New Frontiers in Islam and Evolution

with Shoaib Ahmed Malik, "Introduction to the Symposium on Islam and Evolution"; Safaruk Zaman Chowdhury, "Explaining Evil in the Bio-Sphere: Assessing Some Evolutionary Theodicies for Muslim Theists"; Karim Gabor Kocsenda, "Shīʿī Readings of Human Evolution: Ṭabāṭabāʾī to Ḥaydarī"; Khalil Andani, "Evolving Creation: An Ismaili Muslim Interpretation of Evolution"; David Solomon Jalajel, "Presumptions About God's Wisdom in Muslim Arguments For and Against Evolution"; and Shoaib Ahmed Malik, Hamza Karamali, and Moamer Yahia Ali Khalayleh, "Does Criticizing Intelligent Design (ID) Undermine Design Discourse in the Qurʾān?"

PRESUMPTIONS ABOUT GOD'S WISDOM IN MUSLIM ARGUMENTS FOR AND AGAINST EVOLUTION

by David Solomon Jalajel

Abstract.   Wisdom-based arguments recognize that God has the power to act or refrain from acting in a certain way, but His wisdom dictates a particular course of action. Such arguments have been applied on both sides of the creation/evolution debate among Muslims. This article analyzes a number of contemporary wisdom-based arguments for and against evolution in light of how God's wisdom is understood by classical Muslim theologians of the three canonical Sunnī schools of Ashʿarism, Māturīdism, and Atharism/Salafism. It finds that there is a considerable disconnect between these contemporary arguments and how God's wisdom has been traditionally understood. It also examines the high level of subjectivity exhibited by these arguments and the potential negative impact this subjectivity could have on the broader debate.

Keywords: divine wisdom; evolution; Islam

INTRODUCTION

The theory of biological evolution is a source of controversy for Muslims (Guessoum 2016) entailing many motivations and approaches (Malik 2021, 106–48). This article identifies and examines arguments by Muslim thinkers who invoke God's wisdom to advocate for or against evolution. These wisdom-based arguments make claims about what God would or would not do in His creation. They concede that the issue of contention falls metaphysically within God's omnipotent power, but go on

David Solomon Jalajel is a researcher at the Prince Sultan Research Institute, King Saud University, Riyadh, Saudi Arabia; e-mail: shdave2@gmail.com.

www.wileyonlinelibrary.com/journal/zygon

to assert that His wisdom dictates a particular course of action to the exclusion of all others. This article analyzes contemporary pro-evolution and anti-evolution wisdom-based arguments with reference to how God's wisdom is understood in classical Islamic theology, particularly the canonical Sunnī schools of Ashʿarism, Māturīdism, and Atharism/Salafism. It also explores the appeal of wisdom-based arguments, their particular strengths and weaknesses, and what it would mean for the Islam and evolution debate if such arguments become more prevalent. Its purpose is to critique this style of argumentation and how it is used by both sides of the debate. It is not concerned with resolving the question of Islam and evolution one way or the other.

The article begins by situating wisdom-based arguments between metaphysical questions about God's power and hermeneutic questions about what God declares He did in Creation. Then it explores the concept of wisdom according to the various Sunnī schools. Finally, a number of contemporary wisdom-based arguments, both pro- and anti-evolution, are described and evaluated with reference to the classical Sunnī understanding of wisdom.

Situating the Question

Muslims have employed many approaches to advocate for or against evolution. One approach is to argue the scientific strength or weakness of the theory itself, without much concern for engaging with matters of faith. This approach is typical of the of the Harun Yahya movement (Yahya 1999). It begs the question of whether a Muslim's belief or salvation should depend on their getting scientific questions right.

By contrast, approaching the question from a religious angle requires engaging with theological concerns and scriptural hermeneutics (Malik 2021, 11–12). Theological questions about religion and science explore God's relationship to the universe. In Sunnī theological discourse, the universe is "everything else besides God"; there is God, and there is His creation (al-Rāzī [1210] 1986, 19; Ibn Taymiyyah [1328] 1995, 5:565). A sharp distinction is maintained between God's necessary existence and the contingent universe. Indeed, a twelfth-century Māturīdite[1] theologian Shams al-Dīn al-Samarqandī ([1310] 1985, 66) describes the topic of theology as: "God's essence in and of itself, and the essence of contingent things in their being constrained by dependency." The Ashʿarite theologian al-Sanūsī ([1490] 2009, 56) sums up the concerns of theology by saying: "Every accountable person must know what is necessary, impossible, and possible for our Lord."

What is necessary for God? This question in theology explores the topic of His existence and His necessary attributes. For instance, God must exist. Since the universe exists, God must also be capable of creating it, He must

have the will to do so, and the knowledge to decide. Theologians of all the Sunnī schools agree that God has omnipotent power (*qudrah*). They maintain, however, that the so-called logical impossibilities (*al-mustaḥīlāt al-ʿaqaliyyah*) are not objects of God's power. Al-Ghazālī ([1111] 2002, 183–184) limits such logical impossibilities to three kinds of statements: affirming something while denying it, affirming the specific while denying the general, or affirming the quantity of two while negating one of that quantity. He adds: "What is not reduced to this is not impossible, and what is not impossible is within [divine] power." In short, logical impossibility is limited to contradictory statements like "triangles have two sides" (Harvey 2021, 136) and arguments that can be reduced to contradictory statements like "the rock that God can create but cannot lift". This is when God's power is understood strictly on its own in relation to the objects of the world. Some theologians do conceive of God's power as constrained when considered in conjunction with His other divine attributes. For instance, God's power can never be understood to contravene His will (Fūdah 2011, 60). For them, God's power can be constrained by the demands of His wisdom, justice, or perfection, since God's self-contradiction would entail a logical impossibility (Ḥ. al-Nasafi [1310] 2011, 425) and this is the space wherein wisdom-based arguments can be considered. This covers what is necessary for God, what is impossible, and what is possible, the latter being the determination of all contingent things by His will, power, and creative act.

There are three important questions relevant to the topic of evolution from a theological perspective, and these are as follows:

1. What is God capable of and what is He incapable of?
2. What did God actually do and what didn't He do?
3. What would God do, and what wouldn't He do?

What Is God Capable of and What Is He Incapable of?

