The Fusion of Celestial Wisdom and Scientific Inquiry

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Abstract

Understanding the relationship between God and the universe is essential for Muslims. They hold the perspective that the universe emanates from the creative act of God. This correlation between the divine and the cosmos establishes the underpinning for the convergence of scientific and spiritual understanding. In Islam, the Qur'an and the teachings of the Prophet provide important insights into this relationship. In Islam, knowledge about the world comes from various sources, including nature itself. This knowledge can be scientific, mathematical, metaphysical, spiritual, practical, or aesthetic. Nature has different aspects, and every category of knowledge aligns with a distinct facet that undergoes examination. This document centers on the correlation between celestial wisdom and contemporary scientific knowledge.

Keywords: Islamic Theology, Divine Understanding, Scientific Inquiry, Divine Legislation, Cosmological Investigation.

Introduction

The concept of *science*, which refers to a structured and impartial understanding of the organic world, is not exclusive to the contemporary era. It has been developed and embraced by civilizations predating modern times, including Chinese, Indian, and Islamic civilizations. Nevertheless, notable distinctions exist between pre-modern sciences and modern sciences concerning their goals, methodologies, sources of influence, and philosophical perspectives on humanity, expertise, and the essence of the globe.

One significant distinction between ancient and contemporary sciences lies in their relationship with other forms of knowledge. In ancient societies, the realms of science and spiritual wisdom were intricately intertwined and not distinctly separated. Rather than being separate entities, there was a harmonious fusion of scientific inquiry and spiritual comprehension in ancient civilizations. This chapter aims to explore the unity established during ancient times, particularly within the Islamic scientific heritage. Nonetheless, the attributes discussed herein are applicable to various pre-modern scientific traditions. Spiritual knowledge, as defined here, encompasses insights into the spiritual domain, focusing on comprehending the essence of spirituality. In the Islamic context, such knowledge involves grasping the concept of Divine Oneness and Unity. It is crucial to underscore that the foundational tenet of the Islamic faith revolves around the idea of Divine Oneness, referred to as "al-tawhid". Across centuries, within the Muslim paradigm of knowledge categorization, the understanding of tawhid has persistently occupied the pinnacle of knowledge and serves as the paramount objective of intellect endeavors. Transcendental wisdom transcends mere spirituality; it encompasses the manifold expressions of the Spirit across various dimensions of the universe. At the heart of a Muslim's comprehension of God lies the recognition that the cosmos is a product of celestial creation. This recognition of the intricate interconnection between the divine and the earthly realm, the Maker and the made, or the Sacred Tenet and the universal embodiment, establishes the essential basis for the fusion of rational and transcendent comprehension. In Islam, the Qur'an and prophetic hadiths act as the principal reservoirs of this wisdom. To apprehend the Islamic perspective and encounter the harmony between scientific and transcendental wisdom, it becomes essential to explore essential concepts and ideas embedded within this sphere of comprehension.

The Profound Wisdom as the Bedrock of Both Scientific Inquiry and Spiritual Development

The Qur'an occupies a central position in Islamic intellectual and spiritual domains, serving as the wellspring not only for religious and spiritual wisdom but also as the source of all forms of knowledge. It acts as the primary inspiration behind the Muslim belief in the integration of science and spiritual comprehension. This belief in unity emanates from the overarching concept of comprehensive knowledge unity, derived from the application of the concept of Divine Oneness within human understanding. Human beings acquire information through diverse sources and various methods and channels, with all knowledge ultimately originating from God, who possesses boundless knowledge. According to the teachings of the Qur'an, humans are bestowed with intellectual faculties by God, enabling them to acquire knowledge about both the physical and spiritual realms. Numerous Muslim philosophers and scholars posit that human reasoning is influenced by the divine intellect, shedding light on the

processes of thought and understanding. While the Qur'an does not function as a scientific manual, it conveys scientific principles and consistently connects them to transcendental and spiritual understanding. The Qur'an's command to "recite in the Name of Thy Lord" has been dutifully embraced by successive generations of Muslims, underscoring the notion that the quest for knowledge, including scientific knowledge, ought to be firmly grounded in our comprehension of the reality of God. In Islam, science is deemed valid and legitimate only when intrinsically linked to the knowledge of God and the spiritual realm. As a result, science in Islamic tradition encapsulates a faith-based and transcendent nature. According to the renowned Muslim scientist Ibn Sina (Avicenna), authentic science is one that establishes a connection between knowledge of the world and understanding of the Divine Essence.[1]

