Journal of Religion & Society (JR&S)

Available Online:

https://islamicreligious.com/index.php/Journal/index
Print ISSN: 3006-1296Online ISSN: 3006-130X
Platform & Workflow by: Open Journal Systems

Sunnah, Scientific Method and the Law: Foundations for an Islamic Response to Technological Civilization Lubna Ameen khan

Lecturer, The University of Faisalabad/ Mphil at The University of Faisalabad, Faisalabad, Department of Islamic Studies, The University of Faisalabad innoxentdoll022@gmail.com

Dr. Muhammad Asim Shahbaz

Instructor Islamic Studies, Department of Related Sciences, University of Rasul, Mandi Bahauddin

amasimshahbaz8@gmail.com

Fouzia Ayub

Senior Lecturer, University of Wah

fouzia.ayub@uow.edu.pk

Abstract

This study explores the epistemological and ethical foundations of an Islamic response to modern technological civilization by examining the interrelationship between Sunnah, the scientific method, and the law (Sharī'ah). The research argues that the Sunnah embodies a dynamic model of inquiry rooted in observation, verification, responsibilityprinciples that resonate with the scientific method yet transcend it by integrating divine guidance and ethical purpose. Through a comparative analysis of Islamic jurisprudence and modern philosophy of science, the study demonstrates that Islamic epistemology provides a holistic framework wherein knowledge ('ilm) is inseparable from moral accountability (taklīf). Furthermore, it emphasizes that technological advancement, when divorced from spiritual and ethical parameters, leads to moral disorientation and social imbalance. The paper proposes a revival of ijtihād in scientific ethics, encouraging Muslim scholars and technologists to formulate policies grounded in the Qur'ānic vision of maslahah (public good) and 'adl (justice). By reconnecting the scientific spirit with prophetic wisdom, the research establishes a foundation for an integrated, ethical, and purposeful technological future under the guidance of Islamic law.

Keywords: Scientific Method, Islamic Epistemology, Technological Civilization, Ijtihād, Ethical Framework, Islamic Philosophy of Science.

Introduction:

Emergence of Technological Civilization and the Modern Crisis of Meaning

The twentieth and twenty-first centuries have witnessed the formation of what scholars term a technological civilization a civilization not merely characterized by mechanical inventions but by a total reordering of human consciousness and social values around the logic of technology. The rise of this order, while materially triumphant, has generated what philosophers call a "crisis of meaning." Humanity has gained immense control over the external world but has simultaneously lost its metaphysical compass.

The Western intellectual project that culminated in modern science was born from the Enlightenment's attempt to separate reason from revelation. Its promise was emancipation through human rationality, yet as the historian of science Thomas S. Kuhn observed, "Each scientific paradigm determines what shall count as truth," thereby confining human understanding within the limits of its own constructed worldview (Kuhn, The Structure of Scientific Revolutions, 2nd ed., Chicago: University of Chicago Press, 1962, 110). This epistemological confinement transforms knowledge from a means of truth-seeking into a tool of power. The German philosopher Martin Heidegger similarly warned that modern technology reduces all beings including man himself to mere Bestand ("standing-reserve"), that is, entities to be ordered and exploited for production (Heidegger, The Question Concerning Technology, New York: Harper & Row, 1977, 14). In this reduction, existence loses its sacred depth, and reality becomes a warehouse of resources rather than a divine sign.

In contrast, the Islamic conception of knowledge ('ilm) situates human inquiry within a sacred hierarchy of meaning. The Qur'an declares:

"He it is Who has made you successors upon the earth, that He may test you through that which He has given you."

This verse establishes a profound moral framework: human dominion over nature (istikhlāf) is a trust (amānah), not an unrestricted license. Knowledge, therefore, is never neutral it carries ethical responsibility.

"Knowledge without action is madness, and action without knowledge is impossible."

This statement embodies a central Islamic principle: knowledge and morality cannot be divorced. When modern science detached knowing from ethical being, it created an epistemic void a universe intelligible to reason but empty of purpose. The contemporary Muslim philosopher Syed Muhammad Naquib al-Attas identifies this condition as the loss of adab that is, the loss of the right ordering of knowledge according to reality. He writes:

"The confusion and error in knowledge which has led to the loss of adab is the fundamental cause of the present chaos in the Muslim world."

Thus, the crisis of modernity is not merely social or political but ontological a disorder in how man perceives reality itself. Similarly, Seyyed Hossein Nasr points out that:

"Modern technology is the most tangible crystallization of a worldview which denies the sacred."

For Nasr, technology is not neutral; it is the outward expression of an inner metaphysical stance a stance that desacralizes existence and instrumentalizes nature. Contemporary scholar Ziauddin Sardar terms this phenomenon "epistemological colonization," wherein Western scientific rationality imposes its definitions of truth and progress upon all cultures, marginalizing other worldviews:

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¹ al-An 'ām 6:165

² al-Ghazālī, Iḥyā' 'Ulūm al-Dīn, Cairo: Dār al-Ma'ārif, 1966, vol. 1, 72

³ al-Attas, Islam and Secularism, Kuala Lumpur: ISTAC, 1978, 133

⁴ Nasr, A Young Muslim's Guide to the Modern World, Chicago: Kazi Publications, 1993, 25

"Modern science has become a global epistemology which seeks to define what is rational and what is not for the entire humanity." 5

In the Islamic intellectual tradition, however, 'ilm is never detached from haqq (Truth) or 'adl (Justice). The Prophet Muhammad exemplified a worldview in which empirical observation, spiritual awareness, and moral law coexisted harmoniously. His Sunnah demonstrated how knowledge should lead to ethical action and social balance, not mere domination of the natural world.

Hence, from an Islamic standpoint, the crisis of technological civilization is not a result of science itself but of science's philosophical detachment from divine revelation and moral law. The way forward lies not in rejecting science but in reintegrating scientific inquiry within a metaphysical framework that recognizes God as the ultimate source of truth. In doing so, Islam offers not a reactionary opposition but a transformative response a vision where the Sunnah, the scientific method, and divine law (Sharīʻah) together restore the harmony between intellect, morality, and purpose. Humanity's dignity as khalīfah (vicegerent) depends upon this reanchoring of knowledge in the sacred order.

The Western Epistemological Model: Science and Secular Law

intellectual shaped bv The Western tradition the Enlightenment consolidated in the nineteenth and twentieth centuries established a distinctive epistemological model based on empiricism, rationalism, and humanism. Its purpose was to liberate knowledge from the authority of revelation and metaphysics. However, this "liberation" came at the cost of a radical disjunction between fact and value, and between knowledge and meaning.

The Enlightenment project was grounded in the conviction that human reason alone could lead to universal truth. René Descartes (1596–1650) declared,

"Cogito, ergo sum." "I think, therefore I am."

This assertion established the thinking subject as the foundation of all knowledge, detaching truth from divine revelation. The self became the measure of reality, not God. The modern scientific method evolved from this Cartesian dualism, seeking objective certainty through mathematical reasoning and empirical verification.

Francis Bacon (1561–1626), often called the father of modern science, viewed nature as something to be dominated for human benefit. He wrote:

"The end of our foundation is the knowledge of causes, and secret motions of things; and the enlarging of the bounds of human empire, to the effecting of all things possible."

Here, knowledge is no longer contemplative (theoria) but instrumental (technē). Nature becomes an object to be subdued, analyzed, and controlled. The Baconian paradigm thus initiated a technological epistemology knowledge as power, rather than wisdom.

By the nineteenth century, Auguste Comte (1798–1857) developed positivism, claiming that only observable phenomena are real, and metaphysical or theological explanations are meaningless. Comte wrote:

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⁵ Sardar, Islamic Futures: The Shape of Ideas to Come, London: Mansell, 1988, 67

⁶ René Descartes, Meditations on First Philosophy, trans. John Cottingham, Cambridge: Cambridge University Press, 1996, 18.

⁷ Francis Bacon, New Atlantis, Oxford: Clarendon Press, 1900, 35

"All ideas which cannot be reduced to a simple observation of facts are devoid of all real sense."8

This reductionism, while advancing the physical sciences, simultaneously eliminated transcendence and ultimate purpose from the realm of knowledge. The secularization of science thus produced what Max Weber later termed "the disenchantment of the world" (Entzauberung der Welt), wherein the universe is seen as a mechanical structure devoid of sacred meaning

The Islamic Perspective on Epistemology and Law

From an Islamic perspective, this separation between knowledge, morality, and law represents a fracture of the sacred unity of truth (al-haqq). The Qur'an rejects the idea that moral value and truth can be divorced from divine guidance:

"Do not pursue that of which you have no knowledge."

This verse affirms that true knowledge ('ilm) must be grounded in certainty (yaqīn) and ethical responsibility. Islamic epistemology is therefore both empirical and metaphysical, acknowledging sense-experience (hiss) and rational inquiry ('aql), yet subordinating both to revelation (wahy). The Andalusian philosopher Ibn Rushd (Averroes) wrote:

"Truth does not contradict truth but accords with it." 10

He emphasized that revelation and reason are two paths leading to the same reality, not competing sources of truth. Islam thus integrates the empirical and the spiritual under a unified conception of divine law (Sharī'ah).Imām al-Shātibī (d. 790 AH) expanded this synthesis in his al-Muwāfaqāt, arguing that every legal ruling in Islam (hukm shar'ī) is founded on wisdom (hikmah) and serves the preservation of life, intellect, lineage, property, and faith (magasid alsharī'ah):

"Indeed, the Sharī'ah was instituted for the welfare of humanity, in this life and the hereafter."

vision secular West's This holistic stands in contrast to the compartmentalization of knowledge and ethics. Where modern law isolates legality from morality, Islamic law views them as inseparable aspects of divine order. The Western epistemological model, built upon empiricism and secular rationality, gave humanity immense material power but at the cost of spiritual coherence. Science and law became detached from metaphysics, producing a civilization technically advanced yet morally adrift. Islam, however, maintains a unity between knowledge ('ilm), faith (īmān), and action ('amal), ensuring that scientific progress and legal order remain bound to the moral purpose of This contrast forms the intellectual foundation for an Islamic response to technological civilization, where revelation and reason co-operate rather than conflict.