With respect to biological evolution, the question would be: "Does God have the power to bring about the diverse species on Earth through a gradual process of divergence and change, or is He incapable of doing so?" The answer, assuming the all-powerful God of classical Sunnī theology, would be to say that God is very much capable of doing so. The three theological schools explain how a transcendent all-powerful God engages with His Creation through clearly defined models of divine action. These are Ashʿarite and Māturīdite occasionalism, early Māturīdite concurrentism, and Salafite instrumental causality. Occasionalism is a divine action model where God creates the object that is the cause on the occasion of creating the object that is the effect so that a causal relationship is discerned between them. All causal efficacy belongs to God and it is

Table 1. Three divine action models

Occasionalism	Concurrentism	Instrumentalism
God creates the object that is the cause, the object that is acted upon, and the effect.	The object that is the cause directly brings about the effect in the object acted upon, but with God's action doing so as well.	God creates causal power in one object, receptivity in the other, and brings about the consequent effect through the cause.
God creates everything directly. Nothing has innate causal power.	God creates both directly and indirectly at the same time.	God creates through causes in His created matter.
God is maximally active.	**God is maximally active.**	**God is maximally active.**
Creation is maximally contingent on God.	**Creation is maximally contingent on God.**	**Creation is maximally contingent on God.**

denied to the created realm (Muhtaroglu 2017b, 106 and Koca 2020, 6). An example is God creating fire and cotton and His separately creating ash in place of the cotton when it comes in contact with fire (a-Ghazālī [1111] 2002, 176; [1111] 2004, 59). Concurrentism is a divine action model where God creates things possessing innate causal power, but their effects are only realized in the world with God's concurrent action. This understanding of early Māturīdite divine action is suggested by Ramon Harvey (2018, 32–34; 2021, 93), while Muhtaroglu (2017a, 9–11, 17) and Bulgen (2019, 261) read early Māturīdite texts as advocating a form of occasionalism. According to the concurrentist model, fire has the innate causal power to turn cotton to ash, but that causal power can only be realized with God's concurrent action. Instrumental causality, Ibn Taymiyyah's Salafite divine action model, is where God creates causal power directly within the thing that acts as a cause, and through that causal power, He directly brings about the effect in another receptive object (Hoover 2007, 160–61; see also: Ibn Taymiyyah [1328] 1995, 3:113 and 8:136). In this model, God creates in a particular fire the causal power to burn, He creates receptivity in the cotton, and through this He brings about the desiccation of the cotton into ash. Though each of these models is distinctive, they share in asserting that God is maximally active in His Creation, meaning that each and every causal act is ascribable to His direct action. Table 1 provides a summary of the three Sunnī divine action models, with the points of convergence between the models highlighted in bold.

This point of agreement is significant. Many antievolution arguments focus on the idea that evolution undermines God's power and creativity by assuming natural causes for the development of species (Varisco 2018, 25). Likewise, many arguments object to the way the theory gives "random chance" a dynamic role in the evolutionary process, making the process purposeless (Malik 2021, 52–54). These objections assume an inherent

tension between natural causality and God's action. Sunnī divine action models, by contrast, make God maximally active in every causal event in the universe, so He can impose whatever causal pathways in nature that He wills. This includes patterns that people would perceive as chance, but which are God's determination and completely under His control. Evolution, as a pattern of natural causes in the world, would fall completely within God's power, so it cannot be ruled out metaphysically.

What Did God Actually Do, and What Didn't He Do?

Sunnī divine action models posit that everything in the universe is necessarily something God did. If it is observable, is known as the "Seen" (*al-Shahādah*). However, God can also do things that are unobserved. These are collectively known as the "Unseen" (*al-Ghayb*). Did God create angels? Heaven and hell? Did God create animals and plants *ex nihilo* or through a gradual process of evolution? Such questions are addressed by scripture or not at all. Al-Rāzī ([1210] 2000, 2:27) explains: "The Unseen is divided into what is indicated by evidence and what is not indicated by evidence. As for what is not indicated by evidence, God alone knows about it to the exclusion of others. With regard to what is indicated by evidence, it can be said that we know of the Unseen what the evidence indicates." When scripture addresses these questions explicitly, Muslims believe what the scriptures say as a matter of faith; when scripture is silent, Muslims are expected to remain silent as well and refrain from asserting a committed religious stance on the matter.

With regard to life in general, the scriptures repeatedly attest that God created all living things, but they do not give details about the timeframe or the particular patterns God manifested in the world in doing so. Therefore, scripture does not negate the possibility that God could have manifested an evolutionary process for the development of life on Earth. With respect to human evolution, Adam and Eve are understood by Sunnī theologians to be miraculous creations and forefathers of all people on Earth today (Jalajel 2009, 48–50; Malik 2021, 99). This could possibly constrain the acceptability of human evolution within a theological context.

There is another possible question between these two:

What Would God Do, and What Wouldn't He Do?

This question recognizes that God has the power to do as He wills, when that power is considered in isolation from His other attributes. But what *would* He will, God being who He is? Are there some things about the world that we know must be the case, even if God does not speak to us directly about them, because a wise and just Creator would only create it a certain way? Harvey (2021, 187) explains: "If God does not change and possesses eternal attributes of creative action and wisdom, then despite
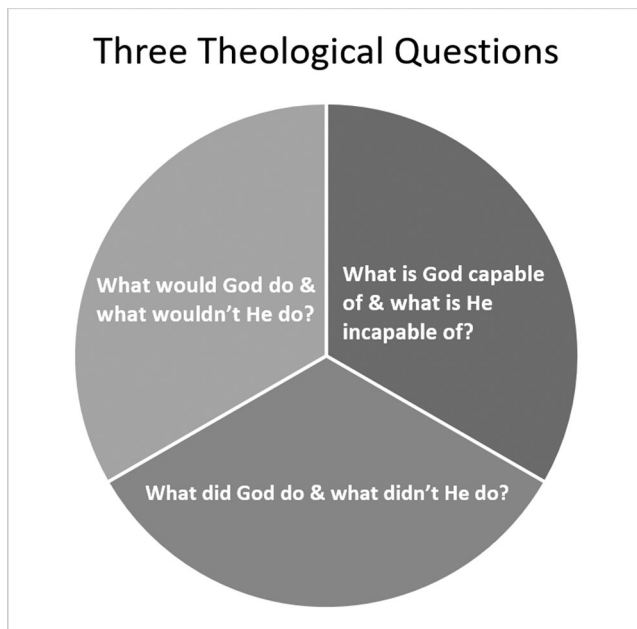
Three Theological Questions

What would God do & what wouldn't He do?

What is God capable of & what is He incapable of?

What did God do & what didn't He do?

Figure 1. Situating wisdom-based arguments. Questions about God's capabilities rest on the concepts of God's omnipotence and divine action. Questions of faith regarding what God actually enacted in the world are strictly determined by scripture. Questions of what God would or would not do in Creation appeal to a theologian's understanding of God's wisdom and how it relates to His will and power.

what can be logically conceded as alternative possibilities, the actual world is necessary in the sense of depending on these absolute necessities and fitting within certain necessary limits that they determine." Arguments framed in this way are wisdom-based arguments. They focus on matters where God's wisdom is understood to dictate either one course of action or another, despite His omnipotence making Him capable of all alternative possibilities. Figure 1 illustrates how wisdom-based arguments are situated with respect to other questions of theology.

Wisdom-based arguments are often encountered in modern discussions about Islam and evolution. They are sometimes employed to promote evolution, and more often employed to refute it. Since these arguments are presented to establish a matter of belief, a point of religious doctrine, it is appropriate to first explore the ways that God's wisdom has been traditionally understood by Muslim theologians and how they used this divine attribute to establish Islamic doctrine.

WISDOM IN CLASSICAL SUNNĪ THEOLOGY

Ashʿarite, Māturīdite, and Salafite theologians agree that God is al-Ḥakīm, "the Wise," who determines everything by His will and according to wisdom. They differ in how God's will and wisdom are related, and this can be seen in the way they define the term "wisdom." The three schools' perspectives on wisdom will be examined in turn.

