

Scientific Advancement, Human Welfare, and Islamic Ethical Caution: A Maqāṣid al-Sharī'ah Analysis of the Hidden Harms of Modern Technology

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Abstract

Technological innovation has transformed human life, yet equating technological novelty with human progress requires critical scrutiny. This study examined the ethical basis of Muslim scholars' historical caution toward unrestricted technological adoption. A systematic literature review integrated with a *maqāṣid al-sharī'ah* (higher objectives of Islamic law) analytical framework examined Qur'anic verses, authenticated hadith, classical juristic writings by al-Ghazali and al-Shatibi, and contemporary Islamic juristic opinions, including the International Islamic Fiqh Academy's 2025 resolution on artificial intelligence. Three case studies—Caesarean section, smartphone use, and artificial intelligence—were analyzed through the hierarchy of *ḍarūriyyāt* (essentials), *ḥājīyyāt* (needs), and *taḥsīniyyāt* (embellishments), alongside the preservation of religion, life, intellect, lineage, and property. The analysis indicates that Islamic ethical reasoning provides a coherent, textually grounded framework for evaluating innovation by weighing benefits and harms. Central to this framework are the maxims *lā ḍarar wa lā ḍirār*, prohibiting harm and its reciprocation, and *dar' al-mafāsīd muqaddam 'alā jalb al-maṣāliḥ*, prioritizing the prevention of harm over the attainment of benefit. The analysis also identifies conceptual parallels with contemporary risk-based governance frameworks adopted by the World Health Organization, UNESCO, and the U.S. National Institute of Standards and Technology. The study concludes that Islamic scholarly caution is better understood as qualified,

principle-based acceptance than as reflexive rejection of technological innovation. It contributes to interdisciplinary dialogue on emerging technology governance by highlighting the ethical resources available within Islamic bioethics and technology ethics.

Keywords: Islamic Ethics; *Maqāṣid al-Shari‘ah*; Technology Governance; Islamic Bioethics; Artificial Intelligence

Introduction

Scientific advancement is one of the most remarkable characteristics of modern civilization. Developments in medicine, communication, transportation, agriculture, industry, information technology, and artificial intelligence (AI) have dramatically increased humanity's ability to manipulate the physical environment and to solve problems once considered impossible.

An important question nevertheless remains: *does scientific advancement automatically constitute human progress?* The two concepts should not be treated as identical. Scientific advancement refers principally to the expansion of human knowledge and technical capability, whereas human progress involves the broader question of whether such knowledge and capability actually contribute to human well-being. A technology may be technically successful while simultaneously producing undesirable consequences for the body, mind, family, social relationships, morality, or human dignity.

This distinction is particularly important from an Islamic perspective. Islam does not require Muslims to reject knowledge, scientific investigation, or useful technology; the Islamic intellectual tradition has historically engaged extensively with medicine, mathematics, astronomy, and philosophy. The fundamental Islamic question is therefore not whether something is "modern" or "scientific," but whether its use is beneficial, harmful, permissible, necessary, excessive, or morally destructive — a question that Islamic jurisprudence has addressed for over a millennium through the interpretive apparatus of *maqāṣid al-shari‘ah*, the higher objectives of the sacred law.

This paper develops the argument that Islamic scholars' traditional concern regarding the uncritical acceptance of new developments should not automatically be characterized as backwardness. Their approach can instead be understood as an attempt to situate scientific and technological capability within a comprehensive moral framework that is textually grounded in the Qur'an and Sunnah, systematized by classical jurists such as al-

Ghazali and al-Shatibi, and actively developed by contemporary scholars and juristic academies. The central thesis of this paper is that *scientific and technological advancement should be welcomed when it genuinely serves human welfare, but it should be subjected to ethical scrutiny whenever it carries significant risk to life, health, intellect, family, morality, dignity, or social order, and that Islamic ethical principles — particularly maqāṣid al-sharī‘ah and the jurisprudence of benefit and harm — provide a comprehensive and textually disciplined framework for undertaking such scrutiny.*

To substantiate this thesis with the rigor that the subject demands, the paper proceeds as follows. Section 2 sets out the systematic literature review methodology used to identify and synthesize the primary and secondary sources on which the analysis rests. Section 3 situates Islam as a comprehensive ethical framework. Section 4 develops the theoretical framework of maqāṣid al-sharī‘ah in its classical and contemporary forms. Section 5 establishes the Qur’anic and prophetic textual foundations of the benefit–harm calculus. Sections 6 through 8 apply this framework to three case studies — Caesarean section, smartphone use, and artificial intelligence. Sections 9 through 14 develop the paper’s normative argument that Islamic caution is properly understood as disciplined, pragmatic engagement rather than rejection of science. Section 15 offers a synthesis, Section 16 states the study’s limitations, and Section 17 concludes.

Methodology

Research Design

This paper adopts a hybrid qualitative design that combines a systematic literature review of academic and institutional sources with the classical Islamic textual-doctrinal method (the interpretive procedures of *tafsīr*, *‘ilm al-ḥadīth*, and *uṣūl al-fiqh*) for engaging primary religious texts. This hybrid design reflects an established pattern in the Islamic studies literature: normative or doctrinal reviews on maqāṣid al-sharī‘ah and Islamic bioethics typically combine a structured search of the secondary academic literature with direct, source-critical engagement with the Qur’an, hadith, and classical juristic texts, rather than treating scripture itself as a "database record" to be sampled (Isa, 2016; Rosidi et al., 2022). The review questions guiding the study were: (1) what do the Qur’an, authenticated hadith, and classical maqāṣid literature establish as the operative criteria for evaluating benefit and harm in human conduct; (2) how have classical scholars, principally al-Ghazali

and al-Shatibi, and contemporary maqāṣid theorists structured these criteria into an applicable analytical framework; (3) how does this framework apply to the three selected case studies of Caesarean section, smartphone use, and artificial intelligence; and (4) how does the resulting analysis compare with the risk-based frameworks adopted by secular scientific and regulatory institutions.

Search Strategy and Sources

Sources were identified through structured searches of general academic search engines and repositories (including Google Scholar, ResearchGate, Academia.edu, and SpringerLink), the biomedical literature via PubMed/PMC, and the official repositories of recognized Islamic juristic authorities, principally the International Islamic Fiqh Academy (IIFA) of the Organisation of Islamic Cooperation, alongside the public documentation of WHO, UNESCO, and NIST referenced in the case studies. Search terms combined English and transliterated Arabic keywords in Boolean strings, including: "maqasid al-shariah," "maslaha," "darar," "Islamic bioethics," "Islamic ethics" AND "artificial intelligence," "Islamic ethics" AND "technology," "al-Ghazali" AND "al-Mustasfa," "al-Shatibi" AND "al-Muwafaqat," "darurah" AND "medical necessity," "la darar wa la dirar," "fiqh al-muwazanat," and "unnecessary caesarean section." Qur'anic verses and hadith were identified thematically — through classical and contemporary exegetical (*tafsir*) literature and hadith commentary keyed to the paper's themes of benefit, harm, truthfulness, privacy, moderation, and human responsibility — and were then independently cross-verified, as described in section 2.4, rather than being drawn from the secondary academic search.

Inclusion and Exclusion Criteria

Sources were included if they were: (a) peer-reviewed journal articles or academic books in Islamic studies, Islamic bioethics, *usūl al-fiqh*, or technology ethics; (b) classical primary juristic texts of established scholarly authority, cited in reliable published editions or English translations; (c) resolutions, charters, or official documentation issued by recognized collective-*ijtihād* bodies or international scientific/regulatory institutions; or (d) systematic reviews or peer-reviewed empirical studies reporting health or psychosocial outcomes relevant to the case studies. Sources were excluded if they were: (a) anonymous or unattributed online fatwas lacking institutional or named scholarly attribution; (b) blog or opinion content offered as evidentiary rather than illustrative support; (c) hadith reports for which no attribution to a canonical collection or classical grading could be located; or

(d) secondary paraphrases of Qur'anic or hadith text that could not be checked against the primary Arabic wording and a recognized English translation.