The Sunnah Foundation of Knowledge and Law in Islam

⁸ Auguste Comte, The Course of Positive Philosophy, London: George Bell, 1896, 12

⁹ al-Isrā, 17:36

¹⁰ Ibn Rushd, Fasl al-Magāl, Beirut: Dār al-Mashriq, 1993, 12.

¹¹ al-Shāṭibī, al-Muwāfaqāt fī Uṣūl al-Sharī'ah, Beirut: Dār al-Kutub al-'Ilmiyyah, 1997, vol. 1, 65

The Concept and Authority of Sunnah

The Sunnah occupies a central epistemological and normative role in Islam. It represents not merely the sayings and actions of the Prophet Muḥammad , but the embodiment of divine guidance in lived human form. In Islamic thought, the Sunnah is both source and method: it conveys revelation (waḥy ghayr matlū) and simultaneously demonstrates how revelation should be interpreted, applied, and internalized within the moral, social, and intellectual life of humanity.

The Qur'an itself affirms the Prophet's authority as a divinely guided interpreter of revelation:

"He does not speak out of his own desire; it is nothing but revelation sent down."

This establishes that the Sunnah is not a humanly devised supplement to the Qur'an, but a continuation of revelation in its practical dimension. According to Imām al-Shāfiʿī (d. 204 AH), one of the earliest systematizers of Islamic legal theory:

"Everything the Messenger of Allah decreed was derived from his understanding of the Qur'an."

Al-Shāfiʿī thus established the epistemological principle that the Sunnah explicates the Qur'an (bayān al-Qur'ān), providing interpretive precision and practical embodiment. The Prophet was the living Qur'an, as ʿĀ'ishah (ra) famously testified:

"His character was the Qur'an."

The Sunnah therefore functions as the hermeneutical axis of Islamic civilization: it unites theory and practice, revelation and reason, spirituality and law.

The classical jurists further emphasized that without the Sunnah, the Qur'an cannot be fully operationalized. Ibn Qayyim al-Jawziyyah (d. 751 AH) wrote:

"The Sunnah ranks second after the Qur'an; it interprets the Qur'an, explains it, and directs one to its purposes."

Hence, epistemologically, Sunnah is not supplementary but constitutive of knowledge in Islam it provides the teleological meaning (purpose and end) to all forms of inquiry, including empirical and rational sciences. From this vantage, Islam's epistemology differs fundamentally from the secular one. Where modern science isolates method from morality, the Sunnah integrates method with ethics. Every act of knowing is also an act of worship, for as the Prophet said:

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¹² al-Najm 53:3–4

¹³ al-Shāfi 'ī, al-Risālah, Cairo: Dār al-Turāth, 1979, 20.

¹⁴ Şaḥīḥ Muslim, Kitāb Şifat al-Munāfiqīn, 746.

¹⁵ Ibn Qayyim, I'lām al-Muwaqqi'īn, Beirut: Dār al-Kutub al-'Ilmiyyah, 1996, vol. 2, 281.

" طلب العلم فريضة على كل مسلم16".

"Seeking knowledge is an obligation upon every Muslim."

This hadīth demonstrates that the pursuit of knowledge is not morally neutral; it carries religious accountability. Knowledge, in the Prophetic sense, must cultivate humility, justice, and spiritual awareness not arrogance or domination. As Seyyed Hossein Nasr observes:

"The Prophet is not only the bearer of revelation but the perfect model of knowledge integrated with virtue and sacred purpose." ¹⁷

Thus, the Sunnah represents the metaphysical bridge between divine command and human understanding an epistemological framework that unites law, ethics, and ontology.

The Interrelation of Revelation, Intellect, and Experience

In Islamic epistemology, revelation (waḥy), intellect (ʿaql), and experience (tajrubah) are not mutually exclusive sources of knowledge; rather, they are hierarchically integrated. Revelation is the foundation and criterion of truth; intellect is its instrument; and experience is its verification in the empirical realm. This triadic harmony ensures that Islamic knowledge is both transcendent and practical, encompassing metaphysical truth and empirical reality alike.

The Qur'an constantly appeals to reason and observation, urging reflection upon the created order:

"Indeed, in the creation of the heavens and the earth and the alternation of night and day are signs for those of understanding."

Here, intellect ('aql) and sensory experience (hiss) serve as avenues toward divine recognition, not substitutes for revelation. As al-Fārābī (d. 339 AH) explained:

"Human reason is a means to know the truth, but absolute truth is known only through revelation."

Thus, Islam envisions an epistemological continuum, not a dichotomy: reason operates within the framework set by revelation, while empirical experience validates the wisdom of divine law in the observable world.

Imām Ibn Taymiyyah (d. 728 AH) further reconciled revelation and reason, asserting:

"Sound reason never contradicts authentic revelation."

This principle anchors Islamic epistemology in harmony, not conflict. The crisis of modern science its alienation of empirical knowledge from moral and spiritual truth stems from abandoning this equilibrium. As al-Ghazālī wrote, contrasting empirical observation with divine illumination:

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¹⁶ Sunan Ibn Mājah, Kitāb al-Sunan, 224

¹⁷ Nasr, Knowledge and the Sacred, New York: SUNY Press, 1981, 21

¹⁸ Ā1 'Imrān 3:190

¹⁹ al-Fārābī, Kitāb al-'Aql, Beirut: Dār al-Andalus, 1973, 42.

²⁰ Ibn Taymiyyah, Dar' Ta'āruḍ al-'Aql wa al-Naql, Riyadh: Dār al-'Āṣimah, 1991, vol. 1, 75.

" إن للعقل حداً يقف عنده، فلا يتعداه، وإن تجاوز حدّه ضلّ 21".

"Reason has a limit which it cannot transcend; if it goes beyond it, it strays."

He acknowledged the legitimacy of observation and logic but warned against their absolutization. Revelation provides the teleological compass that ensures the intellect serves the good, not the ego.

Seyyed Hossein Nasr succinctly summarizes this integration:

"In Islam, knowledge derives its legitimacy from the harmony of revelation, reason, and sensory experience; it is sacred because it reflects the unity of divine truth in the diversity of creation."²²

Thus, unlike the secular epistemology that separates science from faith, Islam envisions an intellectual ecology where the Qur'an, the Sunnah, and human reason co-operate toward a unified goal: the realization of truth (al-ḥaqq). The Sunnah, as the Prophet's lived expression of revelation, remains the guiding framework through which intellect and experience achieve moral and spiritual direction

The Prophetic Paradigm of Inquiry and Justice

The Sunnah of the Prophet membranes embodies not merely a legal code but a comprehensive epistemology grounded in divine revelation, moral consciousness, and rational discernment. In the Prophetic paradigm, knowledge is a means of tahqīq al-'adl (realization of justice) and ta'mīr al-'ālam (construction of a moral civilization). The Prophet declared:

"Indeed, the most beloved of people to Allah are those who are most beneficial to the people."²³

Translation: "The most beloved of people to Allah are those who bring the greatest benefit to others."

This hadīth reveals the ethical foundation of Islamic inquiry — knowledge and action are valuable only insofar as they serve justice and benefit humanity. In contrast to the modern secular scientific ethos that often separates epistemology from ethics, the Prophetic framework integrates truth-seeking with moral accountability. As Imam al-Ghazālī emphasizes, "Knowledge without action is madness, and action without knowledge is void."²⁴

The Prophet ** s judicial method exemplified this integration. When appointing Mu'ādh ibn Jabal as governor of Yemen, the Prophet ** asked:

"By what will you judge?" He replied, "By the Book of Allah." The Prophet asked, "And if you find nothing therein?" He replied, "Then by the Sunnah of the Messenger of Allah." The Prophet said, "And if you find nothing therein?" He replied, "Then I will exert my opinion (ijtihād) without hesitation." The Prophet then said, "Praise be to Allah who has guided the messenger of His Messenger to that which pleases Him."

This incident forms the epistemic nucleus of the Islamic method a tripartite hierarchy of revelation (waḥy), transmitted tradition (Sunnah), and rational exertion (ijtihād). Together they embody an integrated methodology of inquiry

²¹ al-Ghazālī, Mi'yār al-'Ilm, Cairo: Dār al-Ma'ārif, 1961, 29.

²² Nasr, Science and Civilization in Islam, Cambridge: Harvard University Press, 1968, 34.

²³ Musnad Ahmad, Hadīth no. 23408, Beirut: Dār al-Fikr, 1994

²⁴ al-Ghazālī, Abū Ḥāmid. Iḥyā' 'Ulūm al-Dīn, Vol. 1, Cairo: Dār al-Ma'ārif, 1957, 22

²⁵ Abū Dāwūd, Sunan Abī Dāwūd, Kitāb al-Aqdīyah, ḥadīth no. 3592, Beirut: Dār al-Kutub al-'Ilmiyyah, 2009).

and justice, ensuring that the pursuit of knowledge remains subservient to divine guidance.