Al-Ghazālī ([1111] 2004, 99) defines wisdom as: "knowledge of the order of affairs and the capability to arrange them." This definition frames wisdom in terms of God's knowledge and capability, referring strictly to God's attributes. It does not provide any external standard for determining wisdom. This aligns with Jackson's (2009, 83) depiction of the Ashʿarites as "rejecting the notion that there were any standards external to God's self-determined prerogative." For Ashʿarites like al-Ghazālī, wisdom is either an aspect of God's knowledge or one of the attributes of God's actions (*ṣifāt al-afʿāl*). In the latter case, it is the outcome of God's will and power. God's attributes of action, including wisdom, mercy, kindness, and justice, are defined by how He acts in the world, and His will is unrestrained and unrestricted. God has the attribute of wisdom because all of His actions manifest His will, and wisdom emerges from His actions. It is inconceivable for God to act contrary to wisdom, but that is simply because it is inconceivable for anything in the universe to be other than in accordance with what He wills.

As already mentioned, Ashʿarite theologians stress the idea that God can do anything that is logically possible. They illustrate God's freedom of action by asserting that, had it been His will, God could punish the faithful and reward the iniquitous (al-Ghazālī [1111] 2004, 89). However, He does not do so, since He always chooses to act according to the dictates of His wisdom, and this manifests itself in patterns of order, balance, and justice. Therefore, all of God's actions are wise. In this way, Ashʿarites emphasize God's grace and the beauty of His choices, since He has the power to do otherwise, but chooses not to. They do not see wisdom as a separate attribute of meaning in its own right, since certain aspects of its meaning are satisfied by His attributes of will and power, as a description of His actions, and other aspects of its meaning are covered by His attribute of knowledge.

There are no limits upon God. He can bring about any results he wishes through any configuration of causes, so it is impossible for His actions to have ulterior motives (*aghrāḍ*) (al- Ghazālī [1111] 2004, 91 and 100–1). This is what Ashʿarite theologians mean when they say that God's actions are unmotivated. They do not mean that the universe is devoid of purpose. God's actions have clear purposes (*maqāṣid*) but these are purposes that He determines, things in nature he endows with purpose through His wilful configuration of events (al-Laqqānī [1632] 2016, 2:666–67). Likewise,

al- Ghazālī ([1111] 2004, 91) says, while defining wisdom in reference to God's knowledge, that it entails "comprehending the ordering of affairs and their meanings, great and minute, and determining about them how it is appropriate for them to be in order to realise from them the outcome (*ghāyah*) desired from them." Therefore, teleology in the universe is determined by God. He imposes teleology upon His creation; it does not direct or motivate His creative act. The same applies to the Divine Law.[2]

Abū Mansūr al-Māturīdī, the founder of the Māturīdite school, defines wisdom as ([944] 2001, 164): "correctness by placing everything in its proper place." He also says ([944] 2001, 102): "Wisdom is nothing other than correctness in placing everything in its proper place and giving every possessor of a share their share without withholding anyone's right from them." The later Māturīdite theologian Abū al-Muʿīn al-Nasafī ([1114] 2011, 1:586 and 2:922) defines wisdom as: "an action having a laudatory outcome." Both of these definitions have an external reference for wisdom. For al-Māturīdī, it is a proper, intelligible place in the created order. For al-Nasafī, it is the outcome that God's action leads to. Harvey (2021, 165) distinguishes between these definitions in that the earlier "uses the divine attribute of wisdom to ground what is praiseworthy" while the latter "define(s) wisdom in terms of it." In other words, for al-Māturīdī, the wisdom of something is intrinsic to it, while for al-Nasafī, it is revealed in its consequences. In either case, Māturīdite theologians do not reduce God's wisdom to His will. They regard wisdom as an essential attribute in its own right (A. al-Nasafī [1114] 2011, 588), one that works directly in conjunction with God's power and will, to impact on what actions He carries out. Indeed, God's attributes of action are, for them, essential attributes (Harvey 2021, 143). Harvey (2018, 32) explains: "that creation occurs not just from God's knowledge, will, and power, but also by virtue of His wisdom and creative ability." Wisdom does not emerge as a consequence of God's actions, but like His power, will, and life, it is essential to the very concept of God. God cannot act independent of wisdom (Jackson 2009, 110). It is inconceivable for God to punish the faithful and reward the iniquitous, or to be unjust, or to create a universe completely devoid of order, pattern, and balance. Māturīdites concede that God has the power to do so, but emphasize that it is inconceivable for that ever to be His will. Whereas for an Ashʿarite, it is inconceivable for God's act to be unwise since He freely chooses to act according to His wisdom, for a Māturīdite, it is inconceivable for God's act to be unwise, since God's innate attribute of wisdom governs His actions.

The Salafite theologian Ibn al-Qayyim ([1350] 2003, 2:449) asserts that wisdom is an attribute of completeness and defines it as: "doing what is appropriate in the appropriate manner at the appropriate time." Salafite theology stresses appropriateness and suitability in God's actions, and perfection is an external standard to make determinations about God Himself.

God's perfection demands that every one of His action must accord with wisdom (Hoover 2007, 185). For it to be otherwise would be a deficiency in God which is impossible for Him. This is based on the Salafite principle of the higher exemplar (*al-mathal al-aʿlā*), which says that every aspect of categorical completeness ascribable to God, which could also be used to describe a created being, must be ascribed to God in its fullest conceptualization without any aspect of deficiency, since it is more suitable for the Creator than it is for the creatures. The Salafite theologians Ibn Taymiyyah and Ibn Abī al-ʿIzz explain that otherwise, the creature would be more complete than the Creator, which is impossible (Ibn Taymiyyah [1328] 1995, 3:30, 5:201, 6:640–41; Ibn Abī al-ʿIzz [1390] 2003, 1:181). Ibn Taymiyyah ([1328] 1995, 6:129–30) further argues that an agent who has free will and imposes upon himself to only do what is most appropriate is more complete and perfect compared to a free agent who acts with complete abandon.

Not only that, in Salafite theology God's will is dependent on His wisdom and cannot function without it. Ibn Taymiyyah ([1328] 2000, 2:925–26) explains that this is because God's attribute of will merely functions to specify what God wants from various other possibilities. However, God's will does not encompass the standard to distinguish what it is that God wants, which is the choice that is best and most appropriate. That is addressed by His attribute of wisdom. Without wisdom, God's will would not be able to carry out is specifying function, since no particular possibility could ever be distinguished from another. Therefore, divine wisdom enables God's will and makes it possible.

All three theological schools assert God's wisdom, but their concepts fall along a clear spectrum. On the one extreme, Ashʿarites emphasize God's free will and that He has no needs or limitations. Nothing can benefit or harm Him, so He has no motives or vested interests. His wisdom is manifested through His actions that bring about order and precision in the universe, which people can recognize. Further along the spectrum are the Māturīdites, for whom wisdom is an essential attribute that defines God, so it shapes His will and actions. Finally, the Salafites assert that God's wisdom is demanded by His perfection and anything else would make God categorically deficient. God must act according to wisdom, since He is perfect, and His attribute of will, moreover, cannot function except to realize perfection in action as determined by wisdom.