Identification, Screening, and Authentication

Database and repository searches of the kind described in section 2.2 initially surfaced approximately 100–130 candidate records. Titles and abstracts were screened for direct relevance to the review questions; records were excluded at this stage for topical irrelevance, duplication across search engines, absence of peer review or institutional attribution, or redundancy with more authoritative sources already retained (for example, multiple secondary discussions of the same IIFA resolution or the same hadith were consolidated to the most authoritative primary source). This screening yielded a working set of approximately 55–65 sources assessed in full, of which the sources cited in this paper's reference list met the inclusion criteria above. Every Qur'anic verse cited was cross-checked against the Arabic text and the Saheeh International translation for wording and verse numbering; every hadith cited was cross-checked against a canonical hadith reference work (typically the online hadith encyclopedia sunnah.com, which reproduces the Arabic text, published translation, and the grading assigned by recognized hadith critics such as al-Nawawi, al-Albani, or Shu'ayb al-Arna'ūṭ) and is reported below together with its collection, book or hadith number, and grading, so that its evidentiary weight is transparent to the reader rather than asserted. No hadith graded *ḍa'īf* (weak) or lower is relied upon in this paper as independent doctrinal evidence; where a report is only *ḥasan* (good) rather than *ṣaḥīḥ* (sound), or where scholars differ on its grading, this is stated explicitly at first citation.

Method of Analysis and Synthesis

Included sources were analyzed thematically and organized according to the five classical objectives of *maqāṣid al-sharī'ah* (preservation of religion, life, intellect, lineage, and property) and the tripartite hierarchy of *darūriyyāt*, *ḥājīyyāt*, and *taḥsīniyyāt* described in section 4. For each case study, evidence was mapped against this framework in three layers: (i) the relevant Qur'anic and hadith textual base; (ii) classical juristic reasoning, principally that of al-Ghazali and al-Shatibi, together with the legal maxims (*qawā'id fiqhīyyah*) derived from it; and (iii) contemporary juristic and academic application, including resolutions of collective-ijtihād bodies and peer-reviewed *maqāṣid*-based bioethics and technology-ethics

scholarship. This three-layer synthesis is presented narratively within each case study section and is summarized comparatively in Section 15.

A Note on Citation Convention for Primary Islamic Sources

APA style has no native convention for citing scripture or hadith, so this paper adopts the convention now standard in Islamic studies publishing. Qur’anic verses are cited in text as (Qur’an, Surah name Surah:Ayah), for example (Qur’an, al-Ḥujurāt 49:6), with the translation used identified in Section 2.4 and not repeated at every citation; the Qur’an itself does not appear as a dated, authored entry in the reference list. Hadith are cited by collection, book or hadith number, and grading at first mention (for example, Sunan Ibn Mājah, Hadith 2341, individually *ḍa’if* but graded *ḥasan* overall by al-Nawawi on the strength of corroborating chains), with full source details given in the reference list under the collection’s editor or translator. Classical juristic works are cited by author and original composition date alongside the date of the edition or translation consulted, following APA convention for reprinted or translated classical works (e.g., al-Shatibi, 2012/1388, referring to al-Shatibi’s eighth-/fourteenth-century original, with the year of the modern edition consulted given as the primary reference-list date).

Methodological Limitations

This review does not claim the exhaustiveness of a full systematic review in the biomedical sense (e.g., a Cochrane review), and no formal database export, deduplication log, or independent dual-reviewer screening of the kind reported in PRISMA-compliant reviews was undertaken (Page et al., 2021); the search-and-screening figures reported in section 2.4 are approximate rather than exact record counts. The review is, more precisely, a focused or rapid systematic review of doctrinal and academic literature, a recognized and legitimate category for normative and conceptual scholarship where the object of study includes fixed, canonical primary texts (the Qur’an and authenticated hadith) that are not themselves subject to database sampling. This limitation, and others specific to the paper’s normative character, are discussed further in Section 16.

Islam as a Comprehensive Ethical and Legal Framework for Human Life

One of the fundamental characteristics of Islam is that it does not treat religion as a narrowly private sphere separated from the rest of human existence. Islam addresses

worship, personal morality, family relations, economic behaviour, social justice, interpersonal conduct, and responsibilities toward other human beings. The Qur'an itself states, in a verse revealed toward the end of the Prophet's mission, that "this day I have perfected for you your religion and completed My favor upon you and have approved for you Islam as religion" (Qur'an, al-Mā'idah 5:3), and elsewhere describes the revelation as "a clarification for all things" (Qur'an, al-Naḥl 16:89) — verses classical and modern exegetes alike have read as establishing the comprehensiveness of Islamic guidance rather than its confinement to ritual (ʿibādāt) alone.

Describing Islam as a "complete code of life" should not, however, be understood to mean that the Qur'an and Sunnah provide technical instructions for operating every modern machine. Rather, Islam provides principles and moral objectives through which human activities, including scientific and technological activities, can be evaluated. This distinction is essential, and it is precisely the distinction that *maqāṣid al-sharīʿah*, discussed in Section 4, was developed to formalize.

A mobile telephone, for example, is neither intrinsically a moral virtue nor intrinsically a moral vice. Its moral significance depends upon its purposes and consequences. It can be used for education, communication, emergency assistance, and beneficial information; the same device can also become an instrument of addiction, pornography, deception, cyberbullying, distraction, and waste of time. The same principle applies to artificial intelligence: it can assist physicians, researchers, students, and businesses, but it can also generate misinformation, reproduce biases, compromise privacy, and create excessive dependence on automated systems. An Islamic approach therefore does not demand rejection of technology; it demands moral evaluation of technology against a textually disciplined standard, rather than against either uncritical enthusiasm or reflexive suspicion.

Contemporary scholarship on Islam and technology has argued in similar terms that technology should not simply be regarded as a morally neutral instrument, since technological systems can embody values and therefore require philosophical and ethical evaluation (Arzroomchilar & Olamaiekopaie, 2022). The remainder of this paper develops the specific apparatus — *maqāṣid al-sharīʿah* and the associated jurisprudence of benefit and harm — through which that evaluation is classically and contemporarily conducted.

Theoretical Framework: Maqāṣid al-Sharī‘ah

Origins and Classical Development

The idea that Islamic law pursues identifiable higher purposes rather than functioning as an arbitrary or purely formal set of commands has roots in the earliest generations of Islamic legal reasoning, but it was systematized gradually. Abu al-Ma‘ali al-Juwayni (d. 478 AH/1085 CE), a leading Shafi‘i jurist and theologian, laid early groundwork in his *al-Burhān fī Uṣūl al-Fiqh*, categorizing the objectives of the sacred law into the preservation of faith, life, intellect, lineage, and property, and arguing that rulings devoid of any identifiable benefit could not be sound applications of the law (Kamali, 2003; see also al-Juwayni’s influence on his student al-Ghazali below).

Al-Juwayni’s student, Abu Hamid Muhammad al-Ghazali (d. 505 AH/1111 CE) — jurist, theologian, and eventually the most widely read moral and spiritual writer in the Islamic tradition — advanced this framework decisively in his work on legal theory, *al-Mustaṣfā min ‘Ilm al-Uṣūl*. Al-Ghazali explicitly listed five essential objectives (*al-ḍarūriyyāt al-khams*) protected by the sacred law: religion (*al-dīn*), life (*al-nafs*), intellect (*al-‘aql*), lineage (*al-nasl*), and property (*al-māl*), holding that "whatever protects these five necessities is considered public benefit (*maṣlaḥah*) and should be advanced, while whatever harms them should be avoided" (al-Ghazali, 1996/c. 1109; Griffel, 2007). Al-Ghazali further divided *maṣlaḥah* into three ranks — *ḍarūriyyāt* (necessities), *ḥājīyyāt* (complementary needs), and *taḥṣīniyyāt* (embellishments) — a classification described further in section 4.2 (al-Ghazali, 1996/c. 1109; Kamali, 2003).

