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Electromagnetic Radiation of Extra Virgin Olive Oil: A Scientific Reflection on the Qur'anic Verse of Light (Q. 24:35)

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ABSTRACT:

Original Paper

Olive oil is one of the most widely consumed and popular vegetable oils, with numerous applications including in the food industry. Among the factors influencing its quality, environmental conditions, particularly light exposure, play a significant role. Light radiation can trigger specific processes within olive oil that lead to chemical changes and a decline in quality. In religious literature, especially within the Qur'an, olive oil holds a prominent status; notably, it is the only edible oil explicitly mentioned in the Qur'an. In verse 35 of Surah Al-Nūr, God draws a metaphor between His divine essence and light, establishing a symbolic connection between olive oil and illumination. The verse describes a light whose source is a blessed olive tree and further states that its oil is so luminous that it nearly gives light even without being touched by fire. The scientific investigation of this phenomenon forms the core objective of this study.

This research presents a Qur'anic interpretation informed by key lexical analysis, exegetical perspectives and recent scientific findings, focusing on a unique property of olive oil. Studies indicate that extra virgin olive oil is among the rare types of oils extracted not from seeds but directly from the olive fruit, resulting in a high concentration of chlorophyll. The chlorophyll content enables the oil to emit light under ambient illumination, particularly in the infrared and visible regions of the electromagnetic spectrum (with chlorophyll fluorescence occurring in the red region). Since the visible range of the electromagnetic spectrum spans wavelengths from red to violet (low

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to high energy), the light emitted by olive oil, depending on the intensity of surrounding light, approaches the threshold of human visual perception. In essence, olive oil can nearly emit light without contact with fire, a phenomenon remarkably echoed in verse 35 of Surah Al-Nūr.

KEYWORDS: The Qur'an and Science, Scientific Miracle, Scientific Interpretation, Olive Oil, Verse of Light.

1. Introduction

Scientific interpretation of the Qur'an involves elucidating concepts related to natural phenomena mentioned in the verses of the Qur'an through established scientific findings. Discussions surrounding the intersection of Qur'anic exegesis and contemporary science, particularly in relation to scientific miracles, have long attracted the attention of Islamic scholars and commentators. However, with the rapid advancement of empirical sciences in recent centuries, this field has gained even greater significance. Scientific interpretation is inherently interdisciplinary, requiring the integration of various fields such as Qur'anic studies, empirical sciences, Arabic literature, history, and more. Given the numerous verses in the Qur'an that reference natural phenomena, a precise explanation of these verses using the latest verified scientific discoveries is both necessary and valuable.

One notable topic within this domain is the mention of specific foods in the Qur'an, especially olives and their connection to divine revelation. The Qur'an refers to the olive fruit (Q. 80:29; 95:1; 6:99; 6:141; 16:11), the olive tree (Q. 24:35), and olive oil (Q. 24:35). The word olive (*zaytūn*) appears six times in the Qur'an; in five instances it appears alongside other fruits and foods, while only once (Q. 24:35) is olive oil mentioned independently. This verse draws a distinctive connection between olive oil and light, which is the focal point of this study.

اللَّهُ نُورُ السَّماواتِ وَ الْأَرْضِ مَثَلُ نُورِهِ كَمِشْكاةٍ فيها مِصْباحٌ الْمِصْباحُ في زُجاجَةٍ الزُّجاجَةُ كَأَنَّها كَوْكَبٌ دُرِّيٌّ يُوقَدُ مِنْ شَجَرَةٍ مُبارَكَةٍ زَيْتُونَةٍ لا شَرْقِيَّةٍ وَ لا غَرْبِيَّةٍ يَكادُ زَيْتُها يُضيءُ وَ لَوْ لَمْ تَمْسَسْهُ نارٌ نُورٌ عَلى نُورٍ يَهْدِي اللَّهُ لِنُورِهِ مَنْ يَشاءُ وَ يَضْرِبُ اللَّهُ الْأَمْثالَ لِلنَّاسِ وَ اللَّهُ بِكُلِّ شَيْءٍ عَلِيمٌ (النور/٣٥)

Allah is the Light of the heavens and the earth. The parable of His Light is a niche wherein is a lamp the lamp is in a glass, the glass as it were a glittering star lit from a blessed olive tree, neither eastern nor western, whose oil almost lights up, though fire should not touch it. Light upon light. Allah guides to His Light whomever He wishes. Allah draws parables for mankind, and Allah has knowledge of all things (Q. 24:35)

The phrase *"whose oil almost lights up, though fire should not touch it"* has intrigued scholars alike, suggesting that olive oil possesses an inherent luminosity or light-emitting quality. This study aims to investigate whether olive oil emits electromagnetic radiation, thereby providing a scientific basis for the metaphorical language used in the Qur'anic verse.

In physics, material light refers to all or part of the electromagnetic wave spectrum, with different segments of the spectrum corresponding to varying frequencies and energy levels. Electromagnetic radiation, such as sunlight or radio waves, consists of oscillating electric and magnetic fields. These waves travel through space at the speed of light (approximately 300,000 kilometers per second), and, depending on their frequency, encompass various types such as microwaves, visible light, X-rays, and radio waves. Although each type possesses distinct characteristics, they all belong to the electromagnetic spectrum and can be collectively referred to as light.

This study undertakes an interdisciplinary analysis of verse 35 of Surah al-Nūr, which references the luminous quality of olive oil. The research involves a detailed examination of the vocabulary used in the verse, interpretations offered by various exegetes, and the latest empirical findings regarding the optical properties of olive oil. Through this interdisciplinary Qur'anic inquiry, the study aims to offer a more precise understanding of the verse's meaning.

2. Literature Review

In the book *Olive in the Qur'an and Modern Medicine* by Khavari (2014), the therapeutic benefits of olive oil are discussed based on Qur'anic verses, prophetic traditions, and medical opinions. The author emphasizes Islam's encouragement of consuming olive oil and its numerous health benefits. Another book titled *Medicinal Properties of Qur'anic Plants and Fruits* by Vash (2015) explores various exegetical views on verse Q. 24:35. In addition to geographical context, the book highlights other aspects of olive oil. The article *An Overview of the Properties of Olive Plant from the Viewpoint of the Holy Qur'an and Narratives* by Sajadi Kaboudi et al. (2019) discusses the significance of olive oil from both Qur'anic and scientific viewpoints. It covers topics such as the importance of olives in Islamic texts, their medicinal properties, scientific validation of their benefits, and recommendations for their use.

In the article *Physiological Effects of Olive from the Viewpoint of Holy Qur'an and Nutrition* by Emam Jomeh et al. (2017), the authors examine the medicinal properties of olives. They conclude, based on religious texts and scientific studies, that olive compounds possess strong antioxidant

properties that help protect the body from disease. Baher (2002) investigates nutritional, medicinal, and historical aspects of olives with reference to Qur'anic verses. Hekmatpour and Khandan Barani (2018) examine Qur'anic references to various fruits. Scientific studies have shown that these fruits possess high antioxidant activity, suggesting that the Qur'an emphasizes healthy nutrition and the healing properties of certain foods. Taqavizadeh (2014) analyzes verse Q. 6:99 and related verses. She highlights the unique characteristics of each fruit mentioned in the verse and their differences in growth and ripening processes. The article *The Benefits of Olives and the Flammability of Their Oil from the Perspective of the Qur'an and Science* explores the significance of olives in the Qur'an. It references verse Q. 24:35 to highlight the exceptional properties of olive oil and the connection between scientific knowledge and Qur'anic teachings (Qur'anic Elites Network 2020). Gerami (2011) analyzes the symbolic meaning of olives in the Qur'an, particularly in relation to light, guidance, and spirituality in Islamic texts.

Although extensive research has been conducted on olives and their mention in the Qur'an, there remain unexplored aspects such as the issue of light emanating from olive oil without contact with fire, which will be addressed in this article.

3. Qur'anic Analysis

Before examining the exegetical views regarding the phrase "*yakādu zaytuhā yuḍīʾu wa law lam tamsashhu nār*" (Its oil would almost glow, even if untouched by fire), it is essential first to conduct a detailed lexical study of the key terms used in this expression.

3.1. Lexical Investigation: Zaytūn, Zayt & Ḍawʾ

The terms *zaytūn* and *zaytūnah* refer to both the olive tree and its fruit. Like the pair *shajar* and *shajarah*, which distinguish singular and plural for "tree," *zaytūnah* is the singular form of *zaytūn* (Qorashi 1992, 3: 190). While *zaytūn* occurs five times in the Qur'an, *zaytūnah* appears only once, in the description of a blessed olive tree that is "neither of the east nor of the west" (al-Rāghib al-Iṣfahānī 1991, 384). The term *zayt* means the oil of *zaytūn* and its verb form denotes the act of anointing or lubricating with oil. For example, the phrase *zittu raʾsaī* means "I oiled my head" (al-Farāhīdī 1990, 7: 378; Ibn Fāris 1984, 3: 39).

The term *ḍawʾ* signifies illumination or the act of lighting up (Qorashi 1992, 4: 202). It refers to making something clear and visible. Both *ḍawʾ*

and *ḍiyāʾ* mean "light" or "radiance." *ḍiyāʾ* specifically refers to something that becomes apparent and visible to the observer (al-Farāhīdī 1990, 7: 74). It is the emission from luminous bodies (al-Rāghib al-Iṣfahānī 1991, 514). Following this lexical analysis, the next section will explore the interpretations offered by various Qur'anic exegetes regarding this verse.

3.2. Exegetical Perspectives

Exegetes have offered diverse interpretations of the phrase *yakādu zaytuhā yuḍīʾu wa law lam tamsashhu nār* (Its oil would almost glow, even if untouched by fire). These views can be categorized into several thematic groups:

3.2.1. Symbolism of Purity and Divine Light

Some exegetes believe that olive oil is referenced due to its inherent purity, viewing it as a symbol of God's pure light. They emphasize the clarity of olive oil, which metaphorically reflects divine illumination. They highlight the Qur'anic description of the olive tree as "neither of the east nor of the west," interpreting this as a reference to its spiritual purity and its connection to divine light. Moreover, they highlight how the image of nearly self-illuminating oil stands for moral, spiritual, or divine purity; an exaggerated, symbolic praise that points beyond the physical object to a deeper truth.

Scholars in this group read the image primarily as a spiritual or symbolic assertion, an overstatement of its beauty, clarity, and high quality (al-Qurṭubī 1995, 12: 259). God Almighty described its oil as being "on the verge of emitting light even if fire had not touched it." This is because, when the oil is pure and unadulterated and is observed from a distance, it appears as if it possesses an intrinsic radiance. Consequently, when fire touches it, its luminosity is intensified upon an already luminous base. The olive oil itself varies according to the nature of its tree. If it is "neither of the east nor of the west," meaning it is exposed to the sun in all its states throughout the day, its olives mature more perfectly. Consequently, its oil is purer and more readily separable from its dregs, because the abundance of sunlight affects this. When these elements combine and cooperate, that light becomes pure and perfect, making it fit to be established as a metaphor for the guidance of God (Fakhr al-Rāzī 1999, 23: 390). Another opinion is that its oil is not an oil from this limited, observable realm. Rather, it is another, wondrous kind of oil: "Its oil would almost glow, even if no fire touched it." Thus, it is transparent by its very essence and luminous by its very nature, to the extent that it almost illuminates without any combustion (Sayyid Quṭb 1991, 4: 2520).

3.2.2. Natural Purity and Reflective Qualities

This group focuses on physical causes like tree placement, sun exposure, oil clarity, and the lamp's glass and niche. These explanations show how natural and material conditions produce exceptionally clear, reflective oil that appears luminous and burns brilliantly. Those emphasizing natural, material causes present detailed physical explanations as mentioned in the following. They (the olives) are situated on level ground, in a vast, open, and elevated place, fully exposed to the sun. It is illuminated from the beginning of the day until its end so that its oil may be purer and more refined, as noted by several preceding scholars. It is for this reason that the Qur'an says, "even if fire had not touched it," meaning, for the light of the oil's radiance (Ibn Kathīr 1998, 6: 55). The apparent context indicates that the intended meaning is the purity of the oil and its perfect readiness for combustion, and that this is contingent upon the two aforementioned attributes: "neither of the east nor of the west" (Tabataba'i 1996, 15: 124). Some scholars mention that the light of the lamp varies according to the difference in the fuel that ignites it. If that oil is pure and unadulterated, its condition is unlike its condition when it is turbid. Among combustible oils, none manifests the purity found in olive oil. It can reach a degree of clarity and fineness akin to water, yet with an added whiteness and a radiance shimmering within its parts (Fakhr al-Rāzī 1999, 23: 386).

The oil for this lamp is taken from an olive tree in an open plain, untouched by the eastern shadow when the sun sets or the western shadow when the sun rises. Rather, it accompanies the sun throughout the entire day, receiving its rays at both sunrise and sunset. It is thus both eastern and western, deriving its share from both attributes. Consequently, its oil is more luminous and purer. Alternatively, this may signify that the tree is not growing in the far east or far west of the inhabited world, but rather in Syria, whose olive oil is reputed to be the finest, so that "its oil is on the verge of glowing" even from behind its skin, "even if fire had not touched it." Thus, due to its purity and radiance, the oil itself is nearly luminous without any fire. It is through the combination of the niche, which concentrates the light; the glass, which intensifies it; the kindled lamp; and the pure oil, that the light attains its greatest strength. For without the niche, the light would scatter in all six directions; without the purity of the oil, its glow would not be dazzling; and without the glass, it would not be multiplied (Ṭanṭāwī al-Jawharī 2004, 12: 21; Makarem Shirazi 1995, 14: 476).

3.2.3. Natural Luminosity without Fire

These interpretations concentrate on the oil's intrinsic radiance or the idea that, by its nature, the oil seems to glow even before any flame touches it. They emphasize an almost-physical luminosity or pre-existing brilliance that makes the oil look as if it could emit light independently of combustion. A scholar mentions that based on its (olive oil's) purity and intense luminosity, "even if fire had not touched it," that is, prior to being reached by the fire and igniting (al-Ṭabrisī 1993, 7: 225). On account of its purity and superior quality, its oil virtually radiates light even in the absence of fire to ignite it (al-Ṭūsī, 2010, 7: 438). That is to say, it glows almost by its very essence, without any fire, due to its radiance and intense brilliance. "Light upon light" signifies multiplied or compounded light. For the light of the lamp is intensified in its illumination by the purity of the oil, the lustre of the glass, and the manner in which the niche confines its rays (al-Bayḍāwī 1997, 4: 107).

A comprehensive categorization of these interpretations is presented in Table 1, summarizing the exegetical views related to the phrase "Its oil would almost glow, even if untouched by fire."

Table 1. Categorization of exegetical views on the phrase "Its oil would almost glow, even if untouched by fire (Q. 24:35)

Commentators	Symbolism of purity and divine light	Natural purity and reflective qualities	Natural luminosity without fire
Al-Ṭabrisī			✓
Al-Qurṭubī	✓		
Fakhr al-Rāzī	✓	✓	
Ibn Kathīr		✓	
Tabataba'i		✓	
Al-Ṭūsī			✓
Al-Bayḍāwī			✓
Ṭanṭāwī al-Jawharī		✓	
Sayyid Quṭb	✓		
Makarem Shirazi		✓	

As shown in Table 1, even exegetes who adopted a scientific interpretive approach did not go beyond viewing the phrase "Its oil would almost glow, even if untouched by fire" as a metaphor for the reflective purity of olive oil. However, this interpretation confronts some considerations:

- Purity vs. reflectivity: Higher-quality olive oil, such as extra-virgin olive oil, contains more natural compounds and thus is less pure in the

chemical sense, resulting in reduced light reflectivity. Yet the verse, particularly the preceding phrase "lit from a blessed olive tree, neither of the east nor of the west," clearly refers to high-quality oil.

- Universality of light reflection: Light reflection is not exclusive to olive oil. Any oil, depending on its level of impurities, can reflect light. Therefore, interpreting the verse solely as a reference to light reflection does not uniquely highlight olive oil.
- Semantic precision of *yuḍīʾu*: The Qur'anic term *yuḍīʾu* (to give light) implies active emission rather than passive reflection. As discussed in the lexical analysis, this term denotes radiance and illumination, not mere reflectivity.

Given these three considerations, the next section will propose a scientifically grounded interpretation of olive oil's luminous properties, one that not only addresses the shortcomings of previous exegeses but also reveals a remarkable scientific insight embedded in the Qur'an over 14 centuries ago.

4. Recent Scientific Findings on the Optical Properties of Olive Oil

As mentioned in the introduction, the visible spectrum of electromagnetic waves spans wavelengths from approximately 700 nanometers (red) to 400 nanometers (violet). The lowest energy within this range corresponds to the red end of the spectrum, and electromagnetic waves with energies lower than red are not visible to the human eye.

Extra-virgin olive oil is extracted from the olive fruit, unlike many other oils that are derived from oilseeds. This type of olive oil possesses a complex chemical composition, one of its unique features being its high chlorophyll content. The presence of chlorophyll enables the oil to emit light when exposed to radiation across various regions of the electromagnetic spectrum, most notably in the red region.

4.1. Chlorophyll Fluorescence

Chlorophyll fluorescence in olive oil is a valuable tool for assessing the quality and condition of the oil, especially extra-virgin olive oil. This technique utilizes the distinctive fluorescence characteristics of chlorophyll and its derivatives to monitor changes caused by photo-oxidation and thermal degradation, and to differentiate between various types of olive oils.

The fluorescence properties of chlorophyll offer insights into degradation processes and the overall quality of the oil. Fluorescence spectroscopy, combined with multidimensional classification methods, can effectively monitor the storage conditions of extra-virgin olive oil within the chlorophyll spectral region. This approach allows for the distinction between light-exposed and non-exposed samples, as well as between heat-treated and untreated samples, indicating the formation of secondary oxidation products (Manzano et al. 2019).

In terms of optical properties, extra-virgin olive oil is distinct from other oils. This distinction is revealed through the detection of red fluorescence emission around 670 nanometers, a signature wavelength of chlorophyll. This method also highlights the oil's sensitivity to photodegradation under ambient light, a phenomenon less pronounced in refined oils (Hossain et al. 2020).

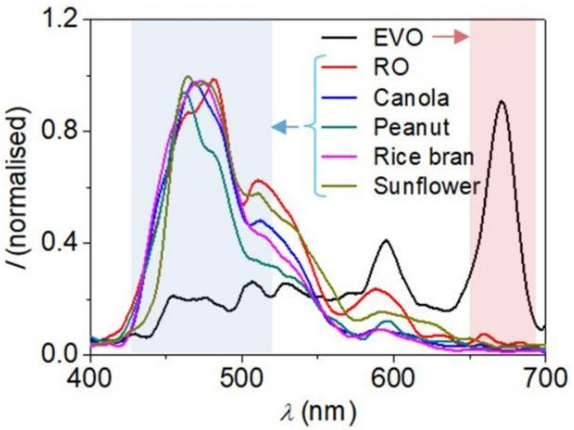

Figure 1. Fluorescence emission spectrum of various vegetable oils, highlighting the unique red emission of extra-virgin olive oil due to its significant chlorophyll content (Hossain et al. 2020).

As illustrated in Figure 1, the fluorescence emission wavelength specific to extra-virgin olive oil lies around 670 nanometers, which corresponds to the red region of the visible spectrum. In contrast, other vegetable oils, such as sunflower oil, canola oil, and peanut oil, exhibit fluorescence emissions in the wavelength range of 460 to 490 nanometers, located within the blue region of the visible spectrum.

The fluorescence associated with chlorophyll in extra-virgin olive oil under ambient light conditions is relatively weak and not visible to the naked eye. However, when stimulated with ultraviolet (UV) light, this chlorophyll fluorescence becomes visible to human vision (Ansar et al. 2023). As shown

in Figure 2, the intensity of chlorophyll fluorescence in different olive oil samples under UV radiation is presented. The higher the fluorescence intensity around the 673-nanometer wavelength, the greater the concentration of chlorophyll in that particular olive oil sample.

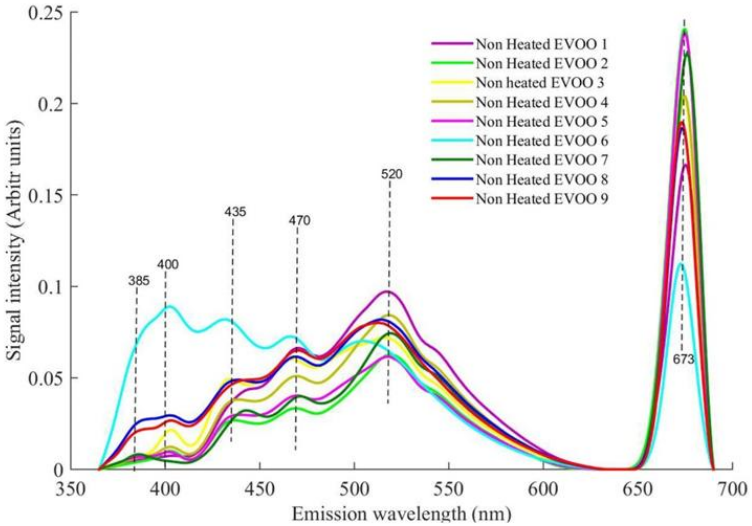

Figure 2. Chlorophyll fluorescence spectrum of nine different olive oil samples (Ansar et al. 2023).

4.2. Light Emission from Olive Oil under Electromagnetic Radiation

The emission of light from olive oil occurs when it is exposed to electromagnetic waves, particularly within the infrared and visible regions of the spectrum. This emission is most prominent in the area known as chlorophyll fluorescence. The light emitted from olive oil lies at the boundary of the visible spectrum, specifically within the red region, making it nearly perceptible to the human eye.

As a scientific summary, chlorophyll fluorescence in olive oil is recognized as a unique characteristic that reflects its optical behavior. The significant presence of chlorophyll in extra-virgin olive oil enables it to emit light in the red region of the electromagnetic spectrum when exposed to light. It is important to note that when the oil is exposed to ambient light (electromagnetic waves with low energy and intensity), the fluorescence in the red region exists but is not visible to the naked eye. However, if the oil is exposed to light with sufficient energy and intensity, such as UV radiation, the chlorophyll fluorescence becomes visible to the human eye.

5. Conclusion

The phrase "Its oil would almost glow, even if untouched by fire" (Q. 24:35) was examined through both Qur'anic and scientific lenses. The study began with a lexical analysis of the verse, followed by a categorization of exegetical views regarding its meaning and implications. As shown in the exegetical review, most exegetes, including those with a scientific interpretive approach, have interpreted the purity of olive oil as the reason for its light-reflecting properties, considering this as the intended meaning of the verse. However, this interpretation faces three critical challenges:

- The purer and higher-quality the olive oil (e.g., extra-virgin), the lower its light reflectivity due to increased natural compounds.
- Light reflection is not unique to olive oil; many oils can reflect light depending on their impurity levels.
- The Qur'anic term *yuḍīʾu* refers to active light emission rather than passive reflection, as confirmed by classical lexicons.

This study aimed to propose a more accurate interpretation of the verse, one that aligns closely with both the literal wording and the latest scientific findings. As discussed in the scientific section, extra-virgin olive oil contains a comparatively high concentration of chlorophyll among edible oils, which gives it a distinctive capacity to emit red fluorescence when excited by light in appropriate regions of the spectrum. When exposed to light, it radiates in the red region of the electromagnetic spectrum. Although this emission is not visible under low-intensity ambient light, it becomes perceptible to the naked eye when the oil is exposed to light of sufficient energy and intensity, such as ultraviolet radiation.

This phenomenon bears a striking semantic resemblance to the Qur'anic phrase "It nearly gives light, even if no fire touches it." It is evident that such a property of olive oil has only been discovered in recent years, thanks to significant advancements in precise scientific instrumentation, highlighting a remarkable aspect of the Qur'an's scientific insight.

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References

Al-Bayḍāwī, ʿA. (1997). *Anwār al-Tanzīl wa Asrār al-Taʾwīl*. Beirut: Dār al-Iḥyāʾ al-Turāth al-ʿArabī.

Al-Farāhīdī, K. (1990). *Kitāb al-ʿAyn*. Qom: Hejrat.

Al-Qurṭubī, M. (1995). *Al-Jāmiʿ li-Aḥkām al-Qur'ān*. Tehran: Naṣīr Khusru.

Al-Rāghib al-Iṣfahānī, Ḥ. (1991). *Mufradāt Alfāẓ al-Qur'ān*. Beirut: Dār al-Qalam.

Al-Ṭabrisī, F. (1993). *Majmaʿ al-Bayān fī Tafsīr al-Qur'ān*. Tehran: Naṣīr Khusru.