What Can the World Reveal about God?

Ashʿarite, Māturīdite, and Salafite theologians agree that God is wise and that the universe we observe, in its order, precision, and harmony, attest to God's wisdom. Furthermore, reflecting on Divine wisdom can strengthen our faith. However, Sunnī theologians do not see arguments from design

or from wisdom as being the primary basis for establishing the existence of God. For Ashʿarite and Māturīdite theologians, the existence of God is necessarily established by recognizing either the originated nature (*ḥudūth*) or contingency *(imkān)* of the universe and then realizing that the universe needs an Originator or Determiner whose existence is unoriginated and necessary (al-Bāqillāni [1013] 1987, 41–43; al-Rāzī [1210] 1986, 103; and al-Taftazānī [1390] 2014, 47). The proof from origination and the proof from contingency are two presentations of the kalām cosmological argument (KCA). Faith based upon such rational reflection comes to a person after developing rational faculties, though it is considered obvious enough to be achieved by a reasoning child (Abū ʿAdhabah [1758] 1904, 37).

Salafite theologians agree that children are not born knowing God, but they see recognition of God coming much earlier, as part of a person's innate nature (*fiṭrah*), developing into knowledge as the mind develops without the need for any external impetus (Ibn Taymiyyah [1328] 1991, 8:460-62). Children are born with an innate yearning for God like the yearning they have for their mother's milk. As their minds develop, this yearning develops into recognition of God, and only external corruptive influences can remove them from this knowledge (Ibn Taymiyyah [1328] 1991, 8:464).

Whether it is the natural world or inner nature that brings people to belief in God, this happens long before they can appreciate the intricacies of God's design and the divine wisdom that is evident in the natural order. Such higher level reflection on nature serves to strengthen faith and deepen the love and reverence people have for God. It also deepens people's knowledge of God's divine attributes. This deeper reflection on nature leads to the recognition of God's wisdom and His justice. Depending on the theological school, this wisdom that nature reveals to us might be understood as an attribute of God's actions, or of His essence, or of His perfection.

Al-Māturīdī ([944] 2001, 94) explains the different ways that nature indicates God by saying:

> The rule is that the world indicates in different ways from various angles. Its propensity for transformation, perishing, and the coming together of opposing properties in a substance in a given circumstance indicates its temporality. Its ignorance of its principles and its inability to restore what becomes corrupt within it indicate that it is not self-sustaining. Then the coming together of opposing tendencies and the material cohesion of creation in integrity indicates that there is One being who plans it and brings it into existence. Its cohesion, integrity and the preservation of opposing forces in a substance also indicate the power, wisdom, and knowledge of its planner.[3]

Therefore, the universe indicates God's existence as well as His wisdom, but through different aspects of its nature. Harvey (2021, 119) explains

that "Al-Māturīdī places his teleological argument after his KCA in such a supplementary order," that order being "to supplement the KCA by revealing the wisdom underlying the creation of the world in a particular way." The world's contingency and temporality demonstrate that God exists. Its order, cohesion, integrity, and harmony reveal His nature and show that He is wise.

The Problem of False Analogies

If nature provides clear signs of God's wisdom, does human knowledge of God's wisdom in turn, tell people about the natural world? Can it be used to predict or determine what particular actions God must perform and what particular phenomena He must bring about in the world?

Theologians agree that people can discern wisdom in God's actions and understand the wisdom in much of what He does in the world, but they also agree that such knowledge is limited. Many aspects of His wisdom are beyond human knowledge. Even though everything in the world accords with God's wisdom, we will not always recognize it or understand it.

The Ashʿarite theologian Al- Ghazālī ([1111] 1982, 1:163) says:

> The meaning of "the Wise" is the Knower of the reality of things, the Capable of precision in making them accord precisely to His will. From this, where is the need of considering best interests? As for a wise man among us, he takes the best interests into consideration, looking out for himself to achieve distinction in this world and reward in the Hereafter or to repel misfortune from himself, all of which is impossible to conceive for God.

The Māturīdite Abū al-Muʿīn al-Nasafī ([1114] 2011, 2:922) says:

> God has created an incalculable abundance of things from which no one in His creation derives benefit or gets to see or examine, like the hidden regions the Earth, the interiors of the mountains, and the bottoms of the oceans. God is transcendent above taking benefit from anything; nevertheless, He did not create those things in vain.

Admittedly, the examples al-Nasafī gives are dated. People now drill through mountains and send submersibles to the deepest ocean trenches and derive either useful knowledge or other practical benefits. However, that makes his point even clearer. He is arguing that our lack of perceiving God's wisdom in certain natural entities or phenomena does not mean they are bereft of wisdom or purpose. The value of such things might never be known to us, but that does not mean we can either negate their wisdom or dismiss their value.

The Salafite theologian Ibn al-Qayyim ([1350] 1998, 423) writes:

> Comparing God's actions to the actions of His servants is one of the falsest of analogies. Likewise is comparing His wisdom to theirs or His attributes to theirs. It is acknowledged that the Lord knows that His servants will fall

into unbelief, injustice, and wrongdoing and that He is capable of either not creating them or of creating them as one heart upon what He loves and is pleased with, or of preventing them from transgressing against one another. However, His infinite wisdom keeps Him from doing so and requires that He creates them the way they are.

The Salafite Ibn Abī al-ʿIzz ([1390] 2003, 1:403) reflects al-Nasafī's sentiments when he says:

> If God's wisdom is not evident to us, that does not mean it is not there. Our ignorance of His wisdom does not negate its existence. Do we not see that though God's wisdom is hidden from us in the creation of snakes, scorpions, rats, and insect vermin, from which we know nothing but harm, this does not negate that God created them, nor does it mean that there is no wisdom in them that remains hidden, since the absence of knowledge does not equate to the knowledge of absence.

Here again, the fact that the examples are dated only strengthens the point. Ibn Abī al-ʿIzz was unable to discern the wisdom in those animals; however he did not reject their being part of God's creation or that they have a role to play, which he simply did not understand.

All three theological schools recognize the danger of false analogies when people apply their own understanding of wisdom to God and His actions. Still, are there aspects of the world that must be known simply by virtue of our knowing that God is wise, needing no other rational, scriptural, or empirical evidence? In classical Ashʿarite theology, the answer is no. Since God can bring about any outcome in any way He wills, there is no particular configuration or phenomenon that God must manifest in His Creation. Creation can teach about God's wisdom, but knowing God is wise makes no demands on what can be asserted about nature.

By contrast, Māturīdism demands that, since the world exists for people to recognize and worship God, it must possess a sufficient level of order. Al-Māturīdī holds that the world, despite all the opposing tendencies observed therein, must be kept coherent for rational minds. He says ([944] 2001, 67): "[The idea] that for the world is meant simply for obliteration (*fanā*) is opposed to wisdom. It is deplorable for any rational being to act contrary to the way of wisdom, so it is not tenable that the world – of which reason forms an [integral] part – is established upon other than wisdom or made in vain. Once this is determined, it shows that the world was established to endure and not to perish." Therefore, God has to impose an order on the universe that would allow for rational beings to exist, enable them to reflect upon Him, and ultimately to come to know Him. It does not necessarily have to be the particular order that we observe, but God's wisdom demands some semblance of order for the world.