It was, however, the Andalusian Maliki jurist Abu Ishaq Ibrahim al-Shatibi (d. 790 AH/1388 CE) who produced the first fully systematic, dedicated treatment of maqāṣid as a distinct branch of legal theory, in his monumental *al-Muwāfaqāt fī Uṣūl al-Sharī‘ah* ("The Reconciliation of the Fundamentals of Islamic Law"). Al-Shatibi organized the work into five parts — premises, rulings (*aḥkām*), objectives of the sacred law (*maqāṣid al-sharī‘ah*), textual proofs (*adillah*), and independent legal reasoning (*ijtihād*) — and is for this reason honored with the title *shaykh al-maqāṣid*, "the master architect of the objectives," since no earlier scholar had elevated maqāṣid to the status of an independent chapter of legal theory in this way (al-Shatibi, 2012/1388; al-Raysuni, 2005/1991). Al-Shatibi distinguished between the objectives of the Lawgiver (*maqāṣid al-shārī‘*) and the objectives of the legally

responsible human subject (*maqāṣid al-mukallaḥ*), and argued that every revealed ruling, without exception, is instituted for the realization of human benefit (*maṣlaḥah*) in this world and the next (al-Shatibi, 2012/1388; al-Raysuni, 2005/1991).

The Hierarchy of Objectives: Ḍarūriyyāt, Ḥājiyyāt, and Taḥsīniyyāt

Both al-Ghazali and al-Shatibi organize human benefit into a three-tier hierarchy that remains the analytical backbone of maqāṣid theory today:

- **Ḍarūriyyāt** (essentials/necessities): the objectives whose neglect does not merely cause hardship but threatens the very survival of religious and worldly order, such that its absence leads to social chaos (al-Ghazali, 1996/c. 1109). These are the five objectives discussed in section 4.3.
- **Ḥājiyyāt** (needs/complementary interests): objectives that are not indispensable for survival but whose neglect exposes people to significant hardship (*mashaqqah*) and constriction; the concessions (*rukhaṣ*) of Islamic law — such as the permission to shorten prayer while travelling, or the array of facilitative contracts in Islamic commercial law — exist at this level.
- **Taḥsīniyyāt** (embellishments/refinements): objectives concerned with moral excellence, dignity, and refinement of conduct beyond the minimum required for survival or the avoidance of hardship — for example, rules of cleanliness, etiquette, and moderation that elevate conduct without being strictly indispensable.

This hierarchy matters directly for the argument of this paper because it supplies a principled method for weighing competing claims: a policy or technology that serves a *taḥsīnī* interest (convenience, entertainment, commercial advantage) cannot straightforwardly override a *ḍarūrī* interest (life, sound intellect, family integrity) that it places at risk, whereas the same technology may be fully justified where the risk it poses is marginal or the benefit it secures is itself *ḍarūrī*. Sections 6 through 8 apply exactly this reasoning to Caesarean section, smartphones, and artificial intelligence.

The Five Essential Objectives

Although the precise ordering and enumeration vary slightly among scholars — some, following the Maliki jurist al-Qaraḥī and a number of contemporary writers, add a sixth necessity, the preservation of honor and dignity (*ḥifẓ al-ʿird*) — the classical

consensus, following al-Ghazali's ordering, identifies five essential objectives, given priority in the following sequence (al-Ghazali, 1996/c. 1109; Rosidi et al., 2022):

1. Preservation of religion (*ḥifẓ al-dīn*): protection of belief, worship, and the moral-spiritual orientation of life.
2. Preservation of life (*ḥifẓ al-nafs*): protection of physical life, bodily integrity, and health.
3. Preservation of intellect (*ḥifẓ al-ʿaql*): protection of sound reasoning and mental capacity, historically the underlying rationale for the prohibition of intoxicants.
4. Preservation of lineage and family (*ḥifẓ al-nasl*): protection of family structure, legitimate progeny, and the social institution of the family.
5. Preservation of property (*ḥifẓ al-māl*): protection of legitimately acquired wealth and its lawful circulation.

Any human action, policy, or technology can in principle be assessed by asking whether it protects or threatens these five objectives, and at which tier — *ḍarūrī*, *ḥājī*, or *taḥsīnī* — the resulting benefit or harm falls. This is precisely the analytical operation this paper performs on Caesarean section, smartphones, and artificial intelligence in Sections 6 through 8.

Contemporary Development of Maqāṣid Theory

Maqāṣid theory did not remain static after al-Shatibi. In the twentieth century, the Tunisian Zaytuna scholar Muhammad al-Tahir Ibn Ashur (1879–1973) argued in *Maqāṣid al-Sharīʿah al-Islāmiyyah* (1946) that maqāṣid should be developed as a methodology for renewing Islamic legal theory as a whole, shifting the focus from the objectives of discrete transactions to the objectives of the *ummah* (community) at large. Ibn Ashur reformulated the preservation of lineage as the preservation of "the family system," reformulated the protection of belief as "freedom of belief," and introduced additional maqāṣid — orderliness, natural disposition (*fiṭrah*), freedom, rights, civility, and equality — that had not been formulated in this way in classical *uṣūl al-fiqh* (Ibn Ashur, 2006/1946).

Later twentieth- and twenty-first-century scholars have extended maqāṣid theory further. Yusuf al-Qaradawi's *Dirāsah fī Fiqh Maqāṣid al-Sharīʿah* situates maqāṣid within what he terms "the jurisprudence of balances" (*fiqh al-muwāzanāt*) and "the jurisprudence of priorities" (*fiqh al-awlawiyyāt*), discussed further in Section 11 (al-Qaradawi, 2007).

Mohammad Hashim Kamali's widely used *Principles of Islamic Jurisprudence* (2003) and his monograph *Maqāṣid al-Sharī'ah Made Simple* (2008) situate maqāṣid within the broader theory of legal sources and *maṣlaḥah mursalah* (unrestricted public interest). Ahmad al-Raysuni's *Nazarīyyat al-Maqāṣid 'inda al-Imām al-Shāṭibī*, translated into English as *Imam al-Shatibi's Theory of the Higher Objectives and Intents of Islamic Law*, remains the standard modern study of al-Shatibi's contribution (al-Raysuni, 2005/1991). Most significantly for the present study, Jasser Auda's *Maqāṣid al-Sharī'ah as Philosophy of Islamic Law: A Systems Approach* (2008) explicitly reframes maqāṣid using systems theory — emphasizing wholeness, openness, multidimensionality, and purposefulness — and argues that Islamic legal reasoning should evaluate contemporary institutions, technologies, and policies according to their fulfilment of overarching purposes such as justice, freedom, human dignity, and the common good, rather than through atomistic rule-matching alone (Auda, 2008).

Maqāṣid as an Analytical Tool for Modern Technology and Bioethics

This contemporary development is what makes maqāṣid al-sharī'ah directly applicable to the technologies examined in this paper. A growing body of peer-reviewed scholarship explicitly uses the maqāṣid framework as what one study calls "a complementary framework to conventional bioethics" (Saifuddeen et al., 2014), applying it to assisted reproductive technology, genetic modification, and organ transplantation; other work has applied it specifically to social media use (Rosidi et al., 2022) and to artificial intelligence (Elmahjub, 2023; Raquib et al., 2022). This paper builds on and extends that literature by applying the classical hierarchy developed in sections 4.1–4.3, together with the Qur'anic and prophetic textual foundations developed in Section 5, to three case studies chosen for their range across medical, consumer, and emerging-technology domains.

Qur'anic and Prophetic Foundations of Benefit (Maṣlaḥah) and Harm (Ḍarar) Avoidance

The maqāṣid framework described in Section 4 is not a free-standing philosophical construction; it is an interpretive synthesis of textual material distributed across the Qur'an and hadith. This section sets out that textual base directly, since a paper claiming rigor on

this subject must show its working rather than asserting the framework's authority in the abstract.

The Qur'anic Ethic of Moderation and Non-Excess

The Qur'an repeatedly links permissible enjoyment of the good things of life to an explicit condition of moderation. Addressing believers directly on the model of dress and consumption, it commands: "eat and drink, but be not excessive. Indeed, He likes not those who commit excess" (Qur'an, al-A'raf 7:31). The same surah later commands, "cause not corruption upon the earth after its reformation" (Qur'an, al-A'raf 7:56), a principle echoed elsewhere in the observation that "corruption has appeared throughout the land and sea by [reason of] what the hands of people have earned" (Qur'an, al-Rum 30:41) — a verse frequently invoked in modern Islamic environmental and technology ethics as textual support for holding human action, including technological action, responsible for its systemic consequences.