Classical Reflections al-Ghazālī, al-Shāţibī, Ibn al-Qayyim

The harmony between revelation and reason in the Sunnah inspired a rich intellectual tradition in classical Islamic thought. Imam al-Ghazālī (d. 505 AH / 1111 CE) saw the Sunnah as a spiritual and epistemological filter that purifies reason from arrogance. In al-Munqidh min al-Dalāl, he writes:

"I realized that certainty cannot be attained by the senses nor by reason alone, but only by a light which God casts into the heart."²⁶

Al-Ghazālī identifies divine illumination (nūr ilāhī) as the ultimate criterion of truth, transcending empirical and speculative limits. This perspective parallels but transcends modern epistemology by reuniting the cognitive and spiritual dimensions of inquiry.

Imam al-Shāṭibī (d. 790 AH / 1388 CE), in al-Muwāfaqāt, further develops this principle by linking knowledge to the maqāṣid al-sharī'ah (higher objectives of the law). He writes:

"The Lawgiver's intent in every command and prohibition is to preserve the five necessities: religion, life, intellect, progeny, and property."²⁷

Al-Shāṭibī's theory transforms the Sunnah into a teleological framework one that guides human action toward preservation and justice. It parallels the moral dimension of the Prophetic paradigm, ensuring that intellectual and legal activity sustains both the individual and society. Ibn al-Qayyim al-Jawziyyah (d. 751 AH / 1350 CE) synthesizes this tradition, asserting that the essence of the Sharī'ah is mercy and justice. In I'lām al-Muwaqqi'īn, he writes:

"The foundation of the Sharī'ah is wisdom and the welfare of the servants in this world and the next. Every matter that departs from justice to injustice, from mercy to cruelty, from benefit to harm, from wisdom to foolishness is not from the Sharī'ah, even if introduced therein by interpretation."²⁸

This profound assertion affirms that the Sunnah is not bound by literalism but by the spirit of justice. Ibn al-Qayyim's framework aligns the ethical with the legal and transforms Islamic jurisprudence into a living embodiment of divine wisdom.

The Modern Scientific Method A Historical and Philosophical Study From Greek Rationalism to Modern Empiricism

The intellectual roots of the modern scientific method lie deep in the philosophical soil of ancient Greece. Greek rationalism sought to explain reality through reason (logos) and logical abstraction, marking a decisive shift from mythos (narrative truth) to rational speculation. Plato (427–347 BCE) viewed the physical world as a reflection of eternal forms, arguing that true knowledge (epistēmē) could only be achieved through intellectual contemplation of these immutable ideals. As he states:

"The objects of sense are visible but not intelligible, while the objects of intelligence are intelligible but invisible." 29

²⁶ al-Ghazālī, Abū Ḥāmid. al-Munqidh min al-Dalāl, Cairo: Dār al-Maʿārif, 1969, 34

²⁷ al-Shāṭibī, Ibrāhīm ibn Mūsā. al-Muwāfaqāt fī Uṣūl al-Sharī'ah, Vol. 2, Beirut: Dār al-Kutub al-'Ilmiyyah, 1996, 8

²⁸ Ibn al-Qayyim al-Jawziyyah. I'lām al-Muwaqqi'īn, Vol. 3, Beirut: Dār al-Jīl, 1973, 11

²⁹ Plato, The Republic, trans. Paul Shorey, Cambridge: Harvard University Press, 1930, Book VI, 508d

Plato's metaphysical dualism separated sensory experience from intellectual truth. This separation later influenced both Western theology and modern scientific abstraction privileging reason as an autonomous faculty detached from revelation or intuition. Aristotle (384–322 BCE), Plato's student, shifted this epistemology toward empirical observation. For Aristotle, knowledge begins with sense perception but is perfected through logical deduction (syllogismos). He writes:

"All knowledge proceeds from the senses."³⁰

Aristotle's synthesis of reason and observation laid the foundation of natural philosophy. However, it also confined truth to the observable and measurable, subtly divorcing knowledge from transcendent revelation. Over centuries, this tension between metaphysical idealism and empirical realism shaped the trajectory of Western science.

With the fall of classical civilization and the rise of Christianity, Greek philosophy was reinterpreted within a theological framework. Thinkers such as St. Augustine (354–430 CE) adopted Platonic idealism to explain divine illumination, while St. Thomas Aquinas (1225–1274 CE) sought harmony between faith and reason through Aristotelian logic. Aquinas wrote:

"Grace does not destroy nature but perfects it.31"

Though Aquinas attempted to maintain this harmony, the scholastic tradition ultimately placed revelation and reason in parallel lanes rather than a unified epistemology. By the Renaissance, the rationalist impulse had become dominant, paving the way for scientific secularism.

Francis Bacon, Descartes, and the Rise of Positivism

The early modern period witnessed a radical transformation in the concept of knowledge. Francis Bacon (1561–1626), often hailed as the father of modern empiricism, rejected metaphysical speculation and emphasized systematic observation and experimentation. In Novum Organum, Bacon declared:

"Man, as the minister and interpreter of nature, does and understands as much as his observations on the order of nature permit him, and neither knows nor is capable of more."³²

Bacon's "inductive method" revolutionized scientific inquiry, experience rather than knowledge in sensory metaphysical or theological material principles. While this shift produced remarkable progress, simultaneously marginalized metaphysical and moral dimensions of truth very essence of divine knowledge in the Islamic paradigm.

René Descartes (1596–1650), in contrast, founded modern rationalism by seeking indubitable certainty through the method of doubt. His famous dictum

"Cogito, ergo sum" 33

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³⁰ Aristotle, Posterior Analytics, trans. Jonathan Barnes, Oxford: Clarendon Press, 1975, Book II, 19, 100a

³¹ Aquinas, Thomas. Summa Theologica, trans. Fathers of the English Dominican Province, New York: Benziger Bros., 1947, I–I, Q. 1, Art. 8

³² Bacon, Francis. Novum Organum, trans. James Spedding, London: Longman, 1857, Book I, Aphorism 1

³³ Descartes, René. Meditations on First Philosophy, trans. John Cottingham, Cambridge: Cambridge University Press, 1996, Meditation II

Descartes' separation of mind and matter inaugurated the dualism that shaped modern science. Matter became inert, mechanical, and quantifiable while consciousness was rendered subjective and private. The cosmos was thus transformed from a divine sign (āyah) into an object of domination and control. The later positivist movement, inspired by Auguste Comte (1798–1857), completed this epistemological reduction. Comte proclaimed:

"The human mind, by its nature, always tends to consider all phenomena as subject to invariable natural laws."³⁴

Positivism eliminated metaphysics altogether, defining "knowledge" as that which can be empirically verified. Truth was thus reduced to measurement; meaning to functionality; and ethics to social convention. This worldview, though powerful in producing technology, also generated an existential vacuum a crisis of meaning that continues to haunt modern civilization. The consequences of this epistemic shift are profound. When knowledge becomes purely instrumental, detached from divine purpose, science transforms from a tool of understanding into an instrument of power. As Max Weber (1864–1920) observed:

"The fate of our times is characterized by rationalization and intellectualization and, above all, by the disenchantment of the world." 35

The "disenchantment" (Entzauberung) Weber describes marks the death of sacred meaning in modernity. In contrast, the Islamic worldview rooted in the Sunnah sees the universe as an open text of divine signs (āyāt), where empirical study and spiritual insight form a single act of worship.

The Scientific Method and its Ethical-Legal Implications

The scientific method, as developed in the modern period, rests on two fundamental principles empirical verification and methodological skepticism. While this has yielded immense technological advancement, it also produced a new epistemic and moral framework that profoundly influences law, ethics, and human self-understanding. The classical model of science, as articulated by Francis Bacon and Isaac Newton, aimed at the mastery of nature through experimentation. Bacon famously asserted:

"The end of our foundation is the knowledge of causes, and secret motions of things; and the enlarging of the bounds of human empire, to the effecting of all things possible." ³⁶

Here Bacon explicitly links knowledge to power "enlarging the bounds of human empire." This represents a decisive ethical shift: knowledge is no longer pursued for truth or wisdom, but for control and utility. The Qur'anic worldview, however, presents knowledge ('ilm) as a trust (amānah) that entails moral accountability, not domination. Islamic perspective:

"وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلُّهَا 37

[&]quot;And He taught Adam the names of all things."

³⁴ Comte, Auguste. The Positive Philosophy of Auguste Comte, trans. Harriet Martineau, London: George Bell & Sons, 1896, Vol. 1, 1

³⁵ Weber, Max. "Science as a Vocation," in From Max Weber: Essays in Sociology, trans. and ed. H. H. Gerth and C. Wright Mills, New York: Oxford University Press, 1946, 155

³⁶ Bacon, Francis. New Atlantis. London: William Rawley, 1627, 35

³⁷ al-Bagarah, 2:31

This verse implies that knowledge is a divine gift (ta'līm), conferred upon humanity as a means of stewardship (khilāfah), not exploitation. Thus, while modern science reduces ethics to procedural neutrality, Islam integrates ethics into the very nature of knowing.

"Knowledge is not to be sought for worldly advantage; its true purpose is the perfection of the soul and the knowledge of the Divine."³⁸

The Islamic epistemological model binds 'ilm, 'adl (justice), and taqwā (God-consciousness) as inseparable. The Western scientific method, by contrast, divorces knowledge from ethics leading to a positivist legal philosophy where morality is subjective and law becomes a function of power and social consensus.