In Salafite theology, God's perfection demands that He is perpetually creating (Hoover, 2004, 294). For God to persist without creating in
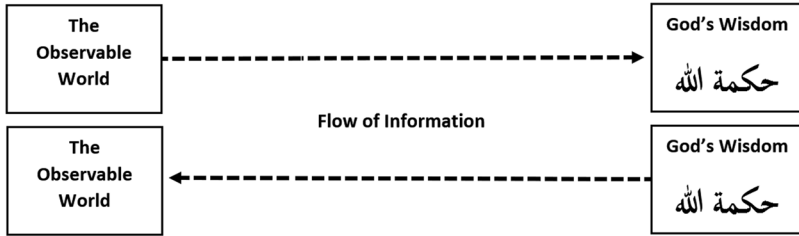
Figure 2. Wisdom and the observable world. The top illustration shows the primary flow of information from observing the order, precision, and purpose in the natural world to attaining knowledge of God's wisdom. This is accepted by all three schools and is the only direction of information flow for Ashʿarites. The bottom illustration shows the flow of information for wisdom-based arguments, where knowledge of God's wisdom is used to determine certain things about the natural world. Māturīdite theologians determine that the world must contain a level of order to allow for rational beings to exist and recognize God. Salafite theologians, additionally, determine that the created order must be eternal, since the divine perfection requires perpetual creation. All three theological schools agree that particular natural processes and phenomena cannot be deduced from the limited human knowledge of God's wisdom.

pre-eternity would constitute deficiency on His part. Ibn Taymiyyah ([1328] 1995, 18:228) cites Q 16:17 to support this claim: "Is one who creates like one who does not create?" The universe must at some point in time attain the requisite order for His worshippers to exist therein and worship Him, but it must additionally be an eternal world of finite objects. The present heavens and Earth have their beginning, but after the infinite succession of creative acts demanded by God's eternal perfection.

Therefore, the different theological schools disagree about what our recognition of God's wisdom requires us to know about the natural world, ranging from nothing with the Ashʿarites to the orderly world of the Māturīdites to the eternal created order of the Salafites. However, this is the limit of what our knowledge of God's wisdom can tell us about the world. All three schools agree that it is impossible for our limited minds to comprehend but a fraction of God's infinite wisdom, so we can never use our understanding of His wisdom to determine or dictate the particular patterns, phenomena and events that God must enact in His creation. Any attempt to do so is necessarily subjective and prone to false analogies which inevitably compare God's wisdom to the limitations of human wisdom founded upon needs and weaknesses. Arguments about what God would do or would not do in His Creation can easily become arguments about what people feel God ought to do or ought not to do, what they feel He should or should not do. This means that wisdom-based arguments cannot be used to predict scientific observations or to critique the theoretical models scientists construct to account for their observations. Figure 2

illustrates different conceptions of the flow of information between knowledge of the God's wisdom and knowledge of the natural world.

A good example of an argument based on a false analogy is an argument described by Douglas Barbour (2000, 112) that there "seems to be too many blind alleys and extinct species and too much suffering and waste to attribute every event to God's specification." In other words, God's wisdom demands that He would not create species in the wasteful and inefficient manner exemplified by evolution. This argument is popular in Western Creationism, but is uncommon among Muslims. It is also one of crassest examples of a false analogy, because of its implication that God possesses finite energies and has to manage limited resources.

Abū al-Muʿīn al-Nasafī ([1114] 2011, 2:922) explains the falsehood of such a comparison where he says that:

> every agent in the observable world is subject to needs and necessities. If they engage in what does not benefit them when they should be acquiring benefit and warding off harm, then they are engaging in what diverts them from acquiring benefit and warding off harm. This is blameworthy behaviour for them since it is deficient and destructive, so it is foolish. God transcends such things, so when He acts without securing benefit for Himself, it is not foolish.

As discussed earlier, the principle that God's wisdom cannot be framed in the context of need, limitation, and dependency is very strongly expressed in Islamic beliefs. This explains why the argument from inefficiency and wastefulness is rarely encountered from Muslim critics of evolution.

Theological Optimism?

Theological optimism is the doctrine that the world is as good as it can be (Ormsby 1984, 4). God would not create a less-than-optimal world. Salafite doctrine upholds optimism, since God must always do what is most appropriate. It might also be expected from Māturīdite theology, since it argues that everything God does must be directed to the realization of His wise purposes, which always have a laudatory outcome. Al-Māturīdī ([944] 2001, 193) stresses that the universe exhibits a just balance and confers benefit, though people might not always grasp it.

Surprisingly, the strongest articulation of this doctrine comes from the Ashʿarite theologian al-Ghazālī. Speaking of the need to trust in God despite the prevalence of weakness, sorrow, suffering, unbelief, and sinfulness in the world, he declares about the world (al- Ghazālī [1111] 1982, 4:258): "There is nothing whatsoever in the realm of possibility that is better, more complete, or more perfect than it."

The meaning and significance of this statement have been debated for centuries (Ormsby 1984, 94–130). One thing al-Ghazālī clearly stresses, however, is that this judgment must be taken on trust. He provides a long

list of prerequisites that God would have to grant the human intellect to actually make this judgment:

- to create for them all the knowledge their souls could sustain;
- to pour out upon them wisdom of indescribable extent;
- to give each person the knowledge, wisdom, and intelligence of them all;
- to reveal to them the consequences of things;
- to teach them the mysteries of the invisible world;
- to acquaint them with the subtleties of divine favor;
- to acquaint them with the mysteries of final punishments;
- to make them aware of all that is good and evil;
- to make them aware of what brings benefit and harm.

Al- Ghazālī maintains that if God enabled human reason to fulfil these prerequisites, they would judge this world to be the best. Since this is not the case, it remains something they must take on faith. This is important for the discussion of science and religion. It means that embracing the "best possible world" paradigm does not provide criteria to pass judgment on proposed scientific theories. Whether or not a certain theory about a natural phenomenon accords with a person's subjective notion of what seems "best," it cannot be used to critique the theory on religious grounds.

Anti-Evolution Wisdom-Based Arguments

God's wisdom is instrumentalized in various ways to construct arguments against biological evolution in general, or human evolution in particular. Four of these arguments will be examined: (1) God would choose to place causal gaps in His creation, (2) God would not create humans from "lower" forms, (3) God would only act in creation to manifest exemplary moral conduct, and (4) God would only act in creation in a way that reflects a just society.

Example 1: God's wisdom dictates that He created a world where natural causes are insufficient to account for every process in nature. If natural "purposeless" causes are found to be sufficient to account for such things, people would have no reason to believe in God. This is the underlying reasoning behind a large number of design arguments, which establish the existence of God on the strength of various complex biological structures that allegedly cannot be accounted for by purely naturalistic processes (Iqbal 2003; Yahya 1999, 218–37). Grounding faith on this basis implies that God would not choose to create a causally closed universe where He provides everything in creation with an observable natural cause, because if He did, people would never be compelled to appeal to anything outside

of natural causes in their explanations. In other words, God's wisdom demands that He leaves "gaps" in nature that science can never fill, since these gaps will compel people to appeal to something beyond natural causes and lead them to believe in God.