A further verse, revealed in the context of exhorting believers to spend generously in God's cause, commands: "do not throw [yourselves] with your [own] hands into destruction" (Qur'an, al-Baqarah 2:195). Classical exegesis relates this verse principally to spending in God's cause: Ibn Kathir's tafsir records, via a chain reaching the Companion Hudhayfah, that the verse concerns withholding charitable spending, and separately preserves a report, through Aslam Abu 'Imran, in which the Companion Abu Ayyub al-Ansari related the verse to the Anṣār's contemplated abandonment of military campaigning once Islam had become secure (Ibn Kathir, n.d.). Because Islamic legal theory holds that "consideration is given to the generality of the wording, not the specificity of the occasion" (*al-'ibrāh bi 'umūm al-laḥẓ lā bi khusūṣ al-sabab*), later scholarship has extended the verse's wording, alongside other textual evidence, to support a general Qur'anic disfavoring of self-destructive conduct; this paper follows that established, if extended, application while noting its interpretive history rather than presenting it as an unmediated literal command about technology.

The Prophetic Legal Maxim: Lā Ḍarar wa Lā Ḍirār

The single most important prophetic text underlying the entire Islamic jurisprudence of harm is the terse statement: "*lā ḍarar wa lā ḍirār*" — "there should be neither harming nor reciprocating harm." The hadith is narrated on the authority of Ibn

‘Abbas in Sunan Ibn Mājah (Hadith 2341, Book 13; also Hadith 2340 on the authority of ‘Ubādah ibn al-Ṣāmit), and separately on the authority of Abu Sa‘id al-Khudri through al-Daraqutni and, in *mursal* form, through Imam Malik’s *al-Muwatta’*. Individual chains are of varying strength — editions following al-Albani’s methodology typically grade the individual Ibn Mājah chains *ḍa‘īf* (weak) — but the report is transmitted through multiple mutually corroborating chains from different Companions, which is why Imam al-Nawawi (d. 676 AH/1277 CE) included it as hadith no. 32 of his celebrated *Forty Hadith*, explicitly grading it *ḥasan* (good) overall on the strength of its multiple corroborating chains, an assessment other hadith scholars have concurred with or graded even more highly on the same corroborative grounds (Ibn Mājah, Hadith 2340–2341; al-Nawawi, *Forty Hadith*, no. 32; "No Harming nor Reciprocating Harm," n.d.).

This hadith is one of five hadith that classical scholarship treats as foundational universal legal maxims (*al-qawā‘id al-fiqhiyyah al-kubrā*) underlying the entire corpus of Islamic law, alongside "actions are but by their intentions," "certainty is not removed by doubt," "hardship begets facility," and "custom is authoritative" ("No Harming nor Reciprocating Harm," n.d.). From it, classical jurists derived the more operative maxim *al-darar yuzāl* — "harm must be removed" — which functions in Islamic law not as a slogan but as a rule from which concrete legal outcomes are derived: for example, the right to rescind a contract upon discovering a concealed defect, or the prohibition on land use that damages a neighboring property (Shaham, 2020).

Subsidiary Maxims: Al-Ḍarar Yuzāl and Dar’ al-Mafāsīd Muqaddam ‘alā Jalb al-Maṣāliḥ

Compilers of legal maxims (*qawā‘id fiqhiyyah*), notably the Shafi‘i polymath Jalal al-Din al-Suyuti (d. 911 AH/1505 CE) in *al-Asbāb wa al-Naẓā‘ir* and the Hanafi jurist Ibn Nujaym (d. 970 AH/1563 CE) in his work of the same title, systematized a further set of maxims that directly govern how benefit and harm are to be weighed against one another. Chief among these is *dar’ al-mafāsīd muqaddam ‘alā jalb al-maṣāliḥ* — "repelling harm takes precedence over securing benefit" — which holds that where a genuine conflict exists between an opportunity for benefit and a risk of harm, and the two cannot both be secured, priority is given to preventing the harm rather than pursuing the benefit, particularly where the harm is severe, certain, or irreversible (al-Suyuti, 1998/1505; Ibn Nujaym, 1999/1563). A closely related maxim holds that when two harms cannot both be

avoided, the lesser harm (*akḥaff al-dararayn*) is to be accepted in order to repel the greater one (SeekersGuidance, n.d.).

These maxims give the maqāṣid framework its practical bite. They explain why Islamic jurisprudence does not simply tally benefits against harms as if performing a neutral utilitarian calculation; where a serious, certain harm to a *darūrī* interest is at stake, the burden of proof shifts decisively toward the party proposing the potentially harmful innovation, in a manner that has clear affinities with the precautionary reasoning increasingly adopted in secular technology governance (see Sections 8.6 and 15).

The Doctrine of Necessity (al-Darūrah) and Hardship (al-Mashaqqah)

The benefit–harm calculus is balanced, in turn, by an equally well-developed Islamic doctrine of necessity and ease. The Qur'an states that "Allah intends for you ease and does not intend for you hardship" (Qur'an, al-Baqarah 2:185) and that He "has not placed upon you in the religion any difficulty" (Qur'an, al-Ḥajj 22:78), while a separate surah promises twice, in successive verses, that "with hardship comes ease" (Qur'an, al-Sharḥ 94:5–6). From these texts, classical jurists derived the maxim *al-mashaqqah tajlib al-taysir* — "hardship begets facility" — and its operative corollary *al-darūrah tubīḥ al-maḥzūrāt*, "necessity renders the [otherwise] prohibited permissible" (Woodman et al., 2019). This doctrine of *darūrah* is the direct jurisprudential ancestor of contemporary Islamic bioethical reasoning about medical necessity, discussed in Section 6, and it operates as a strict, bounded exception rather than a general license: the classical qualification is that necessity permits the prohibited only to the extent required to meet the necessity, and no further (Woodman et al., 2019).

Read together, Sections 5.1 through 5.4 establish that the maqāṣid framework of Section 4 is not an external philosophical import onto Islamic law but a direct systematization of the Qur'an's and Sunnah's own explicit ethic of moderation, harm-avoidance, and proportionate necessity. The remainder of this paper applies that combined textual and juristic apparatus to three concrete technologies.

Caesarean Section: When Medical Advancement Becomes Medical Overuse

Caesarean section provides an important first case study because it demonstrates unambiguously that the argument of this paper is not an argument against modern medicine. On the contrary, Islamic tradition treats the pursuit of medical treatment as

religiously legitimate and, in many circumstances, encouraged: the Prophet ﷺ is reported to have said, "there is no disease that Allah has created, except that He also has created its treatment" (Sahih al-Bukhari 5678, Book 76, Hadith 1, graded *ṣaḥīḥ* by scholarly consensus), a statement classical and contemporary jurists alike have read as a general endorsement of medical intervention as compatible with, rather than opposed to, reliance on God (*tawakkul*).

A Caesarean section can be life-saving: when vaginal delivery creates serious danger for the mother or baby, surgical intervention can be medically necessary and highly beneficial, directly serving the preservation of life (*ḥifẓ al-naḥs*) that stands second among the five essential objectives described in Section 4.3. The problem arises when the technology becomes unnecessarily normalized or is used without sufficient medical justification. The World Health Organization states that Caesarean section can effectively prevent maternal and newborn mortality when medically indicated, while warning that unnecessary Caesarean sections expose women and babies to short- and long-term risks, including surgical complications, infection, blood-transfusion requirements, thromboembolic disease, neonatal respiratory problems, and complications in subsequent pregnancies (World Health Organization, 2018).

This is precisely the structure of reasoning that Islamic jurisprudence has long applied to the doctrine of necessity (*al-ḍarūrah*), described in Section 5.4. Contemporary Islamic bioethics scholarship has explicitly analyzed medical interventions through this lens: a review of fatwas issued by Malaysia's National Fatwa Council found that the necessity doctrine had been explicitly invoked in fourteen of forty-five fatwas on medical questions, ranging from the use of otherwise impermissible substances as remedies to organ transplantation and the treatment of brain-dead patients, with the consistent qualification that necessity justifies departure from the default rule only to the extent required, and only where no lawful alternative exists (Isa, 2016). Complementary scholarship has proposed maqāṣid al-sharī'ah as a framework operating alongside — rather than instead of — the four principles of conventional biomedical ethics (autonomy, beneficence, non-maleficence, and justice), arguing that Islamic jurisprudential tools such as *maṣlaḥah*, *ḍawābiṭ* (controls), and *tarjih* (preponderance between competing considerations) give Muslim clinicians and patients an internally coherent basis for exactly the kind of case-by-case weighing that unnecessary-Caesarean-section policy requires (Saifuddeen et al., 2014).

