 978-0-415-43783-7, Pb'. *Sophia* 49, no. 3 (September 2010): 447–50. https://doi.org/10.1007/s11841-010-0194-4.

Khalayleh, Moamer Y. A. "Does the Qurʾān Affirm Extraterrestrial life? A Hermeneutic Analysis of Sūrat al-Naḥl (Q. 16:8)". In *Islamic Theology and Extraterrestrial Life: New Frontiers in Science and Religion*. London: I.B. Tauris, forthcoming.

Khalil, Muḥammad Hassan and Journal of Islamic Philosophy, Inc. 'Ibn Taymīyyah on Reason and Revelation in Ethics': *Journal of Islamic Philosophy* 2, no. 1 (2006): 103–32. https://doi.org/10.5840/islamicphil2006213.

Khlentzos, Drew, "Challenges to Metaphysical Realism", *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2021/entries/realism-sem-challenge/>

King, David A. *In Synchrony with the Heavens: Studies in Astronomical Timekeeping and Instrumentation in Medieval Islamic Civilization*. Islamic Philosophy, Theology, and Science, v. 55. Leiden ; Boston: Brill, 2004.

Koperski, Jeffrey. *The Physics of Theism: God, Physics, and the Philosophy of Science*. Hoboken, New Jersey: Wiley Blackwell, 2015.

Kors, Alan Charles. 'The Atheism of d'Holbach and Naigeon'. In *Atheism from the Reformation to the Enlightenment*, edited by Michael Hunter and David Wootton, 273–300. Oxford University Press, 1992. https://doi.org/10.1093/acprof:oso/9780198227366.003.0011.

Kosso, Peter. *Appearance and Reality: An Introduction to the Philosophy of Physics*. New York: Oxford University Press, 1998.

Kosugi, Yasushi, Mahmoud Haddad, Yasushi Kosugi, Dale F. Eickelman, Stéphane A. Dudoignon, Stéphane A. Dudoignon, Komatsu Hisao, and Kasuya Gen, eds. *Intellectuals in the Modern Islamic World: Transmission, Transformation, Communication*. New Horizons in Islamic Studies. Abingdon: Routledge, 2009.

Koterski, Joseph W., ed. *Theism and Atheism: Opposing Arguments in Philosophy*. Farmington Hills, Mich: Macmillan Reference USA, a part of Gale, a Cengage Company, 2019.

Kraay, Klaas J. *God and the Multiverse: Scientific, Philosophical, and Theological Perspectives*, 2015.

Kraay, Klaas J. 'Theism, Possible Worlds, and the Multiverse'. *Philosophical Studies* 147, no. 3 (February 2010): 355–68. https://doi.org/10.1007/s11098-008-9289-y.

Krauss, Lawrence Maxwell. *A Universe from Nothing: Why There Is Something Rather than Nothing*. First Atria Books trade paperback edition. New York: Atria Paperback, 2013.

———. "All Scientists Should Be Militant Atheists". *The New Yorker*, 2015. https://www.newyorker.com/news/news-desk/all-scientists-should-be-militant-atheists

Kristeller, Paul Oskar. 'The Myth of Renaissance Atheism and the French Tradition of Free Thought'. *Journal of the History of Philosophy* 6, no. 3 (1968): 233–43. https://doi.org/10.1353/hph.2008.1356.

Kuhn, Thomas S. *The Essential Tension: Selected Studies in Scientific Tradition and Change*. 11. print. Chicago, Ill.: Univ. of Chicago Press, 2000.

Kuhn, Thomas S., and Ian Hacking. *The Structure of Scientific Revolutions*. Fourth edition. Chicago ; London: The University of Chicago Press, 2012.

Kurtz, Paul. *The Transcendental Temptation: A Critique of Religion and the Paranormal*. Nachdr. New York: Prometheus Books, 1994.

Kurtz, Paul, Tim Madigan, and Academy of Humanism, eds. *Challenges to the Enlightenment: In Defense of Reason and Science*. Buffalo, N.Y: Prometheus Books, 1994.

Lacroix, Stéphane. 'Between Revolution and Apoliticism'. In *Global Salafism*, edited by Roel Meijer, 58–80. Oxford University Press, 2014. https://doi.org/10.1093/acprof:oso/9780199333431.003.0003.

Ladyman, James. *Understanding Philosophy of Science*. London; New York: Routledge, 2001.

Lagerlund, Henrik, ed. *Encyclopedia of Medieval Philosophy*. Dordrecht: Springer Netherlands, 2011. https://doi.org/10.1007/978-1-4020-9729-4.

———. *Encyclopedia of Medieval Philosophy: Philosophy between 500 and 1500 with 7 Figures and 12 Tables*. London: Springer, 2011.

Lammer, Andreas, and Raphael Ed. Kretz. 'Online Dictionary of Arabic Philosophical Terms', n.d. http://www.arabic-philosophy.com/.

Lamont, Corliss. *The Philosophy of Humanism* Amherst, N.Y.: Humanist Press, 1997.

Lapidus, Ira M. *A History of Islamic Societies*. 2nd ed. Cambridge ; New York: Cambridge University Press, 2002.

Laqqānī, Ibrāhīm, et al. *Sharḥ al-Nāẓim ʿalā al-Jawhara*. Cairo: *Dār al-Baṣāʾir*, 2009.

Law, Stephen. *Humanism: A Very Short Introduction*. Very Short Introductions 256. Oxford: Oxford University Press, 2011.

Le Poidevin, Robin. *Arguing for Atheism: An Introduction to the Philosophy of Religion*. London ; New York: Routledge, 1996.

Leaman, Oliver, 'Islamic Philosophical Theology', in Thomas P. Flint, and Michael C. Rea (eds), The Oxford Handbook of Philosophical Theology (2011; online edn, Oxford Academic, 2 Sept. 2009), https://doi.org/10.1093/oxfordhb/9780199596539.013.0026, accessed 23 June 2023.

———, ed. *The Biographical Encyclopedia of Islamic Philosophy*. 1. publ. in paperback. London: Bloomsbury Academic, 2015.

———, ed. *The Qur'an: An Encyclopedia*. 0 ed. Routledge, 2006. https://doi.org/10.4324/9780203176443.

———. *An Introduction to Classical Islamic Philosophy*. 2nd ed. Cambridge,UK ; New York: Cambridge University Press, 2002.

LeDrew, Stephen. *The Evolution of Atheism: The Politics of a Modern Movement*. New York: Oxford University Press, 2016.

Lee, Sukjae, "Occasionalism", *The Stanford Encyclopedia of Philosophy* (Fall 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2020/entries/occasionalism/>

Leighton, J. A. 'Hegel's Conception of God'. *The Philosophical Review* 5, no. 6 (November 1896): 601. https://doi.org/10.2307/2176135.

Lemos, Noah Marcelino. *An Introduction to the Theory of Knowledge*. Cambridge Introductions to Philosophy. Cambridge, UK ; New York: Cambridge University Press, 2007.

Lennon, Thomas M. *The Plain Truth: Descartes, Huet, and Skepticism* Brill's Studies in Intellectual History, v. 170. Leiden ; Boston: Brill, 2008.

Lennox, John C. *Can Science Explain Everything?* Purcellville, VA: The Good Book Company, 2019.

———. *God and Stephen Hawking: Whose Design Is It Anyway?* Oxford: Lion, 2010.

Levering, Matthew. "Providence and Predestination in Al-Ghazālī." *New Blackfriars* 92, no. 1037 (2011): 55–70. http://www.jstor.org/stable/43251500.

Lewis, Bernard, ed. *Encyclopaedia of Islam. 3. H - Iram*. Photomechanical repr. Leiden, 1986.

Lewis, Bernard, Charles Pellat, and Joseph Schacht, eds. *The Encyclopaedia of Islam -C - G* New edition, 4. impression. The Encyclopaedia of Islam 2. Leiden: Brill, 1991.