Such an argument depends on a metaphysical assumption that the existence of an observable natural cause rules out God's direct purposeful action. This metaphysical assumption is in contrast to the three understandings of divine action that have been examined, where each and every natural cause is also a direct consequence of God's deliberate action. Indeed, those models make God's purposive, direct action absolutely necessary for observable causal relations to exist in the universe, so a causally closed universe would attest to God's existence as strongly as one exhibiting causal gaps. Therefore, it cannot be argued that it contradicts God's wisdom for Him to manifest in nature a process like evolution that can casually account for the complexity and diversity of life.

Example 2: God's wisdom demands that He would not dishonor human beings by creating them from "lower" species. For instance, Nyang (2005) says: "This Islamic view of human origins and man's favoured status in the universe does not square with the dominant scientific view of evolution as argued by Charles Darwin and the scientific communities around the world. If one follows the logic of the evolutionists, man appeared after a long process of transformation from lower forms of existence to this higher form of biological development."

This argument assumes that God's creative act must conform with subjective human notions of dignity and honor. In other words, it is not reasonable for people to honor something that they derive from lowly sources, so it must be the same for God. The Qur'ān seems to belie such reasoning, since it says that God declares He will create a man from "altered black mud" [al-Hijr (15): 28] and that He creates each human being from a "humble fluid" [al-*Mursalāt* (77):20], which the exegete al-Bayḍāwī ([1319] 1998, 5:275) describes as a "putrid, contemptible sperm drop."

Example 3: God's wisdom demands that He would only act in His creation in a way that reflects exemplary moral conduct. Maqsood writes: "…the theory of evolution is repugnant to believers because it is totally in opposition to the good qualities required by God of His servants. It is a theory of progress that sets a premium on sex, greed, selfishness and violence."

This argument assumes that God's actions must serve as moral instruction. God would not manifest patterns in Creation from which people might derive morally reprehensible lessons. He would not bring about new species through a pattern in nature where sexual prowess, others' misfortune, and fierce competition among His creatures are made to play a role. This assumption is not only subjective and unsubstantiable, but it seems incompatible with some verse of the Qur'ān, like: "And that it is He who

causes to laugh and causes to weep. And it is He who causes death and causes life. And that He created the pairs, male and female" [*al-Najm*: 43–45], and "To God belongs the dominion of the heavens and the Earth. He creates what He wishes. He bestows females upon whom he wishes and bestows males upon whom He wishes. Or he gives them both males and females. And He renders whom He wishes childless. Indeed He is knowing and capable" [*Sūrah al-Shūrā*: 49–50].

The argument assumes that God's actions in nature are required to resemble how humans are expected to behave towards one another. This is a false comparison. Even though human moral duty may be rationally intelligible to a greater or lesser extent, the actions of the Creator are of a different order than the actions of creatures in the world. Commenting on the verse "He is not questioned about what He does but they will be questioned," [*al-Anbiyaʾ*: 23], the Ashʿarite theologian al-Bāqillānī ([1013] 1987, 358) observes:

> It means that they will be asked about what they earn and He will not be asked about what He creates, because there is no one above Him to command Him and there is no requirement upon Him in what He creates. Rather, the command and the requirements are upon them in what they acquire.

Likewise, the Māturīdite Abū al-Muʿīn al-Nasafī ([1114] 2011, 2:923) observes:

> Wisdom is possible in the creation of repugnant acts, so how can you claim that there is no wisdom in it? If they allege that had there been wisdom in it, they would have understood and identified it, then they have been arrogant and presumptuous in the extreme by making their limited intellects, that can only identify some aspects of human wisdom, into a law governing Divine wisdom.

This echoes where al-Māturīdi ([944] 2001, 180–81) observes: "If those sectarians gave consideration to what we have mentioned of proofs, they would have known their intellects' limited ability to know human wisdom, let alone being able to comprehend the Lord's wisdom." For Maturidites, everything God does must result in ultimate good (Jackson 2009, 118), but such ultimate ends are often beyond human knowledge.

The Salafite theologian Ibn Abū al-ʿIzz ([1390] 2003, 2:677) distinguishes between the legislate command and decree, which constitute the law that applies to creatures, and the existential command and decree, which apply to God's actions in nature:

> When he (al-Ṭaḥāwī) says: "Everything takes place by God's wish, his knowledge, His decree, and His ordinance" he means by this His existential and not His legislative decree, for indeed the decree might be existential or legislative. The same is the case for His will, command, permission, prescription, ruling, prohibition, words, and so forth.

According to the Salafite approach of distinguishing the existential from the legislative, the outcome regarding God's actions in nature is the same as it is with the Ashʿarite approach of not asking into God's motives and the Māturīdite approach of recognizing the wisdom in what appears evil to us. From all of these perspectives, what God does in His creation cannot be taken as a model for human moral decisions.

It is important to note that the distinction being made here between God's actions in His creation and human moral action is separate from the question of how moral right and wrong are determined for human beings. The distinction holds whether a natural law theory is adopted that makes moral knowledge innate to human nature and intellect or whether a divine command theory is adopted where moral knowledge is known only through scripture. Indeed, for advocates of a natural law theory, God's creation of order, harmony, and balance in the universe could highlight the positive nature of these qualities as moral lessons for people in the broadest sense. However, neither theory holds that particular natural phenomena must emulate specific human moral standards of conduct, which would entail that God must act in nature in superficial conformity with the particular moral injunctions He prescribes for people.

Example 4: God's wisdom demands that He would only act in His creation in a way that reflects a just political order and ideal social norms. For instance, K. Nadvi (1986, 118) laments that the theory of evolution offers "a peaceful life for the strong at the expense of the weak." Likewise, Wahiduddin Khan (1991) accuses evolution of providing a justification for human inequality and racial exploitation.

This argument is very similar to the previous one, but it focuses on social justice rather than individual moral conduct. It is equally problematic. It assumes that God's actions must emulate a model of ideal social order. Accordingly, God would not bring about new species through a pattern in nature that would resemble, by analogy, an unjust society. Harvey (2021, 164) discusses how the early Māturīdite theologian Abū Salāmah al-Samarqandī refutes the conflation of human justice and divine wisdom, saying that: "within different contexts a thing could be variously just or unjust, and it is thereby impossible to apply a human measuring scale to the moral action of God."

The subjectivity of all four antievolution arguments should be apparent. They each assume that God's actions are like human actions in their effectiveness, valuation, moral soundness, or social implications. From these false analogies, evolution is deemed an unwise and imprudent pattern for God to manifest in the world.

Pro-Evolution Wisdom-Based Arguments

God's wisdom is instrumentalized in very similar ways to construct arguments advocating for the theory of biological evolution in general, and

for human evolution in particular. Three of these arguments will be examined: (1) God would never violate natural laws, (2) God would always manifest purpose in every natural phenomenon, and (3) God would call natural phenomena to respond to Him like He calls people to faith.