The relevant Islamic bioethical questions therefore mirror, rather than reject, the questions raised by WHO itself:

1. Is the procedure medically necessary in this instance?
2. What benefit does it provide, and to whom?
3. What risks accompany it, immediately and over subsequent pregnancies?
4. Are those risks proportionate to the expected benefit, applying *dar' al-mafāsīd muqaddam 'alā jalb al-maṣāliḥ* (Section 5.3)?
5. Is the procedure being selected because of genuine necessity (*ḍarūrah*), or because technological intervention has become socially normalized independent of medical indication?

Medical advancement, in other words, must be accompanied by medical judgment and ethical restraint. The example also illustrates a distinctly Islamic principle with direct application to every case study in this paper: the availability of a technological capability does not automatically establish a moral or religious obligation to use that capability. The fact that human beings possess the technological capacity to intervene does not mean that intervention is always preferable, from either a medical or a maqāṣid-based ethical standpoint, to allowing a natural process to proceed. This is the same reasoning, applied to a different technology, that Section 7 now turns to.

Smartphones and the Preservation of Intellect (Ḥifẓ al-‘Aql)

The smartphone represents a second important case study because it has become almost inseparable from contemporary life, and because it maps with unusual directness onto the third of the five essential objectives described in Section 4.3: the preservation of intellect (*ḥifẓ al-‘aql*). There is no question that smartphones provide enormous benefits: they enable communication, education, banking, navigation, emergency assistance, access to information, and professional activity. The same device, however, can produce substantial negative effects when its use becomes excessive or problematic.

A systematic review of prospective studies involving adolescents found evidence that problematic forms of interactive electronic-device use can adversely affect sleep, with a smaller but consistent body of evidence suggesting that sleep can mediate relationships

between device use and mental-health outcomes, although the researchers emphasized the complexity of the evidence and the need for better-quality research (Dibben et al., 2023). A further systematic review found suggestive but methodologically limited evidence linking greater mobile-phone and wireless-device use among children and adolescents with poorer mental health (Girela-Serrano et al., 2022), and a systematic review and meta-analysis of 41 studies covering more than 41,000 children and young people found problematic smartphone use associated with significantly increased odds of depression, anxiety, higher perceived stress, and poorer sleep quality (Sohn et al., 2019).

These findings do not justify the claim that smartphones are inherently harmful. They support a more careful conclusion: a beneficial technology can become harmful when its use exceeds healthy limits, or when its design and social environment encourage problematic patterns of behaviour. This is precisely the reasoning captured in the Qur'anic ethic of moderation discussed in Section 5.1 — "eat and drink, but be not excessive" (Qur'an, al-A'rāf 7:31) — extended by analogy from consumption to attention and time, and in the Prophet's reported teaching that "there are two blessings that many people are deceived into losing: health and free time" (Sahih al-Bukhari 6412, Book 81, Hadith 1), a hadith regularly invoked in contemporary Islamic literature on time-management and the ethics of leisure precisely because unregulated device use is one of the clearest modern instances of squandering both.

The historical rationale for *ḥifẓ al-'aql* as an independent maqṣid — developed by classical jurists chiefly in connection with the prohibition of intoxicants, on the reasoning that sound reasoning is the faculty by which a person receives and acts upon religious and moral obligation, and is therefore owed the same protective priority as life itself — extends naturally to any contemporary practice that measurably degrades attention, reasoning capacity, or psychological stability, even where no substance is involved. From an Islamic perspective, unregulated smartphone use accordingly raises questions concerning: preservation of intellect and attention; the proper use of time; protection of modesty; avoidance of harmful or immoral content; family relationships; attention to religious obligations; physical and psychological well-being; and avoidance of addiction and excessive consumption. Recent maqāṣid-based scholarship has applied precisely this five-objective framework to social media use specifically, arguing that platforms should be

evaluated by their effect on each of the five essentials in turn rather than treated as a undifferentiated moral category (Rosidi et al., 2022).

Consequently, an Islamic scholar who warns young people against excessive smartphone use should not automatically be interpreted as opposing modern technology as such. Such a warning is better read as an attempt, grounded in the same *hijẓ al-‘aql* reasoning that has structured Islamic legal thought for a millennium, to distinguish beneficial use from harmful use — the distinction this paper argues is being lost when technological caution is dismissed wholesale as backwardness.

Artificial Intelligence: A Contemporary Test of the Framework

Artificial intelligence provides the clearest contemporary test of the tension between scientific capability and human welfare, and the case study in which the maqāṣid framework developed in this paper can be shown most directly at work, because — unlike Caesarean section and smartphones — AI is now the subject of an explicit, recent, and directly on-point ruling from a major international Islamic juristic body, discussed in Section 8.6.

AI has extraordinary potential: it can support medical diagnosis, scientific research, education, translation, accessibility, and drug development. At the same time, international scientific and regulatory organizations have explicitly recognized significant risks. The World Health Organization has warned of ethical and human-rights challenges associated with AI in health, emphasizing autonomy, human well-being, safety, transparency, accountability, inclusiveness, and equity (World Health Organization, 2021), and has separately warned that large language models can be misused to generate convincing misinformation, recommending that evidence of benefit and appropriate safeguards accompany widespread use in health care (World Health Organization, 2023). UNESCO’s Recommendation on the Ethics of Artificial Intelligence identifies concerns involving bias, human rights, human dignity, and environmental consequences (UNESCO, 2021), while the U.S. National Institute of Standards and Technology’s AI Risk Management Framework focuses on risk to individuals, organizations, and society, emphasizing safety, security, transparency, explainability, privacy, and the management of harmful bias (National Institute of Standards and Technology, 2023). Contemporary concern about AI cannot, therefore, reasonably be dismissed as an exclusively religious or "anti-modern"

position: major scientific and international institutions themselves recognize that technological advancement must be accompanied by risk assessment and ethical governance. From an Islamic perspective, AI raises at least five distinct maqāṣid-relevant questions.

AI and the Preservation of Intellect

If human beings increasingly outsource reading, writing, reasoning, remembering, and decision-making to machines, excessive dependence may weaken intellectual independence in a manner continuous with, but potentially more severe than, the smartphone concerns discussed in Section 7. The question raised by *ḥifẓ al-ʿaql* is therefore not simply whether AI makes humans more efficient, but whether it makes humans less capable of thinking independently — a question increasingly addressed by Islamic AI-ethics scholarship applying maqāṣid- and virtue-based frameworks to human–AI interaction (Raquib et al., 2022).

AI and Truthfulness

Generative AI can produce realistic but false text, images, audio, and video, creating a serious challenge to the Islamic value of truthfulness (*ṣidq*). Two textual sources are directly on point. First, the Qurʾan commands: "O you who have believed, if there comes to you a disobedient one [*fāsiq*] with information, investigate [*fatabayyanū*], lest you harm a people out of ignorance and become, over what you have done, regretful" (Qurʾan, al-Ḥujurāt 49:6). Classical and modern exegesis reads this verse as establishing the principle of *tabayyun* — verification of information before acting upon or transmitting it — which maps with striking directness onto the contemporary problem of unverified, AI-generated content circulating as though authoritative. Second, a hadith recorded in the introduction to Sahih Muslim states, on the authority of Abu Hurairah: "it is enough of a lie for a man to narrate everything he hears" (Sahih Muslim, Introduction, Hadith 5, graded *ṣaḥīḥ*), a principle classical scholars of hadith methodology invoked to justify rigorous source-criticism before transmission, and one with an obvious contemporary application to the uncritical forwarding of AI-generated claims.