The Natural Wellspring of Scientific and Ethereal Wisdom

Within the realm of nature, a vast spectrum of knowledge unfolds, spanning mathematics, physics, metaphysics, science, spirituality, qualitative understanding, quantitative analysis, practical applications, and aesthetic appreciation. This richness emanates from the holistic nature of the natural world, which comprises numerous facets. Every realm of knowledge aligns with a specific facet of the natural world earmarked for exploration and examination. However, contemporary science has opted to concentrate on only a subset of these facets. Operating within a scientific framework characterized by reductionism and a materialistic worldview, modern science tends to overlook, underestimate, or outright dismiss the metaphysical, spiritual, qualitative, and aesthetic dimensions inherent in nature. Esteemed scholars such as Eddington and Whitehead aptly contend that modern science exhibits subjectivity in its knowledge selection process, as it exclusively scrutinizes those facets of nature aligning with methods deemed acceptable by the scientific community.[2] Within Islam, the harmony within the natural order is seen as a reflection of the oneness of the Divine Essence. Islamic scientific tradition aims to illustrate this unity by showcasing the interconnectedness of all aspects and elements of nature. As a result, Islamic scientific tradition aims to explore the various aspects of nature through a holistic and unified approach. For instance, Islamic science acknowledges the fundamental role of mathematics in understanding the universe. According to the Ikhwan al-Safa' (the brethren of purity), a group of Muslim scientists and philosophers from the eleventh century, "the entire world is structured based on arithmetic, geometric, and musical relationships." To put it simply, in Islam, the unity of nature is considered an embodiment of the oneness of the Divine, and Islamic science strives to explore and comprehend the interconnectedness of all aspects of the natural world,"[3] However, in Islam, the exploration of the mathematical nature of the universe was never limited to a purely quantitative approach. Muslim mathematics encompassed both qualitative and quantitative aspects. Inspired by the Pythagoreans, whose mathematical worldview seamlessly integrated into the Islamic perspective, Numerous mathematicians in the Muslim tradition deliberated on the "attributes" and "characteristics" of various geometric shapes. Studying geometry served a dual purpose for them: not only to comprehend the mathematical principles but also to aid in the spiritual preparation of the essence of humanity for its voyage towards the realm of spirits and everlasting existence.

In essence, Islamic mathematics viewed the universe as a combination of qualitative and quantitative elements, recognizing the inherent beauty and deeper significance beyond mere

numbers. By incorporating spiritual dimensions into their mathematical inquiries, Muslim mathematicians sought to unlock profound insights into the nature of reality and its connection to the spiritual realm.[4]

Similarly, the exploration of numbers in the Islamic tradition is interwoven with spiritual wisdom. Numbers are not solely quantitative entities susceptible to mathematical operations like addition, deduction, multiplication, and partition; they also exhibit qualitative attributes. In their qualitative aspect, numbers represent the spiritual core that arises within the human soul through the recurrence of oneness. Consequently, numbers are perceived as reflections or manifestations of unity. Delving into the process of generating numbers, commencing from the number one, offers a profound illustration of how all things originate from the Divine. The Ikhwan al-Safa' established a parallel between God's creation of the world and the derivation of numbers from the unitary number One[5] This analogy underscores the profound interrelation between the spiritual realm and the numerical framework of the cosmos. In essence, within Islamic philosophy, the exploration of numbers transcends mere quantitative aspects. It delves into their qualitative essence, unveiling their spiritual significance and illustrating the intrinsic unity and interdependence of all things with the Divine. The concept of zero, originating from metaphysical contemplations by Hindu thinkers, is regarded as a symbol representing the Divine Essence that surpasses all limitations, including the concept of existence. Mathematics, as developed by Muslim scholars, serves as a crucial bridge that connects the tangible realm with the spiritual and metaphysical domain of Platonic archetypes. The disciplines of arithmetic and geometry, foundational to mathematical sciences, not only find practical Muslim philosopher-scholars like al-Farabi, Ikhwan al-Safa, and Qutb al-Din al-Shirazi underscored the essential nature of mathematical education in attaining a profound understanding of spiritual realities. They acknowledged that a solid grounding in mathematics played a pivotal role in grasping the profound aspects of spirituality and metaphysics. To sum up, the development of mathematics by Muslim scholars serves as a crucial bridge connecting the tangible world to the spiritual and metaphysical realms. Its utility surpasses the boundaries of physical sciences, playing a central role in the pursuit of metaphysical knowledge and the comprehension of transcendent verities.[6] Nature serves as a abundant wellspring of both spiritual and metaphysical wisdom, transcending its purely "natural" dimensions. Within Islam, the interconnection between the natural and spiritual realms is profound. The spiritual truth becomes apparent within the natural world while retaining its independent existence beyond physical manifestation. These two spheres are linked through a vertical and metaphysical relationship. Furthermore, there has been a firm delineation between the mundane and the mystical, or between the earthly and the divine. In contemporary scientific viewpoints, the sanctity once attributed to nature has diminished, and its spiritual relevance has been relegated to the sidelines. The spiritual essence within the natural world has been largely disregarded, resulting in the perception that nature has lost its significant place in the religious and spiritual dimensions of existence. The concept that nature encompasses a spiritual dimension is extensively articulated in Islamic philosophical and theological writings. It communicates to humanity a metaphysical and spiritual message of transcendence. This religious and spiritual interpretation of nature establishes the foundation for the convergence between scientific inquiry and spiritual understanding.