Example 1: God's wisdom demands that He would never violate the norms He has placed in nature. Guessoum says (Bigliardi 2014, 175):

> … because He is omnipotent it does not mean that He is just going to violate His own laws. So I am not saying that God *cannot*; I am saying that God put together the laws so that things function in an orderly manner. Otherwise what is the point of putting together laws, and then doing what one wants every now and then? The world is ordered and harmonious; the Qur'ān itself emphasises that. On the contrary, God is saying "I am omnipotent but even I, omnipotent, put together laws by which creation proceeds, and I want you to follow laws, and I want you to be orderly, to follow the order."

This argument assumes that God's norms are like human laws, so violating them means unruliness, inconstancy, and fickleness. The argument also suggests a degree of hypocrisy in demanding that people comply with God's commands while He does not follow His own. God's norms in nature are being compared to His commands for His creatures, as if He is expected to follow a Sharīʿah. It is worth noting Guessoum's words "I am not saying God *cannot*," so he acknowledges God's power to do otherwise. It is simply that, for him, God would not disobey His own "laws." This is explicitly a wisdom-based argument.

Example 2: God's wisdom demands that He manifests His purposiveness in every natural phenomenon without exception, and evolution necessitates that every object and event in the universe is being steered by God for a purpose. Israr Ahmad (2013, 40–41) says: "If the universe has really evolved and developed up to its present stage, does it not mean that purpose, one of the most precious products of its development, was implied in it from the very onset, that purpose of some sort was present at every stage of its development. At the material stage it was entirely unconscious, at the biological stage it was half conscious, at the human stage it became completely conscious and deliberate."

This argument, which advocates for directed or "theistic" evolution, assumes that God's purposes have to be discernible to the human mind in every instance. Evolution, according to this argument, invests purposiveness in every object and occurrence in nature, since it culminates in the human being developing on Earth and then attaining consciousness, which, in turn, enables the initiation of spiritual development as a final stage in purposive evolution (Ahmad 2013, 67–68). The failing of this argument is that it overdetermines the human ability to discern God's wisdom and subjectively imposes a particular purpose on disparate events and phenomena. God's purposes could be other than what is assumed. Nevertheless, this

argument is interesting in how it presents evolution as a model of maximal divine teleology, since evolution is often criticized and opposed out of fear that it undermines divine teleology.

Example 3: God's must create via evolution, since His wisdom dictates that He calls everything to obey His commands, on the natural level as well as on the level of prophecy. T. O. Shavnas (2005, 210–11) writes: "Creation/evolution of life is the result of Allah presenting possibilities (proposals) in each arriving moment of the future to the atoms as well as the aggregates of atoms… Those lazy creatures who did not respond to the choices arriving from Allah through the messenger moments of the future remained as they are… I am proud of my pre-human ancestors' genes, which chose to receive and grasp Allah's guidance to help our ancestors to transform into humankind."

This argument assumes that God's creative act must work like revelation, where God calls His creatures to obey Him and they choose whether to do so. Evolution, according to Shavnas, is where the matter of nature responds to God's call to develop in the direction He wills for it. It can obey and evolve or disobey and stagnate. This is an analogy that places God's creative power on the level of an appeal. God's wisdom dictates that He leaves creation to its own volition, providing nothing more than guidance. In other words, it is through His guidance alone that He should direct the natural world.

These pro-evolution wisdom-based arguments are as subjective as their anti-evolution counterparts. They likewise compare God's actions to human actions, supposing the same kinds of limitations. In light of these limitations, evolution is deemed to be the only wise and judicious pattern God would use to manifest His will in the world.

CONCLUSION

Various modes of argumentation are employed to affirm or reject evolution in an Islamic context. The strategy of debating the science itself has been very popular, but it is not a satisfactory approach for establishing religious doctrine, since it cannot explain why a Muslim would be religiously obligated to adopt one position or the other.

Theological arguments for or against evolution seek to demonstrate either that God works in nature through natural processes like evolution or, by contrast, that such processes contradict divine action. They can be critiqued through formal, well-established philosophical and theological modes of argumentation. This provides criteria that can be brought to bear to enable productive engagement. Moreover, the various divine action models put forth by the three Sunnī theological schools are particularly relevant to these discussions, and they tend to make both evolution and *ex nihilo* creation equally unproblematic on a metaphysical level.

Likewise, scriptural arguments for and against evolution can be critiqued in light of hermeneutic principles and a shared scriptural corpus. These principles can be laid out, referenced, and discussed. Arguments that invoke metaphor or allegory can be analyzed with respect to the rhetorical principles they invoke. Claims made about the apparent meaning of scriptural texts can be analyzed with respect to whether other viable interpretations are equally enabled by the same hermeneutical principles.

In contrast, wisdom-based arguments are far more subjective. Each argument relies on whether the matter under dispute is sufficiently wise or unwise according to the outlook of the claimant. It becomes extremely easy for disputants to talk at cross purposes, due to the different standards of comparison they employ to determine which course of action is wise for God.

Another consequence of the subjectivity of wisdom-based arguments is the question of who serves as the arbiter or interpreter of that wisdom. Who is to be trusted to ascertain what God would or would not do? This increases the risk of demagoguery and personality cults. On the one hand will be the leaders who interpret God's wisdom, and on the other will be the followers who adopt their leaders' arguments on the strength of their personalities. It is no accident that the Harun Yahya movement relies heavily on wisdom-based arguments against evolution. In fact, all of the anti-evolution arguments discussed in this article can be found in that movement's publications. By contrast, the organization's works are generally devoid of theological arguments, cite unsound science, and provide the sparest of scriptural discussions.

If this tendency becomes more prevalent, it could lead to an intensification of conflict and polarization on the topic of evolution and Islam. Constructive discussions and progress on the question, and in the field of Islam and science more generally, will become more difficult.

Notes

1.   Harvey (2021, 42) argues that al-Samarqandī is better characterized as an Ashʿarite "due to the centrality of the thought of al-Rāzī" in his work.

2.   al-Ghazālī ([1111] 1971, 162) writes: "Though we say that God does as he pleases with His servants and He does not have to take our best interests into consideration, we do not deny that reason points to benefits and detriments, warns against lethal dangers, and encourages the attainment of benefits and purposes. We do not deny that the Messengers were sent for the benefit of people in their religion and worldly lives as a mercy from God upon the people from His grace, but not out of necessity or obligation."

3.   See Harvey (2021, 63) for a detailed discussion of this passage.

References

Abū ʿAdhabah, al -Hasan. [1758] 1904. *al-Rawḍah al-Bahiyyah*. Hyderabad: Maṭbaʿah Majlis Dāʾirah al-Maʿārif al-Niẓāmiyyah.