Al-Ṭūsī, M. (2010). *Al-Tibyān fī Tafsīr al-Qur'ān*. Beirut: Dār al-Iḥyāʾ al-Turāth al-ʿArabī.

Ansar, A., Ahmad, N., Albqmi, M., Saleem, M., & Ali, H. (2023). Thermal effects on the quality parameters of extra virgin olive oil using fluorescence spectroscopy. Journal of Fluorescence, 33(5), 1749–1760. https://doi.org/10.1007/s10895-023-03186-3

Baher, G. (2002). Olive: The blessed tree. *Lessons from the School of Islam Journal*.

Emam Jomeh, A., Shanavazi, P., & Hasanein, P. (2017). Physiological effects of the olive from the viewpoint of the Holy Qur'an and nutrition. *Islamic and Iranian Traditional Medicine Journal*, 8(1), 67–75.

Fakhr Al-Rāzī, M. (1999). *Mafātīḥ al-Ghayb*. Beirut: Dār al-Iḥyā' al-Turāth al-ʿArabī.

Gerami, B. (2011). A new perspective on verse 35 of surah 24 (al-Nūr). *Tarjoman-e-Wahy Journal*, 29, 37–47.

Hossain, M. A., Canning, J., & Yu, Z. (2020). Fluorescence-based determination of olive oil quality using an endoscopic smart mobile spectrofluorimeter. *IEEE Sensors Journal*, 20(8), 4156–4163. https://doi.org/10.1109/JSEN.2019.2961419

Ibn Fāris, A. (1984). *Muʿjam Maqāyīs al-Lughah*. Qom: Islamic Media Library.

Ibn Kathīr, I. (1998). *Tafsīr al-Qur'ān al-ʿAẓīm*. Beirut: Dār al-Kutub al-ʿIlmīyyah.

Khandan Barani, K., & Hekmatpoor, Z. (2018). A survey on antioxidants and phytochemical efficiencies of Qur'anic fruits. *Qur'anic Studies Quarterly*, 32, 177–190.

Khavari, N. (2014). *Olive in the Qur'an and modern medicine*. Tehran: Evin Publications.

Makarem Shirazi, N. (1995). *Tafsīr Nimūneh*. Tehran: Dār al-Kutub al-Islāmīyyah.

Manzano, J. D., de la Peña, A. M., & Merás, I. D. (2019). Front-face fluorescence combined with second-order multiway classification based on polyphenol and chlorophyll compounds for virgin olive oil monitoring under different photo- and thermal-oxidation procedures. *Food Analytical Methods*, 12(6), 1399–1411. https://doi.org/10.1007/s12161-019-01471-1

Qarai, A. Q. (2004). *Translation of the Holy Qur'an* .London: ICAS.

Qorashi, S. A. (1992). *Qāmūs al-Qur'ān*. Tehran: Dār al-Kutub al-Islāmīyah.

Qur'anic Elites Network. (2020). *Benefits of olives and the combustion of their oil from the perspective of the Qur'an and science*. Qur'anic Elites Network. https://fa.qelnet.com

Sajadi Kaboudi, P., Aqatabar Roudbari, J., Raie Abbasabadi, H., & Ebrahimpour, S. (2019). An overview of the properties of the olive plant from the viewpoint of the Holy Qur'an and narratives. *Islam and Health Journal*, 4(2), 66–73.

Sayyid Quṭb, I. (1991). *Fī Ẓilāl al-Qur'ān*. Cairo: Dār al-Shurūq.

Tabataba'i, M. H. (1996). *Al-Mīzān fī Tafsīr al-Qur'ān*. Qom: Jāmiʿah Mudarrisīn.

Ṭanṭāwī al-Jawharī (2004). *Al-Jawāhir fī Tafsīr al-Qur'ān al-Karīm*. Beirut: Dār al-Kutub al-ʿIlmiyyah.

Taqavizadeh, R. (2014). Scientific wonders of the Qur'an in grapes, pomegranates, and olives. *The Qur'an and Science*, 7(13), 127–144.

Vash, H. (2015). *Medicinal properties of Qur'anic plants and fruits*. Tehran: Sokhanvaran Publications.

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Mathematical Analyses of Textual Excellency of the Holy Qur'an: A Case Study of Fifteen Short Surahs

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ABSTRACT:

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This study quantitatively examines the textual efficiency and richness of the Qur'an by analyzing fifteen short surahs (al-Fātiḥah and the last fourteen chapters) and comparing them with their translations into English and Bangla languages. Using three measurable parameters—word count, letter count, and unique-letter usage per *āyah*—the research evaluates structural density across languages. The Arabic text of the Qur'an consistently demonstrates remarkable semantic compactness, requiring fewer words and letters that demand expansions in the two translations. The English translation shows an average increase of nearly double in word and letter counts, while Bangla translation expands more moderately but, still exceeds the Arabic Original. These findings highlight the Qur'an's competence to achieve maximum expressive powers with minimal linguistic inputs, underscoring the divine wisdom behind the choice of Arabic as the language of revelation.

KEYWORDS: The Qur'an, Quantitative studies of the Qur'an, Arabic language, Word count analysis, Linguistic density, English translation of the Qur'an, Bangla translation of the Qur'an.

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1. Introduction

Let us begin with the first part of the *Kalimah al-Ṭayyibah* (The Pure Word), which can also be found in Surah *Al-Ṣaffāt* (Q. 37:35) and Surah *Muḥammad* (Q. 47:19)—the only two places in the Qur'an where this exact phrase occurs:

لَآ إِلَٰهَ إِلَّا ٱللَّهُ

There is no God except Allah

আল্লাহ ছাড়া কোনো উপাস্য নেই

This phrase provides a concise and yet powerful example for analyzing the structural efficiency of Qur'anic Arabic. In the original Arabic, the text is composed of three unique letters*, Alif, Lām,* and *Hā'*. The total number of letters is 12, arranged into four words. In English translation, the phrase expands to 15 unique letters (t, h, e, r, i, s, n, o, g, d, x, c, p, a, l), 23 total letters, and six words. In Bangla translation, it is composed of 11 unique letters (আ, ল, হ, ছ, ড়, ক, ন, উ, প, স, ই). The total letters no is 13 and there are five words.

These values are summarized in Table 1, which shows how both English and Bangla translations require a higher number of unique letters, total letters, and words compared to the Qur'anic Arabic. Specifically, English uses nearly five times more unique letters, 1.92 times more total letters, and 1.50 times more words. On the other hand, Bangla, though more compact than English, still requires 3.67 times more unique letters, 1.08 times more total letters, and 1.25 times more words than in Arabic.

Table 1. Comparative structural features of the phrase lā ilāha illā Allāh (Q. 37:35; 47:19) in Qur'anic Arabic and its English and Bangla translations.

Language	Original Text and Translation	Unique letter No	Letter No	Word No	Comparison		
Qur'anic Arabic	لَآ إِلَٰهَ إِلَّا ٱللَّهُ	3	12	4	--	--	--
English	There is no God except Allah	15	23	6	5.00	1.92	1.50
Bangla	আল্লাহ ছাড়া কোনো উপাস্য নেই	11	13	5	3.67	1.08	1.25

This example highlights that Qur'anic Arabic has a greater textural efficiency, conveying profound meaning with fewer letters and words. English and Bangla have to structurally expand to approximate or to uphold the same message. Therefore, the purpose of this research is to examine and quantify the textual efficiency of Qur'anic Arabic in comparison with its

translations. It will try to fulfill that by analyzing the parameters- unique letters, total letters, and word counts.

2. Contextual Foundation

Qur'anic studies in the fields of theology, law, history, and sharia have already matured into well-established disciplines. Theological sides have long examined the nature of God, prophecy, and divine status; legal studies have explored the foundations of jurisprudence and their implementations in sharia; and historical approaches have traced the revelation, compilation, and evolving contextual significances of the Qur'an. On the other hand, researches on the Qur'an through the lenses of mathematics, linguistics, and computational sciences remain at a comparatively early stage. The current study stands on the reality of this relatively new era in Qur'anic studies, and is trying to analyze the Qur'an's text in a possible way previously unexplored. Such a research may generate additional insights into the Qur'an's linguistic structure, conciseness, and singularity.

The Qur'an itself affirms its divine protection: *"Indeed, it is We who sent down the Reminder [i.e., the Qur'an], and indeed, We will be its Guardian"* (Q. 15:9). It also acknowledges the choice of Arabic as its language of revelation. Numerous verses highlight this divine selection:

- *"Indeed, We have sent it down as an Arabic Qur'an so that you may understand" (Q. 12:2).*
- *"And, so, We have revealed to you a Qur'an in Arabic, so that you may warn the Mother of Cities and everyone around it…" (Q. 42:7).*
- *"An Arabic Qur'an, without any deviance, that they might become righteous" (Q. 39:28).*
- *"If it had been a Qur'an in a foreign language… Say, 'It is, for those who believe, a guidance and cure…'" (Q. 41:44).*
- *"This is a Book confirming it in the Arabic tongue…" (Q. 46:12).*
- *"The tongue of the one, they refer to, is foreign, and this Qur'an is in a clear Arabic tongue" (Q. 16:103).*

These verses collectively affirm that Arabic was divinely chosen, not only for its accessibility to the Prophet's immediate community but also for its inherent suitability as the language of the Qur'an. The seventh-century Arabic possessed an unparalleled eloquence, expressiveness, and clarity. Poetry and oratory flourished in pre-Islamic Arabia (Kassab 2009; Nasser 2025), and Arabic's vast vocabulary, rhythmic flexibility, and semantic depth enabled the Qur'an to communicate with power and precision (Erdy 2025). Its stylistic and rhetorical qualities left even the most accomplished

poets unable to produce anything comparable, reinforcing its miraculous nature (Messaoudi et al. 2025). Arabic structural precision allows layers of meaning to be condensed into fewer words (Boulesnam & Boucetti 2025), a feature indispensable for a text intended as a timeless guidance. Through Arabic, the Qur'an became both a perfectly memorized oral text and a meticulously preserved written scripture, unchanged for more than fourteen centuries—an enduring testimony to divine wisdom.

Globally, there are approximately 7,159 languages in use today (Eberhard et al. 2025). Many languages evolve and change across centuries, making it difficult to quantify the true number of languages that have existed since the beginning of human civilization (Janda & Joseph 2017). Yet, the Qur'an has played a crucial role in ensuring Arabic's preservation. Unlike many other languages that underwent dramatic structural shifts, Qur'anic Arabic remains substantially identical to its original form, safeguarded through both oral recitation and the written *muṣḥaf*.

This study contributes to Qur'anic linguistics by analyzing textual richness using some measurable parameters: unique letters, letters, and words. Specifically, it examines fifteen short surahs of the Qur'an and compares them to their translations in English and Bangla. These two languages were chosen for their global and regional significances: English, with approximately 380 million native speakers (third mostly spoken worldwide), and Bangla, with about 237 million native speakers (sixth mostly spoken) (Babbel 2023). Also, it is not possible to compare all the languages under the current context, and yet, it may open the doors of more identical studies.

3. Literature Review

The Qur'an, with roughly 77,000 words, is notably shorter than the New Testament (about 138,000 words) and the Hebrew Bible/Old Testament (about 305,000 words). Despite this, it is dense in meaning, employing a style optimized for recitation and memorization (Jom al-Qur'an n.d.). Behnam Sadeghi's (2011) research demonstrated that measurable linguistic features, such as verse length, mean word length, and variances in word length, vary systematically across the Qur'an, with shorter, more compact verses dominating in some passages and longer, more elaborate verses characterizing in other segments (Sadeghi & Bergmann 2010). Such work highlights that the quantitative metrics can effectively capture Qur'anic stylistic density and development, aligning to the present study's focus on letters, words, and unique letters as markers of semantic compactness.

Studies of Dukes and Habash (2010), Dukes et al. (2010), and Dukes and Buckwalter (2010) revealed that the Qur'an's approximately 77,430 words form a unique genre, with each word often morphologically complex, composed of stems, prefixes, and suffixes. This morphological richness enables Arabic to pack multiple layers of meaning into single words, explaining why translations require more words and letters to approximate the same semantic contents.

Halim Sayoud's computational researches (Sayoud, 2018; 2022; Sayoud & Hadjadj 2018) further underscored the Qur'an's uniqueness. Sayoud found that the Qur'an exhibits extraordinarily high frequencies of successive function words, averaging 27 times higher than in the *ḥadīth* corpus and 11 times higher than in other Arabic religious works. These findings confirm the Qur'an's distinctive stylistic signatures within Arabic literature, complementing evidences from translation comparisons: while translations expand in size, the Qur'an remains compact, rhythmically precise, and semantically powerful.

Other quantitative studies have added further dimensions. Dror et al. (2004) developed a computational system for morphological analysis and annotations of the Qur'an. It facilitates a variety of queries on the Qur'anic text that make references to both words and their linguistic attributes. The core of the system is a set of rules which describes the morpho-phonological and morpho-syntactic phenomena of the Qur'anic language. Mahzuz (2022) tried to contribute through Abjad and non-Abjad numerical analyses of *Surah al-Kawthar* and found that even, at the level of individual letters, the Qur'an has astonishing mathematical precisions. Botani (2012) applied a numbers of probability models to the distribution of the verses, words, and letters, finding that the number of verses of the Qur'an per chapter follows an exponential distribution, while word counts per chapter align to a Gamma distribution. Safi (2013) identified some statistical patterns in the Noble Qur'an, and Bin Dost and Ahmad (2008) examined the symmetry between Meccan and Medinan surahs. Together, all these studies confirm the value of quantitative measures (letters, words, and distributions) in understanding the Qur'an's structural inimitableness.

4. Research Gap and Novelty of Current Study

Despite all the above contributions, a clear research gap still remains. Existing studies have focused on the verses and word-lengths distributions, Morphological segmentation of the Qur'anic words, Stylometric markers such as function-words frequencies, statistical distributions of the verses, words, and letters across the chapters, etc.

What is missing is a direct, systematic comparison of letters, words, and unique letters at the *āyah* levels across the Qur'an and its translations. While prior works have analyzed the Arabic text internally, no one is found to examine how or whether translations expand structurally in terms of letter and word counts, and also none have consistently included unique-letter diversity as a metric. This omission is significant because usages of unique-letters, letters and words reflect phonetic ranges, rhythmic balances, and orthographic compactness—all central to the Qur'an's oral and literary impacts. Present study addresses this gap by:

1. Introducing unique-letters, letters and word count as new quantitative measures of the Qur'anic compactness.
2. Comparing Arabic with translations in English and Bangla to assess how other languages expand structurally.

By doing so, the study provides fresh empirical evidences for the Qur'an's linguistic adequacy and offers deeper possible insight into the divine sagacity behind Allah's choice of Arabic as the language of revelation. It demonstrates that only Arabic language uniquely achieves semantic density, rhythmic precision, and phonetic economy, while translations like English and Bangla inevitably stretch the structure. This can also open a promising new avenue of Qur'anic linguistic researches at the intersection of theology, linguistics, and quantitative analysis.

5. Methodology

This study adopts a quantitative and comparative linguistic approaches to investigate into the differences in textual density between the Qur'an in its original Arabic and its translations into English and Bangla. The study uses three quantifiable parameters: word-count (the number of lexical units per *āyah*), letter counts (the number of alphabetic characters per *āyah*), and unique letters (the diversity of distinct alphabetic characters appearing in each *āyah*). Together, these metrics make it possible to systematically compare the Qur'anic Arabic to its translations and reveal the degree of structural expansion required when transferring compact meanings into other languages. There are 28, 26 and 50 letters in Arabic, English, and Bangla languages, respectively. These are listed in Table 2. Such variations in alphabet sizes influence the outcomes of unique-letter-counts: Bangla, with more graphemes (actual smallest *visible units*), naturally produces higher diversity scores, while Arabic, with fewer letters, relies on a more compact set of symbols.

Table 2. The letters of Arabic, English and Bangla languages

Language	Letters
Arabic	ا, ب, ت, ث, ج, ح, خ, د, ذ, ر, ز, س, ش, ص, ض, ط, ظ, ع, غ, ف, ق, ك, ل, م, ن, هـ, و, ي
English	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
Bangla	অ, আ, ই, ঈ, উ, ঊ, ঋ, এ, ঐ, ও, ঔ, ক, খ, গ, ঘ, ঙ, চ, ছ, জ, ঝ, ঞ, ট, ঠ, ড, ঢ, ণ, ত, থ, দ, ধ, ন, প, ফ, ব, ভ, ম, য, র, ল, শ, ষ, স, হ, ড়, ঢ়, য়, ৎ, ং, ঃ, ঁ

For the purposes of this study, fifteen small surahs of Qur'an have been selected: al-Fātiḥa (1), al-Nās (114), al-Falaq (113), al-Ikhlāṣ (112), al-Masad (Lahab) (111), al-Naṣr (110), al-Kāfirūn (109), al-Kawthar (108), al-Māʿūn (107), Quraysh (106), al-Fīl (105), al-Humazah (104), al-ʿAṣr (103), al-Takāthur (102), and al-Qāriʿah (101). Although a study encompassing the entire Qur'an would be desirable, it would be too extensive for the current scope; and hence, the focus has deliberately been limited to this representative corpus.

The ʿUthmānī Muṣḥaf was taken as the Arabic source text. This recension, compiled under Caliph ʿUthmān ibn ʿAffān (RA), is universally recognized as the authoritative written copy of the Qur'an, preserving a single, standardized text, free from regional variations and boundaries (Al-Shareef and Abdul Salam 2020). Its use ensures consistency and authenticity in letter-based analysis, since orthographic differences in non-ʿUthmānī prints could otherwise affect the counts. The recension compiled under Caliph ʿUthmān ibn ʿAffān is recognized as the authoritative written copy of the Qur'an, preserving a standardized text, free from all the regional variations (al-Aʿẓamī 2003; Burton 1977).

Particularly, for the English translation, the study employed '*The Qur'an, with Surah Introductions and Appendices*' by Al-Mehri (2017), chosen for its accessibility and wider uses. For the Bangla translation, '*Qur'an Shareef: Simple Bengali Translation*' by Ahmed (2008) was selected due to its popularity and straightforward style. Though many translations exist in both English and Bangla, restricting the analyses to one version of each language provides consistency and minimizes variability caused by translator style. It also mirrors practical uses, where readers often rely on a single standard translation. Therefore, the study's analytical framework is built around three metrics:

1. Word-count was defined as the number of alphabetic units separated by whitespace.
2. Letter-count was defined as the total number of alphabetic characters. For example, in Arabic, diacritical marks (*ḥarakāh* such

as vowel signs) were not counted, as they are orthographic aids rather than graphemes.

3. Unique letters per *āyah* were defined as the number of distinct alphabetic characters present. For instance, if an *āyah* contained the letters ك ,ب ,ب ,ا, the unique-letter count would be three (ك ,ب ,ا).

In expressing the reason and philosophy of choosing the three criteria (word-count, letter-count, unique-letter count), it can be said that, 'Word-count' reflects syntactic compactness and the minimal lexical units needed to convey meaning. Meanwhile, 'Letter-count' reflects orthographic compactness and the structural expansions that occur when shifting from an abjad-based script (Arabic) to alphabetic scripts (English, Bangla). On another hand, 'Unique-letter count' serves as a proxy for phonetic and orthographic diversity within an *āyah*, indicating the breadth of alphabetic symbols needed to encode the same meaning in different languages. Therefore, both the three criteria seem to be needed in quantifying the level of space needed to express the same specific meaning. The analytical procedure here followed several steps. Firstly, each surah was segmented into *āyāt*. Secondly, for every *āyah* in Arabic, English, and Bangla, three values were reckoned: total word count, total letter count, and number of unique letters. Thirdly, these results were compiled into several comparative Tables and figures in the following sections.

6. Results and Discussions

6.1. Surah al-Fātiḥah

The unique letter number, letter number and word number of each *āyah* of Surah al-Fātiḥah is presented in Table 3. The table reveals quantitative differences across the Qur'anic Arabic, English, and Bangla versions of *Surah* al-Fātiḥah. In Qur'anic Arabic, 139 letters have been used to create 29 words. While English uses 289 letters and 72 words, and Bangla uses 168 letters to create 55 words to express the same meaning in translation. This shows, English expands meaning by ≈ 148% (= (72-29)/29x100), and Bangla by ≈ 90% (= (55-29)/29x100) compared to Arabic, respectively. Unique Letter-counts follow a similar trend: for example, the last *āyah* used 16, 19, and 22 unique letters in Qur'anic Arabic, English, and Bangla, respectively. This highlights that the Qur'anic Arabic achieves higher semantic density (fewer letters and words per sentence or *āyah*), while English and Bangla expand structurally more to preserve the same meaning. This numerical analysis confirms the Qur'an's linguistic perfectness in Arabic compared to its translations.

Table 3. Analysis of Surah al-Fātiḥah on the bases of letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	بِسْمِ ٱللَّهِ ٱلرَّحْمَٰنِ ٱلرَّحِيمِ	10	19	4	139 and 29
	ٱلْحَمْدُ لِلَّهِ رَبِّ ٱلْعَٰلَمِينَ	11	17	4	
	ٱلرَّحْمَٰنِ ٱلرَّحِيمِ	7	12	2	
	مَٰلِكِ يَوْمِ ٱلدِّينِ	8	11	3	
	إِيَّاكَ نَعْبُدُ وَإِيَّاكَ نَسْتَعِينُ	10	19	4	
	ٱهْدِنَا ٱلصِّرَٰطَ ٱلْمُسْتَقِيمَ	13	18	3	
	صِرَٰطَ ٱلَّذِينَ أَنْعَمْتَ عَلَيْهِمْ غَيْرِ ٱلْمَغْضُوبِ عَلَيْهِمْ وَلَا ٱلضَّآلِّينَ	16	43	9	
English Translation	In the name of God, the Most Compassionate, the Most Merciful	20	49	11	289 and 72
	All praise be to God, Lord of the worlds	15	31	9	
	The Most Compassionate, the Most Merciful	15	35	6	
	Master of the Day of Judgment	15	24	6	
	It is You we worship and You we ask for help	17	34	11	
	Guide us to the straight path	12	24	6	
	The path of those upon whom You have bestowed favour, not of those who have evoked anger or of those who are astray	19	92	23	
Bangla Translation	রহমান রহীম আল্লাহর তায়ালার নামে	8	18	5	168 and 55
	সমস্ত প্রশংসা আল্লাহ্ তা'আলার জন্যে- তিনি সৃষ্টিকুলের মালিক	15	29	8	
	তিনি পরম দয়ালু, অতি মেহেরবান	11	15	5	
	তিনি বিচার দিনের মালিক	9	11	4	
	আমরা তোমারই বন্দেগী করি এবং তোমারই সাহায্য চাই	16	25	8	
	তুমি আমাদের সঠিক পথের দিশা দাও	12	16	6	
	তাদের পথ- যাদের উপর তুমি অনুগ্রহ করেছো, তাদের নয়- যাদের উপর অভিশাপ দেয়া হয়েছে এবং যারা পথভ্রষ্ট হয়ে গেছে	22	54	19	

6.2. Surah Al-Nās

In Table 4 it is highlighted the quantitative differences across Qur'anic Arabic, English, and Bangla renderings of *Surah al-Nās*. In the Qur'anic Arabic, the chapter uses 80 letters to form 20 words. In contrast, the English translation expands to 163 letters and 36 words, while the Bangla translation requires 98 letters and 32 words. Thus, compared to Arabic, English expands by ≈ 80% in word count (= (36−20)/20×100), while Bangla expands by ≈ 60% (= (32−20)/20×100). Letter-counts show a similar trend: English uses

≈ 2× more letters than Arabic, while Bangla uses ≈ 1.2× more. Fewer amount of unique letters also seen: for example, the first *āyah* used 10, 17, and 14 unique letters in Qur'anic Arabic, English, and Bangla, respectively. These numbers show that Arabic achieves higher semantic solidity, conveying the message with fewer letters, while English and Bangla structurally expand to preserve meaning.