Nature is frequently depicted as a symbolic tome, conveying profound meanings. Al-Ghazzali, for instance, highlighted that each constituent within the natural world functions as a symbol, mirroring something in the realms above.[7] As previously explored, the conventional interpretation of symbolism in Islam distinguishes it from allegory. In this traditional context, a symbol signifies, on a less elevated plane of existence, a reality that exists at a higher level of ontology. The heightened domain represented by natural symbols is the realm of spirituality. For
instance, the sun embodies the Divine Mind, the expanse of the cosmos embodies Divine Potentiality and Unchangeability, a bird embodies the essence of the soul, a tree signifies different stages of existence, and water represents wisdom and enlightenment.

The link between a symbol and its symbolic representation is metaphysical rather than physical. Comprehending the meaning of a symbol or the inherent connection between the symbol and what it symbolizes cannot be achieved via logical or mathematical scrutiny or empirical exploration. This knowledge falls within the realm of metaphysical science, known as the science of symbolism. The science of symbolism plays a pivotal role in the pursuit of unity between science and spiritual knowledge, and it flourished in diverse pre-modern civilizations. Nonetheless, due to its essence, the study of symbolism presents hurdles for the contemporary scientific outlook. It requires acknowledging divine revelation and rational intuition as legitimate sources of objective understanding. Additionally, it presupposes recognizing levels of existence beyond the material and the hierarchical structure of the cosmos. Past Muslim scholars illustrated that symbolic and scientific understandings of natural phenomena are not mutually exclusive or disconnected. Symbolic comprehension assists in revealing the metaphysical implications of scientific findings, theories, and principles derived from empirical exploration of the natural realm. Furthermore, on numerous occasions, symbolic wisdom itself acted as a catalyst for Muslim scholars to delve into uncharted scientific territories, resulting in innovative breakthroughs. A notable example is how Suhrawardi's metaphysics of light and light-based cosmology in the twelfth century ignited significant scientific advancements in thirteenth-century Islamic optics. Scholars like Qutb al-Din al-Shirazi and his disciple Kamal al-Din al-Farsi contributed significantly breakthroughs in this field as a result.[8]

The harmonious fusion of scientific and symbolic comprehension of nature is beautifully exemplified by Ibn Sina in his celebrated treatise known as Oriental Philosophy. Within this masterpiece, scientific facts undergo a transformative process, assuming the role of symbols that act as guiding markers for those seeking spiritual perfection along their cosmic journey towards the Divine Presence and beyond.[9] Ibn Sina drew from a wide array of disciplines, encompassing mineralogy, biology, astronomy, physics, cosmology, sociology, and anthropology, as they were understood in the medieval milieu of his time. However, in his work, these scientific facts were not perceived merely as external objects and phenomena subject to analysis and manipulation. Through the lens of symbolic knowledge of nature, Ibn Sina envisioned these physical and astronomical realities of the universe as essential elements of a symbolic cosmos, elucidating the spiritual path towards the Divine. This approach underscores the transformative influence of symbolic knowledge, enabling Ibn Sina to transcend the confined perspective of scientific analysis and discern the profound spiritual dimensions inherent in the physical world. Hence, scientific comprehension of the physical

domain can have a notable impact on shaping the notion of a spiritual voyage across the cosmos, as long as the traditional appreciation of symbols is recognized and embraced.