Lewis, Geraint F., Luke A. Barnes, and Brian Schmidt. *A Fortunate Universe: Life in a Finely-Tuned Cosmos*. Cambridge: Cambridge University Press, 2017.

Lewis, Peter J. "Interpretations of Quantum Mechanics" in the *Internet Encyclopedia Of Philosophy*. *Iep.Utm.Edu*. Accessed August 17. https://iep.utm.edu/int-qm/ .

Liddle, Andrew R. *An Introduction to Modern Cosmology*. 3. ed. Chichester, West Sussex: Wiley, 2015.

Lippitt, John and C. Stephen Evans, "Søren Kierkegaard", *The Stanford Encyclopedia of Philosophy* (Summer 2023 Edition), Edward N. Zalta & Uri Nodelman (eds.), forthcoming URL = <https://plato.stanford.edu/archives/sum2023/entries/kierkegaard/>.

Lipton, Peter. *Inference to the Best Explanation*. 2nd ed. International Library of Philosophy. London ; New York: Routledge/Taylor and Francis Group, 2004.

Locke, John, and P. H. Nidditch. *An Essay Concerning Human Understanding*. The Clarendon Edition of the Works of John Locke. Oxford : New York: Clarendon Press; Oxford University Press, 1979.

Locke, John. *An Essay Concerning Human Understanding*. Penn State University Classic Electronic series, 1999.

Look, Brandon C., "6.3 Innate Ideas" in "Gottfried Wilhelm Leibniz", *The Stanford Encyclopedia of Philosophy* (Spring 2020 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/spr2020/entries/leibniz/;

Lorkowski, C. M. *Atheism Considered: A Survey of the Rational Rejection of Religious Belief*. Cham: Palgrave Macmillan, 2021. https://doi.org/10.1007/978-3-030-56208-3.

———. "Hume: Causation." Internet encyclopedia of philosophy, Accessed: 30 May 2023. https://iep.utm.edu/hume-causation/.

Mackie, J. L. *The Miracle of Theism: Arguments for and against the Existence of God*. Oxford [Oxfordshire] : New York: Clarendon Press ; Oxford University Press, 1982.

Madelung, W., "al-Taftāzānī", in: Encyclopaedia of Islam, Second Edition, Edited by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs. Consulted online on 30 August 2022 <http://dx.doi.org/10.1163/1573-3912_islam_SIM_7296>

Magee, Bryan. *The Great Philosophers: An Introduction to Western Philosophy*. Oxford ; New York: Oxford University Press, 2000.

Makdisi, George. 'Ash'ari and the Ash'arites in Islamic Religious History I'. *Studia Islamica*, no. 17 (1962): 37. https://doi.org/10.2307/1595001.

———. 'Ash'ari and the Ash'arites in Islamic Religious History II'. *Studia Islamica*, no. 18 (1963): 19. https://doi.org/10.2307/1595177.

———. *The Rise of Colleges: Institutions of Learning in Islam and the West*. Edinburgh: Edinburgh University Press, 1981.

Malik, Shoaib Ahmed. 'Atheism and Islam: A Contemporary Discourse', 2018.

———. *Islam and Evolution: The Curious Case of David Solomon Jalajel*. In Muslim 500. Amman: Royal Islamic Strategic Studies Society, 2021.

———. *Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm*. Routledge Science and Religion Series. Abingdon New York (N.Y.): Routledge, 2021.

———. "Did Al-Ghazali Condemn Philosophy and Science? With Dr. Shoaib Ahmed Malik". Blogging Theology. 13 April. 2023. Accessed, 16 June 2023. https://youtu.be/6QjSXJSt7KI.

Malik, Shoaib A. and, Determann, Jörg Matthias ed. *Islamic Theology and Extraterrestrial Life: New Frontiers in Science and Religion*. London: I.B. Tauris, forthcoming.

Malik, Shoaib Ahmed, Hamza Karamali, and Moamer Yahia Ali Khalayleh. "Does Criticizing Intelligent Design (Id) Undermine Design Discourse in the *Qurʾān*? A Kalāmic Response." *Zygon* 57, no. 2 (June 2022): 490–513. https://doi.org/10.1111/zygo.12773.

Al-Manāhij al-Azharīyya: Qāʾima bi-al-Kutub al-Muʿtamada fī al-Azhar al-Sharīf. 1st edition, Cairo: *al-Azhar*, 2016.

Manson, Neil A., ed. *God and Design: The Teleological Argument and Modern Science*. London ; New York: Routledge, 2003.

Marcotte, Roxanne D. 'Islam and Science'. *Ars Disputandi* 6, no. 1 (January 2006): 140–45. https://doi.org/10.1080/15665399.2006.10819915.

Marino, Gordon Daniel, ed. *Basic Writings of Existentialism*. The Modern Library Classics. New York: Modern Library, 2004.

Markham, Ian S. *Against Atheism Why Dawkins, Hitchens, and Harris Are Fundamentally Wrong*. New York, NY: John Wiley & Sons, 2011. http://nbn-resolving.de/urn:nbn:de:101:1-2014112911421.

Marmura, Michael E. 'Ghazālī and Ash'arism Revisited'. *Arabic Sciences and Philosophy* 12, no. 1 (March 2002): 91–110. https://doi.org/10.1017/S0957423902002047.

Martin, Michael. *Atheism: A Philosophical Justification*. Philadelphia: Temple University Press, 1990.

———. *The Cambridge Companion to Atheism*. New York: Cambridge University Press, 2007.

Martin, Richard C., ed. *Encyclopedia of Islam and the Muslim World*. New York: Macmillan Reference USA : Thomson/Gale, 2004.

Masterson, Patrick. *Atheism and Alienation: A Study of the Philosophical Sources of Contemporary Atheism*. London: Gill and Macmillan, 1971.

Maudlin, Tim. *Philosophy of Physics: Quantum Theory*. Princeton and Woodstock: Princeton University Press, 2019.

———. *Quantum Non-Locality and Relativity: Metaphysical Intimations of Modern Physics*. Aristotelian Society Series, v. 13. Oxford, UK ; Cambridge, Mass: B. Blackwell, 1994.

Mayer, Tobias. 'Al-Ghazālī and the Asharite School . By Richard M. Frank. Book review. Pp. 168. Durham and London, Duke University Press, 1994.' Journal of Qurʾānic Studies 1, no. 1 (April 1999): 170–82. https://doi.org/10.3366/jqs.1999.1.1.170.

McAnulla, Stuart. *The Politics of New Atheism* 1 [edition]. Routledge Studies in Religion and Politics. London: Routledge, Taylor & Francis Group, 2018.

Mccabe. *Logic and Virtue of Atheism/5280.* Place of publication not identified: Amer Atheist Pr, 1980.

McDonald, William, "Søren Kierkegaard", *The Stanford Encyclopedia of Philosophy* (Winter 2017 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2017/entries/kierkegaard/>.

McGrath, Alister. *Why God Won't Go Away: Engaging with the New Atheism* London: SPCK, 2011.

———. *Dawkins' God: Genes, Memes, and the Meaning of Life*. Malden, MA: Blackwell Pub, 2005.

———. 'Evidence, Theory, and Interpretation: The "New Atheism " and the Philosophy of Science', 2013.

———. *The Big Question: Why We Can't Stop Talking about Science, Faith, and God*. First edition. New York: St. Martins Press, 2015.

———. *The Twilight of Atheism: The Rise and Fall of Disbelief in the Modern World*. 1st ed. New York: Doubleday, 2004.

McCormick, Matt. "Immanuel Kant: Metaphysics." Internet encyclopedia of philosophy. Accessed January 11, 2022. https://iep.utm.edu/kantmeta/.

McGrath, Alister E, and Joanna Collicutt. *The Dawkins Delusion?: Atheist Fundamentalism and the Denial of the Divine (Veritas Books)*. InterVarsity Press, 2010.