Table 4. Analysis of Surah al-Nās considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	قُلْ أَعُوذُ بِرَبِّ ٱلنَّاسِ	10	14	4	80 and 20
	مَلِكِ ٱلنَّاسِ	6	8	2	
	إِلَٰهِ ٱلنَّاسِ	5	8	2	
	مِن شَرِّ ٱلْوَسْوَاسِ ٱلْخَنَّاسِ	9	17	4	
	ٱلَّذِى يُوَسْوِسُ فِى صُدُورِ ٱلنَّاسِ	11	20	5	
	مِنَ ٱلْجِنَّةِ وَٱلنَّاسِ	8	13	3	
English Translation	Say, "I seek refuge in the Lord of mankind	17	32	9	163 and 36
	The Sovereign of mankind	15	21	4	
	The God of mankind	12	15	3	
	From the evil of the retreating whisperer	16	35	7	
	Who whispers into the breasts of mankind	16	34	7	
	From among the jinn and mankind"	14	26	6	
Bangla Translation	তুমি বলো, আমি আশ্রয় চাই মানুষের মালিকের কাছে	14	21	8	98 and 32
	মানুষের বাদশাহর কাছে	10	11	3	
	মানুষের মা'বুদের কাছে	8	10	3	
	কুমন্ত্রণাদানকারীর অনিষ্ট থেকে, যে গা ঢাকা দেয়	15	22	7	
	যে মানুষের অন্তরে কুমন্ত্রণা দেয়	11	16	5	
	জ্বিনদের মধ্য থেকে, মানুষদের মধ্য থেকে	10	18	6	

6.3. Surah Al-Falaq

Table 5 presents another comparative linguistic analysis of Surah al-Falaq across Qur'anic Arabic, English, and Bangla translations. In the Qur'anic Arabic text, the surah is compact, with 71 letters and 23 words, reflecting the Qur'an's stylistic brevity yet in depth. The English translation, however, expands considerably to 170 letters and 45 words, which indicates that the target language often requires more words to convey the same meaning. In the same way, the Bangla translation uses 118 letters and 41

words, showing a middle ground between the conciseness of Arabic and the elaboration of English. When comparing to word-counts, English uses nearly 96% (= (45-23)/23x100) more words than Arabic, while Bangla uses about 78% (= (41-23)/23x100) more, showing inflation in text size. The analysis underscores how translation influences text density: Arabic maintains precision and rhythm, while English and Bangla introduce descriptive expansions. Also, a smaller number of unique letters are used in each respective *āyah* concerning to Qur'anic Arabic. This demonstrates both the linguistic richness of the Qur'an and the inevitable expansion during translations to preserve meaning and clarity.

Table 5. Analysis of Surah al-Falaq considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	قُلْ أَعُوذُ بِرَبِّ ٱلْفَلَقِ	9	14	4	71 and 23
	مِن شَرِّ مَا خَلَقَ	8	9	4	
	وَمِن شَرِّ غَاسِقٍ إِذَا وَقَبَ	11	15	5	
	وَمِن شَرِّ ٱلنَّفَّٰثَٰتِ فِى ٱلْعُقَدِ	14	18	5	
	وَمِن شَرِّ حَاسِدٍ إِذَا حَسَدَ	10	15	5	
English Translation	Say, "I seek refuge in the Lord of daybreak	17	33	9	170 and 45
	From the evil of that which He created	14	31	8	
	And from the evil of darkness when it settles	16	37	9	
	And from the evil of the blowers in knots	17	33	9	
	And from the evil of an envier when he envies."	15	36	10	
Bangla Translation	তুমি বলো, আমি উজ্জ্বল প্রভাতের মালিকের কাছে আশ্রয় চাই	16	26	9	118 and 41
	তাঁর সৃষ্টি করা অনিষ্ট থেকে	9	13	5	
	আমি আশ্রয় চাই রাতের অনিষ্ট থেকে, যখন রাত তার অন্ধকার বিছিয়ে দেয়	20	33	12	
	গিরায় ফুঁক দিয়ে যাদু টোনাকারিনীদের অনিষ্ট থেকে	12	22	7	
	হিংসুক ব্যক্তির অনিষ্ট থেকেও যখন সে হিংসা করে	15	24	8	

6.4. Surah Al-Ikhlāṣ

The numerical structure of Surah al-Ikhlāṣ across Qur'anic Arabic, English, and Bangla translations illustrates sharp contrasts in textual density and efficiency (Table 6). In the original Arabic, the surah comprises 47 letters and 15 words, reflecting extreme conciseness and rhythmic balance. The English translation expands significantly to 85 letters and 22 words,

which is nearly 47% (= (22-15)/15x100) longer in word count and 81% (= (85-47)/47x100) higher in letter count than in Arabic. This expansion shows how English requires additional syntactic units to capture theological nuances. The Bangla translation have 79 letters and 30 words, which means is has about 68% (= (79-47)/47x100) more letters and 100% ((30-15)/15x100) more words than in Qur'anic Arabic. Also, Qur'anic Arabic uses smaller number of unique letters in each *āyah* in respect to English and Bangla. These statistics reveal that Arabic is structurally compact and yet, semantically powerful, while both English and Bangla extend meaning by distributing ideas across more words.

Table 6. Analysis of Surah al-Ikhlāṣ talking into account the letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	قُلْ هُوَ ٱللَّهُ أَحَدٌ	7	11	4	47 and 15
	ٱللَّهُ ٱلصَّمَدُ	6	9	2	
	لَمْ يَلِدْ وَلَمْ يُولَدْ	5	12	4	
	وَلَمْ يَكُن لَّهُۥ كُفُوًا أَحَدٌۢ	11	15	5	
English Translation	Say, "He is God, One	10	13	5	85 and 22
	God, the Self-sufficient	13	20	4	
	He neither begets nor is born	10	24	6	
	Nor is there to Him any equivalent."	15	28	7	
Bangla Translation	তুমি বলো, তিনিই আল্লাহ, তিনি এক ও একক	11	19	8	79 and 30
	তিনি কারোই মুখাপেক্ষী নন	9	12	4	
	তাঁর থেকে কেউ জন্ম নেয়নি, আর তিনিও কারো থেকে জন্ম গ্রহণ করেননি	14	31	12	
	আর তাঁর সমতুল্য দ্বিতীয় কেউ-ই নেই	13	17	6	

6.5. Surah Al-Masad

The dataset for Surah al-Masad in Table 7 also presents fascinating comparison of Qur'anic Arabic, English, and Bangla in terms of structural density and linguistic expansion. The original Qur'anic Arabic text is highly concise, with 81 letters and 23 words, in delivering its core message. This brevity reflects the Qur'an's hallmark style—compact, rhythmic, and semantically rich. The English rendering expands significantly to 186 letters and 51 words, compared to Arabic, that shows a 122% (= (51-23)/23x100) increases in word count and a 130% (= (186-81)/81x100) upsurge in letters, underscoring how English requires more syntactic units to explain nuanced

meanings. Bangla stands between the two extremes, with 125 letters and 47 words. Both the word count and letter count are higher than Arabic. Both the English and Bangla languages use higher number of unique letters per *āyah* to express the same corresponding meaning than the Qur'anic Arabic.

Table 7. Analysis of Surah al-Masad considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	تَبَّتْ يَدَآ أَبِى لَهَبٍۢ وَتَبَّ	8	15	5	81 and 23
	مَآ أَغْنَىٰ عَنْهُ مَالُهُۥ وَمَا كَسَبَ	12	19	6	
	سَيَصْلَىٰ نَارًا ذَاتَ لَهَبٍ	11	15	4	
	وَٱمْرَأَتُهُۥ حَمَّالَةَ ٱلْحَطَبِ	10	17	3	
	فِى جِيدِهَا حَبْلٌ مِّن مَّسَدٍۭ	12	15	5	
English Translation	May the hands of Abu Lahab be ruined, and ruined is he	16	42	12	186 and 51
	His wealth will not avail him or that which he gained	16	43	11	
	He will enter to burn in a Fire of blazing flame	16	38	11	
	And his wife as well - the carrier of firewood	14	36	9	
	Around her neck is a rope of fibre	15	27	8	
Bangla Translation	আবু লাহাবের দুটো হাতই ধ্বংস হয়ে যাক, ধ্বংস হয়ে যাক সে নিজেও	18	31	12	125 and 47
	তার ধন সম্পদ ও আয় উপার্জন তার কোনো কাজে আসবে না	15	25	11	
	সে অচিরেই আগুনের লেলিহান শিখায় প্রবেশ করবে	16	22	7	
	জ্বালানি কাঠের বোঝা বহনকারি তার স্ত্রীও	12	19	6	
	তার গলায় যেন খেজুর পাতার পাকানো শক্ত কোনো রশি জড়িয়ে আছে	15	28	11	

6.6. Surah Al-Naṣr

The information presented in Table 8 for Surah al-Naṣr provides valuable insights into the linguistic density of Qur'anic Arabic compared to its English and Bangla translations. The surah has 80 letters and 19 words in Qur'anic Arabic. Unique letter usage ranges from 12, 13 and 14 respectively per *āyah*. The English version expands to 184 letters and 42 words. Unique letter usage rises sharply to 17, 19 and 22 per sentence, reflecting English's orthographic variety and its reliance on longer lexical units. This expansion also illustrates how and why English requires more structural elements to capture nuance, increasing both unique letter counts and total words. Bangla yields to 109 letters and 36 words. Unique letters per *āyah* range from 13,

17 and 19. The limited use of unique letters, overall letters, and words in Qur'anic Arabic highlights its ability to achieve a remarkable diversity of sounds and vocabulary with minimal inputs.

Table 8. Analysis of Surah al-Naṣr contemplating letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	إِذَا جَاءَ نَصْرُ ٱللَّهِ وَٱلْفَتْحُ	12	19	5	80 and 19
	وَرَأَيْتَ ٱلنَّاسَ يَدْخُلُونَ فِى دِينِ ٱللَّهِ أَفْوَاجًا	13	31	7	
	فَسَبِّحْ بِحَمْدِ رَبِّكَ وَٱسْتَغْفِرْهُ ۚ إِنَّهُۥ كَانَ تَوَّابًۢا	14	30	7	
English Translation	When the victory of God has come and the conquest	19	40	10	184 and 42
	And you see the people entering into the religion of God in multitudes,	17	58	13	
	Then exalt with praise of your Lord and ask forgiveness of Him. Indeed, He is ever Accepting of repentance.	22	86	19	
Bangla Translation	যখন আল্লাহ তা'য়ালার পক্ষ থেকে সাহায্য ও বিজয় আসবে,	17	26	9	109 and 36
	তখন মানুষদের তুমি দেখবে, তারা দলে দলে আল্লাহর দ্বীনে দাখিল হচ্ছে,	13	33	11	
	অতঃপর তুমি তোমার মালিকের প্রশংসা করো এবং তাঁর কাছেই ক্ষমা প্রার্থনা করো; অবশ্যই তিনি তাওবা কবুলকারী	19	50	16	

6.7. Surah Al-Kāfirūn

The Table 9 for Surah al-Kāfirūn offers another interesting and quantitative and linguistic comparisons across Qur'anic Arabic, English, and Bangla languages. The surah contains 95 letters and 26 words. Unique letter counts per *āyah* vary between 7 and 10, showing a relatively narrower range. This reflects how Qur'anic Arabic maintains semantic intensity and rhythmic flow while using a limited sounds and vocabulary. The English version expands substantially to 191 letters and 48 words, nearly doubling both word-counts and letters, with unique letters per *āyah* ranging from 11 to 16. This demonstrates how English relies on longer words and additional syntactic elements to capture the same meaning. Bangla stands between the two extremes with 125 letters and 48 words. Despite a similar word count to English, Bangla achieves expression with shorter syllabic units. Unique letters range from 9 to 11, showing a moderate phonetic diversity. Overall, the analysis confirms that translation inevitably stretches the structural economy of Arabic, transforming compact verses into more elaborate forms.

Table 9. Analysis of Surah al-Kāfirūn considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	قُلْ يَٰٓأَيُّهَا ٱلْكَٰفِرُونَ	10	14	3	95 and 26
	لَآ أَعْبُدُ مَا تَعْبُدُونَ	9	14	4	
	وَلَآ أَنتُمْ عَٰبِدُونَ مَآ أَعْبُدُ	9	18	5	
	وَلَآ أَنَا۠ عَابِدٌ مَّا عَبَدتُّمْ	9	17	5	
	وَلَآ أَنتُمْ عَٰبِدُونَ مَآ أَعْبُدُ	9	18	5	
	لَكُمْ دِينُكُمْ وَلِىَ دِينِ	7	14	4	
English Translation	Say, "O disbelievers,	11	16	3	191 and 48
	I do not worship what you worship.	13	27	7	
	Nor are you worshippers of what I worship.	14	34	8	
	Nor will I be a worshipper of what you worship.	16	37	10	
	Nor will you be worshippers of what I worship.	16	37	9	
	For you is your religion, and for me is my religion."	14	40	11	
Bangla Translation	তুমি বলে দাও, হে কাফেররা	10	11	5	125 and 48
	আমি এবাদত করি না যাদের এবাদত তোমরা করো	10	21	8	
	না তোমরা এবাদত করো যার এবাদত আমি করি	10	20	8	
	এবং আমি এবাদত করবো না যাদের তোমরা এবাদত করো	11	25	9	
	না তোমরা কখনো এবাদত করবে যার এবাদত আমি করি	11	24	9	
	তোমাদের পথ তোমাদের জন্য আর আমার পথ আমার জন্য	9	24	9	

6.8. Surah Al-Kawthar

The Table 10 for Surah al-Kawthar, the shortest surah of the Qur'an, highlights clear differences between Qur'anic Arabic, English, and Bangla in terms of succinctness, structure, and linguistic density. The Arabic original is extremely concise with only 42 letters and 10 words and a consistent unique letter count of 10 across all the three verses. This reflects its rhythmic compactness and semantic precision. In contrast, the English translation expands significantly to 88 letters and 21 words, nearly doubling both letters and words, with unique letters ranging from 14–16 per verse. This expansion again illustrates how and why English requires longer structures and a wider variety of letters to capture the original meaning. The

Bangla translation use 76 letters and 25 words, with unique letters in between 14–16. While Bangla mirrors English in expansion, it achieves an expression through shorter syllabic units and more descriptive phrasing. Overall, the comparisons show that Arabic conveys theological richness with minimal inputs, English elaborates through length and lexical diversity, and Bangla balances compactness with descriptiveness, though both translations inevitably dilute the Qur'an's original brevity and rhythm.

Table 10. Analysis of Surah al-Kawthar considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	إِنَّآ أَعْطَيْنَٰكَ ٱلْكَوْثَرَ	10	15	3	42 and 10
	فَصَلِّ لِرَبِّكَ وَٱنْحَرْ	10	12	3	
	إِنَّ شَانِئَكَ هُوَ ٱلْأَبْتَرُ	10	15	4	
English Translation	Indeed, we have granted you, al-Kawthar.	16	31	6	88 and 21
	So, pray to your Lord and sacrifice.	15	28	7	
	Indeed, your enemy is the one cut off.	14	29	8	
Bangla Translation	আমি অবশ্যই তোমাকে কাওসার দান করেছি	14	18	6	76 and 25
	অতএব তোমার মালিককে স্মরণ করার জন্য তুমি নামায পড়ো এবং তুমি কোরবানী করো	16	38	13	
	অবশ্যই তোমার নিন্দুক, সেই হবে শেকড়-কাটা	14	20	6	

6.9. Surah Al-Mā ʿūn

In Table 11, Surah al-Mā ʿūn highlights similar differences in structural density and linguistic style across the Qur'anic Arabic, English, and Bangla translations, as above. The Arabic text is concise with 114 letters and 25 words, while unique letters per *āyah* vary between 7–12, showing a balanced but limited phonetic diversity that enhances rhythm and memorability. The English translation nearly doubles the size, with 203 letters and 48 words and unique letters ranging from 9–17. This expansion reflects the need for more elaborate phrasing and lexical variety to capture the original meaning, though it diverts from the Arabic brevity and rhetorical sharpness. The Bangla translation, with 147 letters and 54 words, showing how Bangla relies on shorter syllabic expressions but distributes the meanings across more words. Its unique letters range from 11–17, indicating strong phonetic richness despite compact word lengths. Overall, the difference shows that

Arabic conveys maximum impact with minimal input, English elaborates through structural expansion and lexical diversity, while Bangla balances descriptive details with syllabic bonding. Both translations, however, stretch the concise rhythm and density that characterize the Qur'anic original.

Table 11. Analysis of Surah al-Māʿūn considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	أَرَءَيْتَ ٱلَّذِى يُكَذِّبُ بِٱلدِّينِ	10	19	4	114 and 25
	فَذَٰلِكَ ٱلَّذِى يَدُعُّ ٱلْيَتِيمَ	10	17	4	
	وَلَا يَحُضُّ عَلَىٰ طَعَامِ ٱلْمِسْكِينِ	12	20	5	
	فَوَيْلٌ لِّلْمُصَلِّينَ	7	11	2	
	ٱلَّذِينَ هُمْ عَن صَلَاتِهِمْ سَاهُونَ	12	20	5	
	ٱلَّذِينَ هُمْ يُرَآءُونَ	9	13	3	
	وَيَمْنَعُونَ ٱلْمَاعُونَ	7	14	2	
English Translation	Have you seen the one who denies the Recompense?	17	39	9	203 and 48
	For that is the one who drives away the orphan	15	37	10	
	And does not encourage the feeding of the poor.	15	38	9	
	So, woe to those who pray	10	19	6	
	who are heedless of their prayer.	14	27	6	
	Those who make show	9	16	4	
	And withhold simple assistance.	14	27	4	
Bangla Translation	তুমি কি সে ব্যক্তির কথা ভেবে দেখেছো, যে শেষ বিচারের দিনকে অস্বীকার করে,	17	32	13	147 and 54
	এ তো হচ্ছে সে ব্যক্তি, যে ইয়াতীমকে গলাধাক্কা দেয়,	16	22	9	
	মেসকীনদের খাবার দিতে কখনো সে উৎসাহ দেয় না;	13	22	8	
	দুর্ভোগ রয়েছে সেসব নামাযীর জন্য,	12	15	5	
	যারা নিজেদের নামায থেকে উদাসীন থাকে,	11	17	6	
	তারা কাজকর্মের বেলায় শুধু প্রদর্শনী করে,	13	18	6	
	এবং ছোটোখাটো জিনিস পর্যন্ত দিতে বারণ করে।	17	21	7	

6.10. Surah Quraysh

Table 12 for Surah Quraysh demonstrates the striking compactness and rhetorical highness of the Qur'anic Arabic compared to English and Bangla translations. The Qur'anic Arabic original uses only 75 letters and 17 words, with unique letters per *āyah* ranging between 7 and 13. This shows how the Qur'an achieves profound meaning with a limited set of phonetic and lexical units, producing both brevity and rhythmic elegance. In contrast, the English translation expands to 165 letters and 37 words, raising the unique letter range in between 14–17. The additional length in English reflects the need for more structural and explanatory details, but it dilutes the sharp brevity of the Arabic expression. The Bangla translation, with 105 letters and 34 words, achieves a balance by spreading meaning across shorter syllabic words while maintaining moderate phonetic richness (11–20 unique letters). Overall, the comparison upholds Qur'anic Arabic as uniquely concise, melodious, and semantically dense, while translations—though necessary for accessibility—unavoidably stretch the compact rhetorical sharpness that is intrinsic to the Qur'an's original language.

Table 12. Analysis of Surah Quraysh counting letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	لِإِيلَٰفِ قُرَيۡشٍ	7	9	2	75 and 17
	إِۦلَٰفِهِمۡ رِحۡلَةَ ٱلشِّتَآءِ وَٱلصَّيۡفِ	12	21	4	
	فَلۡيَعۡبُدُواْ رَبَّ هَٰذَا ٱلۡبَيۡتِ	12	18	4	
	ٱلَّذِيٓ أَطۡعَمَهُم مِّن جُوعٖ وَءَامَنَهُم مِّنۡ خَوۡفِۭ	13	27	7	
English Translation	For the accustomed security of the Quraysh	15	36	7	165 and 37
	Their accustomed security for the caravan of winter and summer	17	53	10	
	Let them worship the Lord of this House,	14	32	8	
	Who has fed them in hunger and made them safe from fear.	15	44	12	
Bangla Translation	কোরায়শ বংশের প্রতি রক্ষার জন্য,	11	16	5	105 and 34
	তাদের প্রতিরক্ষা শীত ও গ্রীষ্মকালের সফরের জন্য,	15	23	7	
	তাদের এ ঘরের মালিকেরই এবাদত করা উচিত,	12	21	7	
	যিনি ক্ষুধায় তাদের খাবার সরবরাহ করেছেন এবং যিনি তাদের ভয় ও ক্ষতি থেকে নিরাপদ দিয়েছেন।	20	45	15	

6.11. Surah Al-Fīl

In Surah al-Fīl, the numerical data makes visible the economy of Qur'anic Arabic compared to its translations. The Arabic text conveys the entire surah in only 96 letters and 23 words (Table 13), while maintaining a balanced range of 10–12 unique letters per *āyah*. This balance creates both rhythm and brevity, showing how the Qur'an compresses profound historical narratives into the most compact form. By contrast, the English rendering nearly doubles the size, requiring 194 letters and 44 words, with unique letters expanding from 13 to 19. The need for explanatory phrases in English inevitably stretches the concise, emphatic style of Arabic. Bangla sits between the two, using 133 letters and 44 words, reflecting its reliance on shorter syllables but descriptive details. Its unique letter counts rise as high as 12 up to 17, suggesting richness but less economy. What stands out is that while English and Bangla translations serve clarity, they cannot replicate the Qur'an's original sharpness—its measured brevity, sound harmony, and dense semantic layering remain unmatched in Arabic used in the Qur'an.

Table 13. Analysis of Surah al-Fīl considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	أَلَمْ تَرَ كَيْفَ فَعَلَ رَبُّكَ بِأَصْحَٰبِ ٱلْفِيلِ	12	24	7	96 and 23
	أَلَمْ يَجْعَلْ كَيْدَهُمْ فِى تَضْلِيلٍ	12	19	5	
	وَأَرْسَلَ عَلَيْهِمْ طَيْرًا أَبَابِيلَ	11	20	4	
	تَرْمِيهِم بِحِجَارَةٍ مِّن سِجِّيلٍ	12	18	4	
	فَجَعَلَهُمْ كَعَصْفٍ مَّأْكُولٍ	10	15	3	
English Translation	Have you not considered, how your Lord dealt with the companions of the elephant?	19	66	14	194 and 44
	Did He not make their plan into misguidance?	17	36	8	
	And He sent against them birds in flocks,	17	33	8	
	Striking them with stones of hard clay,	18	32	7	
	And He made them like eaten straw.	13	27	7	
Bangla Translation	তুমি কি দেখোনি তোমার মালিক হাতিওয়ালাদের সাথে কি ব্যবহার করেছেন?	15	30	10	133 and 44
	তিনি কি তাদের যাবতীয় ষড়যন্ত্র নস্যাৎ করে দেননি?	12	23	8	
	এবং তিনি তাদের ওপর আবাবীল পাখী পাঠিয়েছেন,	15	22	7	
	এ পাখীগুলো তাদের ওপর পাথরের টুকরো নিক্ষেপ করছিল	15	26	8	
	অতঃপর তিনি তাদের জন্তু জানোয়ারের চর্বিত ঘাস এর মতো করে দিলেন।	17	32	11	

6.12. Surah Al-Humazah

In Surah al-Humazah, the statistics again clearly reveals the Qur'an's mastery of brevity and rhetorical impact in Arabic. As shown in Table 14, with only 133 letters and 33 words, the surah delivers a sharp condemnation of arrogance, material obsession, and mockery, while maintaining a compact flow of 6–12 unique letters per *āyah*. The English translation, by contrast, nearly doubles the size to 269 letters and 64 words, with unique letter counts as high as 12-16, reflecting the need for extended phrasing and syntactic expansion to capture what Arabic compresses into a few strokes. In case of Bangla, while more efficient than English at 172 letters and 64 words, and with unique letters ranging in between 9-22 per sentence, still cannot mirror the Arabic's compact sharpness. It distributes meanings across syllabic units and descriptive elaboration. This comparative statistic highlights that while translations serve clarity and accessibility, the Qur'anic Arabic stands unmatched in its brevity, melodic rhythm, and semantic density, achieving profound expression with the least verbal expenditure.