As nature is seen as a manifestation of divine revelation, it acts as a source from which one can attain insight into God's wisdom. Muslim scientists hold steadfast to the belief that God's wisdom is intricately woven throughout His creation in myriad ways. They engage in the examination of natural structures, phenomena, energies, laws, and patterns not solely to acquire scientific knowledge in the conventional sense, but also to enrich their comprehension of divine wisdom. Taking zoology as an example, Muslim scholars pursued the study of animals with various objectives in mind. Initially, they conducted scientific inquiries into the anatomy and categorization of animals. Muslim classification systems relied on diverse criteria, including their habitats and methods of defense against external dangers. Moreover, Muslim interest in animals extended to practical domains, particularly in the fields of veterinary medicine and the therapeutic applications of animals. Additionally, considerable emphasis was placed on exploring animal psychology and physiology.

Notably, Muslim zoologists delved into the spiritual, emblematic, and ethical importance of animals. Of particular relevance to our ongoing discussion is the existence of numerous individual scientists and treatises in Islamic history that attest to the unity of scientific and spiritual knowledge in the realm of zoology. One notable figure is al-Jahiz, an author from the ninth century renowned for his work "The Book of Animals," the most famous Arabic work on zoology. In his writings, al-Jahiz seamlessly combined scientific, literary, moral, and religious perspectives on animals. According to him, the primary objective of studying zoology was to demonstrate the existence of God and the inherent wisdom manifested in His creation. Consequently, al-Jahiz regarded zoology as an integral part of religious studies.

In the zoological treatise written by Kamal al-Din al-Damiri in the 14th century, titled *The Great Book of the life of Animals*,[10] we encounter a compelling illustration of the integration of spiritual, ethical, religious, legal, literary, scientific, and medical perspectives in the study of animals. Al-Damiri even delved into the symbolism of animals in the realm of dream interpretation, a discipline intimately entwined with spiritual understanding. The dietary prohibitions related to consuming animal flesh, as stipulated by the shari'ah, the sacred Islamic Law, have served as a catalyst for exploring animals through religious and legal lenses. The Islamic emphasis on the religious and legal status of animals, as governed by Divine Law, offers a prominent framework for the unification of scientific inquiry and spiritual enlightenment within the realm of zoology. Numerous Muslim scholars exhibited a keen interest in seeking scientific justifications for the religiously mandated dietary prohibitions. Meticulous examinations were conducted to observe animal conduct, intrinsic characteristics, and the unique traits of various animal species, all with the aim of extracting spiritual and ethical teachings from them.

There exists a metaphysical foundation supporting the belief that animals possess profound teachings about divine wisdom and human inner nature. In Islamic spiritual tradition, it is acknowledged that humans mirror the Divine Names and Qualities in their entirety, while animals embody partial reflections. Intriguingly, these reflections in animals frequently manifest more overtly than in humans. Animals symbolize cosmic attributes and spiritual

tendencies, serving as embodiments of symbolic qualities. Through their display of both virtuous and flawed traits, animals emerge as moral instructors for humanity. According to the Islamic perspective.

The natural world as Wellspring of "Sacred Principles"