Meijer, Roel, ed. *Global Salafism: Islam's New Religious Movement*. New York: Oxford University Press, USA, 2013.

Meyer, Stephen C. *The Return of the God Hypothesis: Compelling Scientific Evidence for the Existence of God*. First edition. New York, NY: HarperOne, 2020.

Mihrig, Abdurrahman. "The Myth Of Intellectual Decline: A Response To Shaykh Hamza Yusuf - Maydan". *Maydan,* 2017. https://themaydan.com/2017/11/myth-intellectual-decline-response-shaykh-hamza-yusuf/.

Miller, Alexander. 'Realism'. In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Winter 2016. Metaphysics Research Lab, Stanford University, 2016. https://plato.stanford.edu/archives/win2016/entries/realism/.

Mills, David, and Dorion Sagan. *Atheist Universe: The Thinking Person's Answer to Christian Fundamentalism*. Berkeley, Ca: Ulysses Press, 2006.

Mir, Mustansir. "Elephants, Birds of Prey, and Heaps of Pebbles: Farāhī's Interpretation of *Sūrat al-Fīl*", Journal of Quranic Studies, 7, no. 1 (2005): 33-47. Accessed August 19, 2021. http://www.jstor.org/stable/25728163.

MonDardini, Rosy. "*Antiproton Decelerator - History of Antimatter - CERN*." The History of Antimatter . CERN. Accessed January 7, 2022. https://espace.cern.ch/AD-site/What%20is%20antimatter/History%20of%20Antimatter.aspx

Moosa, Ebrahim. *What Is a Madrasa?* Islamic Civilization and Muslim Networks. Chapel Hill: The University of North Carolina Press, 2015.

Morewedge, Parviz, ed. *Islamic Philosophical Theology*. Studies in Islamic Philosophy and Science. Albany: State University of New York Press, 1979.

Morris, Thomas V. *Our Idea of God: An Introduction to Philosophical Theology*. Contours of Christian Philosophy. Downers Grove, Ill: InterVarsity Press, 1991.

Mosaad, Walead. *The Transmission of the Islamic Tradition in the Early Modern Era: The Life and Writings of Aḥmad Al-Dārdīr*," PhD diss. University of Exeter, 2016.

Muʿallim, ʿAbd Allah. *Al-Budūr al-Zāhira fi Tabaqāt al-Ashāʿira*, (Amman: n.p. 2008), 199-200. https://www.Qurʾānicthought.com/ar/books/%D8%A7%D9%84%D8%A8%D8%AF%D9%88%D8%B1-%D8%A7%D9%84%D8%B2%D8%A7%D9%87%D8%B1%D8%A9-%D9%81%D9%8A-%D8%B7%D8%A8%D9%82%D8%A7%D8%AA-%D8%A7%D9%84%D8%A3%D8%B4%D8%A7%D8%B9%D8%B1%D8%A9-%D8%A7%D9%84%D8%B7%D8%A8/ . [Accessed on 6th June 2022].

Murata, Sachiko, and William C. Chittick. *The Vision of Islam*. Visions of Reality. New York: Paragon House, 1994.

Nagel, Ernest. *Logic Without Metaphysics: And Other Studies in the Philosophy of Science*, n.d.

Nagel, Tilman. *The History of Islamic Theology from Muhammad to the Present*. Princeton, NJ: Marcus Wiener, 2000.

———. *The History of Islamic Theology from Muhammad to the Present*. Princeton, NJ: Marcus Wiener, 2000.

———. *The History of Islamic Theology: From Muhammad to the Present*. Princeton Series on the Middle East. Princeton, NJ: Markus Weiner Publishers, 10.

NASA. "WMAP Inflation Theory" NASA. *Map.Gsfc.Nasa.Gov.* Accessed, 13 August, 2022. https://map.gsfc.nasa.gov/universe/bb_cosmo_infl.html;

Nasr, Seyyed Hossein, ed. *The Study Quran: A New Translation and Commentary*. First edition. New York, NY: HarperOne, an imprint of Collins Publishers, 2015.

———. "*Islam and Science*". In Clayton, Philip, and Zachary Simpson, eds. *The Oxford Handbook of Religion and Science*. 1. publ. in paperback, Reprint. Oxford: Oxford Univ. Press, 2009.

'Naturalism | Internet Encyclopedia of Philosophy'. Accessed 4 May 2019. https://www.iep.utm.edu/naturali/.

Al-Nawawī, Yaḥyā ibn Sharaf. *Al-Minhaj: Sharḥ Ṣaḥīḥ Muslim ibn al-Ḥajjāj*. Amman: *Bayt al-Afkar al-Dawliyyah lil-Nashr wa al-Tawziʿ,* 2001.

———. *Al-Nawawī's Forty Hadith: An Anthology of the Sayings of the Prophet Muḥammad*. Riyadh: International Islamic Publishing House, 1997

Navabi, Armin. *Why There Is No God: Simple Responses to 20 Common Arguments for the Existence of God*, 2014.

Nielsen, Kai. *Atheism and Philosophy* New York: Prometheus Books, 2005.

Nietzsche, Friedrich Wilhelm. *The Portable Nietzsche*. New York: Penguin Books, 1976.

Nietzsche, Friedrich Wilhelm, Adrian Del Caro, and Robert B Pippin. *Thus spoke Zarathustra: a book for all and none*. Cambridge; New York: Cambridge University Press, 2006. https://doi.org/10.1017/CBO9780511812095.

Nietzsche, Friedrich Wilhelm, and Walter Arnold Kaufmann. *Basic Writings of Nietzsche*. Modern Library ed. New York: Modern Library, 2000.

Nolan, Lawrence, "Descartes' Ontological Argument", *The Stanford Encyclopedia of Philosophy* (Spring 2021 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/spr2021/entries/descartes-ontological/;

Noll, Mark A. *What Is "Evangelical"?* Oxford University Press, 2010. https://doi.org/10.1093/oxfordhb/9780195369441.003.0002.

Norman, Richard. *On Humanism*. 1. ed. Thinking in Action. London: Routledge, 2004.

Noxon, James. "Hume's Agnosticism." The Philosophical Review 73, No. 2 (1964): 248–61. Https://Doi.Org/10.2307/2183340.', n.d.

Nunley, Troy M. 'A Defense of Alvin Plantinga's Evolutionary Argument against Naturalism'. Ph. D., University of Missouri--Columbia, 2005. https://doi.org/10.32469/10355/4184.

O'Connor, David. *Routledge Philosophy GuideBook to Hume on Religion*. Hoboken: Taylor and Francis, 2013.

Okasha, Samir. *Philosophy of Science: A Very Short Introduction*. Second edition. A Very Short Introduction 67. Oxford, United Kingdom: Oxford University Press, 2016.

Al-Omari, Ali Mahmoud. "*Durūs fī al-Falsafa* 1." YouTube, June 28, 2019. Accessed, 5 June 2023. https://www.youtube.com/watch?v=CpDhOFf-DA0&list=PLa3XSU7qw_YlLmFnitoBRUlQWRNCUgh4I&index=1&ab_channel=%D8%A7%D9%84%D8%AF%D9%83%D8%AA%D9%88%D8%B1%D8%B9%D9%84%D9%8A%D9%85%D8%AD%D9%85%D9%88%D8%AF%D8%A7%D9%84%D8%B9%D9%85%D8%B1%D9%8A.

Onfray, Michel. *Atheist Manifesto: The Case against Christianity, Judaism, and Islam*. New York: Arcade Pub, 2011.

Oppy, Graham, ed. *A Companion to Atheism and Philosophy*. First Edition. Blackwell Companions to Philosophy 66. Hoboken: Wiley, 2019.

Oppy, Graham, "Ontological Arguments", *The Stanford Encyclopedia of Philosophy* (Winter 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2021/entries/ontological-arguments/>.