Table 14. Analysis of Surah al-Humazah on the scale of letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	وَيْلٌ لِّكُلِّ هُمَزَةٍ لُّمَزَةٍ	7	14	4	133 and 33
	ٱلَّذِى جَمَعَ مَالًا وَعَدَّدَهُۥ	10	16	4	
	يَحْسَبُ أَنَّ مَالَهُۥٓ أَخْلَدَهُۥ	11	15	4	
	كَلَّا لَيُنۢبَذَنَّ فِى ٱلْحُطَمَةِ	12	17	4	
	وَمَآ أَدْرَىٰكَ مَا ٱلْحُطَمَةُ	10	15	4	
	نَارُ ٱللَّهِ ٱلْمُوقَدَةُ	9	14	3	
	ٱلَّتِى تَطَّلِعُ عَلَى ٱلْأَفْـِٔدَةِ	9	18	4	
	إِنَّهَا عَلَيْهِم مُّؤْصَدَةٌ	10	14	3	
	فِى عَمَدٍ مُّمَدَّدَةٍۭ	6	10	3	
English Translation	Woe to every scorner and mocker	14	26	6	269 and 64
	Who collects wealth and counts it.	13	28	6	
	He thinks that his wealth will make him immortal.	13	40	9	
	No! He will surely be thrown into the Crusher.	14	36	9	
	And what can make you know what is the Crusher?	16	37	10	
	It is the fire of God, fuelled,	12	23	7	
	Which mounts directed at the hearts.	14	30	6	
	Indeed, it will be closed down upon them	15	32	8	
	In extended columns.	12	17	3	
Bangla Translation	দুর্ভোগ রয়েছে এমন প্রত্যেক ব্যক্তির জন্য, যে নিন্দা করে,	15	24	9	172 and 64
	যে অর্থ জমা করে এবং তা গুণে রাখে,	14	15	8	
	সে মনে করে, অর্থ তাকে স্থায়ী করে রাখবে;	11	17	8	
	বরং নিশ্চিত অল্পদিনের মধ্যেই সে চূর্ণবিচূর্ণকারী আগুনে নিক্ষিপ্ত হবে,	21	34	9	
	তুমি কি জানো, বিচূর্ণকারী আগুন কেমন?	11	16	6	
	আল্লাহ তা'য়ালার প্রজ্জ্বলিত এক আগুন,	12	18	5	
	যা মানুষের হৃদয়ের ওপর পর্যন্ত পৌঁছে যাবে;	14	20	7	
	তাদের ওপর ঢাকনা দিয়ে রাখা হবে,	12	15	6	
	উঁচু উঁচু থামের মধ্যে রাখা হবে।	9	13	6	

6.13. Surah Al-ʿAṣr

The entire surah al-ʿAṣr, is expressed just by 71 letters and 14 words, yet it encompasses a complete worldview: an oath by time, the inevitable loss of mankind, and the exception of those grounded in faith, good deeds, truth, and patience. Unique letter counts range modestly from 6 to 14, showing that Arabic achieves both sound variety and rhetorical power with minimal vocabulary. In another side, the English version expands to 138 letters and 31 words, nearly doubling the length, with unique letters rising as high as 6 to 20; this reflects the necessity of explanatory additions in order to unfold what Arabic compresses so elegantly.

The Bangla rendering stands at 85 letters and 30 words, with unique letters rising as high as 7 to 22, closer to English in word count but characterized by shorter syllabic expressions. Still, both translations inevitably dilute the compact rhythm of Arabic. Thus, this surah exemplifies how the Qur'an in its original Arabic achieves an unmatched brevity, rhythm, and semantic depth, encapsulating vast meanings within the smallest linguistic framework.

Table 15. Analysis of Surah al-ʿAṣr relying on letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	وَٱلۡعَصۡرِ	6	6	1	71 and 14
	إِنَّ ٱلۡإِنسَٰنَ لَفِي خُسۡرٍ	8	14	4	
	إِلَّا ٱلَّذِينَ ءَامَنُواْ وَعَمِلُواْ ٱلصَّٰلِحَٰتِ وَتَوَاصَوۡاْ بِٱلۡحَقِّ وَتَوَاصَوۡاْ بِٱلصَّبۡرِ	14	51	9	
English Translation	By time,	6	6	2	138 and 31
	Indeed, the human being is in loss,	14	27	7	
	Except for those who have believed and done righteous deeds and advised each other to truth and advised each other to patience.	20	105	22	
Bangla Translation	সময়ের শপথ,	7	7	2	85 and 30
	মানুষ অবশ্যই ক্ষতির মধ্যে আছে,	13	15	5	
	সে লোকগুলো বাদে, যারা ঈমান এনেছে, নেক কাজ করেছে, একে অপরকে হক কাজের তাগিদ দিয়েছে এবং একে অপরকে ধৈর্য ধারণ করার উপদেশ দিয়েছে।	22	63	23	

6.14. Surah Al-Takāthur

In Surah al-Takāthur, with only 123 letters and 28 words, and unique letters ranging from 8 to 12, the surah delivers a sweeping critique of human obsession with material rivalry, extending even to the grave, and then a vivid reminder of certainty, Hellfire, and accountability. This compact presentation style is what gives the Arabic its penetrating rhythm and rhetorical sharpness. In contrast, the English rendering expands to 252 letters and 60 words, nearly doubling the length, while unique letters reach 12–17, reflecting the need for elaborate phrasing to capture nuances that Arabic expresses with brevity. The Bangla translation stand at 176 letters and 57 words, closer to English in length but shaped by shorter syllabic constructions, making it descriptively rich but less compact (Table 16). What emerges is the Qur'an's unmatched eloquence: in Arabic, a few words carry the weight of eternity, while translations, though useful for comprehension, inevitably stretch the original's concise force and musical cadence.

Table 16. Analysis of Surah al-Takāthur considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	أَلْهَىٰكُمُ ٱلتَّكَاثُرُ	8	13	2	123 and 28
	حَتَّىٰ زُرْتُمُ ٱلْمَقَابِرَ	10	14	3	
	كَلَّا سَوْفَ تَعْلَمُونَ	10	12	3	
	ثُمَّ كَلَّا سَوْفَ تَعْلَمُونَ	11	14	4	
	كَلَّا لَوْ تَعْلَمُونَ عِلْمَ ٱلْيَقِينِ	10	20	5	
	لَتَرَوُنَّ ٱلْجَحِيمَ	10	11	2	
	ثُمَّ لَتَرَوُنَّهَا عَيْنَ ٱلْيَقِينِ	12	18	4	
	ثُمَّ لَتُسْـَٔلُنَّ يَوْمَئِذٍ عَنِ ٱلنَّعِيمِ	11	21	5	
English Translation	Competition for more distracted you	15	31	5	252 and 60
	Until you visit the graves.	14	22	5	
	No! You are going to know.	12	19	6	
	Then, no! You are going to know.	13	23	7	
	No! If you only knew with knowledge of certainty.	17	39	9	
	You will surely see the Hellfire.	12	27	6	
	Then you will surely see it with the eye of certainty.	15	43	11	
	Then you will surely be asked that Day about the blessings.	17	48	11	
Bangla Translation	অধিক লাভের প্রতিযোগিতা তোমাদেরকে গাফেল করে রেখেছে,	15	24	7	176 and 57
	এমনি করেই তোমরা কবরের কাছে গিয়ে হাজির হবে;	13	22	8	
	এমনটি কখনো নয়, তোমরা অচিরেই জানতে পারবে,	15	22	7	
	কখনো নয়, তোমরা অতি সত্বরই জানতে পারবে;	13	21	7	
	যদি তোমরা সঠিক জ্ঞান দিয়ে তা জানতে পারতে;	13	20	8	
	অবশ্যই তোমরা জাহান্নাম দেখবে,	12	15	4	
	অতঃপর তোমরা অবশ্যই নিজেদের চোখে তা দেখতে পাবে,	13	24	8	
	অতঃপর নেয়ামত সম্পর্কে তোমাদের সেদিন জিজ্ঞেস করা হবে।	15	28	8	

6.15. Surah Al-Qāriʿah

In Surah al-Qāriʿah (Table 17), the numerical structure brings out the Qur'an's remarkable ability to compress awe-inspiring imagery into a tightly knit form. The Arabic text employs only 158 letters and 36 words, with unique letter counts ranging from 6 to 13. This compactness ensures rhythm, repetition, and rhetorical intensity, where sound and meaning reinforce each other.

The English translation, however, expands to 330 letters and 83 words, reflecting the requisite for explanatory phrases to convey what Arabic achieves with piercing brevity. The unique letter counts, higher in English (12–18), show a reliance on lexical variety over rhythmic concision. Bangla, with 156 letters and 58 words, takes a middle path, leaning on short syllabic constructions but still stretching the message descriptively. Thus, the comparison reconfirms that while translations may communicate the sense, they cannot replicate the Arabic's unmatched eloquence, where few words reverberate with eternal weight, blending brevity, rhythm, and meaning in a way no other language fully sustains.

Table 17. Analysis of Surah al-Qāriʿah considering letters and words

	Verses and Translation	Unique letter No	Letter No	Word No	Total Letters & Words
Qur'an	ٱلْقَارِعَةُ	6	7	1	158 and 36
	مَا ٱلْقَارِعَةُ	7	9	2	
	وَمَآ أَدْرَىٰكَ مَا ٱلْقَارِعَةُ	10	17	4	
	يَوْمَ يَكُونُ ٱلنَّاسُ كَٱلْفَرَاشِ ٱلْمَبْثُوثِ	13	26	5	
	وَتَكُونُ ٱلْجِبَالُ كَٱلْعِهْنِ ٱلْمَنفُوشِ	13	24	4	
	فَأَمَّا مَن ثَقُلَتْ مَوَٰزِينُهُۥ	12	16	4	
	فَهُوَ فِى عِيشَةٍ رَّاضِيَةٍ	10	14	4	
	وَأَمَّا مَنْ خَفَّتْ مَوَٰزِينُهُۥ	10	15	4	
	فَأُمُّهُۥ هَاوِيَةٌ	6	9	2	
	وَمَآ أَدْرَىٰكَ مَا هِيَهْ	8	13	4	
	نَارٌ حَامِيَةٌۢ	7	8	2	
English Translation	The Striking Calamity	14	19	3	330 and 83
	What is the Striking Calamity?	15	25	5	
	And what can make you know what is the Striking Calamity?	18	46	11	
	It is the Day when people will be like moths, dispersed,	17	44	11	
	And the mountains will be like wool, fluffed up.	17	38	9	
	Then as for one whose scales are heavy	14	31	8	
	He will be in a pleasant life.	12	23	7	
	But as for one whose scales are light,	16	30	8	
	His refuge will be an abyss.	14	22	6	
	And what can make you know what that is?	15	31	9	
	It is a Fire, intensely hot.	12	21	6	
Bangla Translation	এক মহাদুর্যোগ!	7	7	2	158 and 58
	কি সে মহাদুর্যোগ?	7	7	3	
	তুমি জানো সে মহাদুর্যোগটা কি?	11	12	5	
	যেদিন মানুষগুলো পতঙ্গের মতো বিক্ষিপ্ত হয়ে পড়বে;	17	25	7	
	পাহাড়গুলো রঙ বেরঙের ধুনা তুলার মতো হবে;	13	20	7	
	অতঃপর যার ওজনের পাল্লা ভারী হবে,	13	18	6	
	সে সুখের জীবন লাভ করবে;	9	12	5	
	আর যার ওজনের পাল্লা হালকা হবে,	11	16	6	
	হাবিয়া দোযখই হবে তার মা,	10	12	5	
	তুমি কি জানো সে গর্তটি কি?	8	10	6	
	তা হচ্ছে প্রজ্জলিত আগুনের এক কুন্ডলী।	14	19	6	

7. Findings and Discussion

For a better visual understanding, the number of letters in different languages with respect to different Surahs and the number of words in different languages with respect to different Surahs are presented in Figure 1 and 2, respectively. Also, the range of minimum to maximum usages of unique letters in different languages with respect to the Surahs of the present study is presented in Figure 3. From Table 3-17, letter and word count of the individual surah is presented. But now, across the fifteen selected surahs, the cumulative totals reveal the following final outputs.

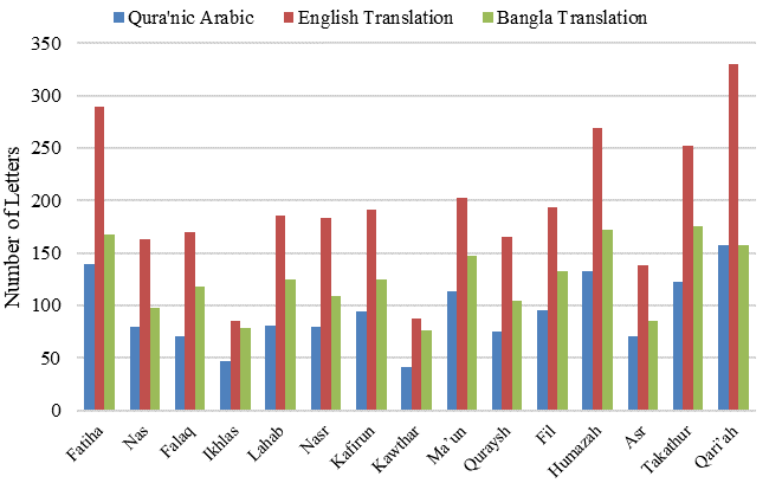

Figure 1. Number of letters in different languages with respect to Surah

Out of the 15 surahs, the total number of letters in Qur'anic Arabic is 1405 (Table 3-17). English translation contains 2907 letters, while Bangla translation requires 1874 letters (Table 3-17). This indicates that, relative to Qur'anic Arabic, English uses 2.07 times or 107% more letters and, Bangla uses 1.33 times or 33% more letters. On the other hand, out of the 15 surahs, Qur'anic Arabic employs 341 words (Table 3-17). By comparison, English translation expands to 704 words and Bangla translation to 655 words (Table 3-17). This means that, relating to Qur'anic Arabic, English uses 2.06 times more words (a 106% increase) and Bangla uses 1.92 times more words (a 92% increase).

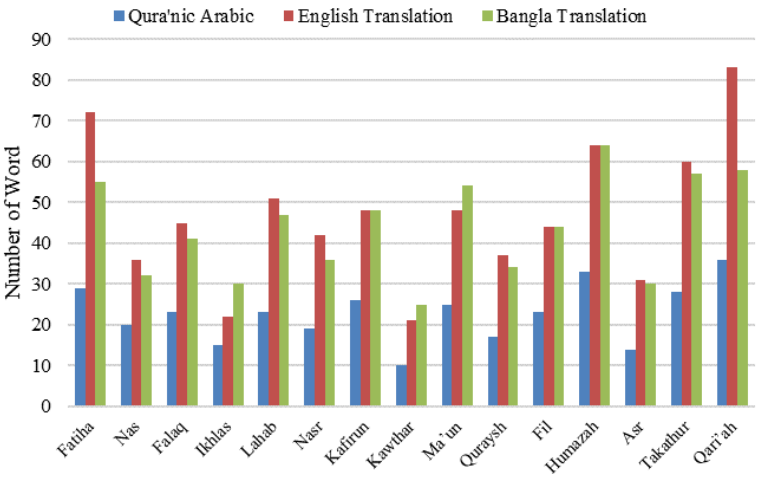

Figure 2. Number of words in different languages with respect to Surah

These upshots provide a quantitative approximation of the Qur'an's textual excellency in Arabic compared to translations. Across all the fifteen surahs under study here, Qur'anic Arabic consistently delivers meaning with the least linguistic expenditure—fewer words, fewer letters, and a more compact range of unique letters. Translations in English and Bangla necessarily expand in both word count and letter count, underscoring the Qur'an's incomparable conciseness and semantic density in its original Arabic form.

Letter and word based comparative numerical analyses of Surahs *Al-Fātiḥah, Al-Nās, Al-Falaq, Al-Ikhlāṣ, Al-Lahab, Al-Naṣr, Al-Kāfirūn, Al-Kawthar, Al-Maʿūn, Quraysh, Al-Fīl, Al-Humazah, Al-ʿAṣr, Al-Takāthur,* and *Al-Qāriʿah* demonstrate a scintillating linguistic asymmetry between Qur'anic Arabic and its translations into English and Bangla. It reveals a consistent and profound phenomenon: Qur'anic Arabic is uniquely effective in delivering meaning with unmatched brevity, rhythm, and semantic compactness. The translations, while necessary for comprehension and accessibility, inevitably expand the text in terms of word count, letter count, and unique letter usages. These results may underscore the theological justification of Allah's choice of Arabic as the language of the Qur'an, as well as the Qur'an's inimitability.

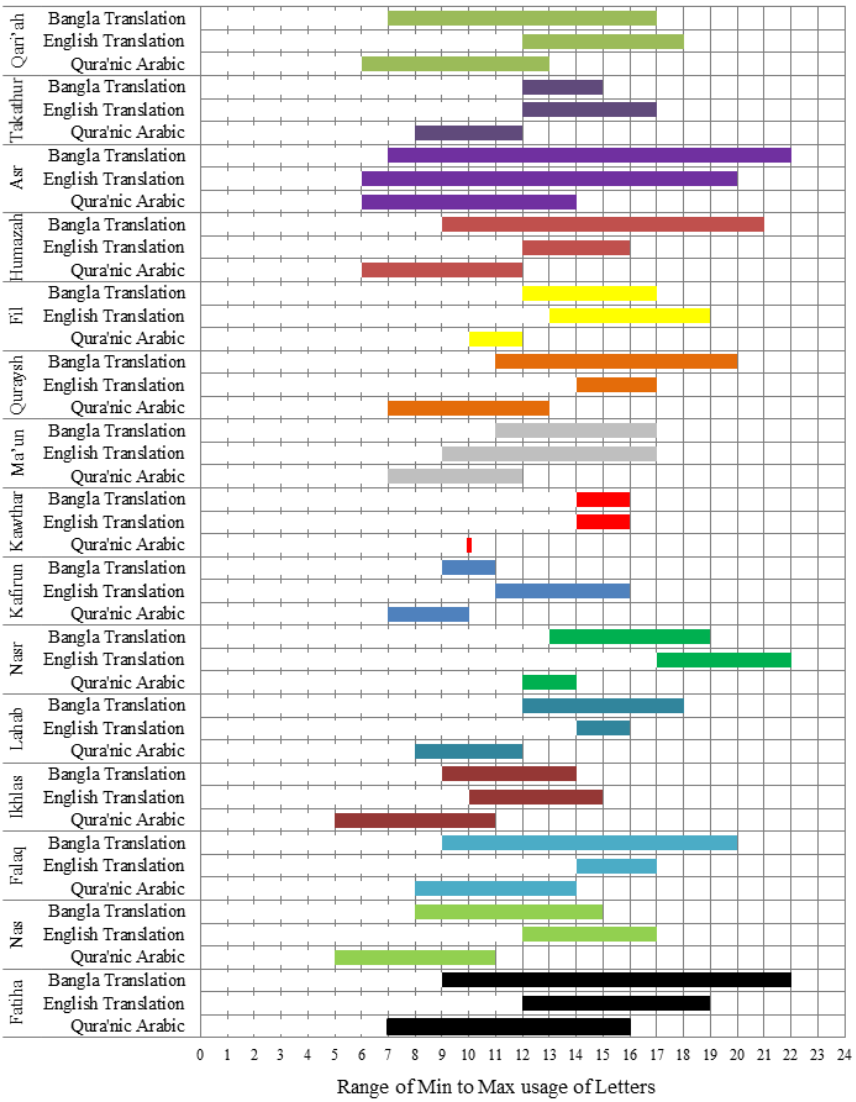

Figure 3. Ranges of minimum to maximum usages of unique letters in different languages with respect to the Surahs of the study

A recurring pattern throughout all the surahs scrutinized here is a remarkable conciseness of the Qur'anic Arabic language. For instance, Surah al-Fātiḥah employs only 139 letters and 29 words to express a completely theological worldview—divine Lordship, mercy, worshiping, and supplication. In contrast, English translations expand to 289 letters and 72 words, while Bangla uses 168 letters and 55 words (Table 3). The same

pattern emerges in Surah al-Ikhlāṣ, a foundational chapter that affirms divine Oneness. The original Arabic text of Surah al-Ikhlāṣ contains 47 letters and 15 words, while the English translation expands to 85 letters and 22 words, and Bangla to 79 letters and 30 words (Table 6). In terms of unique letters usages, for example considering Surah al-Nās (Table 4), in the respective verses, the range of minimum to maximum unique letters for Qur'anic Arabic varies from 5-11, for English varies from 12-17 and for Bangla varies from 8-15. This demonstrates that the Qur'an in Arabic conveys profound theological principles in minimal linguistic spaces. Such consequences are not a superficial matter of brevity. It represents semantic density: the ability to condense vast meanings into the smallest possible form and shape. For a scripture intended for recitation, memorizing, and universal transmission, this property is indispensable. This study has analyzed only English and Bangla translations, selected for their global and regional significances, and due to space considerations. It is needed to point that in translation (either English or Bangla) count of words, letters and unique letters should be interpreted as a relative measure, affected by translation conventions and linguistic structures of the target language of the translator.

The number of letters functions as an independent indicator that highlights structural differences between Arabic and its translations. Qur'anic Arabic, expresses vowels through diacritics and uses morphological compactness and *tashdīd* to convey meanings with fewer written symbols. But, English and Bangla, as alphabetic scripts, must write vowels and phonetic details as full letters, naturally increasing letter-count keeping the meaning the same. Thus, letter-count independently reflects the script efficiency and economy of Arabic compared to the translation languages. The number of unique letters is also considered as an independent criterion. It measures the diversity of alphabetic symbols required to express an *āyah*, rather than the total quantity of letters or words. While letter-count reflects orthographic length, unique-letter count reflects the phonetic range and, graphemic variety of a language. Arabic often conveys meaning using a fewer set of recurring consonantal roots, whereas English and Bangla distribute meaning across a wider variety of letters. Thus, unique-letter usage independently captures how broadly each language's script must extend to encode the same content. One of the remarkable features of Arabic is its use of *iʿrāb*, *tanwīn*, and *tashdīd*, which convey grammatical and phonetic information without increasing the number of written letters. As a result, Arabic expresses meaning with fewer written symbols, reducing both word-count and letter-count and contributing to the language's exceptional structural compactness. While translations often appear longer than the Qur'anic Arabic text, part of this

difference is due to the inherent structural properties of the Arabic language itself which naturally allow to convey meaning with fewer written symbols. This linguistic characteristic is similar in Qur'anic and in typical of Arabic as a language. At the same time, from a broader Islamic theological perspective, such structural conciseness may also help explain why Arabic, beyond merely being the Prophet's mother tongue, was divinely chosen as the language of revelation: its natural brevity enables rich, layered meanings to be communicated with exceptional clarity and economy.

The same methodology, examining word counts, letter counts, and unique letter usages, can be extended to other any languages. Such research could open an entirely new interdisciplinary field, combining linguistics, computational analysis, theology, and translation studies. It is also necessary to emphasize that this study does not intend to rank languages as superior or inferior. Every language has its own intrinsic richness, history, and expressive capacity. The purpose of the comparisons here is not to suggest that Arabic is better than English, Bangla, or any other languages in general, rather, it is to highlight that the Qur'anic Arabic uniquely combines features such as semantic density, rhythms, phonetic balances that make it the divinely chosen vehicle for revelation. This distinction is solely theological, neither cultural nor nationalistic.

8. Conclusion

Finally, across the fifteen selected surahs of the ʿUthmānī Muṣḥaf of the Qur'an and the selected translation scripts (al-Mehri 2017; Ahmed 2008), the study underscores that,

- Compared to Qur'anic Arabic, English translations require 2.07 times more letters and expand by 2.06 times in terms of words.
- Compared to Qur'anic Arabic, Bangla translations use 1.33 times more letters and 1.92 times more words**.**
- Moreover, Qur'anic Arabic maintains phonetic economy and rhythm with fewer unique letters, than the English and Bangla, also ensuring the best clarity, rhythm, memorability, and harmony in recitation.

These outcomes highlight a consistent pattern: Qur'anic Arabic delivers profound meaning with remarkable conciseness, while translations necessarily expand the text. Qur'anic Arabic uniquely combines semantic density, rhythmic harmony, and phonetic elegance, properties not reproducible in English or in Bangla. The compactness of Qur'anic Arabic allows complex theological truths, such as divine mercy, worship, or Oneness, to be expressed in a fraction of the linguistic space required in

translation. From a theological perspective, these findings may affirm Allah's deliberate choice of Arabic for His final revelation. The Qur'an was intended for universal guidance and perpetual preservation through oral transmission and memorization. Arabic's structural proficiency makes it uniquely capable of fulfilling divine purposes. Although this study focused on: 1) fifteen selected surahs, 2) English and Bangla languages, and 3) two translation books, Al-Mehri (2017) and Ahmed (2008), extending the methodology to other major languages would likely yield similar results, and further validating the Qur'an's linguistic distinctiveness. Use of multiple translations in each language can provide robust data. Due to scope limitations, the present study uses only one English and one Bangla translation. Future studies can incorporate multiple translations in different languages as well. Also, coming research can include more Surahs of Qur'an to draw more generate generic information.