One notable characteristic of contemporary science is its significant achievement in uncovering an increasing number of what has historically been denoted as "natural laws" within Western intellectual discourse. The concept of the cosmos operating under its own set of laws is present across various civilizations, signifying the inherent order and equilibrium within the universe. However, it prompts the question: within the framework of contemporary science, have the "laws of nature" gradually lost their transcendental and metaphysical implications? In contemporary society, numerous individuals perceive the "laws of nature" as opposed to the "laws of God" upheld by religious convictions. This modern dichotomy between the "laws of nature" and the "laws of God" has resulted in adverse effects on the harmonization of scientific and spiritual understanding. To reintegrate these realms in the modern era, one possible strategy is to reaffirm the metaphysical and spiritual underpinnings of the "laws of nature." Within Islam, there has never been a division between the "laws of nature" and the "laws of God." It is understood that the "law of nature" itself is divinely ordained, as all laws serve as reflections of the Divine principle. God is the Supreme Legislator, expressing His divine will through laws that encompass both the cosmos and the realm of humanity. Within the human sphere, God has ordained specific laws, known as the Shari'ah, for each community. Among the various Divine laws bestowed upon humankind throughout history, Islam acknowledges them as *"nawamis al-anbiya"* or Laws of the Prophets, with the Islamic Shari'ah being the most recent revelation. However, there exists a singular Divine Law governing the entirety of creation, known as *namus Al-khilaqah*, the Law of Creation. While we refer to this unified Divine Law governing the cosmos, it should be understood that different orders of creation are subject to distinct sets of laws. Even within the same realm of creation, such as the natural world, diverse species are subject to different laws. The Qur'an itself refers to each species of animals as an "ummah" or community, indicating that God has ordained a specific law for every individual being. Furthermore, the Qur'an recognizes that every creature holds its unique essence. The objective of Islamic science is to grasp the genuine nature inherent in all entities as granted by God. Islamic science also endeavors to illustrate the interdependence of the "laws of creation" as an expression of the fundamental unity rooted in the Divine principle. Understanding the nature and law governing each species of existence enables one to grasp the essence of Islam, which concerns the manner in which each species submits to the divine will. This Quranic perspective presents a unified understanding of the "laws of nature" and the revealed religious Law. The Quran affirms that all beings, apart from humans, are inherently Muslim in the universal sense, as they cannot deviate from their intrinsic nature. In this context, "Muslim" refers to a state of harmonious submission to the divine order. Within the realm of humanity, individuals who willingly submit to the Divine law prescribed by God are considered Muslims. Among all beings, humans uniquely possess the capacity to defy both God's decrees and their own inherent nature. From a metaphysical viewpoint, there exists no differentiation in essence between the "laws of nature" and the divine ordinances of religions.

The Fundamentals of Cosmological Understanding for the Fusion of Scientific and Spiritual Wisdom

In the discussion thus far, we have explored significant teachings within Islam that establish the foundational philosophical and religious principles for the convergence of scientific and spiritual understanding. I have emphasized that this unity is attained when each individual scientific discipline is intricately connected to the central concept of tawhid. However, it is imperative to offer additional clarification on the concept of this "intrinsic relationship" and how it can be concretely realized. The different natural and mathematical sciences are categorized as specific disciplines since they concentrate on particular domains of existence. In contrast, the foundational understanding *tawhid* is a metaphysical discipline, encompassing the most overarching perspective as it grapples with the Supreme Reality that encompasses all phenomena. Bridging the gap between the fundamental knowledge of *tawhid* and the specific sciences lies a realm of understanding termed cosmological insight.

When discussing cosmology, we are not referencing the contemporary academic field bearing the same title. Traditional cosmology, whether within Islam or other cultures, relates to the study concerned with the arrangement and qualitative nature of the universe. Due to its engagement with the entirety of reality, cosmology is considered a universal science. In his renowned work on the classification of sciences, "Ihsa al-'ulum" (Enumeration of the Sciences), al-Farabi designates cosmology as a branch of metaphysics. He further asserts that the principles of particular sciences can be derived from cosmology. In Islam, cosmology functions as a crucial bridge between pure metaphysics and the various scientific disciplines, serving as a conceptual framework that harmonizes scientific and spiritual understanding. The idea that science is inherently linked to the metaphysical comprehension of *tawhid* suggests that scientific understanding is fundamentally ingrained within this broader framework of knowledge. The incorporation of specific scientific disciplines into the metaphysical realm of tawhid becomes plausible because the Divine principle acts as the metaphysical source from which the diverse realms explored by those sciences emanate. However, the indispensable "conceptual tools" for such amalgamation must be drawn from cosmology. Cosmology possesses the capability to furnish these "tools of conceptual integration" by its very objective: to provide a scientific framework that unveils the interconnectedness of all phenomena, the correlation between the tiers of the cosmic hierarchy, and ultimately their link to the supreme principle. In this manner, cosmology imparts knowledge that facilitates the seamless integration of multiplicity into Unity".[11]

The Harmony of Science and Islam: The Validated Muslims' Proposition:

Syed Qutab Shaheed has shed illumination on the interconnectedness of Islam and Science, revealing how the Holy Qur'an presents factual evidence that forms the bedrock of scientific understanding. The Syed expounds:

"The Holy Qur'an is not a compendium of scientific ideology, nor is its purpose to systematically gather sciences through experimentation. Rather, it serves as a comprehensive guide for life, offering guidance to reason and encouraging its thoughtful engagement within defined boundaries. It imparts the citizens with the ability to cultivate a discerning taste, enabling reason to operate freely within specified limits. While the Qur'an does not delve into the intricacies of specific sciences, it diligently equips the intellect and

entrusts it to navigate and resolve scientific matters independently."[12]

The Islamic understanding of science diverges significantly from the scientific paradigms of the Western world. In the Muslim context, there is a symbiotic relationship between knowledge and social values, each relying on and influencing the other. Muslim Scientists embraced a multifaceted approach to research, recognizing that a single method alone would not suffice. Muslims sought to employ reason while keeping it subservient to moral principles. Thus, within the Islamic framework, synthesis and integration prevailed instead of reduction and isolation. The fundamental origins of this system lie in the concepts and values derived from the Qur'an. Syed Qutab further elucidates: By amalgamating diverse fields of science and fostering harmony among various ideologies, a profound understanding of societal needs emerged. This was accompanied by a sense of accountability to the Almighty God, leading to the establishment of a remarkable institution within Islamic civilization. Such an institution stands as a unique exemplar, unparalleled in any other civilization worldwide. The extensive range of knowledge exhibited by individuals who excelled as experts in various sciences and crafts is a legacy that thrived among numerous scholars in the ancient Islamic civilization. This characteristic arises as a natural consequence of a distinct mindset influenced by Islamic scientific principles.[13]

Philip K. Hitti, in listing the motivating forces behind the literary and empirical progress of Muslim Scholars, recognizes the latent abilities and extraordinary intellectual prowess of the Arabs. He articulates:

The Arab Muslims initiated their inquiries grounded in their basic scientific, philosophical, and literary knowledge. Driven by a deep-seated curiosity and a fervent quest for knowledge, they carried with them from the desert a passion for research and exploration. Consequently, they swiftly emerged as the heirs to ancient and advanced civilizations.[14]

However, the pertinent question arises: "From whence how did they cultivate their exceptional brilliance, advanced cognition, and what sparked their latent capabilities?" Is there any motivation greater in authority than the Holy Qur'an, which awakened a dormant nation to explore the enigmas of nature? Through an ardent examination of the verses of the Holy Qur'an, it profoundly and compellingly awakened within them a fervor for knowledge and research. This instilled within them an insatiable thirst for understanding, prompting them to explore every avenue of knowledge and science. With an insatiable curiosity akin to a parched individual seeking water, they flocked to every source of knowledge and research. He further adds: The primary catalyst for the Muslims' inclination towards sciences can be attributed to the shaping of their intellect through the ideological guidance of the Holy Qur'an. This guidance infused in them a spirit of enlightenment and open-mindedness, enabling them to swiftly assimilate the wealth of global knowledge and pave new paths towards modernity and profound contemplation.[15] Renowned Orientalist Mr. Mrgoliath states in the preface of Mr. Rodwell's translation of the Holy Qur'an: “The Holy Qur'an holds a significant position among the esteemed religious scriptures of the world. Despite being the most recent among these historic manuscripts, it is equally powerful and impactful as its counterparts. The Holy Qur'an introduced a novel paradigm of human thought and set a new moral standard for the world”.[16] Numerous books and commentaries have been compiled to elucidate these subjects, sparking discussions and debates among Muslims and fostering the development of various

sciences. Its impact transcends the Arab community, reaching and influencing even the Jewish Philosophers they looked to the Arabs as role models for resolving religious and metaphysical issues. The inspiration to delve into the sciences came from Greek astrology and medical insights. The revelations bestowed upon the Holy Prophet (SAW) not only addressed the celestial movements for establishing prayer times but also depicted them as a divine order intended for the welfare of humanity. Muslim civilizations excelled in the exploration of astronomy, leading this field for centuries. Even in modern times, the names of numerous planets remain predominantly Arabic, conveyed through interconnected Arabic terminology. During medieval Europe, astrological scholars were primarily followers of Arab academics. Similarly, the Holy Qur'an promotes the pursuit of medical knowledge and urges reflection on the complexities of nature and the truths of existence".[17]

In his book titled 'The History of Islamic Philosophers,' Lutfi Juma states:

The book, revealed through the most eloquent personality among the Arabs, is not merely a religious scripture but also the principal foundation for over a hundred fields of study in the world. These encompass disciplines such as *Shariah*, linguistics, history, literature, physics, metaphysics, astrology, and philosophy. All these realms of knowledge originate from the foundational principles of the Holy Qur'an, with scholars anchoring their core concepts in its verses.[18]