Oppy, Graham Robert, and Nick Trakakis, eds. *The History of Western Philosophy of Religion*. Durham: Acumen, 2009.

Osman Bakar. *Classification of Knowledge in Islam: A Study in Islamic Philosophies of Science*. Cambridge, U.K: Islamic Texts Society, 1998.

Othman, Roslina BT; Noordin ,Mohamad Fauzan Bin; Ahmed, Mahfooz; Ahmad, Nadzrah Binti; Kassim, Salina Bt. 'How Do Muslim Scholars and Experts Posit Cryptocurrencies In Social Media'. *Journal of Theoretical and Applied Information Technology* . Vol.100. No 21 (15 November 2022).

Owen, Derwyn R. G. *Scientism, Man, and Religion.* Philadelphia: Westminster Press, 1952.

Padela, Aasim I., Mansur Ali, and Asim Yusuf. 'Aligning Medical and Muslim Morality: An Islamic Bioethical Approach to Applying and Rationing Life Sustaining Ventilators in the COVID-19 Pandemic Era'. *Journal of Islamic Ethics* 15 April 2021, 1–36. https://doi.org/10.1163/24685542-12340061.

Page, Don N. 'Does God So Love the Multiverse?' In *Science and Religion in Dialogue*, edited by Melville Y. Stewart, 380–95. Oxford, UK: Wiley-Blackwell, 2010. https://doi.org/10.1002/9781444317350.ch29.

Park, Jaddon, and Sarfaroz Niyozov. 'Madrasa Education in South Asia and Southeast Asia: Current Issues and Debates'. *Asia Pacific Journal of Education* 28, no. 4 (December 2008): 323–51. https://doi.org/10.1080/02188790802475372.

Pasternack, Lawrence and Courtney Fugate, "Kant's Philosophy of Religion", *The Stanford Encyclopedia of Philosophy* (Summer 2022 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2022/entries/kant-religion/.

Patzig, Günther. *Aristotle's Theory of the Syllogism: A Logico-Philogical Study of 'Book A' of the 'Prior Analytics'*. Synthese Library. Dordrecht: D. Reidel, 2010.

P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs, P.J. Bearman (Volumes X, XI, XII), Th. Bianquis (Volumes X, XI, XII), et al., eds. 'Kufr'. In Encyclopaedia of Islam, Second Edition. Accessed June 14, 2023. doi:http://dx.doi.org/10.1163/1573-3912_islam_DUM_3903.

Penrose, Roger. *Fashion, Faith, and Fantasy in the New Physics of the Universe*. Princeton, New Jersey: Princeton University Press, 2016.

Plantinga, Alvin. *God and Other Minds: A Study of the Rational Justification of Belief in God*. Cornell Paperbacks. Ithaca, N.Y: Cornell Univ. Press, 1990.

———. *God and Other Minds: A Study of the Rational Justification of Belief in God*. Cornell Paperbacks. Ithaca, N.Y: Cornell Univ. Press, 1990.

———. *Where the Conflict Really Lies: Science, Religion, and Naturalism*. New York: Oxford University Press, 2011.

Plantinga, Alvin, Kelly James Clark, and Michael C. Rea, eds. *Reason, Metaphysics, and Mind: New Essays on the Philosophy of Alvin Plantinga*. New York: Oxford University Press, 2012.

Poli, Roberto, and Johanna Seibt, eds. *Theory and Applications of Ontology. Philosophical Perspectives*. Dordrecht ; London: Springer, 2010.

Polkinghorne, John. C. *Quantum Theory: A Very Short Introduction*. Very Short Introductions 69. Oxford ; New York: Oxford University Press, 2002.

———. *Exploring Reality: The Intertwining of Science and Religion*. London: SPCK, 2005.

———. *The Faith of a Physicist: Reflections of a Bottom-up Thinker: The Gifford Lectures for 1993-4*. Princeton, N.J: Princeton University Press, 1994.

———. *Reason and Reality: The Relationship between Science and Theology*. London: SPCK, 1991.

———. *Belief in God in an Age of Science*. The Terry Lectures. New Haven, Conn.: Yale Univ. Press, 1998.

———. Polkinghorne, John, et al. Arguing God From Natural Theology? | Closer To Truth. [online] Closertotruth.com, 2010. Available at: <https://www.closertotruth.com/series/arguing-god-natural-theology#video-3615> [Accessed 11 April 2020].

Popkin, Richard H., and Richard H. Popkin. *The History of Scepticism: From Savonarola to Bayle*. Rev. and Expanded ed. Oxford ; New York: Oxford University Press, 2003.

Popper, Karl R. *Objective Knowledge: An Evolutionary Approach*. Rev. ed. Oxford [Eng.] : New York: Clarendon Press ; Oxford University Press, 1979.

Porter, Andrew. 'Naturalism, Naturalism by Other Means, and Alternatives to Naturalism'. *Theology and Science* 1, no. 2 (October 2003): 221–37. https://doi.org/10.1080/1474670032000124612.

Poston, Tes. "Foundationalism." Internet encyclopedia of philosophy. Accessed December 26, 2022. https://iep.utm.edu/foundationalism-in-epistemology/

Pourjavady, Reza. 'The Legacy of ʿAḍud Al-Dīn al-Ījī: His Works and His Students', 337–70. Leiden, The Netherlands: Brill, 2020. https://doi.org/10.1163/9789004426610_013.

Pruss, Alexander R., and Joshua L. Rasmussen. *Necessary Existence*. First edition. Oxford, UK: Oxford University Press, 2018.

Al-Quḍā, Nūh. *Al-Mukhtaṣar al-Mufīd fī Sharḥ Jawharat al-Tawḥīd*. Amman: *al-Rāzī*, 1999.

Quinton, A. M. , Quinton, . Baron , Fumerton, . Richard and Duignan, Brian. "*empiricism*." Encyclopedia Britannica, September 15, 2022. https://www.britannica.com/topic/empiricism

Qureshi, Faisal. 'Comparisons of Ayats of the *Qurʾān* with Astrophysics, Quantum Physics, and Cosmology'. *Journal of Qurʾānic Sciences and Research* 02, no. 01 (30 June 2021). https://doi.org/10.30880/jqsr.2021.02.01.006.

Qureshi, Omar. "Dr. Omar Qureshi - Universals in Islam." YouTube. Bayan Islamic Graduate School, December 20, 2022. https://www.youtube.com/watch?v=h-iRT6hkfLc&ab_channel=BayanIslamicGraduateSchool.

Qurṭubī, Muhammad ibn Ahmad al-. *Al-Jāmiʿ li-Aḥkām al-Qurʾān*. 23 vols. Beirut: *al-Risāla*, 2006.

Ray, Christopher. *Time, Space, and Philosophy*. London; New York: Routledge, 1991. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=76538.

R. Cotter, Christopher. *New Atheism : Critical Perspectives and Contemporary Debates*. New York, NY: Springer Berlin Heidelberg, 2017.

Rey, Georges, "The Analytic/Synthetic Distinction", *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2020/entries/analytic-synthetic/>.

Al-Rāzī, Fakhr al-Dīn. *Al-Arbaʿīn fī Uṣūl al-Dīn*. Cairo: *Maktabat al-Kulīyyāt al-Azharīyya*, 1986.

———. *Al-Tafsīr al-Kabīr li al-Imām al-Fakhr al-Rāzī*. 33 vols. Beirut: *Dār al-Fikr*, 1981.

Al-Rāzī, Fakhr al-Dīn, Muḥammad Ibn-ʿUmar, and Muḥammad ʿAbd-as-Salām Shāhīn. *Al-Maṭālib al-ʿĀliya min al-ʿIlm al-Ilāhī. Manshūrāt* Muḥammad ʿAlī Baiḍūn. Beirut: *Dār al-Kutub al-ʿIlmiyya*, 1999.