Ahmad, Israr. 2013. *The Process of Creation: A Qurʾānic Perspective*. Lahore: Markazi Anjuman Khuddam-ul-Quran.

al-Bāqillāni, Abū Bakr. [1013] 1987. *al-Tamhid*. Beirut: Muʿassasah al-Kutub al-Thaqafiyyah.
Barbour, Ian G. 2000. *When Science Meets Religion*. San Francisco: Harper SanFrancisco.
al -Bayḍāwī, ʿAbd Allah b. ʿUmar. [1319] 1998. *Anwār al-Tanzīl wa Asrār al-Taʾwīl*. Beirut: Dār Ihyāʾ al-Turāth al-ʿArabī.
Bigliardi, Stefano. 2014. *Islam and the Quest for Modern Science: Conversations with Adnan Oktar, Mehdi Golshani, Mohammed Basil Altaie, Zaghloul El-Naggar, Bruno Guiderdoni and Nidhal Guessoum*. Istanbul: The Swedish Research Institute.
Bulgen, Mehmet. December 2019. "al-Māturīdī and Atomism." *ULUM* 2: 2.
Fūdah, Saʿīd. 2011. *Sharḥ Masāʾil al-Ikhtilāf bayn al-Ashāʿirah wa al-Māturīdiyyah*. Dār al-Fatḥ.
al-Ghazālī, Abū Ḥāmid. [1111] 2002. *The Incoherence of the Philosophers*. 2nd edition. Translated by Michael Marmur Provo, UT: Brigham Young University Press.
———. [1111] 2004. *al-Iqtiṣād fī al-Iʿtiqād*. Beirut: Dār al-Kutub al-ʿIlmiyyah.
———. [1111] 1971. *Shifāʾ al-Ghalīl*. Baghdad: Matbaʿah al-Irshaad.
———. [1111] 1982. *Ihyāʾ ʿUlūm al-Dīn*. Beirut: Dār al-Maʿrifah.
Guessoum, Nidhal. 2016. "Islamic Theological Views on Darwinian Evolution" in *Religion: Oxford Research Encyclopedias*, 2016. https://oxfordre.com/religion/view/10.1093/acrefore/9780199340378.001.0001/acrefore-9780199340378-e-36.
Harvey, Ramon. 2018. *The Qurʾān and the Just Society*. Edinburgh: Edinburgh University Press.
———. 2021. *Transcendent God, Rational World: A Maturidi Theology*. Edinburgh: Edinburgh University Press.
Hoover, Jon. 2007. *Ibn Taymiyya's Theodicy of Perpetual Optimism*. Leiden: Brill.
———. 2004. "Perpetual Creativity in the Perfection of God: Ibn Taymiyya's Hadith Commentary on God's Creation of This World" *Journal of Islamic Studies* 15(3):287–329.
Jackson, Sherman. 2009. *Islam and the Problem of Black Suffering*. Oxford: Oxford University Press.
Jalajel, David. 2009. *Islam and Biological Evolution: Exploring Classical Sources and Methodologies*. Bellville: University of the Western Cape.
Khan, Wahiduddin. 1991. "Social Justice in Islam" Address at the "Law College of Ranchi Meeting on the topic of Social Justice in Islam." http://en.iwpeace.com/sites/en.iwpeace.com/files/field/files/pdf-1426.pdf
Koca, Özgür. 2020. *Islam, Causality, and Freedom*. Cambridge: Cambridge University Press.
al-Laqqānī, Burhān al-Dīn. [1632] 2016. *ʿUmdah al-Murīd: Sharh Jawharah al-Tawḥīd*. Amman: Dar al-Nūr al-Mubīn.
Malik, Shoaib Ahmed. 2021. *Islam and Evolution: Al-Ghazālī and the Modern Evolutionary Paradigm*. London: Routledge.
al-Rāzī, Fakhr al-Din. [1210] 1986. *al-Arbaʿin fi ʿUsūl al-Dīn*. Cairo: Maktabah al-Kuliyyāt al-Azhariyyah.
———. [1210] 2000. *Mafātīḥ al-Ghayb*. Beirut: Dār al-Kutub al-ʿIlmiyyah.
al-Samarqandī, Shams al-Dīn. [1310] 1985. *al-Ṣahāʾif al-Ilāhiyyah*, Kuwait: Maktabat al-Falāḥ.
al-Sanūsī, Muḥammad. [1490] 2009. *Umm al-Barāhīn*. Beirut: Dār al-Kutub al-ʿIlmiyyah.
Ibn Abī al-ʿIzz, ʿAlī b. ʿAlī. [1390] 2003. *Sharḥ al-ʿAqīdah al-Ṭaḥāwiyyah*. Beirut: Muʾassasah al-Risālah.
Ibn Qayyim al-Jawziyyah, Muḥammad. [1350] 2003. *Maʿārij al-Sālikīn*. ed. ʿĀmir b. ʿAlī Yāsīn. Riyadh: Dār Ibn Khuzaymah.
———. [1350] 1998. *Shifāʾ al-ʿAlīl*. Beirut: Dār al-Kitāb al-ʿArabī.
Ibn Taymiyyah, Taqī al-Dīn. [1328] 1995. *Majmuʿ al-Fatāwā*. Madinah: King Fahd Printing Complex.
———. [1328] 2000. *Kitāb al-Nubuwwāt*. Riyadh: Aḍwāʾ al-Salaf.
———. [1328] 1991. *Darʾ Taʿāruḍ al-ʿAql wa al-Naql*. Riyadh: Jāmiʿah al-Imam.
Iqbal, Muzaffar. 2003. "Biological Origins: Traditional and Contemporary Perspectives." *Islamic Herald* http://saif/w.tripod.com/curious/evolution/muz/muz-part4.html#dzign
al-Māturīdī, Abū Mansūr. [944] 2001. *Kitāb al-Tawḥīd*. Beirut: Dar Ṣādir.
Muhtaroglu, Nazif. 2017a. "Al-Maturidi's View of Causality" in *Occasionalism Revisited: New Essays from the Islamic and Western Philosophical Traditions*. Nazif Muhtaroglu, 3–21. Dubai: Kalam Research & Media.
———. 2017b. "Ashʿarites, Cartesians, and Occasionalism" in *Occasionalism Revisited: New Essays from the Islamic and Western Philosophical Traditions*. Nazif Muhtaroglu, 105–38. Dubai: Kalam Research & Media.

Nadvi, Khurshid S. 1986. *Darwinism on Trial*. Darwinism on Trial. Mobeni: Islamic Medical Association of South Africa.

al-Nasafī, Abū al-Muʿīn. [1114] 2011. *Tabṣirah al-Adillah*. Cairo: al-Maktabah al-Azhariyyah lil-Turath.

al-Nasafī, Ḥāfiẓ al-Dīn [1310] 2011. *al-I'timād fī al-Iʿtiqād*. Cairo: Maktabah al-Azhariyyah lil-Turāth.

Nyang, Sulayman. 2005. "The Origins of Life: A Muslim View." *National Public Radio* https://www.npr.org/templates/story/story.php?storyId=4783600

Ormsby, Eric Linn. 1984. *Theodicy in Islamic Thought*. Princeton: Princeton University Press.

Shavnas, T.O. 2005. Creation and/or Evolution: An Islamic Perspective. Philadelphia: Xlibris.

al-Taftazānī, Saʿd al-Dīn. [1390] 2014. *Sharḥ al-ʿAqāʾid al-Nasafiyyah*. Beirut: Dār Ihyāʾ al-Turāth al-ʿArabi.

Varisco, Daniel. June 2018. "Darwin and Dunya: Muslim Responses to Darwinian Evolution" *Journal of International and Global Studies* 9(2):14–39.

Yahya, Harun. 1999. *Evolution Deceit: The Scientific Collapse of Darwinism and Its Ideological Background*. Istanbul: Vural Publishing.