Morius Bokaia has conducted thorough investigations on this subject, the crux of which confirms that the Holy Qur'an serves as the fundamental source for all branches of science, thereby negating any conflict between Islam and Science.[19] Furthermore, a significant number of Orientalists have acknowledged the multitude of scientific contributions made by Muslims. Therefore, the assertions implying that Muslims have regressed as a result of Islam hold no merit in reality. Likewise, Edward Jurji, another Orientalist, elaborates on the topics: The Arab population within the Islamic community, through its very existence, acted as a potent counterforce to ascetic impact.[20]

Prof. Hitti states: The Arabs played a crucial role as a bridge, facilitating the transfer of ancient culture into the medieval periods of Europe. Their philosophical influence played a crucial role in laying the groundwork for the Renaissance in Europe. Throughout the medieval period, no other group or community made a more substantial contribution to human progress than the Arabs and Arabic-speaking societies.[21]The aforementioned statement by Professor Hitti unequivocally establishes that Muslims have established the foundation for contemporary sciences and have not impeded progress. Muslim Spain played a remarkable role in shaping the history of intellectual advancement in medieval Europe. During the period spanning from the 8th to the 13th centuries, Arabic speakers were the primary custodians of civilization and culture globally. Furthermore, they served as the wellspring of ancient scientific and philosophical knowledge, augmenting it to empower Western Europe and pave the way for the Renaissance.[22] Islam served as the driving force behind the scientific accomplishments of Muslims, a notion that we will expound upon using the insights gleaned from personal axioms and quotations of Muslim scientists. The majority of these scientists firmly believe that their philosophical underpinnings are solely derived from the Holy Qur'an, irrespective of schools of thought or religious sects. Our aim is to shed light on the profound and direct affiliation that Muslim scientists have with the faith of Islam.

Jabir bin Hayyan stands as one of the pioneering Muslim scientists. Dr. Hussain Nasr provides

insights about him, stating: Jabir, a follower of the Shiite sect and a member of a Sufi school, had the privilege of being a disciple of the sixth Imam Jaffer Sadiq. In his writings, Jabir humbly acknowledges multiple occasions that he is merely an interpreter of his teacher's ideas and wisdom, attributing his own contributions to that lineage of thought.[23] According to Mr. Sardar's account on the religious convictions of Alhazen, it would be unjust to label his thoughts as purely secular. Despite his dedication to knowledge for the sake of knowledge, Alhazen advocated for delimiting knowledge within the realms of philosophy and theology. While Alhazen gained popularity through his remarkable contributions to mathematics and physics, he also possessed expertise in metaphysics, philosophy, and theology. His philosophy manifests a harmonious merging of science and theology.[24]

Alhazen elucidates that upon attaining a profound understanding of prevalent beliefs, he redirected his focus towards the pursuit of truth. He transcended all uncertainties and caprices, dedicating himself to uncovering the aspects that would earn him the favor of the Almighty. This journey guided him towards seeking divine consent and approval, while providing guidance for obedience and reverence.[25]

The writer of the book “The Thinkers of Islam” says about the Muslim medical expert Avecena:

He was a devout Muslim from the outset and maintained his faith until his passing. Sheikh Avicenna was also devout in his religious practices. Whenever he encountered a challenge, he would promptly visit the Mosque, offer prayers, and earnestly supplicate before God Almighty, leading to the resolution of the intricate issue.[26]

Dr. Nasr states about Averroes, the popular Scientist and Jurist.

In the Western world, Averroes is often portrayed as an adversary of revealed religion. However, this portrayal is contrary to his inherent disposition as a Muslim philosopher. Averroes, distinctively different, has been subjected to numerous misunderstandings perpetuated by Western societies.[27]

It is worth noting that Al-Beruni was a devout Muslim who initiated his journal with the following invocation: "I beseech the mercy of the Almighty God, imploring His blessings and guidance to illuminate my path towards uncovering the truth. May He facilitate the acquisition of knowledge and alleviate any impediments on the path to
attaining the ultimate destination.