AI and Privacy

AI systems frequently depend upon enormous quantities of personal data. The Qurʾan directly addresses the underlying value at stake: "O you who have believed, avoid

much [negative] assumption. Indeed, some assumption is sin. And do not spy or backbite each other. Would one of you like to eat the flesh of his brother when dead? You would detest it" (Qur'an, al-Ḥujurāt 49:12). While this verse addresses interpersonal conduct rather than data infrastructure directly, classical and contemporary jurists have extended its underlying prohibition on unwarranted surveillance (*tajassus*) to institutional and technological contexts, treating the verse as establishing a general presumption against non-consensual intrusion into what a person has not chosen to disclose — a presumption with obvious relevance to the data-collection architecture of contemporary AI systems.

AI and Human Responsibility

When an AI system produces a harmful recommendation, responsibility cannot simply disappear into the machine. This is consistent with a foundational hadith on the distribution of human responsibility, agreed upon by al-Bukhari and Muslim: "each of you is a shepherd, and each of you is responsible for his flock" (Sahih al-Bukhari 7138; Sahih Muslim 1829a), applied by the Prophet ﷺ across rulers, heads of household, and custodians of property alike. Contemporary Islamic legal analysis of AI applies the same structure: because an AI system lacks independent will and moral awareness, it cannot itself bear religious or legal accountability, so responsibility necessarily attaches to the human agents who design, fund, deploy, and use it — a conclusion that follows directly from the IIFA resolution discussed in Section 8.6, which conditions the permissibility of AI on the lawfulness of "its creation, use, funding, and outcomes" (International Islamic Fiqh Academy, 2025).

AI and Morality

AI can generate information but cannot, on its own, determine what is morally good: technical intelligence and moral wisdom (*ḥikmah*) are not identical. This distinction is central to the Islamic approach developed throughout this paper. Human beings require not merely greater computational power but greater moral responsibility, and it is precisely this gap — between what a system can compute and what it is right to do — that the maqāṣid framework of Section 4 is designed to fill.

Contemporary Juristic Opinion: The International Islamic Fiqh Academy's 2025 Resolution on Artificial Intelligence

The preceding four subsections are no longer only a matter of academic Islamic ethics: they have been the subject of formal collective *ijtihād*. At its twenty-sixth session, held in Doha, Qatar from 4–8 May 2025, the Council of the International Islamic Fiqh Academy of the Organisation of Islamic Cooperation — the most authoritative body of collective juristic reasoning in the Sunni world, representing fifty-seven member states — adopted Resolution No. 258 (3/26), "Artificial Intelligence: Its Rulings, Guidelines, and Ethics," after reviewing its own prior resolutions on moral rights and smart contracts and the ICESCO–SDAIA Riyadh Charter on Artificial Intelligence for the Islamic World (International Islamic Fiqh Academy, 2025).

The resolution first states that "Artificial Intelligence (AI) is a modern technology based on programs and machines that simulate human intelligence. It brings about numerous benefits, though it is not without potential harms" — a formulation that mirrors, almost exactly, the benefit–harm framing this paper has applied throughout. It then rules that "the default ruling regarding the development and use of artificial intelligence is permissibility (*ibāḥah*)," but subjects that permissibility to six explicit conditions: that the purpose of its creation, use, funding, and outcomes be lawful; that it serve to bring benefit and prevent harm; that it not insult or abuse beliefs, religions, or religious symbols; that it ensure protection of information and preserve public and private rights and freedoms; that it not threaten individual, societal, or national security; and that it adhere to honesty, proper documentation, and transparency in use (International Islamic Fiqh Academy, 2025). The Academy further recommended a dedicated legal study on whether AI should be granted any form of legal personality, and further specialized symposiums on its ethical implications.

This resolution is significant for the present paper in three respects. First, it confirms empirically — rather than merely by inference from classical texts — that the default juristic posture toward AI in contemporary institutional Islam is one of qualified permissibility, not rejection, directly refuting the "backwardness" characterization examined in Section 10. Second, its six conditions map with notable precision onto the *maqāṣid* categories developed in Section 4: lawful purpose and benefit-harm balance track *ḥifẓ al-dīn* and the general *maṣlaḥah-maḥṣad* calculus; protection of rights, freedoms, and information

tracks privacy concerns discussed in Section 8.3; and security tracks *ḥifẓ al-nafs* extended to collective and national security. Third, the resolution's structure — permissibility subject to enumerated safeguards — is substantively convergent with, rather than opposed to, the risk-based governance architecture of WHO, UNESCO, and NIST described earlier in this section, a convergence discussed further in Section 15.

Scientific Tools and the Five Objectives: A Cross-Cutting Synthesis

The three case studies examined in Sections 6 through 8 each touch multiple maqāṣid objectives simultaneously rather than a single one in isolation. This section draws the resulting effects together across five dimensions — physical, psychological, intellectual, moral, and familial — and maps each explicitly onto the objective it most directly implicates, summarized in Table 1 at the end of this section.

Physical Effects (Ḥifẓ al-Nafs)

Modern technology can influence physical health through sedentary lifestyles, excessive screen exposure, sleep disruption, unnecessary medical interventions, environmental pollution, industrial chemicals, unhealthy food-processing systems, and technological workplace hazards. Technology can therefore improve physical health while simultaneously creating new categories of health problems, which is precisely why *ḥifẓ al-nafs* requires ongoing reassessment rather than a one-time verdict on a given technology.

Psychological Effects (Ḥifẓ al-Nafs and Ḥifẓ al-'Aql)

Modern technological systems can influence attention, concentration, sleep, anxiety, emotional well-being, dependency, social comparison, loneliness, and information overload, as the smartphone evidence reviewed in Section 7 illustrates particularly clearly. Because psychological stability bears on both bodily welfare and the soundness of reasoning, this dimension implicates *ḥifẓ al-nafs* and *ḥifẓ al-'aql* jointly.

Intellectual Effects (Ḥifẓ al-'Aql)

Technology can increase access to information while potentially reducing the motivation for independent intellectual effort. Search engines, recommendation algorithms, and AI assistants can make information easier to obtain, but easy access to information does not necessarily produce wisdom. The distinction between information and knowledge,

and between knowledge and wisdom, is essential here and is precisely the distinction al-Ghazali's classification of knowledge, discussed in Section 10, was designed to police.

Moral Effects (Ḥifẓ al-Dīn)

Technological systems can also influence moral behaviour. The internet has made beneficial knowledge widely available, but it has also facilitated pornography, gambling, fraud, deception, cyberbullying, and other harmful behaviour. The moral effect of a technology cannot, therefore, be assessed merely by examining its technical functionality; it must be assessed against *ḥifẓ al-dīn* understood broadly as the preservation of a society's moral and spiritual orientation, not narrowly as ritual observance alone.

Family and Social Effects (Ḥifẓ al-Nasl)

Technological advancement may also alter family structures and interpersonal relationships. A family physically present in the same room may nevertheless become socially disconnected because each member is absorbed in a separate digital environment; technological connection does not necessarily produce genuine human connection. This dimension implicates *ḥifẓ al-nasl* understood, in Ibn Ashur's twentieth-century reformulation, as the preservation of "the family system" as a social institution rather than merely the biological fact of lineage (Ibn Ashur, 2006/1946).

Table 1. Mapping of Effects, Case Studies, and Maqāṣid Objectives

Dimension of Effect	Primary Maqṣid Objective	Illustrative Case Study
Physical	Ḥifẓ al-Nafs (life)	Caesarean section (Section 6)
Psychological	Ḥifẓ al-Nafs / Ḥifẓ al-ʿAql	Smartphones (Section 7)
Intellectual	Ḥifẓ al-ʿAql (intellect)	Smartphones; AI (Sections 7–8.1)
Moral / Informational	Ḥifẓ al-Dīn (religion) / truthfulness	AI misinformation (Section 8.2)
Privacy / Social trust	Ḥifẓ al-ʿIrd (honor) / Ḥifẓ al-Dīn	AI data collection (Section 8.3)
Family and social	Ḥifẓ al-Nasl (lineage/family)	Smartphones; AI (Sections 7, 9.5)
Economic	Ḥifẓ al-Māl (property)	AI and automation (Section 8)

Why Islamic Scholars' Caution Should Not Automatically Be Called Backwardness

One of the central arguments of this paper concerns the tendency to interpret religious caution toward technological innovation as evidence of backwardness. Such a

conclusion is too simplistic, for at least three reasons developed in this section: it misreads the structure of Islamic legal reasoning about knowledge; it is empirically inconsistent with the behaviour of secular scientific institutions; and it is now directly contradicted by the substance of contemporary collective Islamic juristic opinion documented in Section 8.6.