The rise of legal positivism, articulated by John Austin (1790–1859), redefined law as the command of the sovereign, detached from any transcendent moral order. Austin wrote:

"The existence of law is one thing; its merit or demerit another."³⁹

This view stripped law of ethical substance. What is "legal" is not necessarily what is "right." The scientific spirit of value-neutrality thus entered the legal realm resulting in what Max Weber described as "formal rationality", where justice is procedural, not moral. Islamic jurisprudence (fiqh), however, stands on the moral unity of Sharī'ah where law (hukm) is derived from revelation (waḥy) and its ethical objectives (maqāṣid al-sharī'ah). Al-Shāṭibī (d. 1388) stated:

"إن الشريعة إنما وضعت لمصالح العباد

"The Sharī'ah has been established for the realization of human welfare." 40

The ethical legal dimension of knowledge in Islam centers on maṣlaḥah (benefit) and 'adl (justice), ensuring that all human inquiry remains within divine moral limits. The secular scientific worldview, however, operates under the illusion of neutrality producing technologies that can heal or destroy, liberate or enslave, depending solely on human will.

The Reduction of Knowledge to Material Observation

The defining feature of modern science is its reductionism the belief that all phenomena can be explained solely by material causes. This epistemic narrowing, from the metaphysical to the mechanical, has profound implications for both civilization and the law. Auguste Comte's positivism crystallized this reductionism by rejecting metaphysics as meaningless:

"All genuine knowledge concerns only the relations of phenomena, to the exclusion of any metaphysical or theological consideration."⁴¹

Comte's statement institutionalized a worldview that denies transcendence. Consequently, "truth" became synonymous with quantifiable data, and all that could not be measured such as soul, revelation, or divine purpose was dismissed as subjective belief. This approach directly conflicts with the Qur'anic conception of reality as multi-dimensional, encompassing both seen (shahādah) and unseen (ghayb):

³⁸ Ibn Khaldūn, Muqaddimah, trans. Franz Rosenthal, Princeton: Princeton University Press, 1967, Vol. 3, 412

³⁹ Austin, John. The Province of Jurisprudence Determined. London: John Murray, 1832, 157

⁴⁰ Al-Shātibī, Al-Muwāfaqāt fī Uṣūl al-Sharī'ah, Beirut: Dār al-Ma'rifah, 1996, Vol. 2, 9

⁴¹ Comte, Auguste. Cours de Philosophie Positive, Paris: Rouen Frères, 1830, Vol. 1, 5

"He is the Knower of the unseen and the seen, the Great, the Exalted."

In the Qur'anic view, reality is unified and layered; material observation is only one dimension of knowing. Modern epistemology, however, flattens this structure, treating metaphysical truths as illusions. As Seyyed Hossein Nasr observes:

"Modern science has succeeded in dominating nature by forgetting the sacred, but in doing so, it has forgotten the very purpose of knowledge."⁴³

Nasr here highlights the spiritual amnesia of modern civilization. Knowledge, once a means to approach the Divine, has been turned into an instrument of production and consumption. This desacralization produces a moral and existential void what Jacques Ellul called "the autonomy of technique."

"Technique has become autonomous; it has taken on a life of its own, independent of moral or social constraints."⁴⁴

The reduction of knowledge to material observation results not only in technological domination but also in a profound moral alienation. The legal systems shaped by this epistemology particularly in the modern West treat human beings as biological entities or citizens, rather than as spiritual-moral agents accountable before God.In contrast, the Sunnah presents a holistic epistemology where 'ilm is an act of worship, hikmah (wisdom) is a moral imperative, and observation (nazar) is a spiritual journey. The Prophet said:

"Whoever follows a path to seek knowledge, Allah will make easy for him a path to Paradise."

The hadith affirms that in Islam, knowledge is not a neutral pursuit but a sacred journey one that leads not merely to information but to salvation. Hence, the Islamic epistemic model cannot accept a "scientific method" stripped of transcendence, ethics, and divine purpose.

Islamic Law and the Scientific Method A Comparative Inquiry The Epistemological Structure of Sharī'ah

The Islamic legal system (Sharī'ah) represents a unique synthesis of divine revelation (waḥy), reason ('aql), and empirical reality ('urf and wāqi'). Unlike modern law, which evolves through human consensus and experience, the Sharī'ah emerges from the conviction that all truth originates from God. It is therefore not merely a code of conduct but a comprehensive epistemological framework.

Imām al-Juwaynī (d. 1085 CE), the teacher of al-Ghazālī, defines Sharī'ah as:

الشريعة ما استقام به أمر الأمة في معاشهم ومعادهم
46

"The Sharī'ah is that which ensures the upright order of the community in both worldly and spiritual affairs."

⁴² ar-Ra'd, 13:9

⁴³ Nasr, Seyyed Hossein. Knowledge and the Sacred. Albany: State University of New York Press, 1989, 13

⁴⁴ Ellul, Jacques. The Technological Society. New York: Vintage Books, 1964, 133

⁴⁵ Muslim, Şaḥīḥ Muslim, Kitāb al-Dhikr, 2699. Beirut: Dār al-Maʿrifah, 2001

⁴⁶ Al-Juwaynī, Al-Burhān fī Usūl al-Figh, Cairo: Matba'at al-Istiglāl, 1950, Vol. 1, 19).

This statement captures the holistic epistemology of Islamic law its purpose is not the regulation of behavior in isolation, but the alignment of human will with divine order. It thus integrates the metaphysical, moral, and empirical realms into a single vision of justice ('adl). In the Qur'an, revelation itself is described as an epistemic light (nūr) that illuminates reason and corrects perception:

"There has come to you from Allah a light and a clear Book."

The "light" here signifies guidance that makes reason effective. Reason in isolation can only perceive patterns within creation, not their ultimate purpose. Thus, 'aql in Islam is not autonomous but instrumental it functions rightly only within the framework of waḥy.Imām al-Ghazālī (d. 1111 CE), in Al-Mustasfā, emphasizes that revelation and reason are complementary sources of knowledge:

"Reason is the foundation of transmission (revelation), and revelation is the guide of reason."

Al-Ghazālī's formulation establishes a profound epistemic balance. Reason confirms the authenticity of revelation, while revelation directs the moral and ontological use of reason. The Western scientific method, by contrast, isolates the intellect from any sacred guidance, leading to what Nasr calls "epistemological fragmentation." 49

Moreover, in Sharī'ah, knowledge ('ilm) and action ('amal) are inseparable. Ibn Taymiyyah (d. 1328 CE) noted:

"العلم ما قام عليه الدليل، والهدى ما جاء به الرسول
50
"

"Knowledge is that which is established by evidence, and guidance is that which was brought by the Messenger."

Here, knowledge is empirical in its method but revelatory in its ultimate criterion. The Sharī'ah therefore integrates both observation (hiss) and revelation (waḥy) not as opposites, but as two harmonized paths to truth. This epistemic structure produces a legal system that is both rational and transcendent, capable of adapting to new realities without compromising divine principles. Hence, Islamic law naturally accommodates empirical inquiry while restraining it within moral boundaries a balance modern secular systems have lost.

Induction (Istigrā') and Experimentation in Islamic Thought

Contrary to the common misconception that experimentation and empirical induction originated in Europe, the Islamic intellectual tradition had already developed sophisticated methods of empirical observation and induction (istiqrā') centuries before Bacon or Descartes.

Ibn al-Haytham (Alhazen, d. 1040 CE), in his Kitāb al-Manāzir, formulated what can rightly be called the first systematic scientific method:

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⁴⁷ al-Mā'idah, 5:15)

⁴⁸ Al-Ghazālī, Al-Mustasfā min 'Ilm al-Usūl, Beirut: Dār al-Kutub al-'Ilmiyyah, 1993, Vol. 1, 16).

⁴⁹ Nasr, Seyyed Hossein. Islam and the Problem of Modern Science. Kuala Lumpur: ISTAC, 1993, 22

⁵⁰ Ibn Taymiyyah, Majmūʻ al-Fatāwā, Riyadh: King Fahd Complex, 1995, Vol. 19, 120

"The duty of the man who investigates the writings of scientists, if learning the truth is his goal, is to make himself an enemy of all that he reads and attack it from every side."⁵¹

This statement describes a method of critical observation, hypothesis, and verification centuries before modern empiricism. Ibn al-Haytham's methodology was rooted in the Qur'anic command to observe and reflect:

"Say: Observe what is in the heavens and the earth."

Here, observation (nazar) is an act of faith a means of discovering divine wisdom within creation. Thus, the experimental method in Islam is not merely epistemic but spiritual, a form of worship and contemplation of āyāt Allāh (signs of God).Ibn Khaldūn (1332–1406 CE), in Al-Muqaddimah, explicitly defined istiqrā' (inductive reasoning) as a legitimate method for establishing general laws in both natural and social sciences:

"Induction produces dominant probability, and it is the basis for understanding habitual patterns and natural phenomena."

Ibn Khaldūn's insight anticipates the probabilistic foundations of modern science, yet his epistemology remains rooted in metaphysical order. For him, empirical investigation does not negate divine causality (sunnat Allāh), but reveals its manifestations in the world of matter.

"Complete induction provides certainty in understanding the objectives of the Sharī'ah."

Here, istigrā' is not a mere tool of observation but a hermeneutical principle that connects specific rulings to universal purposes (maqasid). It bridges empirical facts with divine meaning the very synthesis missing in secular science. This methodology also anticipates modern inductive logic, but within a sacred framework. Whereas Bacon's induction sought mastery over nature, sought submission scholar's induction to divine order understanding the harmony of creation.