In his book "Kitab-ul-Hind," Al-Beruni included excerpts from the Holy Qur'an in its preamble. He referenced the following verse from the Holy Qur'an:

كونوا قوّامين بالقسط شهداء لله ولو على أنفسكم

Embrace the principles of justice and bear testify for the Almighty, even if it entails speaking against your own interests.[28]

Sayyed Amir Ali has shed comprehensive light on this subject, advocating its merits. He elucidates: The advancement of physical sciences has revolutionized the Muslims' understanding of the natural world. It gave rise to numerous intellectual luminaries, bestowed with the honorary title of "Hukama" (wise scholars). Their method of reasoning closely resembles the argumentative approach of contemporary science. Despite encountering bias and lack of understanding, which led to derogatory labels such as "heretic," "apostate," or "infidel," historical truth attests that these individuals were never estranged from the religion of Islam. Moreover, their ideas found validation within the sayings of the

Holy Prophet (SAW) of Islam and his rightful successors.[29] In light of this context, it becomes imperative to delve into the philosophical foundations that underpinned the scientific contributions of early Muslims. It is essential to identify the factors and catalysts that guided Muslim scientists in their scientific and philosophical explorations, leading to groundbreaking inventions. Hence, to achieve this aim, it is essential to examine the philosophical advancements of ancient Muslim scholars. The primary focus of this thesis underscores the assertion that Islam uniquely functions as the dynamic force driving scientific development. It is imperative to explain that Deen-e-Islam (the religion of Islam) acts as the patron of scientific progress. This assertion is not merely a doctrine but requires substantiation through logical arguments that highlight the distinctive approach of Islam compared to other religions in their relationship with science. The teachings of Islam offer explicit guidance in this regard. Hence, it will be a pioneering research endeavor to establish that the foremost motivating factor behind the scientific pursuits of early Muslims was indeed Islam. Muslim scientists demonstrate a deep and direct connection with Deen-e-Islam.

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[2] S.H. Nasr, *Man and Nature*, p.28.
[3] See S.H. Nasr, *Islamic Cosmological Doctrines*, p. 45.
[4] Ibid, p.49.
[5] "Comprehend, O dear Brother (May God bless you and bestow His grace upon us), that in the divine act of creating all entities and giving rise to existence, Almighty God, praised be His name, arranged and manifested them through a method resembling the generation of numbers from a singular source. This order seeks the diversity of numbers to stand as evidence of His Unity, and the classification and

arrangement to act as signs showcasing the flawless nature of His wisdom in the act of creation. Furthermore, this provides proof that these beings are linked to the Creator, much like numbers are associated with the entity that precedes two, symbolizing the fundamental, primordial, and origin of numbers. This idea has been elucidated in our discussion on mathematical calculations.''
(Ikhwan al-Safa, Rasail, Cairo Arabiyyah Press, 1928; translated by S.H. Nasr in "Science and Civilization in Islam," pp. 155-6).

[6] The views of al-Farabi and Qutb al-Din al-Shirazi on this question are described in *classification of knowledge*
in Islam (Kuala Lumpur Institute for Policy Research, 1991).

[7] See his *Mishkat al-anwar,* trans. by W.H.T. Gairdner, pp 121-5.

[8] For a discussion of these discoveries, see E.S. Kennedy, The Exact Sciences in Iran under the Seljuqs and Mongols, *"Cambridge History of Iran*" vol. v, Ed. By J.A Boyle, (Cambridge, 1968), p. 676.

[9] See H. Corbin, *Avicenna and the visionary Recitals,* trans. W.R. Trask, (Texas: Spring Publications, 1980).

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[13] Z. Sardar, *Why Islamic Science?* Maraf-e-Islami, Lahore, 1991, p. 34

[14] Phillip K. Hitti. *The History of the Arabs* from the earliest times to the present. Macmillan. 1970. pp. 30.

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[19] Mourice Bucaille, *Quran & Science*, p. 16

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[22] Ibid., p. 557.

[23] Hussian Nasr, Sayyed, *Science and Civilization in Islam,* World of Islam Pub. London. 1968. pp. 258.

[24] Z. Sardar, *Why Islamic Science?*, p. 33

[25] Lutfi Juma, *Tareekh Falaspha-e-Islam,* p. 265

[26] Hussian Nasr, Sayyed, *Science and Civilization in Islam*, World of Islam Pub. London. 1968. pp. 54.

[27] Abdul Salam Nadvi, *Hukama-e-Islam,* pp. 117

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[29] Ameer Ali Syed, *A short story of Saracens*, London 1934. p. 18