Reck, Erich, "Dedekind's Contributions to the Foundations of Mathematics", *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2020/entries/dedekind-foundations/> .

Reginster, Bernard. "The Paradox of Perspectivism." (*Philosophy and Phenomenological Research* 62, no. 1 (2001): 217–33), 217.

Riggs, Peter J. *Quantum Causality: Conceptual Issues in the Causal Theory of Quantum Mechanics*. Studies in History and Philosophy of Science, v. 23. Dordrecht ; New York: Springer, 2009.

Robichaud, Denis J.-J. *Renaissance and Reformation*. Oxford University Press, 2013. https://doi.org/10.1093/oxfordhb/9780199644650.013.013.

Robinson, Daniel N., and Richard N. Williams, eds. *Scientism: The New Orthodoxy*. London ; New York: Bloomsbury Academic, an imprint of Bloomsbury Publishing Plc, 2014.

Rockwood, Nathan. "Locke: Epistemology." *Internet encyclopedia of philosophy*. Accessed: 30 May 2023. https://iep.utm.edu/locke-ep/.

Rodriguez-Pereyra, Gonzalo, "Nominalism in Metaphysics", *The Stanford Encyclopedia of Philosophy* (Summer 2019 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2019/entries/nominalism-metaphysics/>.

Rohlf, Michael, "Immanuel Kant", *The Stanford Encyclopedia of Philosophy* (Fall 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2020/entries/kant El-Rouayheb, Khaled, and Sabine Schmidtke, eds. *The Oxford Handbook of Islamic Philosophy*. New York, NY: Oxford University Press, 2017.

Rorty, Richard. *Objectivity, Relativism, and Truth*. Philosophical Papers, v. 1. Cambridge ; New York: Cambridge University Press, 1991.

Rosenberg, Alexander. *Philosophy of Science: A Contemporary Introduction*. 2nd ed. Routledge Contemporary Introductions to Philosophy. New York ; London: Routledge, 2005.

———. *Philosophy of Science: A Contemporary Introduction*. 3rd ed. Routledge Contemporary Introductions to Philosophy. New York: Routledge, 2012.

Rosenthal, Franz. *Knowledge Triumphant: The Concept of Knowledge in Medieval Islam*. Brill Classics in Islam, v. 2. Boston ; Leiden: Brill, 2007.

Ross Solberg, Anne. *The Mahdi Wears Armani: An Analysis of the Harun Yahya Enterprise*. Huddinge: Södertörns högskola, 2013.

Rubenstein, Mary-Jane. *Worlds without End: The Many Lives of the Multiverse*. New York: Columbia University Press, 2014.

Rudolph, Ulrich. *Occasionalism*. Edited by Sabine Schmidtke. Vol. 1. Oxford University Press, 2016. https://doi.org/10.1093/oxfordhb/9780199696703.013.39.

Rudolph, Ulrich, and Rodrigo Adem. *Al-Māturīdī and the Development of Sunnī Theology in Samarqand*. Islamic History and Civilization / Studies and Texts, v. 100. Leiden ; Boston: Brill, 2015.

Rudolph, Ulrich. *Post-Ghazālian Theology What were the Lessons to be Learned from al-Ghazālī?* In *Philosophical Theology in Islam: Later Ashʿarism East and West*. Shihadeh, Ayman, and Jan Thiele, eds. *Islamicate Intellectual History*, vol. 5. (Leiden ; Boston: Brill, 2020).

Ruler, Han van. *The Crisis of Causality: Voetius and Descartes on God, Nature and Change*. BRILL, 1995. https://doi.org/10.1163/9789004247208.

Ruse, Michael, and Stephen Bullivant. *The Oxford Handbook of Atheism*. Oxford, United Kingdom: Oxford University Press, 2015.

Russell, Bertrand. *The Problems of Philosophy*. Rockville, Md.: Arc Manor, 2008.

———. *Why I Am Not a Christian: And Other Essays on Religion and Realted Subjects*. London: Unwin, 1975.

———. *Why I Am Not a Christian, and Other Essays on Religion and Related Subjects*. New York: A Touchstone Book, 1983.

———. *Why I Am Not a Christian: And Other Essays on Religion and Related Subjects*. Repr. Routledge Classics. London: Routledge, 2010.

Rysiew, Patrick. 'Naturalism in Epistemology'. In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Spring 2017. Metaphysics Research Lab, Stanford University, 2017. https://plato.stanford.edu/archives/spr2017/entries/epistemology-naturalized/.

Sabra, A. I. 'The Simple Ontology of *Kalām* Atomism: An Outline.', n.d. http://www.jstor.org/stable/20617778.

Sabri, Mustafa. *Mawqif al-ʿAql wa al-ʿIlm wa al-ʿAlim min Rabb al-ʿAlamīn wa Ibadihī al-Mursalīn*. Cairo: *Dār Ihya' al-Kutub al-Arabiyya,*1981 .

Sadakata, Akira, and Hajime Nakamura. *Buddhist Cosmology: Philosophy and Origins*. Translated by Gaynor Sekimori. First English Ed. 1997, Third printing. Tokio: Kōsei, 1999.

Said, Edward W. *Orientalism*. 1st Vintage Books ed. New York: Vintage Books, 1979.

Saleem, Muḥammad. 'The Failure of Classical Physics and the Advent of Quantum Mechanics'. *Quantum Mechanics*. 2053-2563. IOP Publishing, 2015. https://doi.org/10.1088/978-0-7503-1206-6ch1.

Salmon, Wesley C., and Christopher Hitchcock. *The Foundations of Scientific Inference*. 50th anniversary edition. Philosophy of Science. Pittsburgh, Pa: University of Pittsburgh Press, 2017.

Saluti, Sultan. 'Frank Griffel. The Formation of Post-Classical Philosophy in Islam. Oxford: Oxford University Press, 2021.' *Revista Española de Filosofía Medieval* 29, no. 1 (12 October 2022): 256–59. https://doi.org/10.21071/refime.v29i1.15153.

Sanūsī, Muḥammad Ibn-Yūsuf al-, and Yūsuf, Aḥmad. *Sharḥ al-ʿAqīda al-Kubrā: al-Musammāh ʿAqīdat Ahl al-Tawḥīd*. 1st edition. Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2006.

Sardar, Ziauddin. *Explorations in Islamic Science*. Islamic Futures and Policy Studies. London ; New York: Mansell, 1989.

Schielke, Samuli. 'Being A Nonbeliever in a Time of Islamic Revival: Trajectories Of Doubt And Certainty In Contemporary Egypt'. *International Journal of Middle East Studies* 44, no. 02 (May 2012): 301–20. https://doi.org/10.1017/S0020743812000062.

Schmidtke, Sabine, ed. *The Oxford Handbook of Islamic Theology*. Oxford Handbooks. Oxford, United Kingdom: Oxford University Press, 2016.

Schwyzer, Hubert. 'Subjectivity in Descartes and Kant'. *The Philosophical Quarterly (1950-)* 47, no. 188 (1997): 342–57.

Scruton, Roger. *Kant: A Very Short Introduction*. Rev. ed. Very Short Introductions 50. Oxford ; New York: Oxford University Press, 2001.

———. *Modern Philosophy: A Survey*. Repr. London: Arrow, 1997.

———. *Modern Philosophy: An Introduction and Survey*. New York: Penguin Books, 1996.

———. *A Short History of Modern Philosophy: From Descartes to Wittgenstein*. 2nd ed., [Rev.]. Routledge Classics. London ; New York: Routledge, 2002.