Magāṣid al-Sharī'ah as a Framework for Rational Inquiry

The doctrine of Maqāṣid al-Sharīʿah (the higher objectives or purposes of the Islamic law) represents one of the most profound epistemological contributions of Islamic civilization to the philosophy of rational inquiry. While Western rationalism separates knowledge from value, Islam integrates the two through maqāṣid principles that give direction, purpose, and moral meaning to intellectual and empirical pursuits.In essence, maqāṣid transform human reasoning (ʿaql) from a merely cognitive faculty into an ethical and teleological instrument one that seeks not just to know what is, but to understand what ought to be in accordance with divine wisdom.

The Origin and Meaning of Magasid

⁵¹ Ibn al-Haytham, Kitāb al-Manāzir, trans. A. I. Sabra, The Optics of Ibn al-Haytham, London: Warburg Institute, 1989, Vol. 1, 54

⁵² Yūnus, 10:101

⁵³ Ibn Khaldūn, Al-Muqaddimah, Beirut: Dār al-Fikr, 1981, 2:56

⁵⁴ Al-Shātibī, Al-Muwāfaqāt fī Usūl al-Sharī'ah, Beirut: Dār al-Ma'rifah, 1996, Vol. 3, 45

The classical jurist Imām al-Juwaynī (d. 1085 CE) first laid the foundation of this concept, describing the objectives of Sharī'ah as preservation of the essentials of life and religion:

"The purpose of the Law concerning mankind is the preservation of their religion, their lives, their intellects, their progeny, and their wealth."

Imām al-Ghazālī (d. 1111 CE) further systematized this framework, affirming that every command or prohibition in the Sharī'ah serves these five essentials (al-ḍarūriyyāt al-khams):

"Whatever ensures the protection of these five principles is a maslahah (benefit), and whatever violates them is a mafsadah (corruption) which the Sharī'ah seeks to prevent." 56

Here, al-Ghazālī provides a moral architecture for rational inquiry — 'aql is tasked with discerning benefit (maṣlaḥah) and harm (mafsadah) in light of divine guidance. Thus, reasoning in Islam is not value-neutral but value-oriented, always situated within the sacred telos of human flourishing (ṣalāḥ alinsān).

Magāṣid as Epistemic and Ethical Regulators

The framework of maqāṣid transforms the process of reasoning into a disciplined moral act. As al-Shāṭibī (d. 1388 CE) elucidated:

"The Sharī'ah was established for the realization of human welfare in both the immediate and ultimate sense."

Al-Shāṭibī's insight gives rise to a distinct Islamic theory of rationality, where empirical and logical reasoning must operate within the moral compass of maṣlaḥah. Knowledge divorced from ethical purpose is, in his words, "a deviation from the purpose of revelation."

This approach differs fundamentally from the Western secular model, where rationality is measured by instrumental success or utility, not moral rectitude. The maqāṣid-based rationality is therefore teleological, always directed toward realizing 'adl (justice), raḥmah (mercy), and ḥikmah (wisdom) the divine attributes reflected in human conduct.

Magasid and Scientific Rationality

When applied to scientific inquiry, maqāṣid function as epistemic constraints and moral directives. They prevent knowledge from degenerating into power, and experimentation from crossing ethical boundaries. Ibn Taymiyyah (d. 1328 CE) recognized the necessity of aligning reason with moral purpose:

"Sound reason never contradicts sound revelation; rather, it confirms and testifies to it."

Here, Ibn Taymiyyah outlines the epistemic unity of 'aql and waḥy. Reason ('aql ṣarīḥ) is to be guided, not negated, by revelation a concept modern science abandoned when it redefined rationality as empirical sufficiency

⁵⁵ Al-Juwaynī, Al-Burhān fī Usūl al-Figh, Cairo: Matba'at al-Istiglāl, 1950, 2:589

⁵⁶ Al-Ghazālī, Al-Mustasfā min 'Ilm al-Uṣūl, Beirut: Dār al-Kutub al-'Ilmiyyah, 1993, 1:286

⁵⁷ Al-Shāṭibī, Al-Muwāfaqāt fī Uṣūl al-Sharī ah, Beirut: Dār al-Ma rifah, 1996, 2:8

⁵⁸ Ibn Taymiyyah, Dar' Ta'ārud al-'Aql wa-l-Naql, Riyadh: King Fahd Complex, 1998, 1:67

alone.Contemporary philosopher Taha Jabir al-Alwani interprets maqāṣid as a bridge between revelation and modern reasoning:

"The maqāṣid paradigm restores coherence to knowledge by ensuring that every inquiry serves the purpose of justice, balance, and mercy the universal aims of the Qur'an." 59

Maqāṣid as a Dynamic Paradigm for Ijtihād and Knowledge

Through maqāṣid, the Islamic intellectual tradition preserved a dynamic model of ijtihād (independent reasoning), enabling continuous engagement with new realities without moral relativism. As Fazlur Rahman observes:

"The spirit of maqāṣid al-sharī'ah makes Islamic law capable of evolution from within, guided not by social expediency but by an inner moral logic." 60

This "inner moral logic" defines a distinctly Islamic form of rational inquiry:

- 1. Purpose-oriented (ghā'īyah) seeking ultimate ends, not mere means.
- 2. Ethically bound (akhlaqiyyah) subordinating empirical pursuits to divine values.
- 3. Integrative (tawhīdiyyah) uniting revelation, reason, and experience under one ontological order.

In this sense, maqāṣid provide the missing ethical architecture of modern science. They ensure that knowledge, technology, and experimentation remain in harmony with divine justice and human dignity protecting humanity from what Seyyed Hossein Nasr terms "the desacralization of knowledge."Maqāṣid al-Sharīʿah thus represent not only a legal theory but a comprehensive epistemology one that sanctifies the intellect through moral purpose. By grounding rational inquiry in divine wisdom, the Islamic framework reconciles reason and revelation, science and ethics, intellect and faith — a synthesis that can offer modern civilization an alternative to the morally fragmented epistemology of secular modernity.

Ethical Constraints on Knowledge and Experimentation

The pursuit of knowledge, in both scientific and religious traditions, carries profound ethical responsibilities. In Islam, knowledge ('ilm) is never neutral it is a trust (amānah) bestowed by God, and its use is governed by divine moral order. While modern scientific civilization often regards inquiry as autonomous from ethical or metaphysical boundaries, Islam insists that all forms of knowledge must operate within the framework of Sharī'ah and the objectives of divine justice ('adl), mercy (raḥmah), and wisdom (ḥikmah).

Knowledge as Amānah (Sacred Trust)

The Qur'an affirms the sacred nature of knowledge and moral accountability in its use:

"Indeed, We offered the Trust to the heavens and the earth and the mountains, but they refused to bear it and feared it; yet man undertook it."

According to Ibn Kathīr, this "Trust" (Amānah) includes intellect, freedom, and the responsibility to act justly with knowledge. He writes:

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⁵⁹ Al-Alwani, The Crisis of the Muslim Mind, Herndon: IIIT, 1991, 49

⁶⁰ Rahman, Fazlur. Islam and Modernity: Transformation of an Intellectual Tradition.

Chicago: University of Chicago Press, 1982, 44

⁶¹ Qur'an, al-Aḥzāb 33:72).

"The amānah encompasses the duties and obligations imposed by God upon humankind to use reason, power, and knowledge within the limits of revelation." 62

Thus, the Qur'anic conception of knowledge is inherently ethical and teleological knowledge divorced from responsibility becomes a source of corruption (fasād), not progress.

The Prophetic Ethic of Inquiry

The Prophet Muhammad ## emphasized moral discipline in the pursuit and application of knowledge:

"Whoever acquires knowledge that should be sought for the sake of Allah, but learns it only for worldly gain, will not smell the fragrance of Paradise on the Day of Resurrection."

This hadith establishes that the intention (niyyah) determines the ethical legitimacy of knowledge. The pursuit of knowledge becomes 'ibādah (worship) when guided by sincerity and moral purpose; otherwise, it degenerates into a tool of exploitation or arrogance.

Boundaries of Experimentation in Islamic Law

Unlike modern positivism, which often assumes that what can be done may be done, the Islamic worldview distinguishes sharply between capability (qudrah) and moral permissibility (halāl/ḥarām). The Qur'an cautions against transgressing divine limits:

"تلْكَ حُدُودُ اللَّهِ فَلَا تَعْتَدُوهَا 64

"These are the limits set by Allah, so do not transgress them."

Imām al-Qurṭubī comments that these limits apply not only to worship and law but also to the boundaries of human action, including knowledge and experimentation:

"Every act that exceeds the measure of divine guidance is transgression ('udwān), even if it arises from reason or curiosity."65

Hence, the ethical control of experimentation in Islam derives not from pragmatic utility, but from ontological humility before the Creator.

Human Dignity (Karamah) as the Ultimate Constraint

In the modern context of biotechnology, artificial intelligence, and genetic engineering, Islam places human dignity (karāmah) at the heart of ethical inquiry.

"وَلَقَدْ كَرَّمْنَا بَنِي آدَمَ 66"

"And We have certainly honored the children of Adam."