Everything is created by Allah, including Arabic Language. Since Qur'an is a very special book therefore as the language of revelation it is not surprising that Arabic also can contain special quality in terms of structure, compactness and expression. Whether Arabic inherently possesses distinctive linguistic properties or whether it was divinely selected for the purpose of revelation-in both ways-the remarkable brevity and semantic density of Qur'an is beyond dispute. At least this conclusion can be drawn under the presented analysis and result- focusing on the three target languages (Arabic, English and Bangla) and fifteen small surahs of Qur'an examined in this study. Importantly, the intention of current study was to describe structural differences, not to evaluate Arabic, English and Bangla as superior of inferior. Both English and Bangla use full vowel letters for clarity and readability. This naturally increases letter counts compared to Arabic's diacritic-based system. This research tried to highlight Qur'anic Arabic's textual excellency as the vessel of revelation. The results reaffirm what believers have always recognized: the Qur'an's Arabic is unique, divinely chosen, and linguistically miraculous.

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Declarations

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References

Ahmed, M. U. (2008). *Qur'an Shareef: Simple Bengali Translation.* London: Al-Qur'an Academy.

Al-Azami, M. M. (2003). *The history of the Qur'anic text: From revelation to compilation*. UK: UK Islamic Academy.

Al-Mehri, A. B. (2017). *English Translation: The Qur'an, with Surah Introductions and Appendices*. United Kingdom: The Qur'an Project.

Al-Shareef, A. M., and Abdul Salam, Y. I. (2020). Early manuscripts of Qur'an (through data of hijazi calligraphy and archaeological evidence). *Journal of the General Union of Arab Archaeologists*, *5*(1), 1-26.

Babbel (2023). The 10 most spoken languages in the world. *Babbel Magazine*. https://www.babbel.com/en/magazine/the-10-most-spoken-languages-in-the-world

Bin Dost, M. K., & Ahmad, M. (2008). Statistical profile of Holy Qur'an and symmetry of Makki and Madni surras. *Pakistan Journal of Commerce and Social Sciences,* 1(1), 1–14.

Botani, D. S. I. (2012). Probability distributions of the verses, words, and letters of the Holy Qur'an. *International Journal of Mathematics and Computer Applications Research,* 2(3), 27–34.

Boulesnam, I., and Boucetti, R. (2025). Arabic Language Characteristics that Make its Automatic Processing Challenging. *International Arab Journal of Information Technology (IAJIT)*, *22*(4). https://doi.org/10.34028/iajit/22/4/14

Burton, J. (1977). *The Collection of the Qur'an*. Cambridge, UK: Cambridge University Press.

Dror, J., Shaharabani, D., Talmon, R., and Wintner, S. (2004). Morphological Analysis of the Qur'an. *Literary and Linguistic Computing*, *19*(4), 431-452. https://doi.org/10.1093/llc/19.4.431

Dukes, K., and Buckwalter, T. (2010). A Dependency Treebank of the Qur'an using Traditional Arabic Grammar. In *Proceedings of the 7th international conference on Informatics and Systems*. Cairo, Egypt.

Dukes, K., and Habash, N. (2010). Morphological annotation of Qur'anic Arabic. In *Proceedings of the 7th International Conference on Language Resources and Evaluation (LREC 2010)* (2530–2536). European Language Resources Association.

Dukes, K., Atwell, E., and Sharaf, A. M. (2010). Syntactic Annotation Guidelines for the Qur'anic Arabic Treebank. In *Proceedings of the Language Resources and Evaluation Conference*, (LREC 2010). Valletta, Malta.

Eberhard, D.M., Simons, G.F., and Fennig C.D. (eds.). (2025). *Ethnologue: Languages of the World*. Texas: SIL International. Online version: https://www.ethnologue.com/insights/how-many-languages/?cf=1

Erdy, M. (2025). The Origins, Theories, and Linguistic Development of the Qur'an. *Jurnal Kajian Islam*, *2*(1), 13-22. https://doi.org/10.56566/jki.v2i1.300

Janda, R. D., & Joseph, B. D. (2017). On language, change, and language change–or, of history, linguistics, and historical linguistics. In *The handbook of historical linguistics*. https://doi.org/10.1002/9781405166201.ch0

Jom al-Qur'an (n.d.). *The Total Word Count of the Holy Quran*. Retrieved January 22, 2025, from https://jomalquran.my/faq/statistics/words/

Kassab, E. S. (2009). *Contemporary Arab thought: Cultural critique in comparative perspective*. New York: Columbia University Press.

Mahzuz, H.M.A. (2022). Towards exploring mathematical facts of *Surah al-Kawthar*. *AL-BURHĀN: Journal of Qur'ān and Sunnah Studies, 6*(3), 29–49.

Messaoudi, F., Mansouri, M., & Rabahi, H. (2025). The Phonetic Miracle in the Qur'an. *ATRAS Journal*, *6*(1), 19-33. https://doi.org/10.70091/Atras/vol06no01.1

Nasser, S. H. (2025). *Arabic, Qurʾān, and Poetic License: Reciting the Word of God*. Routledge Taylor & Francis.

Sadeghi, B. (2011). The chronology of the Qurʾān: A stylometric research program. *Arabica, 58*(3–4), 210–299. https://doi.org/10.1163/157005810X529692

Sadeghi, B., and Bergmann, U. (2010). The codex of a companion of the Prophet and the Qurʾān of the Prophet. *Arabica, 57*(4), 343–436. https://doi.org/10.1163/157005810X504518

Safi, S. K. (2013). Statistics in Noble Qur'an. In *Proceedings of the 2013 International Conference on Information, Operations Management and Statistics (ICIOMS2013)*, Kuala Lumpur, Malaysia.

Sayoud, H. (2018). Visual Analytics Based Authorship Discrimination Using Gaussian Mixture Models and Self Organising Maps: Application on Quran and Hadith. In: Mouhoub, M., Sadaoui, S., Ait Mohamed, O., Ali, M. (eds) *Recent Trends and Future Technology in Applied Intelligence*. IEA/AIE 2018. Lecture Notes in Computer Science. Springer, Cham. https://doi.org/10.1007/978-3-319-92058-0_15

Sayoud, H. (2022). Stylometric comparison between the Qur'an and Hadith based on successive function words: Could the Qur'an be written by the Prophet? *International Journal on Islamic Applications in Computer Science and Technology, 10*(2), 1–6.

Sayoud, H., and Hadjadj, H. (2018). Fusion Based Authorship Attribution-Application of Comparison between the Quran and Hadith. In: Lachkar, A., Bouzoubaa, K., Mazroui, A., Hamdani, A., Lekhouaja, A. (eds) *Arabic Language Processing: From Theory to Practice*. ICALP 2017. Communications in Computer and Information Science. Springer, Cham. https://doi.org/10.1007/978-3-319-73500-9_14

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Semantic Abductive Network Construction for the Holy Qur'an: A Hybrid Ontology-Based Approach

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ABSTRACT:

Original Paper

The Engineering and constructing semantic networks constitute one of the foundational technologies in the fields of cognitive processing, natural language processing, the semantic web, and the development of artificial intelligence-based systems. Consequently, expertise in the design, construction, engineering, maintenance, evolution, and optimization of ontologies has played a crucial role in advancing intelligent technologies in recent years, and this trend, particularly in the context of dependable and responsible artificial intelligence, is expected to continue in the coming years. The Holy Qur'an, as the sacred book of Muslims worldwide and the primary source of Islamic religion, civilization, and culture, has consistently served as a principal resource in the humanities and Islamic studies, as well as in socio-religious service applications, within Muslim communities.

In this paper, a semantic network is automatically constructed using a hybrid approach that integrates multiple technological solutions, including ontologies, word embeddings, co-occurrence analysis, and Arabic root extraction. After the construction of the semantic network and through the application of clustering techniques, several semantic frames were automatically extracted and designated as "abduction frames." To evaluate the proposed approach, a questionnaire-based assessment was conducted, in

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which 1,295 individuals participated voluntarily. The results yielded a precision of 69.47% and a recall of 85.35%. Additionally, a mixed quantitative–qualitative evaluation conducted by a panel of experts rated the validity and innovation of the proposed method's outputs as "good."

KEYWORDS: The Qur'an, Ontology, Word embedding, Co-occurrence, Semantic frame, Abduction, Association, Collocation.

1. Introduction

Constructing a semantic network requires the integration of multiple components. The approach employed in this paper focuses on the automatic construction of a semantic network. Modern approaches to computerized Qur'an mining were established in the second half of the 20th century by Muslim scholars, in parallel with advancements in computational processing equipment. In the early years of the 21st century, as natural language processing and semantic computing methods flourished, these approaches gained greater coherence and diversity. From 2010 onward, with the emergence of novel artificial intelligence techniques such as deep neural networks, these methods were increasingly employed to further expand this research domain. Following the widespread introduction and success of large language models (LLMs) between 2017 and 2021, and continuing to the present, researchers have adopted methods based on this computational infrastructure—such as machine comprehension of texts, automatic machine tagging, and prompt engineering techniques—within the field of computerized Qur'an mining.

The knowledge of Qur'anic exegesis encompasses a substantial corpus of profound insights and wisdom preserved in interpretive texts. Semantic—and even cognitive—processing of this valuable corpus can lead to significant advancements in understanding the Holy Qur'an through computerized Qur'an mining. To achieve this objective, robust semantic processing infrastructures must be applied to existing exegetical texts, whether through human, semi-automatic, or fully automatic methods. Among the most important of these semantic infrastructures are semantic networks and ontologies. In the present paper, we propose a multifaceted solution for the automatic generation of an abductive semantic network for the Holy Qur'an, employing a hybrid engineering approach. This solution integrates advances from information engineering, information retrieval, natural language processing, word embedding systems, and semantic-cognitive computing.

2. Theoretical Framework

2.1. Ontology

Ontologies serve as formal and explicit representations of conceptual structures and are essential tools in semantic networks. An ontology comprises several components, including concepts (classes) (C), relations (properties) (R), instances (I), axioms (A), data types (T), and values (V) (Gruber 1993). Ontology relations are divided into two main categories: taxonomic relations and non-taxonomic relations. Non-taxonomic relations encompass several subcategories, including Part-of, Antonymy, Synonymy, Possession, Causality, Hypernymy, and Hyponymy.

In the Persian language, a number of ontologies have been developed. Some of these are domain-specific, as outlined below:

- IrGo: A general ontology of Iranian traditional medicine based on *Makhzan al-Adwiyah*. This ontology includes 3,521 classes, 15 properties, and 20,903 axioms (Naghizadeh et al. 2021).
- PMD: An ontology of diseases in Persian medicine, designed to classify diseases in traditional Persian medicine. This ontology contains 529 classes and 41 properties (Persian Medicine Diseases Ontology 2019).
- QuranJooy: Developed by the Iran Telecommunication Research Center, this ontology includes more than 69,000 concepts and 8,000 instances (Mirarab & Khorram 2022).
- Borhan: This ontology focuses on Islamic Fiqh (jurisprudence) principles and includes more than 6,000 classes and 2,000 relations (Mirarab & Khorram 2022).
- FarsNet: In addition to these domain-specific ontologies, FarsNet has been developed as a general-purpose ontology, containing over 100,000 entries (Shamsfard et al. 2009).

The table below (Table 1) lists several prominent studies on computational ontology development for the Holy Qur'an conducted between 2023 and 2025. These studies emphasize ontology engineering, ontology modeling, text mining, and natural language processing. They originate from universities and research institutes in Germany, Indonesia, Egypt, Turkey, Iraq, Pakistan, Iran, China, Malaysia, Japan, and the UK, demonstrating the global scope of research efforts in this field. Specific references corresponding to each study title are provided in the references section.

Table 1. Several prominent studies on computational ontology development for the Qur'an (2023–2025)

No.	Research Title	Ontology Engineering Approach	Ontology Modeling Approach	NLP Techniques	Text Mining	Key Results	Evaluation Criteria
1	Investigating Retrieval-Augmented Generation in Qur'anic Studies (Khalila et al. 2025)	RAG	Creating Semantic Ontologies of Surahs	LLM, BERT, Embeddings	Text and Meaning Extraction	Analysis of 13 LLM Models	Relevance, Faithfulness, Correlation
2	Computational Analysis of Qur'an Text using ML and LLMs (Shahidet al. 2025)	Extraction of Qur'anic Patterns	Knowledge Graph of Verses	text-embedding-3-large, GPT-4	Analysis and Clustering	Implicit Semantic Patterns	Coherence, Clustering
3	Exploring Thematic Structures in Surah al-Baqarah (Salah et al. 2025)	Semantic Clustering	Key Concept Extraction	TF-IDF, SVD, UMAP, K-means	Theme Analysis	10 Distinct Clusters	Davies–Bouldin, Silhouette
4	QuranMorph: Morphologically Annotated Corpus (Akra et al. 2025)	Morphological Tagging	Lemmatization and POS Tagging	SAMA/Qabas, Lemmatization	Morphological Parsing	77,429 Words, 40 Tags	IAA, Cohen's Kappa
5	LLM-Based Approach for Qur'anic QA (Saadaoui et al. 2024)	Question Concept Extraction	Semantic Response Representation	GPT-4, BART, LLAMA, CoT	Question Analysis	F1 = 95% with BART	BLEU, ROUGE, F1 Score
6	Developing a Qur'anic QA System (Urdu) (Tariq et al. 2025)	Extraction of Qur'anic Entities	Urdu Semantic Modeling	RoBERTa, TF-IDF, SBERT	Semantic Search	MAP = 0.85, F1 = 0.88	Precision, Recall@K
7	Qur'anic Conversations: Semantic Search (Shohoud et al. 2023)	Search Concept Extraction	Arabic Semantic Ontology	Arabic NLP, Semantic Search	Phrase Analysis	Improved Precision	Precision, Recall, MRR
8	Linking Qur'an and Hadith Topics through Ontology (Alshammari et al. 2024)	Extraction of Cross-Topics	Connected Qur'an – Hadith Ontology	BERT Embeddings, Cellfie	Relation Extraction	Linking Two Islamic Sources	Topic Alignment
9	Enhancing Qur'anic Ethics through NLP-Based Search (Aftab et al. 2025)	Extraction of Ethical Concepts	Representation of Qur'anic Virtues	Sentence Transformers	Semantic Analysis	High Precision and Recall	F1-Score, User Evaluation

2.2. Abduction (Tadāʿī)

In the *Amid Dictionary* (2010), three meanings are provided for the term *tadāʿī* (abduction): A. The principle or state in which thoughts, ideas, emotions, and experiences become interconnected, such that they emerge sequentially in the mind; a chain of thoughts or notions; B. Calling upon one another and gathering together; C. Recalling or remembering. Moreover abduction (*tadāʿī*) is defined as calling upon one another, and in psychology, it refers to the relationship between a phenomenon and its associated thoughts (Pournamdarian & Tehrani Sabet 2010). Lobo describes abduction as a process for explaining the observable influences of phenomena in the universe (Lobo & Uzcátegui 1997). Ernest defines abductive relations as the chain of antecedents and consequents of an expression (Ernest 2023).

As is evident from the meaning of the term "abduction" (*tadāʿī*), the

intended sense in this paper is the recalling of a word as a result of seeing or hearing another word. In English, two equivalents exist for *tadāʿī*: in the context of logic, the term "abduction" is used, whereas in the context of psychology, the term "association" is employed.

3. Scope of Prior Approaches

Numerous methods have been employed to construct or develop ontologies, semantic networks, and associative structures. Mohammadi and Badie, in their article, proposed a method for extracting concept chains and assigning scores to them. First, the text is segmented and semantically parsed. Then, concept chains are extracted. Finally, key concepts are identified using the assigned scores and a predefined threshold (Mohammadi & Badie 2017). Ahmadi et al. (2017) utilized a lexical co-occurrence method to extract concept hierarchies in the field of scientometrics. Mousavi et al. (2017) presented a method for constructing a Persian ontology by establishing links between Persian words and PWN (Princeton WordNet). This WordNet contains 16,000 words and 22,000 synsets. The accuracy reported in this study was 91.18%. Mousavi and Faili (2021) improved upon their previous work by adding Persian compound verbs to the existing ontology. The method employed in this study also relied on supervised learning.

Humans typically present their observations based on their background knowledge. This process resembles abduction more closely than deductive reasoning, as it requires assumptions that are not explicitly present in the observation itself. Humans possess the ability to comprehend complex situations, a capability that does not necessarily arise directly from observation (Langley & Meadows 2019). Al-Salhi and Abdulla (2022) introduced a method based on domain-specific language mapping for the automatic construction of a Qur'anic ontology. Ghayoomi (2019) proposed a method for automatically determining word meanings based on word-embedding vectors. For each target word, two vectors were constructed: one representing the word itself and another representing the contextual environment in which the word appears. Soliman et al. (2017) presented a trained word-embedding model using a dataset that included Twitter data, web data, and Wikipedia content. The technique employed in this study was Word2Vec.

4. The Proposed Solution and Its Method Engineering

In this section, after examination of the scope and limitations of prior

approaches, the proposed technical solution is introduced. It is noteworthy that the rationale underlying the engineering decisions made during the development of the proposed solution, which constitutes a significant portion of this paper's technical contribution from a method-engineering perspective, is explained at each step of the processing pipeline in this section.

Figure 1 illustrates the overall workflow of the proposed approach. First, the text of Tafsir Nūr is converted into a structured dataset, and its constituent words are extracted. Then, TF-IDF is applied, and a threshold is used to select the final set of relevant words. In the next stage, and in parallel for these selected words, a co-occurrence matrix, word-embedding vectors, Persian FarsNet ontology relations, and connections to Arabic root extraction are obtained. Finally, based on the relations derived in the previous stage, abduction pairs and abduction frames are generated.

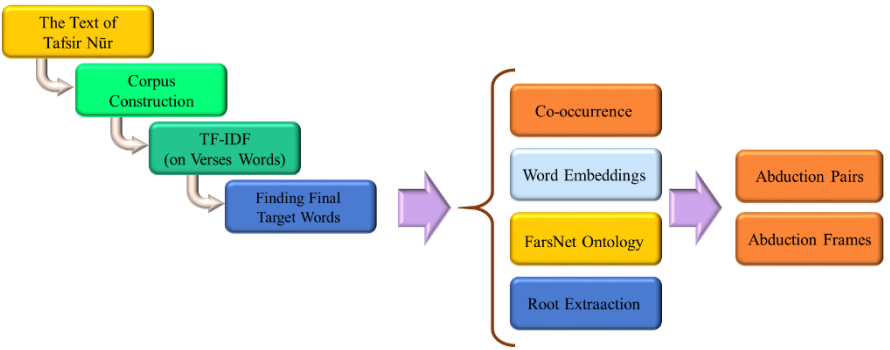

Figure 1. General Method of the Proposed Approach

This process (co-occurrence matrix, word embedding vector, Persian FarsNet ontological relations, connection to Arabic text root-finding, and finally clustering) was conducted in three cases:

1. Identifying final words using TF-IDF thresholding
2. Identifying final words using a thesaurus
3. Identifying final words using normalization, word embedding, and FarsNet

4.1. Corpus Construction

To prepare the corpus, the Tafsir Nūr (Qara'ati 2004) was selected. The reason for using this Tafsir is its simple and fluent text, which makes the concepts of the Qur'an accessible to the general public. The source of the corpus is the Islamic Encyclopedia website (https://wiki.ahlolbait.com).

The Qur'an Comprehensive Database website (https://quran.inoor.ir) provides thematic categorization of verses. Using this site, verses related to the Hereafter were selected, comprising approximately 1600 records.

4.2. Preprocessing

After constructing the corpus from the Tafsir texts, preprocessing was performed. Preprocessing consisted of four stages: normalization, removal of extra punctuation marks, stop word removal, and lemmatization. The Hazm library was used for the preprocessing stages. After preprocessing, the number of words decreased from approximately 19000 to 17000. Subsequent processing stages were conducted separately for the three word categories. After removing low-frequency words (and applying TF-IDF thresholding), the number of words reduced to approximately 4000.

4.3. Co-Occurrence

The co-occurrence matrix, a square matrix representing the probability of words appearing together within a window size of 5, was computed.

4.4. Word Embedding

The two main approaches in word embedding systems are CBOW and Skip-gram (Hinton 1986; Mikolov et al. 2013). Commonly used models include word2vec, GloVe, and FastText (Chawla 2018). This study utilized two pre-trained word embedding models: AminMozhgani and FarsiYar. The Mozhgani model (n.d.) is based on the word2vec word embedding trained on the Persian Wikipedia 2016 corpus (wikipedia_fa_all_nopic_2016-12.zim). Approximately 2000 words were extracted from this model. The FarsiYar (n.d.) corpus collection provides several services for Persian language processing (https://text-mining.ir/corpus). Among the multiple word embedding models available in this corpus, the GloVe model was selected. Approximately 2900 words were extracted from this model.

After extracting the word embedding vectors (separately for each of the two models), cosine similarity measurement was performed. The

meaningfulness of high-scoring word pairs indicated the validity of the proposed models (e.g., the word pair "Hazrat" and "Hassan" from the Mozhgani model, and the pair "adab" and "rusum" from the GloVe model had high scores).

4.5. FarsNet

FarsNet was selected as the best and most comprehensive Persian WordNet. This ontology offers several advantages over other Persian ontologies:

- FarsNet covers more than one million nodes (words).
- It is general-purpose.
- It was manually produced (non-automatically), thus having very high reliability. Additionally, it is continuously updated with the help of crowd-sourcing.
- It provides a suitable application programming interface (API), available both online and offline.
- It has been practically evaluated in various applications and is recognized as a key technical infrastructure for Persian NLP.

Using the FarsNet web-service, synsets exactly matching the words were retrieved and stored.

4.6. FarsNet Usage in the Proposed Approach

For each word, the corresponding synset ID, sense ID, synset text, noun category, verb past stem, verb present stem, verb type, semantic category, and part of speech were stored. Through matrix processing and utilization of the FarsNet ontology, relations among words in the Tafsir texts of the verses were derived (Figure 2).

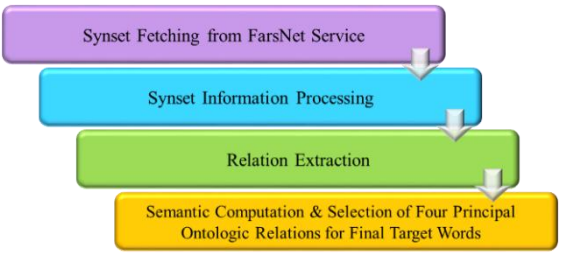

Figure 2. Method of Extracting Relations Using the FarsNet Ontology

4.7. Word Roots in the Qur'anic Text

The text and wording of the Qur'an are highly sacred and meticulously structured. Many Qur'anic scholars believe that the Qur'anic text possesses linguistic inimitability. Accordingly, the Arabic Qur'anic text was also employed in this study.

This research proposes a method to establish connections between two texts in different languages that are related (not necessarily translations of each other). Here, the Arabic text of the Qur'an and the Persian text of Tafsir Nūr constitute these two texts. Since they are not direct translations, one-to-one mapping cannot be applied. Instead, this study proposes a TF-IDF-based method applied separately to both texts to computationally link them.

4.8. Forqan Corpus

Using the Forqan corpus (Estiri et al. 2013), the roots of Arabic words in each verse were first extracted, followed by computation of TF-IDF scores for these roots across the verses (Figure 3).

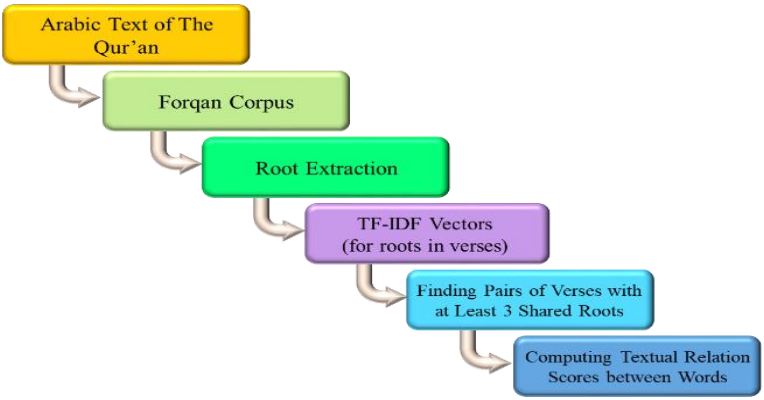

Figure 3. Method of Calculating Relations between Words Based on Verse Word Roots

4.9. TRR Relation Calculation

This relation is derived based on the previously computed TF-IDF scores of roots and words.