Sedgwick, Mark. "The Modernity of Neo-Traditionalist Islam," In Jung, Dietrich, and Kirstine Sinclair eds. *Muslim Subjectivities in Global Modernity: Islamic Traditions and the Construction of Modern Muslim Identities* (Brill, 2020), 121-46. *https://doi.org/10.1163/9789004425576.*

Seipel, Peter and Philosophy Documentation Center. 'Nietzsche's Perspectivism, Internal Reasons, and the Problem of Justification:' *International Philosophical Quarterly* 55, no. 1 (2015): 49–65. https://doi.org/10.5840/ipq20152929.

Şen, A. Tunç. 'The Sultan's Syllabus Revisited: Sixteenth Century Ottoman Madrasa Libraries and the Question of Canonization', 2021. https://doi.org/10.7916/D8-9GV0-GM17.

Senderowicz, Yaron M. *The Coherence of Kant's Transcendental Idealism*. Studies in German Idealism, v. 4. Dordrecht ; New York: Springer, 2005.

Şentürk, Recep. *Comparative Theories and Methods: Between Uniplexity and Multiplexity*. 1st edition. Istanbul: İbn Haldun University Press, 2020.

Setia, Adi. **"**Fakhr Al-Dīn Al-Rāzī on Physics and The Nature of the Physical World: A Preliminary Survey". In Iqbal, Muzaffar, ed. *Contemporary Issues in Islam and Science*. Islam and Science: Historic and Contemporary Perspectives 2. (Burlington, VT: Ashgate, 2012), 124-44.

———. "The Philosophy of Science of Syed Muhammad Naquib al-Attas", *Islam & Science,* 1, 2003, 165-214

Seung, T. K. *Kant: A Guide for the Perplexed*. Guides for the Perplexed. London ; New York: Continuum, 2007.

———. "Kant's Conception of the Categories." *The Review of Metaphysics* 43, no. 1 (1989): 107–32. http://www.jstor.org/stable/20128836.

Şeyhun, Ahmet. *Islamist Thinkers in the Late Ottoman Empire and Early Turkish Republic*. Brill, 2015. https://doi.org/10.1163/9789004282407.

Al-Shāfiʿī, Ḥasan Maḥmūd. *Al-Madkhal Ilā Dirāsat ʿilm al-Kalām*. Cairo: Maktabat Wahba, 1991.

El-Shamsy, Ahmed. *Rediscovering the Islamic Classics: How Editors and Print Culture Transformed an Intellectual Tradition*. Princeton, NJ: Princeton University Press, 2020.

———. 'The Social Construction of Orthodoxy'. In *The Cambridge Companion to Classical Islamic Theology*, edited by Tim Winter, 1st ed., 97–118. Cambridge University Press, 2008. https://doi.org/10.1017/CCOL9780521780582.006.

Shah, Mustafa. 'Trajectories in the Development of Islamic Theological Thought: The Synthesis of Kal?M'. *Religion Compass* 1, no. 4 (July 2007): 430–54. https://doi.org/10.1111/j.1749-8171.2007.00026.x.

Shaha, Alom. *The Young Atheist's Handbook: Lessons for Living a Good Life without God*. London: The Robson Press, 2014.

Sharov, A. S., and I. D. Novikov. *Edwin Hubble, the Discoverer of the Big Bang Universe* Cambridge [England] ; New York, NY, USA: Cambridge University Press, 1993.

Shehadi, Fadlou. *Metaphysics in Islamic Philosophy*. 1st ed. Studies in Islamic Philosophy and Science. Delmar, N.Y: Caravan Books, 1982.

Shepherd, Aaron Pratt. *Challenging the New Atheism : Pragmatic Confrontations in the Philosophy of Religion*. Routledge Studies in American Philosophy. New York ; London: Routledge, Taylor & Francis Group, 2021.

Shermer, Michael. 'Scientific Naturalism: A Manifesto for Enlightenment Humanism'. *Theology and Science* 15, no. 3 (3 July 2017): 220–30. https://doi.org/10.1080/14746700.2017.1335060.

Shihadeh, Ayman. 'From al-Ghazālī to al-Rāzī: 6th/12th Century Developments in Muslim Philosophical Theology'. *Arabic Sciences and Philosophy* 15, no. 1 (March 2005): 141–79. https://doi.org/10.1017/S0957423905000159.

———. *The Teleological Ethics of Fakhr Al-Dīn al-Rāzī*. Islamic Philosophy, Theology and Science. Texts and Studies, v. 64. Leiden,The Netherlands ; Boston: Brill, 2006.

Shihadeh, Ayman, and Jan Thiele, eds. *Philosophical Theology in Islam: Later Ashʿarism East and West*. Islamicate Intellectual History, vol. 5. Leiden ; Boston: Brill, 2020.

El-Showk, Sedeer. "The Islamic View of the Multiverse". *Nautilus | Science Connected,* 2016. https://nautil.us/the-islamic-view-of-the-multiverse-10157/#:~:text=From%20a%20broader%20perspective%2C%20the,of%20fine%2Dtuning%20more%20compelling

Sim, Stuart, ed. *The Routledge Companion to Postmodernism*. 2. repr. Routledge Companions. London: Routledge, 2002.

Sirāj al-Dīn, ʿAbd Allah, and al-Bayqūnī, ʿUmar. *Sharḥ al-Manthūma al-Bayqūniyya*. Aleppo: Dār al-Falāh, 2009.

Sloan, David, Rafael Alves Batista, Michael Townsen Hicks, and Roger L. Davies, eds. *Fine-Tuning in the Physical Universe*. Cambridge ; New York, NY: Cambridge University Press, 2020.

Sloan, David. "Fine-Tuning." Fine-Tuning - Philosophy of Cosmology. n.d. Accessed July 2, 2023. http://philosophy-of-cosmology.ox.ac.uk/fine-tuning.html#:~:text=First%20precisely%20described%20by%20Dicke,space%20(see%20flatness%20problem).

Smith, George H. *Atheism: The Case against God*. Amherst, New York: Prometheus Books, 2016.

Smith, R. J., and R. G. Bryant. 'Metal Substitutions Incarbonic Anhydrase: A Halide Ion Probe Study'. *Biochemical and Biophysical Research Communications* 66, no. 4 (27 October 1975): 1281–86. https://doi.org/10.1016/0006-291x(75)90498-2.

———. 'Metal Substitutions Incarbonic Anhydrase: A Halide Ion Probe Study'. *Biochemical and Biophysical Research Communications* 66, no. 4 (27 October 1975): 1281–86. https://doi.org/10.1016/0006-291x(75)90498-2.

Smith, Wolfgang. *Ancient Wisdom and Modern Misconceptions: A Critique of Contemporary Scientism*. First edition. Tacoma, WA: Sophia Perennis, 2013.

———. *Science and Myth: What We Are Never Told*. San Rafael, CA: Sophia Perennis, 2010.

———. *The Quantum Enigma: Finding the Hidden Key*. 3rd rev. ed. Hillsdale, N.Y: Sophia Perennis, 2005.

S. Nurit, C.E. Bosworth Ed. *Encyclopaedia of Islam. 9. San - Sze*, (Leiden: Brill, 1997).

Sobel, David M., and Natasha Z. Kirkham. 'Blickets and Babies: The Development of Causal Reasoning in Toddlers and Infants.' *Developmental Psychology* 42, no. 6 (2006): 1103–15. https://doi.org/10.1037/0012-1649.42.6.1103.

Sokolowski, Robert. *The God of Faith and Reason: Foundations of Christian Theology*. Washington, D.C: Catholic University of America Press, 1995.

Solomon, Robert C., ed. *Existentialism*. 2nd ed. New York: Oxford University Press, 2005.

Sorell, Tom. *Scientism: Philosophy and the Infatuation with Science*. International Library of Philosophy. London ; New York: Routledge, 1991.

———. *Scientism Philosophy and the Infatuation with Science*. Routledge, 2013.

Sottosanti, K.. "observable universe." Encyclopedia Britannica, May 5, 2023. https://www.britannica.com/topic/observable-universe.