This verse, as Fakhr al-Dīn al-Rāzī observes, implies that any form of knowledge or technology that undermines the sanctity of human life, intellect, or moral agency constitutes an ethical violation:

⁶² Ibn Kathīr, Tafsīr al-Qur'ān al-'Azīm, Beirut: Dār al-Kutub al-'Ilmiyyah, 1987, 6:489

⁶³ Abū Dāwūd, Sunan Abī Dāwūd, Kitāb al-ʿIlm, 3664. Beirut: Dār al-Kutub al-ʿIlmiyyah, 1990, 3:321

⁶⁴ Qur'an, al-Baqarah 2:229

⁶⁵ Al-Qurtubī, Al-Jāmiʿ li Aḥkām al-Qurʾān, Cairo: Dār al-Kutub al-Miṣriyyah, 1964, 3:187

⁶⁶ Qur'an, al-Isrā' 17:70).

"The karāmah of humanity is grounded in intellect and free will; to manipulate or degrade these is to violate the divine purpose." 67

Thus, in an Islamic framework, karāmah operates as a moral boundary condition for all experimentation. Scientific freedom is not abolished but subordinated to the preservation of human sanctity (ḥifz al-nafs wa-l-ʿaql), as outlined in the magāsid al-sharīʿah.

Knowledge, Power, and Accountability

Islamic scholars have consistently warned against the unrestrained use of knowledge for domination or profit. Al-Ghazālī famously cautioned:

"Knowledge without action is madness, and action without knowledge is futile."68

Here, al-Ghazālī links knowledge to ethical responsibility the true measure of scholarship lies not in discovery but in its alignment with divine justice. This perspective starkly contrasts with modern technocratic paradigms, where utility and control often override moral restraint.

6. The Qur'anic Ethos of Accountability in Inquiry

The Qur'an enshrines an uncompromising standard of intellectual accountability:

"And do not pursue that of which you have no knowledge. Indeed, the hearing, the sight, and the heart all of these will be called to account."

This verse articulates an early form of epistemic ethics a principle that knowledge is not merely an entitlement but a moral liability. Every act of knowing carries the obligation of truth and justice (al-haqq wa-l-'adl).

Contemporary scholar Seyyed Hossein Nasr interprets this as an antidote to modern scientific arrogance:

"The desacralization of knowledge has led to a civilization that knows how to do everything but has forgotten why."⁷⁰

The Principle of No Harm (Lā Darar wa Lā Dirār)

A central legal maxim of Islamic jurisprudence underscores the ethical boundary of harm in all pursuits, including science and technology:

"There shall be neither harm nor reciprocating harm in Islam."

This principle (qā'idah fiqhiyyah) serves as the ethical minimum of all human endeavor. In modern terms, it parallels the principle of non-maleficence in bioethics but transcends it by grounding moral restraint in the divine order rather than human consensus.

Islamic epistemology integrates ethics into the very structure of knowledge and experimentation. The pursuit of truth is not an autonomous intellectual act but a moral journey bound by divine purpose. Whereas the modern scientific worldview often divorces inquiry from ethics, the Islamic worldview fuses them inseparably. Knowledge must serve haqq (truth) and 'adl (justice), not

⁶⁷ Al-Rāzī, Tafsīr Mafātīḥ al-Ghayb, Beirut: Dār Iḥyā al-Turāth al- Arabī, 1999, 20:137

⁶⁸ Al-Ghazālī, Ihyā' 'Ulūm al-Dīn, Beirut: Dār al-Ma'rifah, 1985, 1:12

⁶⁹ Qur'an, al-Isrā' 17:36

⁷⁰ Nasr, Knowledge and the Sacred, Albany: SUNY Press, 1989, 97

⁷¹ Mālik b. Anas, Al-Muwatta', Kitāb al-Agdiyah, 31:5. Cairo: Dār al-Hadīth, 1994, 2:746

domination or profit. Thus, Sharī'ah does not restrict scientific progress but sanctifies it, ensuring that human intellect remains a servant of divine wisdom rather than a rival to it. As Imām al-Shātibī wrote,

"The Sharī'ah's purpose is not to abolish human reason but to guide it toward the path of righteousness."⁷²

Technological Civilization and the Islamic Response

Technology as a Value System

The modern technological civilization is not merely a collection of tools or neutral instruments; it is, as Jacques Ellul observed, "a total phenomenon" self-sustaining value system that shapes human consciousness, ethics, and social

"Technique has become autonomous; it shapes society according to its own logic, demanding efficiency and control above all else."73

Ellul's insight reveals that modern technology carries an implicit moral code one that prioritizes efficiency, productivity, and control, often at the expense of spiritual and ethical values. In contrast, Islam views technology not as an autonomous domain but as a moral trust (amānah), subject to accountability. The Qur'an presents a radically different ontology of human creativity and power:

"He it is who produced you from the earth and settled you upon it."

to Al-Tabarī. "ista marakum According the phrase "He means commanded you to build and cultivate it in righteousness" 75.

Thus, the Our'an grants humanity the mandate of creative stewardship, not absolute dominion. Technology, therefore, is an instrument of moral cultivation ('imārah), not domination.

Technology and the Loss of Meaning

In the modern era, technology has evolved into a metaphysical substitute for transcendence. Martin Heidegger diagnosed this shift as the transformation of Being into mere availability:

"The essence of technology is not technological; it is a way of revealing, a mode of enframing that challenges nature to yield orderable energy."⁷⁶

Heidegger's "enframing" (Gestell) resonates with the Qur'anic warning against human arrogance:

"Nay, indeed, man transgresses because he sees himself self-sufficient." Islamic epistemology identifies this illusion of autonomy as the moral root of the false belief that human intellect and invention are technological hubris independent of divine command. Seyyed Hossein Nasr therefore writes:

⁷² Al-Shātibī, Al-Muwāfaqāt fī Uṣūl al-Sharī ah, Beirut: Dār al-Ma rifah, 1996, 4:245

⁷³ Ellul, Jacques. The Technological Society. New York: Vintage Books, 1964, 133

⁷⁴ Our'an, Hūd 11:61

⁷⁵ Al-Tabarī, Jāmi al-Bayān an Ta wīl Āy al-Qur ān, Cairo: Dār al-Ma ārif, 1954, 12:124

⁷⁶ Heidegger, Martin. The Question Concerning Technology. New York: Harper & Row,

⁷⁷ Qur'an, al-'Alaq 96:6–7

"Technology, when divorced from the sacred, becomes an instrument of cosmic rebellion, severing man from the Divine Center."⁷⁸

From the Islamic standpoint, the moral failure of modern technology lies not in its utility but in its metaphysical orientation. Islam calls for a re-sacralization of knowledge, where scientific and technological creativity is guided by the principle of tawhīd (unity of truth and value).

Artificial Intelligence, Bioethics, and the Question of Moral Agency

The rise of Artificial Intelligence (AI) and biotechnological innovation presents the most profound moral and ontological challenge to traditional conceptions of agency, personhood, and moral responsibility. While the Western discourse on AI ethics centers on autonomy, rights, and harm reduction, the Islamic moral paradigm grounds agency in accountability before God (taklīf) and the sanctity of human consciousness ('aql).

AI and the Illusion of Conscious Agency

Modern AI systems are designed to replicate decision-making processes, yet they lack intentionality (qaṣd) and moral will (irādah) both essential components of Islamic moral responsibility. The Qur'an attributes taklīf only to beings endowed with intellect and choice:

"We guided him to the path, whether he be grateful or ungrateful."

Here, moral responsibility arises from moral freedom, not computational capacity. An artificial system may simulate reasoning but cannot experience niyyah (intent) or taqwā (moral awareness). As Imām al-Māturīdī explains:

"Reason is the foundation of moral obligation; whoever lacks reason bears no responsibility."

Bioethics and the Sanctity of Life

In the domain of biotechnology cloning, genetic engineering, and transhumanist experimentation Islam provides an ethical framework rooted in hifz al-nafs (preservation of life) and hifz al-'aql (preservation of intellect), two of the essential maqāṣid al-sharī'ah. The Qur'an declares:

"And do not take a life which Allah has made sacred except in the cause of justice."

Imām al-Qurṭubī interprets this as a universal moral law prohibiting any form of manipulation or destruction of life outside divinely sanctioned purposes:

"To alter life or its essence beyond necessity is to interfere with divine creation (khalq Allāh)."82

80 Al-Māturīdī, Kitāb al-Tawhīd, Istanbul: Dār al-Maʿārif, 1970, 1:47

⁷⁸ Nasr, Seyyed Hossein. Man and Nature: The Spiritual Crisis of Modern Man. London: George Allen & Unwin, 1968, 57

⁷⁹ Qur'an, al-Insān 76:3

⁸¹ Qur'an, al-Isrā' 17:33

⁸² Al-Qurtubī, Al-Jāmi' li Aḥkām al-Qur'ān, Cairo: Dār al-Kutub al-Miṣriyyah, 1964, 10:248

Islamic bioethics therefore rejects the technological instrumentalization of the whether through eugenics, organ commodification, or genetic human body enhancement as violations of divine trust.

The Moral Problem of Creation

AI and biotechnology both raise the theological question of "creating like God" (takhlīq)", which the Qur'an explicitly condemns:

"They alter the creation of Allah."

Ibn 'Abbās explained this as a warning against any act that seeks to redefine divine order for worldly gain (Al-Tabarī, Jāmi' al-Bayān, 8:147). The Islamic oppose medical or scientific progress but insists position does not maintaining the ontological boundary between divine creation (khalq) and invention (san').Taha Abderrahmane, a leading contemporary Moroccan philosopher, critiques Western technological ethics as "a philosophy of capability without responsibility":

"Modernity celebrates what man can do, while Islam asks what man ought to do.84"

This distinction restores moral teleology to technological reasoning — science is judged not by its power to create, but by its service to justice, mercy, and the preservation of life.