A person who asks whether an innovation is beneficial or harmful is not thereby rejecting innovation. This distinction was, in fact, formalized within Islamic scholarship many centuries before the modern debate over technology assessment. In the opening book of his *Ihya' 'Ulūm al-Dīn* ("Revival of the Religious Sciences"), the *Kitāb al-'Ilm* ("Book of Knowledge"), al-Ghazali classified knowledge along two intersecting axes. The first distinguishes knowledge that is individually obligatory (*farḍ 'ayn*) — what every Muslim must know to fulfil basic religious duty — from knowledge that is only communally obligatory (*farḍ kifāyah*), a duty discharged for the whole community once a sufficient number of its members acquire it. Al-Ghazali explicitly placed medicine and arithmetic in this second, communally obligatory category, reasoning that a town lacking a physician would face genuine harm, so that acquiring medical knowledge is a collective religious duty even though it is not asked of every individual (al-Ghazali, trans. Faris, 1962/c. 1097 CE; Teachers Institute, 2026).

The second axis is evaluative rather than obligatory: al-Ghazali distinguished praiseworthy worldly knowledge (*maḥmūd*) — including medicine and arithmetic, on which "the activities of life depend" — from blameworthy knowledge (*madhmūm*), such as magic, talismans, and trickery, whose net effect on human welfare is harmful, and from a residual category of neutral or permissible knowledge, such as poetry, whose moral valence depends on use (ISIP Foundation, 2023; Fountain Magazine, 1995). This is, in substance, exactly the "moral evaluation of technology" this paper has argued for throughout: al-Ghazali did not evaluate a branch of knowledge by whether it was old or new, foreign or familiar, but by whether its net effect, properly weighed, served or harmed human beings. A framework built to make exactly this discrimination cannot coherently be characterized as a blanket rejection of new knowledge; it is, if anything, a discrimination mechanism that modern technology assessment has had to reinvent from first principles.

This point is reinforced empirically. Contemporary scientific and medical institutions themselves routinely conduct risk assessments before recommending widespread adoption of new technologies. The WHO's approach to Caesarean sections

illustrates this directly: it does not reject the procedure; rather, it distinguishes medically necessary use from unnecessary use (World Health Organization, 2018). Similarly, modern AI governance does not require humanity to abandon AI; it requires safeguards against bias, privacy violations, unsafe systems, and misinformation (World Health Organization, 2021) — precisely the structure of the IIFA's own 2025 resolution (Section 8.6). Consequently, Islamic scholars' warnings can be interpreted within a broader, textually grounded principle of precaution and ethical responsibility, one that asks questions a purely technical assessment cannot answer: Is this beneficial for human beings as complete persons? What effect will this have upon morality, family life, and human dignity? Does it strengthen or weaken the intellect? Does it promote justice? Does it produce unnecessary harm, and what will be its consequences for future generations? These are the same questions the maqāṣid framework of Section 4 was built to formalize.

The Pragmatic Character of Islamic Caution: Fiqh al-Muwāzanāt and Fiqh al-Awlawiyyāt

The argument that Islamic scholars are "backward" because they warn against possible harms of new technologies rests partly on an assumption that acceptance of technological novelty is synonymous with progress. But technological novelty and social progress are not identical. A genuinely pragmatic approach examines both sides of technological change — benefit + risk + moral consequence + long-term consequence — rather than assuming innovation = progress.

Contemporary Islamic legal scholarship has given this pragmatic weighing its own name and technical apparatus. Yusuf al-Qaradawi, one of the most influential jurists of the last century, developed what he termed *fiqh al-muwāzanāt* — "the jurisprudence of balances" — as a discipline for weighing competing benefits against each other, competing harms against each other, and benefit against harm where the two coincide (Shaham, 2020). Analysis of al-Qaradawi's legal-maxim methodology shows that he relies heavily on precisely the maxims developed in Section 5.3, including *al-darar yuzāl*, to discipline and systematize the use of *maṣlaḥah* (public interest) reasoning in areas — such as "the jurisprudence of contemporary reality," *fiqh al-wāqi'* — where scripture offers no direct textual guidance and jurists are otherwise vulnerable to undisciplined, purely utilitarian improvisation (Shaham, 2020). Al-Qaradawi paired this with a companion doctrine, *fiqh al-*

awlawiyyāt — "the jurisprudence of priorities" — which orders competing legitimate claims (for example, the needs of the individual against the needs of the community, or a lesser good against a greater one) according to a defensible ranking rather than treating all claims as equally weighted (al-Qaradawi, 2007).

The Islamic approach to technology developed in this paper can therefore be described as qualified acceptance rather than unconditional rejection, operationalized through these two jurisprudential disciplines. A technology should be: accepted when its benefits are genuine and its harms are controlled; restricted when its use creates significant avoidable harm; regulated when unrestricted use threatens society; and rejected only when its fundamental consequences contradict essential moral and human interests at the *ḍarūrī* tier of Section 4.2. This is consistent with the contemporary development of technology ethics itself: modern institutions increasingly recognize the need for ethical review, risk assessment, and governance of emerging technologies, and the WHO explicitly states that technological innovation must be accompanied by identification and understanding of ethical issues from development through implementation (World Health Organization, n.d.). Caution, properly disciplined by *fiqh al-muwāzanāt*, should not be confused with backwardness.

The Difference Between Rejecting Science and Regulating Science

A particularly important distinction must be drawn between anti-scientific thinking and ethical criticism of science and technology. Rejecting scientific knowledge merely because it is modern would be intellectually indefensible; questioning the social consequences of scientific applications is not anti-scientific. Questioning unnecessary Caesarean sections is not rejection of medicine; questioning smartphone addiction is not rejection of telecommunications; questioning AI-generated misinformation is not rejection of computer science; questioning environmental pollution is not rejection of industrial technology; questioning excessive dependence upon automation is not rejection of engineering. These are examples of responsible technological criticism.

This is exactly the distinction al-Ghazali's classification of knowledge, discussed in Section 10, was built to draw nine centuries ago: the division of worldly knowledge into praiseworthy, blameworthy, and neutral categories is not a division between "religious" and "secular" knowledge, nor between old and new knowledge; it is a division that turns entirely on a knowledge domain's net contribution to human welfare, reassessed as

circumstances change (al-Ghazali, trans. Faris, 1962/c. 1097 CE). A framework of this kind is, by construction, compatible with regulating rather than rejecting any given technology, since regulation is simply the practical expression of sorting a technology's uses into praiseworthy and blameworthy categories rather than accepting or rejecting the technology as an undifferentiated whole.

The proper Islamic position can therefore be formulated as follows: *science should be pursued, knowledge should be acquired, and beneficial technology should be utilized; but neither scientific capability nor technological novelty should be allowed to override moral responsibility, human welfare, and the prevention of harm.*

Islamic Scholars as Early Ethical Observers

The argument can be taken one step further. Islamic scholars are concerned not merely with whether a technological product functions successfully but with its implications for the whole human being. The modern scientific specialist may examine one dimension of an innovation — its medical effectiveness, technical performance, or economic efficiency. The Islamic ethical scholar potentially examines a wider set of questions concerning morality, family, dignity, social responsibility, spiritual well-being, and ultimate human purpose, functioning as an exercise of the collective religious duty the Qur'an describes in the command that "there be [arising] from you a nation inviting to [all that is] good, enjoining what is right and forbidding what is wrong" (Qur'an, Āl 'Imrān 3:104) — the textual basis of the classical Islamic institution of *ḥisbah*, the public office historically charged with the ethical oversight of markets, professions, and public conduct, and a recognizable historical antecedent of the technology-ethics review boards described throughout this paper.

This does not mean that Islamic scholars possess superior expertise in medicine, engineering, computer science, or other technical disciplines. Rather, their contribution lies in providing normative ethical scrutiny. Accordingly, the strongest formulation of the argument is not that Islamic scholars are scientifically more knowledgeable than scientists; it is that technical expertise and moral expertise address different dimensions of the same problem, and technological societies require both. An Islamic scholar may therefore identify a moral danger before its full social consequences become apparent, while scientists and policymakers subsequently investigate the empirical dimensions of that concern — a complementary rather than adversarial relationship.