1. Identifying pairs of verses that share more than 3 common roots. If a pair of verses shares fewer than 3 common roots, they are considered unrelated.
2. Calculating the RR relation (Root Relation): For all common roots in each verse pair.

$$RR_{x,y} = \sum_{i=1}^{n} T_{r_i,x} * T_{r_i,y}$$

n : Number of Common Roots Between Verses x and y

$T_{r_i,x}$: TF-IDF Value for Root r (the i-th Common Root) in Verse x

$T_{r_i,y}$: TF-IDF Value for Root r (the i-th Common Root) in Verse y

x,y : Index of Verse Pairs with More Than Three Common Roots (If x,y Share Fewer Than Three Common Roots, It Is Zero)

The matrix below is constructed using the root relations derived from the verses.

$$RR_{Mat} = \begin{bmatrix} RR_{1,1} & \dots & RR_{1,m} \\ \vdots & \ddots & \vdots \\ RR_{m,1} & \dots & RR_{m,m} \end{bmatrix}$$

The matrix is a square matrix with rows and columns equal in number to the verses.

3. Calculation of TRR for all words:

$$TRR_{w_\alpha w_\beta} = \sum_{i,j=1}^{m} T_{w_{\alpha_i}} * T_{w_{\beta_j}} * RR_{Mat_{i,j}}$$

w_α , w_β: Persian word α and Persian word β

$T_{w_{\alpha_i}}$: TF-IDF vector value of the word in the interpretation text of i-th verse

$T_{w_{\alpha_j}}$: TF-IDF vector value of the word in the interpretation text of j-th verse.

$RR_{Mat_{i,j}}$: Entry corresponding to verses \(i\) and \(j\) in the matrix.

Some of the results from these calculations with high TRR values are presented in Table 2.

Table 2. Some of the results with high TRR values.

First Word	Second Word
معاد	متاع
هستی	مکان
موسی	صالح
معاد	الدنیا
قیامت	اتقوا
ینظرون	شاهد

4.10. Matrix Weighting, Summation, and K-Means Clustering Method

Using the matrices obtained from the previous sections, a square matrix

was constructed where the rows and columns represented the final words. The K-Means clustering method was applied to the resulting matrix. The clusters obtained are referred to as "abduction frames." Some of these clusters are presented in the table 3. Note that only a portion of the cluster members are shown for display purposes.

Table 3. Some Clusters obtained from K-Means method.

Cluster 1	Cluster 2	Cluster 3	Cluster 4
تفکیک	بیهوده	بخشش	ارائه
جداگانه	جایز	خرج	استفاده
جرم	روا	طلب	اصلاح
دسته	زشت	شهادت	اعمال
جزء	سزاوار	شعار	انجام
ذیل	غفلت	هدیه	ایجاد
قاعده	قاتل	وعده	برداشت
مطابق	مجرم	پاداش	تقویت
معین	مقصر		حرکت
وجه	گناهکار		فراهم

Figure 4 shows the Davies-Bouldin index values for different numbers of clusters.

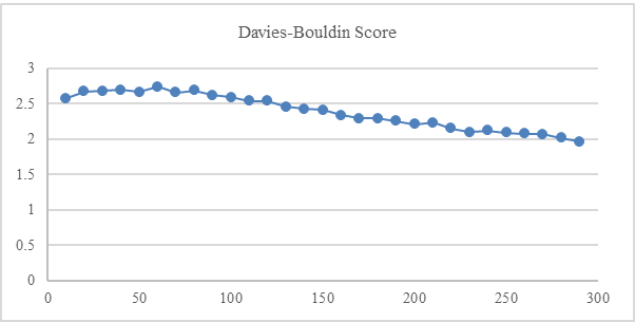

Figure 4. The Davies-Bouldin Score for different numbers of clusters

As shown in Figure 4, although the criterion continues to decrease after 200 clusters, suggesting apparent improvement, an excessively large number of clusters reduces the interpretability of the clusters and may lead to overfitting of these semantic clusters. It is noteworthy that other clustering methods (such as agglomerative and divisive clustering and DBSCAN) were also employed, but they yielded significantly lower output quality compared to K-Means.

4.11. Thesaurus Method

One effective approach for selecting appropriate words in constructing a semantic network is the use of a thesaurus. In this study, the *Thesaurus of Qur'anic Concepts* (2007) was utilized, which is available digitally through the Noor website (https://noorlib.ir/book/info/5028).

This thesaurus contains approximately 3000 single-word Qur'anic terms. Of these, around 1200 words were found in the corpus used in this research (i.e. mentioned in the resurrection verses). All previous steps were performed separately for these words. First, words not present in the thesaurus were removed. Then, the remaining steps were applied to the surviving words.

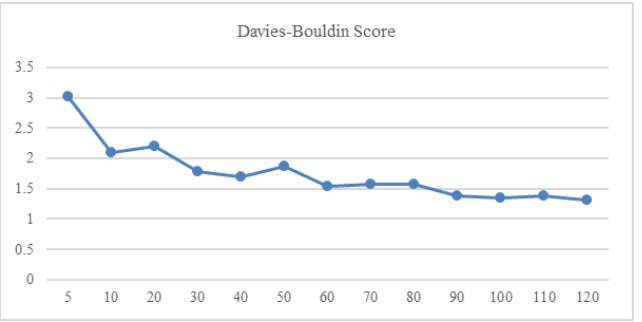

Figure 5. Davies-Bouldin Index Chart for thesaurus Word Clustering

The above figure displays the Davies-Bouldin index values for various numbers of clusters. Based on the chart, 90 clusters were selected for use. In Table 4, some resulting clusters by this method are presented.

Table 4. Some of the clusters obtained using the K-Means method in the thesaurus section with 90 clusters

Cluster 21	Cluster 11	Cluster 7	Cluster 4
آهن	هنر	غرور	وفات
طلا	اعتقاد	عذاب	زادگاه
قلم	اخلاق	محبت	نسب
برق	علم	نفرت	وارث
زره	مطالعه	رنج	بستگان
مس	دانش	فقر	باردار
سلاح	شناخت	احساس	تولد
سپر	آموزش	آزار	ارث
سنگ	پژوهش	اضطراب	اجداد
زر	علوم	لذت	نوه

4.12. Normalization

The total number of words used when IDF values determined the threshold was approximately 4,000 words. Additionally, among these words were meaningless terms, errors (typos), and words that had been incorrectly stemmed. In the thesaurus section, the total selected words numbered around 1,200. Solutions were proposed to address each of these issues.

Problem 1: Some words that had been incorrectly stemmed. These words were divided into two categories: Persian and Arabic.

Solution: The Persian text processing library AIPA (https://aipaa.ir) and the Arabic text processing library Qalsadi (https://pypi.org/project/qalsadi) were utilized. Qalsadi is a Python library used for Arabic language text processing. This library also features Arabic stemming capabilities (Zerrouki 2020).

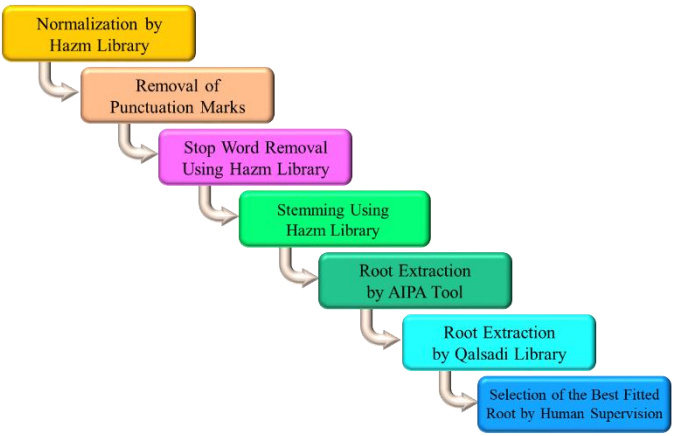

Figure 6. Root Extraction Process Using AIPA and Qalsadi Tools

After initial normalization, words were listed and then root-extracted using AIPA. In the next stage, these words (which had undergone Persian stemming) were processed by Qalsadi for Arabic Root Extraction. Given that both tools (Arabic and Persian) have errors, human judgment determined which stemming\Root-Extraction was more accurate. This file was then used for root extraction of the words. From approximately 17000 words stemmed using the Hazm library, around 15000 words remained after all.

Problem 2: Words that were meaningless or erroneous (typos).

Solution: To exclude meaningless or erroneous words, a condition was

established. For a word to be included in the final word list, it must belong to at least one of the following categories:

1. The word exists in the AminMozhgani or FarsiYar word embedding models.
2. Co-occurrences of the word are present in FarsNet.

Words not falling into these categories were removed from the corpus, leaving approximately 7000 words. For these remaining words, TF-IDF vectors, co-occurrence matrices, and TRR (Arabic stemming) were computed. The matrices were then combined according to the previous priorities. Following the formation of the final matrix, the words were clustered using the K-Means method.

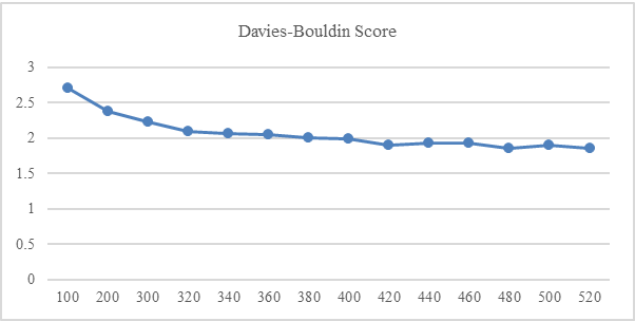

Figure 7. Davies-Bouldin Index Chart for Word Clustering in the Normalization Section

Figure 7 illustrates the Davies-Bouldin index for various numbers of clusters. Based on the chart, 420 clusters were selected. Note that in both the TF-IDF threshold method for final word selection and the thesaurus-assisted selection, a large number of words clustered together in a single group. In the TF-IDF threshold approach, approximately 1300 words fell into one cluster, while in the thesaurus method, around 300 words did so. This phenomenon generally stems from two factors:

1. Low informativeness of the word (absence from FarsNet or word embedding models).
2. Low connectivity of the word (very low scores, near zero, with other words).

Due to this issue, a significant portion of words (about 30%) lacked interpretability and were not included in abduction frames. However, this problem was less pronounced in the normalization section, where the largest clusters contained around 400 members each, comprising less than 14% of the total words.

Table 5. Some of the clusters obtained using the K-Means method in the normalization section with 420 clusters.

Cluster 33	Cluster 28	Cluster 10	Cluster 6
نصب	خوک	کلاه	شعور
هدایت	اسب	چنگال	شهود
پرتاب	سگ	چرخ	معنویت
ذخیره	پرنده	سوزن	تجسم
پیاده	شیر	شلاق	ذات
تعویض	مار	شمشیر	انسانیت
تولید	حیوان	میخ	بینش
تخریب	گاو	سپر	تخیل
متصل	عقاب	آهنین	عواطف
تخلیه	اژدها	زره	وجدان

5. Evaluation

5.1. Questionnaire

For the external evaluation criterion, 10% of the clusters from each section were randomly selected, with the condition that they contain at least 10 and at most 40 members. For the TF-IDF threshold condition, 20 clusters; for the thesaurus condition, 12 clusters; and for the normalization condition, 42 clusters were randomly chosen. After cluster selection, 10 members were randomly picked from each cluster. These 10 members are identified as positive. An additional 10 members were randomly selected from other clusters. These are identified as negative. For each user, a form is displayed that asks about the degree of belonging of a word to a group of words. Users must rate the degree of a word's belonging to a group on a scale from very high, high, medium, low, and very low. Two scenarios exist for the queried word:

1. A word is randomly selected from the cluster-related words (true positive) and becomes the query word. The ideal response here is "very high".
2. A word is selected from unrelated words (true negative) and becomes the query word. The ideal response here is "very low".

Two questions are asked per cluster: one for true positive and one for true negative. Each user receives a total of 6 questions. Additionally, age and gender are collected from each participant. To gather data from various individuals, advertisements were posted three times (once per experiment) in a Telegram channel (https://telegram.me/OfficialPersianTwitter) with

approximately 500,000 members. Multiple advertisements were placed at meaningful time intervals to balance the data collection.

5.2. Evaluation Method

If a respondent selects "very high" or "high," it is considered a positive evaluation. If "low" or "very low" is selected, it is considered negative. "Medium" responses are excluded due to respondent uncertainty. Four values are defined for evaluation using metrics such as accuracy:

- True Positive (TP): The model agrees with human judgment, both indicating high word belonging.
- True Negative (TN): The model agrees with human judgment, both indicating low word belonging.
- False Positive (FP): The model indicates high belonging contrary to human low assessment.
- False Negative (FN): The model indicates low belonging contrary to human high assessment.

Five metrics—accuracy, precision, recall, specificity, and F-measure—were computed for evaluation.

5.3. Experiments Conducted

Multiple experiments were conducted at time intervals for data collection. Across three experiments, 1,295 volunteers participated in the dynamic online questionnaire, each answering 6 questions, yielding 7,770 responses stored. These questions evaluated a total of 71 clusters.

It can be observed that there is no significant difference between the results of the first and second experiments and the combined results of the first, second, and third experiments, with outcomes showing convergence. The overall results from the three methods—TF-IDF threshold, thesaurus, and normalization—are presented in the table 6, 7, 8.

Table 6. Number of Participating Persons in each Experiment

Method / Experiment Order	Normalization	Thesaurus	TF-IDF Threshold
Number of Participants in the First Experiment	180	53	83
Number of Participants in the Second Experiment	236	65	116
Number of Participants in the Third Experiment	348	81	133

Table 7. Evaluation Results for the Combined First, Second, and Third Experiments (values in percentages)

Criteria / Experiment	F	Specificity	Recall	Precision	Accuracy
TF-IDF Threshold	62.09	81.34	73.37	53.81	67.89
Thesaurus	62.5	83.61	75	53.57	69.23
Normalization	62.44	87.49	79.22	51.52	70.20

Table 8. Overall Results of Accuracy, Precision, Recall, Specificity, and F-Measure.

F	Specificity	Recall	Precision	Accuracy
62.35	85.35	76.93	52.42	69.47

5.4. Qur'anic Experts Evaluation

A separate questionnaire was designed for Qur'anic experts. 12 clusters were randomly selected, and from each cluster, 7 words were chosen to ensure cluster coverage and diversity. Two questions were asked per cluster:

1. To what extent are these concepts semantically related or associated? This question had 5 options: very high, high, medium, low, very low. Very high was scored as 5, and very low as 1.
2. If the computational Qur'an mining detects associations between these concepts, does it identify innovative connections (from a research perspective) among some concepts? This question had 4 options:
   - Yes, the connection is highly innovative research-wise.
   - Yes, the connection is innovative research-wise.
   - No, it is relatively established in prior research.
   - No, the connection is entirely obvious and well-known.

   The first option scored 4, and the last scored 1.

Seven experts participated. The average score for the first question was 3.74, and for the second, 2.6.

6. Conclusion

This study presented and evaluated a technical approach for creating association semantic networks for the Holy Qur'an. Results indicate that natural language processing methods can automatically and semi-automatically generate abduction semantic networks for the Qur'an using interpretive data, base ontologies like FarsNet, and word co-occurrences in

verses.

Evaluation by Qur'anic experts shows that the outputs exhibit strong semantic connection accuracy and innovation discovery. Thus, generating abduction semantic networks for the Qur'an holds practical significance for Qur'anic and Islamic studies communities.

A key outcome of this research is the recommendation that producing abduction semantic networks using various technical methods be considered a vital and practical topic in future computational Qur'an mining research, particularly in semantics, interpretation, and cross-lingual studies application domains.

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Declarations

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References

Aftab, Y., Awan, M. A., Khaleeq, D., & Ismail, T. (2025). Enhancing Qur'anic Ethics and Morality: An NLP-Based Semantic Search Model for Urdu Translation. *International Journal of Innovations in Science & Technology*, 7(1), 651–663.

Ahmadi, H., Osareh, F., Hosseini Beheshti, M. S. and Heidari, G. (2017). Designing Semiautomatic System in Ontology Structure by To Co-occurrence word Analysis and C-value Method (Case Study: The field of Scientometrics of Iran). *Iranian Journal of Information Processing and Management*, *33*(1), 185-216. https://doi.org/10.35050/JIPM010.2017.008

AminMozhgani (n.d.). *Persian Word2Vec: A Persian Word2Vec model trained by Wikipedia articles*. GitHub repository. https://github.com/AminMozhgani/Persian_Word2Vec

Akra, D., Hammouda, T., & Jarrar, M. (2025). QuranMorph: Morphologically

Annotated Qur'anic Corpus. *arXiv preprint arXiv:2506.18148*. https://doi.org/10.48550/arXiv.2506.18148

Al-Salhi, R. Y., & Abdulla, A. M. (2022). Building Qur'anic stories ontology using MappingMaster domain-specific language. *International Journal of Electrical and Computer Engineering*, 12(1), 684-693. https://dx.doi.org/10.11591/ijece.v12i1.pp684-693

Alshammari, I. K., Atwell, E., & Alsalka, M. A. (2024). Linking Qur'an and Hadith Topics in an Ontology using Word Embeddings and Cellfie Plugin. In *Proceedings of the 7th International Conference on Natural Language and Speech Processing (ICNLSP 2024)* (449-455).

Amid, H. (2010). *Amid Dictionary*. Tehran: Amirkabir.

Chawla, J. S. (2018). *What is GloVe?* https://medium.com/analytics-vidhya/word-vectorization-using-glove-76919685ee0b

Ernest, P. (2023). Abduction and Creativity in Mathematics. In: Magnani, L. (eds) *Handbook of Abductive Cognition*. Springer, Cham. https://doi.org/10.1007/978-3-031-10135-9_38

Estiri, A., Kahani, M. and Ghaemi, H. (2013). Creating and publishing a semantic web infrastructure for the Holy Quran. In *the 5th Conference on Information Technology and Knowledge*, Shiraz University.

FarsiYar corpus (2019). In (Text-Mining.ir) GitHub repositories. https://github.com/Text-Mining/Useful-Corpora-for-Text-Mining-in-Persian-Language

Ghayoomi, M. (2019). Identifying Persian Wordsâ Senses Automatically by Utilizing the Word Embedding Method. *Iranian Journal of Information Processing and Management*, 35(1), 25-50. https://doi.org/10.35050/JIPM010.2019.001

Gruber, T. (1993). A translation approach to portable ontologies. *Knowledge Acquisition*, 5(2), 199-220. https://doi.org/10.1006/knac.1993.1008

Hinton, G. E. (1986). Learning distributed representations of concepts. In: *Proceedings of Eighth Annual Conference of the Cognitive Science Society*, 1-12.

Hinton, G. E. (1986). Learning Distributed Representations of Concepts. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 8. https://escholarship.org/uc/item/79w838g1

Khalila, Z., et al. (2025). Investigating Retrieval-Augmented Generation in Quranic Studies: A Study of 13 Open-Source Large Language Models. *International Journal of Advanced Computer Science and Applications (IJACSA)* 16(2). http://dx.doi.org/10.14569/IJACSA.2025.01602134

Langley, P., & Meadows, B. (2019). Heuristic Construction of Explanations through Associative Abduction. *Advances in Cognitive Systems,* 8, 93-112.

Lobo, J., & Uzcátegui, C. (1997). Abductive consequence relations. *Artificial Intelligence*, 89(1-2), 149-171. https://doi.org/10.1016/S0004-3702(96)00032-X

Mikolov, T., Chen, K., Corrado, G.S., & Dean, J. (2013). Efficient Estimation of Word Representations in Vector Space. *International Conference on Learning Representations.*

Mirarab, A., & Khorram abadi arani, M. (2022). Analytical review of Iranian Ontographs for semantic Persian information retrieval. *Sciences and Techniques of Information Management*, *8*(3), 201-232. https://doi.org/10.22091/stim.2022.8274.1798

Mohammadi, S., & Badie, K. (2017). Key concept extraction using frame networks and concept chains. *Iranian Journal of Electrical and Computer Engineering*, 15(1), 64-72.

Mousavi, Z., & Faili, H. (2017). Persian wordnet construction using supervised learning. *International Journal of Information & Communication Technology Research*, 9(2), 35-44. https://doi.org/10.48550/arXiv.1704.03223

Mousavi, Z., & Faili, H. (2021). Developing the Persian Wordnet of Verbs Using Supervised Learning. *ACM Transactions on Asian and Low-Resource Language Information Processing*, 20(4), 1-18. https://doi.org/10.1145/3450969

Naghizadeh, A., Salamat, M., Hamzeian, D., Akbari, S., Rezaeizadeh, H., Vaghasloo, M. A., Karbalaei, R., Mirzaie, M., Karimi, M., & Jafari, M. (2021). IrGO: Iranian traditional medicine General Ontology and knowledge base. *Journal of biomedical semantics*, 12(1), 9. https://doi.org/10.1186/s13326-021-00237-1

Persian Medicine Diseases Ontology (PMD). (2019). [Ontology]. NCBO BioPortal. https://bioportal.bioontology.org/ontologies/PMD?p=summary

Pournamdarian, T. & Tehrani Sabet, N. (2010). Associations and Rhetorical Figures. *Literary Arts*, 1(1), 1-13.

Qara'ati, M. (2004). *Tafsīr Nūr*. Tehran: Cultural Center of Lessons from the Qur'an.

Saadaoui, Z., Tlig, G., & Jarray, F. (2024). LLMs Based Approach for Quranic Question Answering. *International Conference on Web Information Systems and Technologies*. https://doi.org/10.5220/0013012900003825

Salah, A., Mahdi, M., & badawy, A. (2025). Exploring Thematic Structures in Surah Al-Baqarah using TF-IDF, Dimensionality Reduction, and K-means Clustering. *Journal of Computing and Communication*, 4(2), 1-12. https://doi.org/10.21608/jocc.2025.446634

Shahid, U., Hussain, M.Z., & Sayers, W. (2025). Computational Analysis of Quran Text Using Machine Learning and Large Language Models. In *8th International Conference on Data Science and Machine Learning Applications (CDMA)*, 18-

24.

Shamsfard, M., Hesabi, A., Fadaei, H., Mansoory, N., Noor, P., Famian, A.R., Bagherbeigi, S., Fekri, E., & Monshizadeh, M. (2009). *Semi Automatic Development of FarsNet: The Persian WordNet*. http://farsnet.nlp.sbu.ac.ir/Site3/Modules/Public/Default.jsp

Shohoud, Y., Shoman, M., & Abdelazim, S. (2023). Qur'anic Conversations: Developing a Semantic Search tool for the Quran using Arabic NLP Techniques. *ArXiv, abs/2311.05120*. https://doi.org/10.48550/arXiv.2311.05120

Soliman, A. B., Eissa, K., & El-Beltagy, S. R. (2017). AraVec: A set of Arabic Word Embedding Models for use in Arabic NLP. In *Procedia Computer Science,* 117, 256-265. https://dx.doi.org/10.1016/j.procs.2017.10.117

Tariq, M., Awan, M. A., & Khaleeq, D. (2025). Developing a Qur'anic QA System: Bridging Linguistic Gaps in Urdu Translation Using NLP and Transformer Model. *International Journal of Innovations in Science & Technology*, 7(1), 493-505. https://doi.org/10.33411/ijist/202571492505

Thesaurus of Qur'anic Concepts (2007). Qom: Bustān Ketāb. https://noorlib.ir/book/info/5028

Zerrouki, T. (2020). *Qalsadi, Arabic morphological analyzer Library for python*. https://pypi.python.org/pypi/qalsadi/

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An Analysis of Conflict of Interest Cases and Their Management Strategies: Insights from Qur'anic Narratives

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ABSTRACT:

Original Paper

The Qur'an, as a divine scripture, transcends a merely religious and spiritual text; it constitutes a unique compendium of knowledge and guidance for understanding and addressing diverse individual and social issues. With its comprehensive and boundless depth, this sacred text engages with all aspects of human life and elucidates the causes and conditions of various challenges. One of the significant issues discussed within this framework is the conflict of interest. The main question of this study is: What are the instances of conflict of interest from the Qur'anic perspective, and what solutions does the Qur'an propose for managing them? This paper aims to identify and explain the manifestations of conflict of interest based on Qur'anic teachings and to explore the corresponding management strategies. To achieve this goal, a descriptive-analytical method was employed, drawing upon four Qur'anic narratives: the Battle of Uḥud, the behavior of the Companions during the Prophet's time, the story of Prophet Shuʿayb, and the account of Hābīl and Qābīl (Abel and Cain). The findings indicate that the Qur'an extensively addresses this issue and provides multiple approaches for confronting, managing, and avoiding conflicts of interest. The key managerial components include identifying the roots of conflict, preventing

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and controlling it through transparency, emphasizing ethical leadership, and managing group relations. Qur'anic strategies are based on such concepts as *al-taqwā* (self-restraint), *al-īmān* (reinforced responsibility), *al-infāq* (almsgiving or reduction of inequality), and *al-ṣabr* (rational forbearance). Operationalizing these strategies through a three-level framework (individual, organizational, and social) can foster communities resilient against corruption. The results demonstrate that the Qur'an not only contributes to preventing conflicts of interest but also assists in cultivating a balanced and morally grounded society.