Toward an Islamic Technological Ethic

The Islamic response to technological civilization is neither rejectionist nor assimilationist. It seeks a transformative synthesis — restoring the sacred center of human creativity. Technology must be reclaimed as a tool of khilāfah (vicegerency), not tyranny. The Qur'an reminds humanity of this sacred role:

"And when your Lord said to the angels, 'Indeed, I am placing upon the earth a vicegerent."

As Al-Rāghib al-Isfahānī notes:

"Khilāfah implies both authority and accountability; it is mastery under divine command, not in rebellion against it."86

Under this vision, technological progress becomes an act of 'ibādah when it fulfills the higher purposes of Sharī'ah justice, welfare, and balance. The integration of ethical boundaries and metaphysical humility into technological innovation thus represents Islam's unique contribution to the global debate on the moral future of science.

Islamic civilization offers a holistic ethical framework that redefines technology as a spiritual and moral enterprise. Where modernity reduces man to a maker and machine to a master, Islam restores the harmony between knowledge, power, and virtue. By grounding technological creativity in tawhid, magasid, and amanah, the Islamic worldview provides the intellectual and moral resources to confront the crises of artificial intelligence, biotechnological

⁸³ Our'an, al-Nisā' 4:119

⁸⁴ Abderrahmane, Taha. Al-'Amal al-Ittisālī wa Manāzir al-'Aql. Casablanca: al-Markaz al-Thaqāfī al-'Arabī, 2006, 83

⁸⁵ Qur'an, al-Baqarah 2:30

⁸⁶ Al-Isfahānī, Al-Mufradāt fī Gharīb al-Qur'ān, Beirut: Dār al-Qalam, 1997, 142

manipulation, and moral nihilism not through fear or rejection, but through restoration of the sacred meaning of human action.

Legal Ethical Dilemmas of Modern Science

Modern scientific progress, though unprecedented in its capacity to alter nature, has also blurred the boundaries between what is technically possible and what is emerge from morally permissible. The dilemmas that cloning, genetic modification. intelligence. and life-extension technologies merely bioethical questions; they are civilizational tests that probe assumptions metaphysical underlying human action.From standpoint, scientific power is not self-justifying. The Qur'an repeatedly warns against the illusion of limitless control:

"Do not pursue that of which you have no knowledge. Surely the hearing, the sight, and the heart each of these shall be called to account."

Epistemic Arrogance and the Crisis of Moral Restraint

The Qur'anic injunction above identifies accountability (mas'ūliyyah) as the essence of ethical science. Modernity's scientific method, however, is founded upon epistemic autonomy the belief that truth can be pursued independent of revelation. This separation produces what Alasdair MacIntyre calls "the fragmentation of moral discourse" in which no shared standard exists to limit or direct knowledge.

Islamic law (fiqh) offers a counter-principle the unity of knowledge and morality. According to Imām al-Shāṭibī:

"The purpose of the Sharī'ah is to draw the morally responsible being away from the impulses of his desires, so that he may be a servant of God by choice as he is by necessity."

Thus, the ethical question is not what science can do, but what should it do in the sight of God. Science without restraint leads to the desecration of both life and meaning fasād fī al-arḍ (corruption on earth), which the Qur'an condemns as the moral inversion of creation.

Sharī'ah and the Limits of Human Intervention

In Islamic jurisprudence, moral and legal limits are not arbitrary constraints but expressions of cosmic harmony (tawāzun). The principle of lā ḍarar wa lā ḍirār "no harm and no reciprocation of harm" serves as a foundational ethical maxim regulating scientific.

For example, genetic editing may be permissible for therapeutic correction ('ilāj) but forbidden when it aims at perfection (taḥsīn) or vanity, as it distorts divine purpose. The International Islamic Fiqh Academy (OIC, Jeddah) has likewise ruled that reproductive cloning violates human dignity and divine will, citing Qur'an 4:119: "They will alter the creation of Allah."

Hence, Islamic jurisprudence operates not as a static code but as a dynamic moral compass, ensuring that the pursuit of knowledge remains within the bounds of justice ('adl) and mercy (raḥmah).

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⁸⁷ Qur'an, al-Isrā 17:36

⁸⁸ Al-Shātibī, Al-Muwāfaqāt fī Uṣūl al-Sharī ah, Beirut: Dār al-Ma rifah, 1997, 2:8

The Balance (Wasatiyyah) in the Prophetic Model

If modern civilization tends toward extremes unbounded rationalism on one side and blind rejectionism on the other the Prophetic paradigm exemplifies wasatiyyah (balance, moderation). The Qur'an calls the Muslim community "ummatan wasaṭan" a justly balanced nation:

"And thus We have made you a balanced community, that you may be witnesses over mankind."

Wasatiyyah as an Epistemic Principle

Balance in Islam is not mere moderation of behavior; it is an epistemological virtue harmonizing reason and revelation, intellect and spirit, science and ethics. As Imām al-Ghazālī observes:

"The perfection of reason lies in recognizing its limits and submitting to the light of revelation." 90

In the Prophetic Sunnah, this balance is embodied through the principle of tawāzun equilibrium between spiritual aspiration and worldly engagement. The Prophet said:

91
إِنَّ لِرَبِّكَ عَلَيْكَ حَقًّا، وَلِنَفْسِكَ عَلَيْكَ حَقًّا، وَلِأَهْلِكَ عَلَيْكَ حَقًّا، فَأَعْطِ كُلَّ ذِي حَقِّ حَقَّهُ 19

"Your Lord has a right over you, your self has a right over you, and your family has a right over you so give each their due."

This hadith establishes wasatiyyah as the governing ethic of all human endeavors, including scientific pursuit. Scientific inquiry divorced from moral and social obligations becomes excess (isrāf), while spiritual withdrawal that neglects worldly responsibilities becomes deficiency (taqṣīr).

Prophetic Ethics and the Modern Knowledge Crisis

The Prophetic model reconciles faith and rationality through the principle of service to creation (khidmah al-khalq). Knowledge is not for domination but for benefit (manfa'ah). The Prophet prayed:

"O Allah, I seek refuge in You from knowledge that brings no benefit."

This supplication delineates the Islamic criterion for legitimate science knowledge must serve ethical ends. The moral worth of discovery lies not in its novelty but in its alignment with the maqāṣid al-sharīʿah: preservation of life (ḥifz al-nafs), intellect (ḥifz al-ʿaql), lineage (ḥifz al-nasl), property (ḥifz al-māl), and religion (ḥifz al-dīn). Seyyed Hossein Nasr eloquently remarks:

"The Prophet represents the perfect balance between the world of the spirit and the world of action; in him, sacred knowledge and worldly endeavor are harmonized." 93

Thus, wasatiyyah in the Prophetic model provides a corrective lens to modern science restoring proportion, humility, and moral teleology.

90 Al-Ghazālī, Ihyā' 'Ulūm al-Dīn, Beirut: Dār al-Kutub al-'Ilmiyyah, 2005, 1:57

⁸⁹ Qur'an, al-Baqarah 2:143

⁹¹ al-Bukhārī, Sahīh, hadīth no. 1968

⁹² Muslim, Sahīh, hadīth no. 2722

⁹³ Nasr, Seyyed Hossein. Knowledge and the Sacred. Albany: State University of New York Press, 1989, 99

The legal ethical dilemmas of modern science stem not from scientific discovery itself but from the loss of metaphysical restraint. Islam offers a coherent framework that integrates revelation, ethics, and empirical inquiry into a unified vision of truth.

The Prophetic model of wasatiyyah guides humanity toward a balanced civilization one that honors scientific creativity while preserving the sanctity of moral law. In this synthesis, knowledge is not a path to domination but to witnessing (shahādah) a testimony of divine order within creation.

Unity of Revelation and Reason in Islam

The intellectual foundation of Islam rests upon a profound synthesis between revelation (waḥy) and reason (ʻaql). Contrary to the dichotomy that characterizes post-Enlightenment epistemology, Islamic thought perceives no inherent conflict between divine revelation and rational inquiry. Both are complementary modes of guidance, leading the human intellect toward recognition of ultimate truth (al-ḥaqq). The Qur'an repeatedly invites reflection (tafakkur), reasoning (taʻaqqul), and observation (nazar) as essential acts of faith. Knowledge in Islam is not bifurcated into "religious" and "secular" domains but viewed as a unified pursuit directed toward the apprehension of divine order.

As the Qur'an declares:

"We shall show them Our signs in the horizons and within themselves until it becomes clear to them that this is the Truth."

This verse encapsulates the Qur'anic epistemology: revelation and empirical observation are two mirrors reflecting the same Reality. Revelation guides reason; reason, when purified, confirms revelation.

Revelation as the Source of Certainty

Revelation (waḥy) functions as the epistemic anchor that grounds human understanding in divine truth. Without revelation, human reason is prone to speculation, bias, and relativism. Imām al-Ghazālī articulated this synthesis eloquently:

"The light which God casts into the heart is the key to most knowledge; whoever believes that discovery is confined to rational proof has indeed narrowed the vast mercy of God."