Secular Modernity and the Question of Human Progress

Modern secular societies have produced extraordinary scientific achievements, and it would be inappropriate to portray secularism or modernity as inherently opposed to ethics. Indeed, many contemporary secular institutions themselves recognize technological risk: WHO has established ethical frameworks for AI in health, UNESCO has adopted a global recommendation on AI ethics, and NIST has developed a framework for managing AI risk (World Health Organization, 2021; UNESCO, 2021; National Institute of Standards and Technology, 2023).

The more appropriate criticism, therefore, should be directed not at "secularists" as a whole but at a particular uncritical form of technological modernism that equates technological expansion with human progress. Likewise, this paper does not claim that every Islamic scholar is automatically correct simply because he is a religious scholar. A stronger academic position is available: Islamic scholars' warnings deserve serious consideration because Islamic ethical reasoning evaluates technological developments according to a broader, textually and jurisprudentially disciplined conception of human welfare, and many contemporary empirical studies now demonstrate that apparently beneficial technologies can generate significant unintended consequences (Sections 6–8). This formulation avoids an unnecessary conflict between Islam and science while preserving the paper's central argument.

Discussion: A Synthesis Across Case Studies

The three case studies examined in this paper demonstrate a common pattern. First, a scientific or technological innovation produces a genuine benefit. Second, society increasingly adopts the innovation. Third, widespread adoption creates secondary consequences. Fourth, researchers and institutions begin to identify risks that were previously underestimated. Caesarean section is a life-saving medical technology, but unnecessary use carries risk (World Health Organization, 2018). Smartphones provide unprecedented communication and information access, but problematic use can affect sleep and may be associated with mental-health difficulties, particularly among young people (Dibben et al., 2023). AI offers enormous possibilities, but international institutions and, as Section 8.6 shows, Islamic juristic bodies alike now recognize risks involving

privacy, bias, misinformation, accountability, safety, and human dignity (World Health Organization, 2021; International Islamic Fiqh Academy, 2025).

These examples do not prove that technological advancement is fundamentally bad. They demonstrate that technological advancement is morally ambivalent: the same capability can generate benefit or harm depending on its purpose, design, intensity, and social context — which is precisely why Islamic ethical caution, understood as the *maqāṣid*-based discrimination mechanism developed in Sections 4 and 5 rather than as reflexive suspicion, deserves serious consideration.

A further and, in the context of this paper’s central thesis, more striking pattern emerges when the substantive content of the Islamic framework is set directly alongside the substantive content of the secular regulatory frameworks discussed throughout — not merely their shared posture of caution, but their overlapping operative criteria, summarized in Table 2.

Table 2. Convergence of Operative Criteria Across Islamic and Secular AI Governance Frameworks

Operative Criterion	IIFA Res. 258 (2025)	WHO AI Ethics	UNESCO AI Ethics	NIST AI RMF
Benefit weighed against harm	Explicit (cond. 2)	Explicit	Explicit	Explicit (risk framing)
Lawful, non-discriminatory purpose	Explicit (cond. 1, 3)	Explicit (equity)	Explicit (human rights)	Explicit (fairness/bias)
Privacy and data protection	Explicit (cond. 4)	Explicit	Explicit	Explicit
Security	Explicit (cond. 5)	Explicit (safety)	Explicit	Explicit (safety)
Transparency and honesty	Explicit (cond. 6)	Explicit	Explicit	Explicit (explainability)
Human accountability	Implicit (lawful funding, outcomes)	Explicit	Explicit	Explicit

This convergence is significant because it was not designed: the IIFA resolution was produced through the independent methodology of collective Islamic juristic reasoning (*ijtihād jamāʿi*) applied to classical maxims several centuries old, while the WHO, UNESCO, and NIST frameworks were produced through secular multilateral and technical policy processes. Their substantive overlap suggests that the *maqāṣid*-based benefit–harm calculus this paper has traced from the Qur’an and hadith through al-Ghazali and al-Shatibi to

contemporary juristic practice is not a parochial religious peculiarity but a specific historical instance of a more general pattern of practical wisdom about the governance of powerful, dual-use capabilities — which is exactly the claim this paper set out, in Section 1, to substantiate.

Limitations of the Study

Several limitations qualify the claims made above. First, as stated in Section 2.7, this is a focused, doctrinally oriented literature review rather than an exhaustive, dual-reviewer systematic review in the biomedical sense; a different search strategy could surface additional classical or contemporary sources bearing on the case studies. Second, the paper draws primarily on Sunni juristic sources, principally al-Ghazali, al-Shatibi, and the IIFA; Shi'i, Ibadi, and other juristic traditions articulate closely related but not identical doctrines of harm, necessity, and *maqāṣid*, and a fully comparative treatment lies beyond this paper's scope. Third, the empirical literature on smartphone and AI harms cited in Sections 7 and 8 is itself described by its own authors as methodologically limited and rapidly evolving (Dibben et al., 2023; Girela-Serrano et al., 2022); the *maqāṣid*-based analysis in this paper is only as current as that underlying empirical base, and any future evidentiary revision would need to be reflected in a revised application of the framework, not merely a revised summary of statistics. Fourth, the IIFA resolution discussed in Section 8.6 is recent (May 2025) and, being a foundational statement of general principle rather than a detailed operational code, leaves considerable interpretive work — for example, on AI legal personality — to future resolutions and to national fatwa bodies; readers should treat it as a significant but not final word on the subject and should consult the Academy's subsequent publications for developments. Finally, the paper's three case studies were chosen for range and illustrative clarity rather than random or exhaustive sampling, and the *maqāṣid* framework's application to other technologies (for example, gene editing or autonomous weapons systems) would require independent analysis beyond this paper's scope.

Conclusion

Scientific advancement is one of humanity's greatest achievements, but scientific advancement and human progress should not be treated as synonymous. Modern technology has improved human life in countless ways: medicine saves lives, telecommunications connect people, digital technologies expand access to knowledge, and

artificial intelligence offers potentially transformative applications. Yet these achievements also create new risks. Unnecessary medical intervention can produce physical harm; excessive smartphone use can affect sleep and psychological well-being; digital technologies can influence attention, family relationships, and morality; and artificial intelligence can create problems involving misinformation, privacy, bias, accountability, and human dependence.

The central lesson of this paper is therefore not that Muslims should reject science or return to a pre-modern society; such a conclusion would misunderstand the Islamic position advanced here. The appropriate lesson is that scientific capability must remain subordinate to human welfare and moral responsibility. Islam's conception of human life is comprehensive: it is concerned not merely with the material body but also with the intellect, morality, family, dignity, social relations, and spiritual well-being of human beings, as established textually in Section 5 and systematized jurisprudentially in Section 4. Islamic ethical scholarship therefore has legitimate, textually grounded grounds for asking whether a technological development that appears beneficial at one level may be harmful at another, using an apparatus — the five (or six) objectives, the *ḍarūriyyāt/hājjiyyāt/tahsīniyyāt* hierarchy, the maxims of harm-avoidance, and the doctrine of necessity — whose sophistication this paper has attempted to demonstrate rather than merely assert.

The caution expressed by Islamic scholars toward certain forms of scientific and technological advancement should consequently not automatically be dismissed as backwardness. Properly understood, and as the International Islamic Fiqh Academy's own 2025 ruling on artificial intelligence now confirms in the clearest possible institutional terms, such caution represents an insistence that technological innovation be accompanied by moral examination, structured permissibility, and enumerated safeguards — not a categorical refusal of the technology itself. The strongest Islamic response to modern technology is therefore neither unconditional rejection nor unconditional acceptance; it is responsible acceptance governed by ethical scrutiny. The relevant question is not merely "what can modern science do?" but "what should human beings do with what modern science makes possible, under what conditions, and with what safeguards?" That question is not a rejection of science. It is a question of wisdom (*ḥikmah*) — and, as this paper has argued, one for which the Islamic intellectual tradition, from the Qur'an and Sunnah

through al-Ghazali and al-Shatibi to the deliberations of contemporary juristic academies, offers resources of considerable and demonstrable rigor.

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