Spevack, Aaron. *The Archetypal Sunnī Scholar: Law, Theology, and Mysticism in the Synthesis of al-Bājūrī*. Albany: State University of New York Press, 2014.

Spitzer, Robert J. *New Proofs for the Existence of God: Contributions of Contemporary Physics and Philosophy*. Grand Rapids, Mich: William B. Eerdmans Pub, 2010.

Stausberg, Michael, and Steven Engler, eds. *The Routledge Handbook of Research Methods in the Study of Religion*. London ; New York: Routledge, 2011.

Stein, Vicky. "How Fast Does Light Travel? | The Speed of Light". 2022. *Space.Com*. https://www.space.com/15830-light-speed.html .

Stenger, Victor J. *God and the Multiverse: Humanity's Expanding View of the Cosmos*. Amherst, New York: Prometheus Books, 2014.

———. *God: The Failed Hypothesis: How Science Shows That God Does Not Exist*. Amherst, N.Y: Prometheus Books, 2007.

———. *The Fallacy of Fine-Tuning: Why the Universe Is Not Designed for Us*. Amherst, N.Y: Prometheus Books, 2011.

———. *The New Atheism: Taking a Stand for Science and Reason*. Amherst, N.Y: Prometheus Books, 2009.

Stenmark, Mikael. 'What Is Scientism?' *Religious Studies* 33, no. 1 (1997): 15–32.

Stromberg, Roland N. "Marxism and Religion." *Studies in Soviet Thought* 19, no. 3 (1979): 209-17. http://www.jstor.org/stable/20098834.

Stroud, Barry. *The Significance of Philosophical Scepticism*. Oxford [Oxfordshire] : New York: Clarendon Press ; Oxford University Press, 1984.

Stump, Eleonore, and Michael J. Murray, eds. *Philosophy of Religion: The Big Questions*. Philosophy, the Big Questions. Malden, Mass: Blackwell Publishers, 1999.

Swinburne, Richard. *Is There a God?* Oxford ; New York: Oxford University Press, 1996.

———. *Is There a God?* Rev. ed. Oxford ; New York: Oxford University Press, 2010.

———. *The Coherence of Theism*. Rev. ed. Clarendon Library of Logic and Philosophy. Oxford : Oxford ; New York: Clarendon Press ; Oxford University Press, 1993.

———. *The Existence of God*. 2nd ed. Oxford : New York: Clarendon Press ; Oxford University Press, 2004.

———. Swinburne, Richard. et al. Is God logically necessary? | Closer To Truth. 2010 [online] Closertotruth.com. Available at: <https://www.closertotruth.com/series/god-logically-necessary#video-4311> [Accessed 12 April 2020].

———. Swinburne, Richard. et al. Arguments about God | Closer To Truth. 2010 [online] Closertotruth.com. Available at: <https://www.closertotruth.com/series/arguments-about-god#video-4165> [Accessed 12 April 2020].

Taftāzānī, Masʿūd ibn ʿUmar, and Elder, Earl Edgar. *A Commentary on the Creed of Islam: Saʿd al-Dīn al-Taftāzānī on the Creed of Najm al-Dīn al-Nasafī*. New York: Columbia University Press, 1950.

Al-Taftazānī, Masʿūd Ibn-ʿUmar. *Sharḥ al-Maqāṣid*. Beirut: *ʿĀlam al-Kutub*, 1998.

———. *Sharḥ al-Maqāṣid*. Edited by Ibrāhīm Shams al-Dīn. Beirut: *Dār al-Kutub al-ʿIlmiyya*, 2001.

———. *Sharḥ al-Imam al-Saʿd al-Taftazānī ʿala al-Shamsiyya*, Amman: *Dār al-Nūr al-Mubīn,* 2011.

Ṭaḥāwī, Aḥmad Ibn-Muḥammad aṭ-, and Hamza Yusuf. *The Creed of Imam Al-Ṭaḥāwī: = Al-ʿAqīda Aṭ-Ṭaḥāwīya al-Musammāt 'Bayān as-Sunna Wa'l-Ǧamāʿa' = al-ʿAqīdah al-Ṭaḥāwiyya*. 1. ed. Berkeley, Calif: Zaytuna Institute, 2007.

Taylor, Charles. *A Secular Age*. Cambridge, Mass: Belknap Press of Harvard University Press, 2007.

Taylor, Mark C. *Erring: A Postmodern a/Theology*. Paperback edition. Chicago: University of Chicago Press, 1987.

Taylor, Richard C., and Luis Xavier López Farjeat, eds. *The Routledge Companion to Islamic Philosophy*. Routledge Philosophy Companions. London ; New York: Routledge, Taylor & Francis Group, 2016.

The Glorious Qur'an. New York: Tahrike Tarsile *Qur'an*, 1992.

The History of Islamic Theology from Muhammad to the Present. Princeton Series on the Middle East. Princeton, NJ: Markus Weiner Publishers, 1999.

Thiele, Jan. *Abū Hāshim Al-Jubbāʾī's (d. 321/933) Theory of 'States' and Its Adaption by Ashʿarīte Theologians*. Edited by Sabine Schmidtke. Vol. 1. Oxford University Press, 2014. https://doi.org/10.1093/oxfordhb/9780199696703.013.021.

———. 'Ḥāl (Theory of "states" in Theology)'. In Encyclopaedia of Islam, three, edited by Kate Fleet, Gudrun Krämer, Denis Matringe, John Nawas, and Devin J. Stewart. Accessed June 14, 2023. doi:http://dx.doi.org/10.1163/1573-3912_ei3_COM_30220.

———. *Between Cordoba and Nīsābūr*. Edited by Sabine Schmidtke. Vol. 1. Oxford University Press, 2015. https://doi.org/10.1093/oxfordhb/9780199696703.013.45.

Thompson, Peter. *Marxism*. Oxford University Press, 2013. https://doi.org/10.1093/oxfordhb/9780199644650.013.046.

Tillman, Nola Taylor, and Biggs, Ben. *"What Are Black Holes? Facts, Theory & Definition*." Space.com. December 4, 2021. Accessed, 7 January 2022. https://www.space.com/15421-black-holes-facts-formation-discovery-sdcmp.html

El-Tobgui, Carl Sharif. 'Ibn Taymiyya': In *Ibn Taymiyya on Reason and Revelation*, 78–131. A Study of Darʾ Taʿāruḍ Al-ʿaql Wa-l-Naql. Brill, 2020. http://www.jstor.org/stable/10.1163/j.ctv2gjwv76.8.

Tottoli, Roberto. "Origin and Use of the Term *Isrāʾīliyyāt* in Muslim Literature." *Arabica* 46, no. 2 (1999): 193–210. http://www.jstor.org/stable/4057496;

Treiger, Alexander. 'Al-Ghazali's Classifications of the Sciences and Descriptions of the Highest Theoretical Science'. *Dîvân: Disiplinlerarası Çalışmalar Dergisi 16.1 (30) (2011): 1-32*, 2011.

———. *Inspired Knowledge in Islamic Thought: Al-Ghazālī's Theory of Mystical Cognition and Its Avicennian Foundation*. Culture and Civilization in the Middle East, v. 27. London ; New York: Routledge, 2012.

Tritton, A. S. 'Foreign Influences on Muslim Theology'. *Bulletin of the School of Oriental and African Studies* 10, no. 4 (February 1942): 837–42. https://doi.org/10.1017/S0041977X00090066.

Tzortzis, Hamza Andreas. *Divine Reality: God, Islam and the Mirage of Atheism*, 2016.

Vaidman, Lev, "Many-Worlds Interpretation of Quantum Mechanics", *The Stanford Encyclopedia of Philosophy* (Fall 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2021/entries/qm-manyworlds/>.

Vilenkin, A. *Many Worlds in One: The Search for Other Universes*. 1st ed. New York: Hill and Wang, A division of Farrar, Straus and Giroux, 2006.