Al-Ghazālī does not reject rationality; rather, he situates it within the hierarchy of divine illumination. For him, intellect is a noble faculty yet incomplete without the light of revelation that reveals the metaphysical dimension of reality.Al-Shāṭibī, building upon this tradition, emphasized that reason itself is validated by revelation:

⁹⁴ Qur'an, Fussilat 41:53

⁹⁵ al-Ghazālī, Iḥyā' 'Ulūm al-Dīn, Beirut: Dār al-Kutub al-'Ilmiyyah, 2005, 1:93

⁹⁶ al-Shātibī, Al-Muwāfaqāt fī Usūl al-Sharī'ah, Beirut: Dār al-Ma'rifah, 1997, 1:43

"Reason is foundational in understanding the divine law, but it cannot independently discern benefit except in the light of the Sharī'ah."

Hence, in Islamic epistemology, revelation and reason are not competitive but hierarchically integrated reason serves revelation by interpreting and actualizing its objectives.

Reason as the Instrument of Understanding

While revelation provides the ontological foundation of truth, reason is the methodological tool that interprets, deduces, and applies it to the world. The Qur'an frequently appeals to rational deliberation:

"افَكْ يَعْقِلُونَ" (Do they not reason?) Appearing over a dozen times establishes that reason is not antagonistic to faith but essential to it.According to Fakhr al-Dīn al-Rāzī, one of Islam's most profound theologians and philosophers:

"Reason is a condition for knowing the law; through it one understands revelation and affirms prophethood. Thus, it is a servant of the law, not its rival."

This balance ensures that faith is neither blind submission nor rational arrogance, but a conscious act of understanding anchored in both intellect and revelation.

Reconstruction of the Islamic Epistemic Paradigm

In contrast to modern secular epistemology, which separates facts from values and science from metaphysics, the Islamic worldview unifies knowledge under the sovereignty of God (tawhīd). This epistemic unity restores coherence between the spiritual and material dimensions of existence.

As Seyyed Hossein Nasr explains:

"To know is to penetrate beyond the veil of phenomena and to see things as signs (āyāt) of God. The divorce between knowledge and the sacred has led to the crisis of modern science."98

Similarly, Muhammad Iqbal sought to revive the dynamic synthesis of faith and reason in modern times:

"The spirit of Islam is not opposed to the rational search for truth; it seeks to harmonize revelation with human experience." 99

In this sense, the Qur'anic and Prophetic paradigm does not merely tolerate reason; it transforms it from an instrument of worldly control to a vehicle of divine recognition.

The unity of revelation and reason in Islam represents a civilizational synthesis that transcends the binary of faith and science. Revelation provides metaphysical certainty, while reason offers methodological clarity. Together, they form an integrated vision of knowledge that resists the moral fragmentation of modernity.

The Sunnah of the Prophet sembodies this equilibrium: his practice demonstrates that rational deliberation (ijtihād), when guided by revelation, becomes an act of worship and a means of fulfilling the divine trust (amānah).

⁹⁷ al-Rāzī, Al-Maṭālib al-ʿĀliyyah, Beirut: Dār al-Kutub al-ʿIlmiyyah, 1999, 1:12

⁹⁸ Nasr, Seyyed Hossein. Knowledge and the Sacred. Albany: State University of New York Press, 1989, 22

⁹⁹ Iqbal, Muhammad. The Reconstruction of Religious Thought in Islam. Lahore: Sheikh Muhammad Ashraf, 1930, 45

In reviving this synthesis, the Muslim intellectual tradition offers not merely a critique of modern science but an alternative epistemology — one that restores truth, morality, and purpose to the human quest for knowledge.

Ijtihād and Renewal of Islamic Legal Thought

The vitality of Islamic civilization has historically depended upon the dynamic institution of ijtihād the disciplined exertion of intellectual effort to derive rulings from the foundational sources of Islam: the Qur'an and Sunnah. Far from being a mechanical legal exercise, ijtihād is an epistemological principle of renewal (tajdīd), ensuring that the Sharī'ah remains responsive to new contexts without compromising its divine objectives (maqāsid).

Ibn al-Qayyim al-Jawziyyah famously articulated this principle:

"The foundation of the Sharī'ah is built upon wisdom and the welfare of humanity in this life and the next. It is entirely justice, mercy, benefit, and wisdom. Any rule that departs from justice to injustice, from mercy to cruelty, from benefit to harm, and from wisdom to nonsense is not part of the Sharī'ah, even if interpreted as such."

This statement captures the essence of dynamic legal reasoning ijtihād is not innovation outside revelation but engagement within revelation, aligning human judgment with divine intent.

The Role of Reason and Context in Ijtihād

The classical jurists never perceived ijtihād as mere analogy (qiyās) or technical deduction. It was the living instrument through which divine law interacted with the evolving conditions of human civilization.

Imām al-Shāfiʿī, the founder of legal hermeneutics (uṣūl al-fiqh), emphasized that ijtihād must rest on both textual fidelity and rational coherence:

"When the Sunnah of the Messenger of Allah becomes clear to someone, it is not lawful for him to abandon it for the opinion of any other person."

In this, al-Shāfiʿī underscores that ijtihād derives legitimacy only from its rootedness in the Prophetic model reason operates within the orbit of revelation, not beyond it. The same balance is affirmed by Al-Ghazālī, who warned against both literal rigidity and speculative excess:

"The jurist who abandons the spirit of the law for its letters, and the philosopher who abandons the law for pure speculation, both err in their approach to truth." 102

Hence, the renewal of Islamic law (tajdīd al-fikr al-fiqhī) lies in restoring the harmony between textual fidelity and contextual application a balance that modern reformers such as Muhammad Iqbal and Fazlur Rahman later sought to rearticulate.

Ilmiyyan, 1991, 3:14

¹⁰⁰ Ibn al-Qayyim, I'lām al-Muwaqqi'īn 'an Rabb al-'Ālamīn, Beirut: Dār al-Kutub al-'Ilmiyyah, 1991, 3:14

¹⁰¹ al-Shāfi 'ī, Al-Risālah, Cairo: Dār al-Turāth, 1940, 512

¹⁰² al-Ghazālī, Al-Mustasfā min 'Ilm al-Usūl, Beirut: Dār al-Kutub al-'Ilmiyyah, 1993, 1:19

Iqbal writes:

"The spirit of ijtihad is the principle of movement in Islam. When this principle is neglected, Islam ceases to be a living force." 103

Thus, ijtihād is not a relic of the classical age but the intellectual engine through which Islamic law engages with technological, social, and ethical modernity.

The Prophetic Model as an Intellectual Authority

At the center of Islamic epistemology stands the Prophetic intellect (al-'aql al-nabawī) a unique synthesis of revelation, wisdom, and action. The Prophet Muhammad embodies the integration of knowledge and practice, serving as the paradigm of intellectual and moral authority for all subsequent Muslim thought. The Qur'an explicitly affirms this function:

"Indeed, in the Messenger of Allah you have an excellent example for whoever hopes for Allah and the Last Day and remembers Allah much."

Here, uswah ḥasanah (the excellent example) is not only moral but epistemic the Prophet provides the interpretive model for understanding both divine revelation and worldly phenomena.

The Prophet as a Model of Rational and Ethical Action

The Prophetic intellect harmonized rational inquiry with ethical restraint. His engagement with the world was guided by reflection, consultation, and mercy — attributes that define the Islamic method of inquiry.

The Qur'an commands him:

"وَشَاوِرْهُمْ فِي الْأَمْرِ 105"

"Consult them in affairs."

Ibn Kathīr comments on this verse:

"God commanded him to consult his companions, though he was independent of their counsel, to honor them and to teach the community that blessing and correctness lie in consultation."

This demonstrates that Prophetic reasoning was neither authoritarian nor dogmatic; it was participatory, empirical, and ethically grounded an early form of intellectual humility and collective reasoning (shūrā).

The Prophetic Model as the Archetype of Knowledge

According to Seyyed Hossein Nasr, the Prophet is "the archetype of the hakīm the sage who embodies knowledge as wisdom, not merely information"

In this sense, the Prophetic Sunnah represents the living synthesis of intellect ('aql), revelation (waḥy), and action ('amal). His intellectual legacy integrates contemplation (tafakkur) with service ('ibādah), science with ethics, and law with spirituality.Imām al-Qarāfī highlighted this integration:

¹⁰⁵ Qur'an, Āl 'Imrān 3:159

¹⁰³ Iqbal, Muhammad. The Reconstruction of Religious Thought in Islam. Lahore: Sheikh Muhammad Ashraf, 1930, 146

¹⁰⁴ Qur'an, al-Ahzāb 33:21

¹⁰⁶ Ibn Kathīr, Tafsīr al-Qur'ān al-'Azīm, Beirut: Dār al-Kutub al-'Ilmiyyah, 1998, 2:210

¹⁰⁷ al-Qarāfī, Al-Furūq, Beirut: 'Ālam al-Kutub, 1998, 1:32

"Every action of the Prophet is presumed to have legislative significance unless evidence indicates it was exclusive to him."

This principle establishes the Prophet not only as a source of law but as the epistemic standard for interpreting reality itself. His actions provide a template for how intellect and revelation coexist harmoniously.

The Prophetic intellect is the cornerstone of Islamic epistemology — the point at which divine revelation becomes embodied in rational, ethical, and social action. In him, revelation assumes a human form that both transcends and informs reason.

Therefore, the renewal of Islamic thought (tajdīd al-fikr al-islāmī) cannot occur without reviving the Prophetic model as the supreme intellectual and ethical authority. This model offers a paradigm of balanced rationality, one that transforms knowledge into wisdom and science into service. In the contemporary age of technological dominance, where information expands but meaning collapses, the Prophetic model reasserts the unity of truth, morality, and knowledge the very unity upon which the Islamic civilization was founded.

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