KEYWORDS: The Qur'an, Conflict of interest, Conflict Management Strategies, Qur'anic Ethics, Organizational Ethics, Corruption Prevention.

1. Introduction

In recent decades, increasing attention has been devoted to exploring and elucidating managerial concepts such as conflict of interest within the domains of governance and policy. During this relatively short period, the term has emerged as a specialized concept with a distinct semantic load, establishing its place in academic discourse and generating a substantial body of literature (Soroushfar 2020). Consequently, administrators and policymakers have shown growing concern with finding ways to address and avoid conflicts of interest. Many instances of corruption can be traced back to conflicts of interest, which often form their background and foundation. Most cases of corruption arise from situations where conflicting interests are present. The recurrence of such cases leads to harmful consequences across various sectors (Parhizkari & Rezghi 2017). Hence, one of the principal methods for preventing corruption lies in resolving and managing conflicts of interest. Managing and mitigating conflicts of interest in administrative systems require measures such as delegation of authority and imposition of stricter restrictions (Sohrabi 2019). Moreover, rulers and decision-makers must regard the prevention of conflicts of interest as a central approach in combating corruption. Through a precise assessment of potential conflict points and the adoption of appropriate preventive strategies, they can take effective steps to curtail corruption (Parhizkari & Rezghi 2017).

Conflict of interest not only leads to discrimination and injustice, but can also misguide individuals and inflict considerable harm upon societies. Therefore, understanding this issue and offering effective strategies to prevent it are of great importance. A closer examination of the ethical and social teachings of Islam—particularly those of the Qur'an—reveals two principal methods for managing conflict: 1) a preventive approach, which

proposes measures to avert destructive and unproductive conflicts; and 2) a solution-oriented approach, which focuses on resolving and managing conflicts when they arise (Ghane 2014). In the Qur'an, submission to base desires and satanic temptation are identified as the principal causes of human deviation when faced with conflicts of interest. Both are presented as divine tests that place humans at the crossroads between truth and falsehood, and between personal benefit and communal welfare. Unfortunately, personal gain often takes precedence over truth and collective benefit.

This study seeks, through a targeted examination of Qur'anic verses, to identify the concept of conflict of interest, its salient instances, and the management strategies proposed therein. The aim is to enable managers, leaders, and individuals—both in administrative domains and in personal and social ethics—to gain a clearer understanding of this concept and its Qur'anic treatment. Such insight can guide them in appropriately addressing conflicts at different levels, leading to both worldly well-being and ultimate salvation. Although some previous studies have discussed conflict of interest, this paper distinguishes itself by focusing explicitly on its instances and solutions through Qur'anic components. The main research question is therefore: What are the manifestations of conflict of interest according to the Qur'an, and what solutions does it offer for their management? To address this, the study further examines the following subsidiary questions: What is the nature and essence of conflict of interest in the Qur'anic view, and what are the main challenges in resolving it?

2. Literature Review

A review of the existing literature reveals that, considering the prevalence and significance of conflict of interest as a common social and ethical challenge, numerous studies have addressed this issue from legal, administrative, or economic perspectives. However, despite its importance, there appears to be no dedicated study on the manifestations and management strategies of conflict of interest from a Qur'anic perspective. The present research, therefore, seeks to develop a practical and systematic model for avoiding conflicts of interest through the analytical study of Qur'anic narratives. Siahbidi Kermanshahi (2021) examined the jurisprudential principles governing the management of conflict of interest, though without a Qur'anic approach. Manzoor & Abbasi (2019) analyzed the relationship between transparency and the mitigation of conflicts of interest, and proposed mechanisms to enhance transparency in governance. Similarly, Vakilian & Derakhshan (2020) compared the legal systems of Iran, the United Kingdom, and the United States, concluding that while judicial systems in the latter two countries show a declining trend in conflicts of

interest, the Iranian legal framework still lacks a distinct conceptual and legislative recognition of the issue. Auby et al. (2014) explored various dimensions of corruption and conflict of interest at the international level. Adopting a comparative perspective, he analyzed the experiences of several countries and international organizations in preventing and combating corruption, highlighting the challenges and existing policy responses. Finally, Annamoradnejad et al. (2021) emphasized the importance of enacting laws to regulate such situations and examined the impact of legislation on improving governance and ethical compliance.

3. Theoretical Framework

3.1. Conflict

Conflict is a complex and multidimensional concept that carries diverse meanings across various scientific, social, and economic disciplines. It can be examined from different theoretical perspectives. This section discusses definitions of conflict from the viewpoints of management theories and Islamic teachings.

3.1.1. Conflict in Management Theories

From the perspective of management theories, conflict is defined as a lack of alignment or harmony in activities and goals. According to Dodge, conflict is "a disagreement regarding activities and objectives" (Soleimani 2005). Berelson and Steiner regard it as the pursuit of contradictory goals, in which achieving one objective occurs at the expense of another (Izadi Yazdanabadi 2000). Robbins defines conflict as "any type of opposition or antagonistic interaction," tracing its origin to scarcity of resources, social position, power differences, or value-system divergence (Rezaeian 2003). Similarly, Daft interprets conflict as "behavior among organizational groups that occurs when one group obstructs another from achieving its goals" (Daft 2004; Mas'oudi & Mirzaee 2009).

3.1.2. Conflict in Islamic Teachings

In Islamic texts, conflict is understood as disagreement or lack of accord between individuals or groups. It may manifest in forms such as disputation, competition, opposition, quarrel, or even war. Islam distinguishes between positive and negative conflict. Positive conflict encompasses *mujādalah bil-aḥsan* (constructive debate), exchange of ideas, and healthy competition, whereas negative conflict includes *mujādalah ghayr aḥsan* (unjust dispute), enmity, strife, and warfare (Izadi Yazdanabadi 2000; Mas'oudi & Mirzaee 2009).

3.2. Conflict of Interest

3.2.1. Definition of Conflict of Interest

Various definitions of conflict of interest have been proposed in different sources. In some definitions, it refers to a situation where a person's private interests conflict with their official duties or the public good, potentially leading to decisions that favor personal benefit over collective welfare (Siahbidi Kermanshahi 2021). Other definitions describe it as a set of circumstances in which there is a risk that personal interests may improperly influence an individual's professional judgments or actions (Badini & Siahbidi 2021). In general, conflict of interest occurs when a person or organization is placed in a position where personal or organizational benefits may influence professional decisions or actions, leading to outcomes that favor specific individuals or entities at the expense of public or professional integrity (Parhizkari & Rezghi 2017).

In Islamic teachings, conflict of interest likewise refers to a situation in which an individual faces a choice between personal and collective interests. This decision may be affected by satanic temptations or base desires (*al-hawā*), which incline a person toward self-interest. Alternatively, by exercising self-restraint (*al-taqwā*), one may prioritize the collective good. In such situations, the individual faces two inner forces: one, the ego-driven desire, which inclines toward selfishness and personal gain and the other, the force of faith and piety, which promotes altruism and concern for communal welfare. Therefore, based on Qur'anic and ethical teachings, conflict of interest can be defined as a moral and decision-making situation wherein the individual possesses the power of choice between self-interest and public benefit. This condition does not inherently lead to corruption; rather, the outcome depends on the person's moral will and ethical self-control. If guided by faith and self-restraint, one can make the correct choice and give precedence to the common good.

3.2.2. Constituent Elements of Conflict of Interest

Interest (Benefit) may be financial or non-financial, encompassing any right, privilege, authority, or immunity. Personal interest may be actual or potential and may relate directly or indirectly to the individual or others who benefit from it. Judgment (Decision-Making) refers to the process through which an individual must choose among several options. This process may be influenced by personal interests, resulting in decisions that prioritize private gain over public welfare. Conflict arises when secondary interests (personal benefits) contradict primary interests (the duties or responsibilities

one is entrusted to uphold). Such conflict can lead to decisions that favor personal advantage over public responsibility. Another element is relationship in which one party trusts another to safeguard their interests. This relationship may be formal or informal and is often grounded in responsibility or impartiality (Badini & Siahbidi 2021).

3.2.3. Types of Conflict of Interest

Conflicts of interest can be categorized into various types, each with distinct features and consequences. An individual conflict involves tension between personal and organizational interests, while an organizational conflict refers to competition between institutions or corporations. A group conflict highlights divergence of interests between different departments or divisions, and a structural conflict arises from unjust laws or discriminatory policies. A public conflict emerges from tension between public and private interests, an international conflict concerns conflicting interests among nations, and an ethical conflict occurs when personal benefit clashes with moral values. Each type may generate adverse effects for individuals, organizations, or society at large.

Moreover, Conflict of interest may emerge in a broad range of contexts and activities, with some notable examples including financial conflicts, where confidential information is used for personal gain; political conflicts, where decisions favor specific groups for political reasons; military conflicts, where personal motives lead to disobeying a commander's orders; employment conflicts, where individuals are hired based on personal relationships; and procurement conflicts, where contracts are awarded to friends or acquaintances. These examples demonstrate how conflicts of interest can manifest in diverse professional and institutional settings.

4. Manifestations of Conflict of Interest Inspired by Qur'anic Narratives

The Holy Qur'an offers a comprehensive guidance for human life and provides the constructive strategies for confronting ethical and social challenges. One such challenge is conflict of interest, which has increasingly been recognized in recent decades as a root cause of various forms of corruption. This study aims to explore Qur'anic perspectives on conflict of interest through a thematic analysis of narrative examples. In this section, we will refer to four examples of conflict of interest in Quranic stories and analyze the Quran's approach to this issue.

4.1. The Battle of Uḥud

In the second year after the Hijra (624 CE), the Battle of Uḥud took place between the Muslim army and the polytheists at the foothills of Mount Uḥud. In this battle, the Prophet of Islam (PBUH) acted as the supreme commander of the Muslims. With military wisdom and strategic insight, he positioned fifty archers under the command of ʿAbd Allāh ibn Jubayr in a critical and strategic location, the Uḥud pass. Their mission was to protect the Muslim army from the rear and to prevent any surprise attack by the enemy. ʿAbd Allāh ibn Jubayr, as the leader of this unit, had a crucial role in executing the Prophet's command and was expected to defend his position at all costs (Tabataba'i 1995, 4: 66–67; Parhizkari & Rezghi 2017).

Despite the Muslims' initial victory in the Battle of Uḥud, the archers stationed at the Uḥud pass, driven by worldly desire and greed, entered into dispute with their commander ʿAbd Allāh ibn Jubayr and a few other Muslims who remained loyal to the Prophet's order. This dispute arose from a tension between two competing choices: obeying the Prophet's command to maintain the strategic position, or collecting the spoils of war. The majority of the archers abandoned their post and turned to gathering spoils, thereby disregarding the Prophet's order. Their action weakened the collective resolve and led to a military defeat for the Muslims. As a result, a large number of the Prophet's Companions were martyred, and the outcome of the battle shifted to the Muslims' disadvantage. Verse Q. 3:152 describes this incident: *"Allah certainly fulfilled His promise to you when you were slaying them with His leave, until you lost courage, disputed about the matter, and disobeyed after He showed you what you loved. Some of you desire this world, and some of you desire the Hereafter. Then He turned you away from them so that He might test you. Certainly He has excused you, for Allah is gracious to the faithful"* (Q. 3:152).

This event, beyond its military aspect, also represented a divine test. Through this incident, God distinguished the steadfast believers from the hypocrites. Worldliness and greed, as the primary causes of conflict of interest, led some Muslims astray from the path of truth and inclined them toward falsehood. The incident provided important lessons on the necessity of obedience to divine and prophetic commands, avoidance of material attachment, and preservation of unity in times of crisis. Therefore, in this event, the issue of conflict of interest was not limited to individual choices but was deeply influenced by human relationships and social interactions. This historical episode demonstrates how interpersonal and group relations can affect collective decision-making and even result in disastrous consequences.

In this event, the components of conflict of interest can be understood as follows: first, interest appears in the narrative in the form of war spoils (material interest) and worldliness (non-material interest); second, judgment (decision-making) presents the archers with two options, obey the Prophet's command and maintain their position or pursue personal gain by collecting spoils, ultimately they chose to abandon their position; third, conflict arises from the tension between personal interest (spoils and worldly desire) and collective interest (obedience to the Prophet and the preservation of strategic defense); and finally, the relationship between the archers and the Prophet, as well as with other Muslims, deteriorates due to the preference for personal gain, leading to a breakdown of trust and mission failure.

4.2. Conflict of Interest in Companions' Behavior in Two Historical Events

During the Prophet's lifetime, two historical events clearly illustrate the occurrence of conflict of interest among the Companions. In the first event, wealthy Companions would engage in private conversations with the Prophet under various pretexts, causing inconvenience to him and distress to the poorer Companions. To address this issue, God commanded that those who wished to converse privately with the Prophet should first offer charity: *"O you who have faith! When you talk secretly to the Apostle, offer a charity before your secret talk. That is better for you and purer. But if you cannot afford [to make the offering], then Allah is indeed all-forgiving, all-merciful"* (Q. 58:12). However, except for ʿAlī ibn Abī Ṭālib, the rest of the Companions, fearing poverty, refrained from paying the charity: *"Were you apprehensive of offering charities before your secret talks? So, as you did not do it, and Allah was clement to you, maintain the prayer and pay the zakat, and obey Allah and His Apostle. And Allah is well aware of what you do"* (Q. 58:13) (al-Ḥaskānī 1991, 2: 312; al-Suyūṭī 1984, 6: 185; Ḥaqqī Burūsawī 1985, 9: 407; al-Zamakhsharī 1987, 4: 494; al-Qurṭubī 1985, 18: 302; al-Ṭabrisī, 1993, 9: 379). This divine command, which served as a test for the Companions (Fakhr al-Dīn al-Rāzī 1999, 29: 495; Makarem Shirazi 1995, 23: 248), was later abrogated.

In the second event, while the Prophet was delivering the Friday sermon, a man entered Medina with merchandise and announced his arrival by beating a drum. Upon hearing the drum, most Companions left the prayer, leaving only twelve men with the Prophet: *"When they sight a deal or a diversion, they scatter off towards it and leave you standing! Say," What is with Allah is better than diversion and dealing, and Allah is the best of providers"* (Q. 62:11). In response, the Prophet said: *"If these twelve had*

also left, God would have rained stones upon them from the heavens." (Tabataba'i 1995, 19: 463–467; Ibn Abī Jumhūr al-Aḥsāʾī 1985; al-Wāḥidī 1991)

In both events, the Companions faced situations involving conflict of interest. In the first case, the conflict lay between personal benefit (preserving wealth) and obedience to divine command (offering charity). Most Companions, due to worldly attachment and fear of poverty, refrained from giving charity, prioritizing personal interest over obedience to God. This behavior was divinely reproached, as it reflected weakness of faith and the dominance of materialism over spiritual values. In the second event, the conflict was between honoring the Prophet and pursuing material benefit (buying commercial goods). By abandoning the Friday prayer, the Companions preferred material gain to the Prophet's company. This act not only violated the Prophet's dignity but also revealed a failure to prioritize religious values.

These two events clearly demonstrate how the preservation of personal interest can influence decision-making and lead individuals toward erroneous choices. In both cases, worldliness and weak self-control caused the Companions to deviate from the path of truth and sacrifice religious values for material benefit. The incidents thus offer vital lessons on strengthening faith, cultivating self-restraint, and prioritizing divine values when confronted with conflicts of interest. Consequently, these two historical events from the Prophet's era illustrate how human relationships profoundly shape and intensify conflicts of interest. They clearly show that social interactions and interpersonal relations can affect both individual and collective decision-making, potentially resulting in unintended consequences.

4.3. The Story of Prophet Shuʿayb

Prophet Shuʿayb was sent as a messenger to the people of *Madyan* (Q. 7:85; 29:36) and *Aykah* (Q. 26:176). Despite being blessed with abundant resources, these two communities were afflicted by economic and moral corruption, manifested through fraud in measurement, tampering with weights and scales, and profiteering. Shuʿayb called upon them to worship the One God and to abandon their immoral practices. However, rather than embracing faith, the people of Madyan and Aykah mocked him, threatened him, and accused him falsely. Their conduct revealed their resistance to divine guidance and the dominance of material greed over moral values. Eventually, Shuʿayb, despairing of their belief, prayed for divine judgment (Q. 7:89). In response, both communities were struck by divine punishment (Q. 7:91; 26:189).

The story of the people of Shuʿayb serves as a clear example of conflict of interest and the disastrous outcomes of misguided choices. The people of Madyan and Aykah faced two possible paths: Obedience to divine commandments and adherence to justice in trade; Pursuit of personal gain through continued economic corruption by cheating in measurement and overpricing goods. Regrettably, due to worldliness, greed, and satanic temptation (Jazāʾirī 2002), they chose the latter path. This decision not only led them away from divine guidance but also brought divine punishment upon them. The narrative vividly demonstrates how conflict of interest can place individuals in morally critical situations, where wrong decisions lead to both ethical and worldly ruin.

Furthermore, the story of Shuʿayb offers profound lessons on economic justice, *al-taqwā* (piety), and abstention from greed (Q. 26: 181-184). In this account, the issue of conflict of interest extends beyond individual decisions and is deeply shaped by human relationships and social interactions. When Shuʿayb called his people to practice justice and honesty in trade, their collective resistance revealed the influence of social conformity and group pressure on individual decision-making. Even those who might initially have been inclined to accept divine guidance were swayed by the behavior of others and ultimately defied the Prophet's command. This aspect highlights the importance of social dynamics and their role in intensifying conflicts of interest.

In summary, the components of conflict of interest can be understood as follows: first, interest refers to a financial benefit obtained through fraud and overpricing; second, judgment presents the people of Madyan and Aykah with two options, obey divine law and pursue justice in trade or seek personal gain through dishonesty for profit—ultimately they chose the latter; third, conflict arises from the clash between personal interest (material profit and social standing) and collective interest (justice and obedience to divine commandments); and finally, the relationship between the people and Prophet Shuʿayb was strained by their focus on personal gain, leading to disobedience and divine punishment.

4.4. The Story of Hābīl and Qābīl

Hābīl (Abel) and Qābīl (Cain), the sons of Prophet Ādam, were subjected to a divine test. According to narrations, Ādam was commanded to appoint Hābīl as his successor, but Qābīl, motivated by pride and selfishness, became envious of his brother. Therefore, God instructed Ādam that both sons should offer sacrifices to Him (Q. 5:27). Whosever offering was accepted would become the rightful successor (al-ʿAyyāshī 2001, 1: 312; al-

Ḥuwayzī 1995, 1: 610). Driven by material desire, Qābīl presented the worst portion of his crops, while Hābīl offered the finest of his flock. God accepted Hābīl's sacrifice but rejected Qābīl's (Makarem Shirazi 1995, 4: 348). Following this rejection, Qābīl, consumed by envy and resentment, murdered his brother (Tabataba'i 1995, 5: 498–521).

The narrative of Hābīl and Qābīl provides another archetypal example of conflict of interest and the destructive effects of misguided decisions. Qābīl faced a choice between: Obedience to divine command and offering a sincere sacrifice; or pursuit of personal interest by offering an inferior gift motivated by greed and pride. Tragically, Qābīl chose the second path. His decision not only led to the rejection of his offering but also fueled jealousy and animosity toward his brother. Ultimately, his internal conflict and the dominance of desire drove him to fratricide. This narrative demonstrates how conflict of interest can place individuals in morally perilous situations, where self-centered decisions produce catastrophic consequences. It also offers enduring moral lessons on *al-taqwā* (piety), restraint, and detachment from materialism. Had Qābīl been able to master his passions and prioritize his relationship with God over his ego and material interest, his destiny would have been different.

In summary, the components of conflict of interest can be understood as follows: interest encompasses both non-material desires for superiority and status, and material motives such as withholding the best part of one's produce; judgment presents Qābīl with two choices, obedience to God's command or pursuit of self-interest, and he chose the latter; the conflict arises between personal interest (self-glorification and greed) and collective interest (justice and divine obedience); and finally, Qābīl's relationship with God and with his father, Ādam, deteriorated due to his preference for personal interest, leading to disobedience and tragic moral consequences.

5. Executive Qur'anic Strategies for Conflict-of-Interest Management

Conflict of interest, as one of the fundamental challenges of management in complex organizational and social environments, requires precise analytical and executive approaches. Qur'anic narratives such as the Battle of Uḥud, the conduct of the Companions, the story of the people of Prophet Shuʿayb, and the account of Hābil and Qābil serve as valuable case studies, not only in the field of ethics but also as practical operational models for managing conflicts of interest. These narratives vividly portray the profound tension between individual interests and collective or religious values, and they inspire four principal managerial and executive dimensions in this regard. These dimensions, grounded in Qur'anic teachings, are scientifically and practically designed for organizational and social implementation.

5.1. Identifying the Roots of Conflict of Interest

Across the four narratives, the key observation is that conflicts of interest arise from the tension between individual motives (worldliness, greed, envy, and fear of loss) and collective or religious values. In the Battle of Uḥud, the conflict between short-term profit gained from spoils and adherence to the Prophet's strategic command to maintain a defensive position marks a turning point in this contradiction. Among the Companions, both at Uḥud and in other instances, the dominance of material motives over divine obligations is evident. In the story of the people of Shuʿayb, the clash between economic justice and exploitative self-interest leads to corruption and moral decline. Similarly, in the story of Hābil and Qābil, envy and material desire stand opposed to piety and obedience to divine commands.

5.1.1. Managerial Components

- Establishing an accurate and efficient system for identifying and analyzing conflicts of interest;
- Comprehensive understanding of individual and collective motivations and needs to apply targeted and effective strategies;
- Emphasis on continuous training and reinforcement of organizational values that clearly prioritize collective interests.

5.2. Prevention and Control of Conflicts of Interest

The examined narratives indicate that the failure to manage conflicts of interest often stems from the lack of transparency in setting priorities and understanding the consequences of decisions. For instance, the archers positioned at Uḥud abandoned their posts due to incomplete adherence to command and the misalignment between personal and collective goals, resulting in disorder and disunity. Similarly, the Companions faced challenges in prioritizing charitable obligations and participation in communal religious duties, which weakened collective discipline. Among the people of Shuʿayb, social pressures and the absence of an effective oversight mechanism in commerce facilitated economic corruption and malpractice. Moreover, Qābil's inability to control his ego and his disregard for divine standards led to moral transgression. These examples illustrate that effective management of conflicts of interest requires transparent mechanisms, clearly defined duties, explicit prioritization, and consistent monitoring to minimize opportunities for corruption and preserve organizational integrity.

5.2.1. Managerial Components

- Clear formulation of organizational policies and rules, including conflict-of-interest regulations that prioritize overarching ethical values;
- Continuous supervision and enforcement of accountability mechanisms to reduce opportunities for greed and corruption;
- Training in ethical decision-making and self-control skills to effectively manage personal inclinations;
- Designing precise command and coordination structures to maintain organizational cohesion and crisis management efficiency.

5.3. Leadership and Role Models to Mitigate Conflicts of Interest

In every narrative, the role of leadership, embodied by the Prophet and religious figures, in directing individuals toward values is central. The Prophet Muḥammad, through military wisdom and clear assignment of duties during the Battle of Uḥud, played a key role in managing conflicts of interest. The conduct of eminent Companions such as Imam ʿAlī exemplified steadfast commitment to divine values. Prophet Shuʿayb, as a divinely guided leader, sought to guide his people toward justice and away from materialism. Likewise, Hābil, as a model of piety, resisted Qābil's worldliness and became a symbol of moral steadfastness.

5.3.1. Managerial Components

- Ethical leadership as a crucial factor in reducing conflict and exerting sustainable influence on values and behavior;
- Strengthening an organizational culture based on value-centered leadership and shared responsibility;
- Developing leadership capacities for process transparency, moral motivation, and resistance to group pressure.

5.4. Managing Group Dynamics and Social Influences in Conflict-of-Interest Escalation

Social relations, group pressures, and interpersonal dynamics play a decisive role in conflict-laden decision-making. During the Battle of Uḥud, the collective temptation for spoils led to the abandonment of strategic positions. Among the Companions, social reactions and collective

tendencies weakened religious discipline. The people of Shuʿayb succumbed to economic corruption due to social conformity and peer influence. Individuals may likewise deviate from ethical values under external pressure.