Verbeek, Theo. "Descartes and The Problem of Atheism: The Utrecht Crisis." *Nederlands Archief Voor Kerkgeschiedenis / Dutch Review of Church History* 71, no. 2 (1991): 211–23. http://www.jstor.org/stable/24009081

Vernon, Mark. "Mark Vernon: God Or A Multiverse?". *The Guardian,* 2008. https://www.theguardian.com/commentisfree/belief/2008/dec/08/religion-philosophy-cosmology-multiverse

Wainwright, William J., ed. *The Oxford Handbook of Philosophy of Religion*. Oxford Handbooks in Philosophy. Oxford ; New York: Oxford University Press, 2008.

Wainwright, William J., and William Lane Craig. 'The *Kalām* Cosmological Argument.' *Noûs* 16, no. 2 (May 1982): 328. https://doi.org/10.2307/2215379.

Waldman, Marilyn Robinson. "The Development of the Concept of Kufr in the Qur'ān." *Journal of the American Oriental Society* 88, no. 3 (1968): 442–55. https://doi.org/10.2307/596869.

Waller, Jason. *Cosmological Fine-Tuning Arguments: What (If Anything) Should We Infer from the Fine-Tuning of Our Universe for Life?* Routledge Studies in the Philosophy of Religion 22. New York: Routledge, Taylor & Francis Group, 2020.

Wall, Mike. "Cosmic Anniversary: 'Big Bang Echo' Discovered 50 Years Ago Today". *Space.Com*. 2014. https://www.space.com/25945-cosmic-microwave-background-discovery-50th-anniversary.html; "Cosmic Microwave Background (CMB) Radiation". European Space Agency. Accessed 14 August, 2022.

Ward, Keith. *Defending the Soul*. Oxford, England ; Chatham, NY: Oneworld, 1992.

———. *Rational Theology and the Creativity of God*. Oxford: B. Blackwell, 1982.

Ward, Keith, William Curtis Holtzen, and Roberto Sirvent. *By Faith and Reason: The Essential Keith Ward*. London, England; Eugene, OR: Darton, Longman and Todd ; Wipf & Stock Publishers, 2012.

Watt, W. Montgomery. *Islamic Philosophy & Theology*. New Brunswick [N.J.]: AldineTransaction, 2009.

———. *Islamic Philosophy and Theology: An Extended Survey*. Edinburgh: Edinburgh University Press, 1985.

———. *The Formative Period of Islamic Thought*. Repr. Oxford: Oneworld Publ, 2009.

Weaver, Richard M. *Ideas Have Consequences*. Expanded edition. Chicago ; London: University of Chicago Press, 2013.

Webster, John, Kathryn Tanner, and Iain R. Torrance, eds. *The Oxford Handbook of Systematic Theology*. Oxford: Oxford University Press, 2009.

Wensinck, Arent J., and Arent J. Wensinck. *The Muslim Creed: Its Genesis and Historical Development*. [Nachdr. der Ausg.] London, 1965. Routledge Library Editions: Islam 39. London: Routledge, 2008.

Whitehouse, Bill. *Sam Harris and the End of Faith: A Muslim's Critical Response*. Place of publication not identified: Bilquees Press, 2009.

Whitmarsh, Tim. *Battling the Gods: Atheism in the Ancient World*. First edition. New York: Alfred A. Knopf, 2015.

Wielandt, Rotraud. *Main Trends of Islamic Theological Thought from the Late Nineteenth Century to Present Times*. Edited by Sabine Schmidtke. Vol. 1. Oxford University Press, 2015. https://doi.org/10.1093/oxfordhb/9780199696703.013.43.

Wilson, M. Brett. 'The Failure of Nomenclature: The Concept of "Orthodoxy" in the Study of Islam'. *Comparative Islamic Studies* 3, no. 2 (1 November 2007): 169–94. https://doi.org/10.1558/cis.v3i2.169.

Wimmel, Hermann. *Quantum Physics & Observed Reality: A Critical Interpretation of Quantum Mechanics*. Singapore ; River Edge, N.J: World Scientific, 1992.

Winter, T. J., ed. *The Cambridge Companion to Classical Islamic Theology*. Cambridge Companions to Religion. Cambridge ; New York: Cambridge University Press, 2008.

Wolfe, Charles T. 'From Locke to Materialism: Empiricism, the Brain and the Stirrings of Ontology'. In *What Does It Mean to Be an Empiricist?*, edited by Siegfried Bodenmann and Anne-Lise Rey, 331:235–63. Boston Studies in the Philosophy and History of Science. Cham: Springer International Publishing, 2018. https://doi.org/10.1007/978-3-319-69860-1_13.

Wolfson, Harry Austryn. *The Philosophy of the Kalām*. Structure and Growth of Philosophic Systems from Plato to Spinoza ; 4. Cambridge, Mass: Harvard University Press, 1976.

Wood, Allen W. 'Dialectical Materialism'. In *Routledge Encyclopedia of Philosophy*, 1st ed. London: Routledge, 2016. https://doi.org/10.4324/9780415249126-N013-1.

Wootton, David. 'New Histories of Atheism'. In *Atheism from the Reformation to the Enlightenment*, edited by Michael Hunter and David Wootton, 13–54. Oxford University Press, 1992. https://doi.org/10.1093/acprof:oso/9780198227366.003.0002.

Worsley, Peter. *Marx and Marxism*. Rev. ed. London: Routledge, 2002.

Yagisawa, Takashi, "Possible Objects", *The Stanford Encyclopedia of Philosophy* (Summer 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2020/entries/possible-objects/>.

Yahya, Hârun. *The Evolution Deceit: The Scientific Collapse of Darwinism and Its Ideological Background*. 6. ed., Revised&Updated. Istanbul: Kültür Publ, 2001.

Yaqeen Institute for Islamic Research. 'What Is Islamic Analytic Theory? | Yaqeen Institute for Islamic Research'. Accessed 10 November 2018. https://yaqeeninstitute.org/en/omar-edward-moad/what-is-islamic-analytic-theology/.

Yaran, Cafer S. *Islamic Thought on the Existence of God: With Contributions from Contemporary Western Philosophy of Religion*. Cultural Heritage and Contemporary Change, v. 16. Washington, D.C: Council For Research In Values and Philosophy, 2003.

———. *Islamic Thought on the Existence of God: With Contributions from Contemporary Western Philosophy of Religion*. Cultural Heritage and Contemporary Change, v. 16. Washington, D.C: Council For Research In Values and Philosophy, 2003.

Younas, Salman. "Question: What is the Islamic Position on The Concept of Time Travel? Alternate/Parallel Worlds? Multiverse?". *Seekersguidance*, 2021. https://seekersguidance.org/answers/education/question-what-is-the-islamic-position-on-the-concept-of-time-travel-alternate-parallel-worlds-multiverse/.

Zaid, Tigani M. A and Zein, Ibrahim Mohamed. *Stages of development in Arabic philosophical nomenclature: emergence, progression and stability.* Intellectual Discourse, 24 (2), 2016. pp. 217-243. ISSN 0128-4878 E-ISSN 2289-5639.

Zagzebski, Linda Trinkaus. *Philosophy of Religion: An Historical Introduction*. Fundamentals of Philosophy 3. Malden, MA: Blackwell Pub, 2007.

Al-Zarkashī, Badr al-Dīn Muḥammad. *Al-Baḥr al-Muhiṭ fī Usūl al-Fiqh*. Kuwait: *Dār al-Ṣawfa*, 1992.

Zuckerman, Phil, ed. *Atheism and Secularity*. Praeger Perspectives. Santa Barbara, Calif: Praeger, 2010.

———. *The Nonreligious: Understanding Secular People and Societies*. New York: Oxford University Press, 2016.

Zweerink, Jeffrey A. *Who's Afraid of the Multiverse?* Cork: BookBaby, 2008.