5.4.1. Managerial Components

- Promoting organizational awareness and culture grounded in collective values and ethical commitments;
- Developing communication and group-management skills to mitigate the negative effects of peer pressure;
- Creating open channels for expressing concerns and ensuring active participation in ethical decision-making;
- Designing supportive systems to protect individuals committed to values from external or social pressure.

This strategic framework provides decision-makers and managers with the capacity to effectively address and resolve conflicts of interest. Ultimately, the analysis demonstrates that the examined Qur'anic narratives offer a model for a deeper understanding of such conflicts and for designing preventive and corrective managerial strategies applicable in contemporary organizational and social contexts.

6. Strategies for Managing Conflicts of Interest Inspired by Qur'anic Teachings

According to the verses of the Qur'an, it seems that it is inevitable that human beings will face situations involving conflicts of interest. The key question, therefore, is: if a person, for any reason, encounters a situation of conflicting interests or faces a choice between truth (*ḥaqq*) and falsehood (*bāṭil*), what strategies exist for overcoming or preventing such a state? The following section examines approaches inspired by Qur'anic narratives for managing and avoiding conflicts of interest.

6.1. al-Taqwā (piety)

Al-Taqwā, a fundamental ethical and spiritual term in Islamic teachings, is recognized as the most essential means of spiritual refinement and proximity to God. Some scholars define it as complete vigilance (Khamenei 2022), while others describe it as a spiritual disposition that enables a person to guard against sin (Motahhari 2018). Certain thinkers consider the

attainment of spiritual perfection impossible without *al-taqwā* (Khomeini 2001). The Qur'an places *al-taqwā* above all worldly or external privileges, affirming that the only acceptable criterion for nearness to God is *al-taqwā* itself, whereas factors such as lineage, tribe, color, race, social status, or wealth hold no value: *"O mankind! Indeed We created you from a male and a female, and made you nations and tribes that you may identify yourselves with one another. Indeed the noblest of you in the sight of Allah is the most God wary among you. Indeed Allah is all-knowing, all-aware"* (Q. 49:13). Those who boast of their ancestry are regarded by God as lower than insects that wallow in filth (Makarem Shirazi 1995, 22: 197–202).

Al-Taqwā entails self-restraint and control over one's desires, while the absence of *al-taqwā* indicates submission to passions and loss of moral self-governance (Makarem Shirazi 1995, 22: 206–207). Some scholars distinguish various levels of *al-taqwā*, including avoidance of polytheism (*shirk*), avoidance of sin, and abstaining from anything that distracts one from the truth (al-Bayḍāwī 1998, 1:36). Characteristics of the people of *al-taqwā* include patience, justice, truthfulness, fulfillment of promises, and generosity. The effects of *al-taqwā* include protection from satanic temptations and avoidance of sin (Q. 7:201) (al-Ṭabrisī 1993, 4: 790), the ability to distinguish right from wrong (Q. 8:29) (al-Ṭabrisī 1993, 4: 825), relief from life's difficulties and the provision of sustenance from unexpected sources (Q. 65:2–3) (Tabataba'i 1995, 19: 526), and the facilitation of one's affairs (Q. 65:8).

In situations of conflicting interests, when one must choose between personal gain and divine command, *al-taqwā* functions as a powerful mechanism for making the right decision. In such circumstances, a person must adhere to divine guidance and resist the temptations of Satan and the impulses of the base desires. When reason is overwhelmed by desire, passion, and satanic whisperings, the human intellect falters. Therefore, one must carry the best provision, *al-taqwā*, described in the Qur'an as the best provision: *"Take provision, for indeed the best provision is God wariness. So be wary of Me, O you who possess intellects!"* (Q. 2:197), which is also the key to Paradise: *"This is the paradise We will give as inheritance to those of Our servants who are God wary"* (Q. 19:63).

Al-Taqwā enables individuals to refrain from sacrificing divine commandments for personal advantage and to avoid satanic influences. This quality empowers them to make ethical and sound decisions in difficult circumstances and prevents the undesirable consequences of morally flawed choices. Beyond being a tool for managing conflicts of interest, *al-taqwā* also strengthens the human relationship with God and secures divine satisfaction. Thus, *al-taqwā*, as a central concept in religious teachings,

enhances human relationships with both God and others and plays an essential role in managing conflicts of interest. In such situations, *al-taqwā* helps individuals act justly, prioritize collective welfare over personal benefit, and avoid oppression and corruption (Q. 5:27; 26:184). It causes to respect the rights of others and to foster healthy social relations, thereby preventing future conflicts and strengthening social responsibility.

6.2. Al-Īmān (Faith)

The frequency of the term *al-īmān* and its derivatives in the Qur'an signifies the centrality of this concept in Islamic theology. Scholars have debated whether *al-īmān* is limited to inner conviction or also encompasses verbal confession and practical adherence to divine law. Nonetheless, across all theological schools, *al-īmān* is fundamentally recognized as heartfelt conviction (Jafari 2004). In Islamic ethics, *al-īmān* represents the noblest disposition of the soul, guiding human beings toward righteousness. The Prophet Muḥammad stated, "Nothing is more beloved to God than faith (*al-īmān*) and abstaining from what He has forbidden" (al-Ṭūsī 1993).

Faith plays a decisive role in human salvation and is described as possessing degrees or stages, metaphorically likened to the steps of a ladder that one must ascend (al-Kulaynī 1987, 2: 45; Ibn Bābawayh 1983). The Qur'an identifies belief in the unseen (Q. 2:3), divine unity (Q. 64:8; 112:1), the Resurrection (Q. 5:69; 2:4), prophetic missions, and revelation (Q. 2: 285, 136; 3:84) as prerequisites for guidance. Moreover, the Qur'an declares that professing faith without righteous deeds is false (Q. 24:47).

Al-Īmān, as a powerful spiritual force, helps individuals make correct choices in situations of conflicting interests (Q. 7:85). To achieve genuine happiness, spiritual peace, and freedom from anxiety (Q. 48:4; 10:62–63; 5:69; 13:8), as well as to gain insight and discernment between truth and falsehood (Q. 8:29) (Tabataba'i 1995, 9: 70; Makarem Shirazi 1995, 7: 140), and to attain divine affection (Q. 19:96), believers must refrain from selfish pursuits and resist satanic temptations. Faith in God and adherence to His commands act as the "ark of salvation" (Ibn Bābawayh 1993, 2:282) that carries human beings safely through moral trials and conflicts of interest. Hence, *al-īmān*, like *al-taqwā*, fortifies one's relationship with God and others and serves a central role in managing ethical and organizational conflicts. During moral or social conflict, *al-īmān* directs individuals to prioritize collective welfare over personal gain, thereby fostering cooperation and reducing tension. The faithful person avoids envy and destructive competition, choosing instead constructive engagement and mutual support. This approach not only diminishes conflicts but also

strengthens social trust and cohesion. As an ethical force, *al-īmān* inspires justice and fairness in interpersonal relations.

6.3. Al-Infāq (Almsgiving)

One of the greatest social challenges in contemporary societies is class inequality, which often arises from the corruption of rulers, their self-interest, and the prolonged wars waged by powerful nations against weaker ones for political and economic gain. This form of social injustice is not limited to the developing world; even in advanced nations, vast populations still struggle with poverty and hunger. Tyrannical leaders frequently attempt to address this issue through the exploitation of other nations' wealth or by further impoverishing the weak. In contrast, the Qur'an identifies *al-infāq* (almsgiving) and related moral virtues, such as *al-ṣadaqah* (voluntary charity) (Q. 2:263; 9:71), *al-zakāh* (obligatory alms) (Q. 5:55), *jihād bil-māl* (striving with one's wealth) (Q. 9:41), *al-qarḍ al-ḥasan* (benevolent loan) (Q. 2:245; 57:11, 18), and *al-iṭʿām* (feeding the poor) (Q. 90:14; Q. 76:8), as the primary remedies for social inequality, and it repeatedly exhorts believers to practice them.

God describes *al-infāq* as a transaction with Himself (Q. 61:10–12), a defining trait of the righteous (*al-abrār*) (Q. 76:5–8), and one of the essential attributes of the pious (Q. 2:2–3; 51:15; 92:17–18), the faithful, the truthful (Q. 8:3–4; 28:52-54; 49:15), and the humble (Q. 22:34–35). The Qur'an further portrays *al-infāq* as a means of purifying the soul (Q. 9:103), achieving spiritual tranquility (Q. 2:274), increasing wealth (Q. 34:39), drawing nearer to God (Q. 9:99), attaining divine mercy and forgiveness (Q.5:12; 3:134), and securing reward in the Hereafter (Q. 9:111–112). Conversely, neglecting *al-infāq* leads to social insecurity (Q. 2:195), loss of blessings (Q. 68:17–24), regret at the time of death (Q. 63:10), and divine punishment (Q. 3:180).

Human beings often face situations where they must choose between giving in the way of God and preserving their personal wealth. This represents a clear case of conflict of interests, wherein self-interest (retaining wealth) conflicts with divine and social values (charity and aiding others). Unfortunately, many people, driven by satanic temptations (Q. 2:268; 4:38), weak or absent faith (Q. 9:98), intense love of wealth (Q. 63:9), miserliness (Q. 47:38; 3:180; 64:16), and fear of poverty (Q. 17:100), prioritize personal gain over divine principles. Choosing to hoard wealth rather than engage in *al-infāq* results not only in the loss of spiritual and eternal rewards but may also lead to the eventual loss of the very wealth one seeks to preserve. The Qur'an warns that such choices entail both severe punishment in the

Hereafter and adverse consequences in this world. This underscores that unmanaged conflicts of interest can be detrimental to both the individual and society.

Such conflicts illustrate the dominance of self-interest over divine and moral values, a tendency that fuels injustice, exacerbates inequality, and erodes empathy and solidarity. By emphasizing *al-infāq*, the Qur'an offers a means to bridge economic divides and establish social justice. Through *al-taqwā*, faith in divine providence, and avoidance of satanic whisperings, believers are guided toward righteous choices in the face of ethical dilemmas. For instance, Q. 2:268 states: *"Satan frightens you of poverty and prompts you to [commit] indecent acts. But Allah promises you His forgiveness and grace, and Allah is all-bounteous, all-knowing."* This verse clearly shows that fear of poverty and satanic temptation hinder charitable giving, whereas faith in divine promises overcomes such barriers. Conflicts between *al-infāq* and wealth preservation affect not only individuals but also the broader community. When people refrain from charity due to greed or fear, poverty and inequality inevitably rise. Conversely, charitable giving fosters economic balance, reduces class disparity, and strengthens social cohesion. Thus, adherence to the divine command of *al-infāq* benefits both the individual and society as a whole.

6.4. Al-Ṣabr (Patience)

Al-Ṣabr (patience) is among the most exalted virtues, often described as "the mother of all virtues" (Norouzi et al. 2016; Rabie et al. 2018). Its role in human conduct is likened to the head's role in the body (al-Kulaynī 1987, 2: 90). It has consistently been emphasized by prophets, imams, and righteous leaders as essential for spiritual progress and perfection (Khamenei 2020). The Qur'an presents several prophets, including Ayyūb (Job), Yaʿqūb (Jacob), Nūḥ (Noah), Idrīs (Enoch), Dhū al-Kifl, Mūsā (Moses), and Ibrāhīm (Abraham), as models of *al-ṣabr* (Q. 46:35; 31:27) (Behnami 2006). In Q. 2:177, God identifies three main contexts for patience: adversity, hardship, and battle (Tamri 2010). In contrast, *al-shayṭān* (Satan) and the *al-nafs* (lower self) incite sin and haste (Q. 21:37), which hinder *al-ṣabr*. Yet enduring adversity and resisting temptation are themselves divine tests, through which God praises the patient (Q. 2:155). Thus, *al-ṣabr* is not merely an ethical quality but a powerful instrument for confronting life's trials and attaining divine approval.

When one faces a dilemma between personal benefit and divine obligation, conflict of interest emerges as both an ethical and spiritual challenge. In such moments, *al-ṣabr* serves as a key virtue that enables

individuals to restrain themselves and resist satanic temptation, thereby avoiding sin and disobedience. The Qur'an declares: *"Indeed the patient will be paid in full their reward without any reckoning"* (Q. 39:10). This verse highlights that patience in the face of conflict not only earns divine satisfaction but also leads to boundless reward. *Al-Ṣabr* allows individuals to purify their souls, avoid rash decisions, and adhere to divine guidance rather than fleeting worldly gains. Such moral discipline strengthens faith and ethical integrity while fostering a just and balanced society.

Consequently, *al-ṣabr*, as both a moral and managerial principle, provides an effective framework for balancing self-interest with divine values in situations of conflict. It underscores the importance of patience not only as a personal virtue but as a foundational principle in managing ethical and social challenges. When individuals are confronted with a choice between personal and collective good, *al-ṣabr* enables them to control impulses, avoid hasty actions, and pursue fair and ethical solutions. This approach promotes social harmony, reduces tension, and contributes to the realization of justice and solidarity. Hence, *al-ṣabr* functions not merely as a private virtue but as a cornerstone of conflict-of-interest management and the enhancement of human relationships.

7. The Operational Framework of Qur'anic Strategies for Managing Conflict of Interest

7.1. Developing an Operational Framework

An analysis of Qur'anic themes indicates that managing conflicts of interest requires a systematic and multi-level approach. Drawing upon four core Qur'anic concepts and strategies, *al-taqwā*, *al-īmān*, *al-infāq*, and *al-ṣabr*, this section proposes an operational framework for their implementation across individual, organizational, and societal levels. Integrating the theoretical foundations of conflict of interest management with Qur'anic teachings, the model provides a comprehensive ethical strategy for addressing moral challenges in both professional and social contexts.

7.1.1. The Individual Level

7.1.1.1. The Moral Training System Based on al-Taqwā and al-Īmān

- Ethical Self-Care Programs: Designing *al-taqwā*-centered mindfulness workshops focused on identifying personal moral vulnerabilities that

expose individuals to conflicts of interest. The structure of these workshops includes a phase of reflection and self-awareness, in which participants contemplate Qur'anic verses addressing ethical weaknesses. For instance, the verse *"Do not eat up your wealth among yourselves wrongfully, nor proffer it to the judges in order to eat up a part of the people's wealth sinfully, while you know [that it is immoral to do so]"* (Q. 2:188) serves as a key model for identifying ethical vulnerabilities related to the abuse of power. The primary aim of this stage is to recognize the personal weaknesses that may predispose an individual to conflicts of interest.

- Practical Exercises in Self-Control: Organizing "*resisting temptation*" training sessions inspired by Qur'anic techniques, such as contemplating the consequences of actions, to strengthen willpower and enhance self-regulation against inner impulses.
- Intrinsic Motivational Systems: Developing spiritual reward mechanisms to reinforce ethical choices and deepen intrinsic moral motivation, inspired by the verse *"Whoever brings virtue shall receive [a reward] better than it"* (Q. 27:89), emphasizing that virtuous acts yield greater divine rewards.

7.1.1.2. The Decision-Making System Based on al-Taqwā and al-Īmān

This preventive framework institutionalizes *al-taqwā* and *al-īmān* as moral filters in decision-making through four stages:

1. Recognition of Conflict: Internal review prior to decision-making, guided by faith, *al-taqwā*, and awareness of the Hereafter (self-monitoring through moral foresight), as stated in *"O you who have faith! Be wary of Allah, and let every soul consider what it sends ahead for tomorrow"* (Q. 59:18).
2. Evaluation of Intentions: Scrutinizing motives in light of divine omniscience to avoid hidden intentions contrary to collective welfare: *"that you may know that Allah has power over all things, and that Allah comprehends all things in knowledge"* (Q. 65:12).
3. Consultation with Ethical Role Models: Utilizing the collective wisdom of the pious to uncover hidden dimensions of conflict (Council as an ethical safeguard): *"consult them in the affairs"* (Q. 3:159).
4. Decision by Divine Approval: Choosing the option aligned with divine pleasure, even at material cost, prioritizing enduring reward over

transient gain.

Through these structured stages, Qur'anic principles transform decision-making into a spiritually informed and ethically robust process that facilitates effective management of conflicts of interest.

7.1.2. The Organizational Level

7.1.2.1. The System of Transparency and Accountability

- Conflict-of-Interest Disclosure Mechanism: Establishing a public disclosure system analogous to the pre-offering of charity mentioned in *"O you who have faith! When you talk secretly to the Apostle, offer a charity before your secret talk"* (Q. 58:12). This system reinterprets pre-consultation charity as pre-disclosure of conflict, institutionalizing transparency as an act of ethical purification and thus preventing corruption and misuse of authority.
- Participatory Oversight: Implementing peer-monitoring mechanisms inspired by the Qur'anic principle of enjoining good (Q. 3:104). By transforming this individual duty into a systematic, peer-based process, collective moral responsibility and organizational integrity are enhanced.
- Ethical Performance Evaluation: Designing quantitative indicators to measure *al-taqwā*, inspired by the Qur'anic notion of meticulous moral accounting (weighing deeds of good and evil), such as scoring ethical behaviors and documenting them numerically: *"and set up the balance"* (Q. 55:7).

7.1.2.2. The Incentive System Based on al-Infāq

- Social Commitment Development Fund: Establishing *al-waqf-based social security institutions* aimed at reducing financial dependency, inspired by the verse *"Who is it that will lend Allah a good loan that He may multiply it for him several fold?"* (Q. 2:245). This mechanism integrates the concepts of modern endowment and social protection to minimize financial pressures that foster conflicts of interest.
- Collective Reward System: Creating group-based incentive mechanisms rather than individualistic ones to mitigate self-interest and foster collective responsibility. This approach draws from *"Cooperate in piety and God wariness, but do not cooperate in sin and aggression, and be wary of Allah"* (Q. 5:2), which underscores the collective nature of ethical cooperation.

- Wealth Purification Programs: Implementing asset-cleansing initiatives inspired by *"Take charity from their possessions to cleanse them and purify them thereby, and bless them"* (Q. 9:103). Such programs promote moral integrity, economic equity, and social solidarity, thereby fostering an ethically healthy environment for managing conflicts of interest.

7.1.3. The Societal Level: Cultural Engineering

7.1.3.1. The System of Social Education Based on al-Ṣabr

- Moral Resilience Programs: Implementing initiatives to strengthen ethical resilience and endurance in the face of trials and financial temptations, grounded in Qur'anic teachings. The foundation of this approach lies in the verse: *"We will surely test you with a measure of fear and hunger and a loss of wealth, lives, and fruits; and give good news to the patient"* (Q. 2:155). This verse indicates that such trials, including material loss, are an integral aspect of the believer's spiritual life. Therefore, designing programs that cultivate resistance against financial temptations and tribulations not only aligns with Qur'anic principles but also helps individuals uphold moral values when encountering conflicts of interest.
- Networks of Ethical Support and Reconciliation: Establishing cooperative groups founded on *al-taqwā* and *al-īmān*, inspired by the verse: *"The believers are brothers; so reconcile between your brothers, and be aware of God, that you may receive mercy"* (Q. 49:10). These networks aim to foster supportive environments and strengthen social solidarity based on moral values, enabling members to remain steadfast under social and economic pressures.
- Media-Based Cultural Development: Producing narrative and educational media content addressing the consequences of conflicts of interest, inspired by the Qur'anic story of Prophet Shuʿayb's community. This method enhances public awareness and promotes ethical conduct across the broader society.

7.1.3.2. The System of Social Oversight

- Public Reporting Mechanisms: Establishing specialized reporting systems for submitting complaints and documenting violations, inspired by the verse: *"but had they referred it to the Apostle or to those vested with authority among them, those of them who investigate would have ascertained it"* (Q. 4:135). Such systems strengthen public monitoring

and enable citizens' active participation in supporting justice, ensuring that reporting can be carried out without fear of social or institutional retaliation.

- Moral Rating System: Designing evaluation mechanisms for assessing institutional integrity and adherence to Qur'anic values, based on the verse: *"Indeed the noblest of you in the sight of Allah is the most God wary among you. Indeed Allah is all-knowing, all-aware"* (Q. 49:13). This system provides measurable ethical criteria for assessing the credibility and moral excellence of organizations. By reinforcing internal ethical accountability and deepening both individual and collective responsibility, it contributes to more effective management of conflicts of interest.

7.2. Implementation of the Framework

7.2.1. Structural Requirements

- Formation of an *al-Taqwā* Steering Committee: Establishing a Steering Committee of *al-Taqwā* at the organizational apex serves as a key managerial structure for promoting an ethical culture, reinforcing commitment to Qur'anic values, and improving conflict of interest management. Members of this committee should possess not only professional expertise but also high levels of *al-īmān*, *al-taqwā*, and ethical commitment. The primary function of the committee is to guide, monitor, and ensure compliance with moral and religious principles throughout all organizational processes and decisions.
- Development of a Qur'anic Ethical Charter: The *Qur'anic Ethical Charter* serves as a strategic and practical guideline for institutionalizing Qur'anic moral values within organizational culture. This document provides a transparent and comprehensive framework outlining principles, norms, and expected ethical behaviors at all levels of the organization. It functions as a reference for decision-making and conflict of interest resolution based on Qur'anic teachings.

7.2.2. Implementation Stages

1. Preparation: Training ethical instructors with emphasis on Qur'anic moral concepts and practical skills, and designing applicable tools for implementing conflict of interest management systems.
2. Pilot Implementation: Conducting pilot programs within selected organizational units to assess the framework's effectiveness and identify strengths and weaknesses.

3. Evaluation: Collecting feedback and analyzing pilot results to refine and optimize the framework based on empirical data and practical experience.
4. Generalization: Expanding the updated and refined system across all organizational levels and sectors to institutionalize conflict of interest management and promote a comprehensive culture of Qur'anic ethics.

7.2.3. Distinctive Features of the Proposed Framework

The proposed framework possesses distinctive features that differentiate it from other existing models:

1. The effective integration of *al-taqwā* and *al-īmān* with comprehensive supervisory systems enables both the prevention and correction of conflicts of interest.
2. The framework is derived from authentic religious sources and is in full harmony with the principles and values of Islamic culture.
3. The formulation of precise quantitative indicators allows for continuous assessment of performance and the effectiveness of conflict-of-interest management.
4. Its flexible design ensures adaptability to diverse organizational structures and needs. Thus, by offering practical strategies across three levels, this model empowers organizations to move from reactive approaches to proactive management of conflicts of interest. Historical experience demonstrates that the combination of individual faith and transparent institutional systems can lead to corruption-free working environments.

8. Conclusion

Conflict of interest, as an inevitable phenomenon in human interactions, can, if mismanaged, lead to partiality, the erosion of moral and religious values, and the disintegration of social bonds. Through the analysis of four Qur'anic narratives, the Battle of Uḥud, the conduct of the Companions during the Prophet's lifetime, the story of Prophet Shuʿayb's people, and the account of Hābīl and Qābīl, this study demonstrates that the Qur'an views conflict of interest as a form of divine test, in which humans are placed between material desires and ethical or religious commitments. The analysis of the Battle of Uḥud illustrates that military conflicts of interest, particularly the tension between obedience and personal gain, can undermine collective cohesion and even lead to strategic failure. In the

stories concerning certain Companions and the people of Shuʿayb, financial conflicts of interest resulted in neglect of divine commands and the spread of economic corruption. The story of Hābīl and Qābīl represents a moral conflict of interest in which jealousy and selfishness led to catastrophic consequences at the individual level.

These narratives collectively reveal the operational strategies and key components for managing conflicts of interest: identifying root causes such as ego-driven tendencies, material desire, and envy; ensuring prevention and control through transparency, clear prioritization, and structural oversight; emphasizing the central role of ethical leadership and exemplary behavior in reducing tensions; and managing group relations to prevent the escalation of conflicts. These components form the foundation of any effective managerial system designed to address this challenge.

The Qur'an provides solutions to these conflicts grounded in ethical and spiritual principles. *Al-Taqwā* acts as a mechanism of self-restraint that prevents self-centered decision-making by instilling reverence for divine limits. *Al-Īmān* strengthens the sense of accountability before God and promotes prioritization of collective welfare. *Al-Infaq* functions as a means of reducing socioeconomic disparities by balancing personal wealth preservation with social responsibility. *Al-Ṣabr* cultivates rational rather than impulsive responses in moments of trial.

Ultimately, this article proposes a three-level framework for operationalizing these Qur'anic strategies. The individual level focuses on nurturing inner moral infrastructure through education and decision-making grounded in *al-taqwā* and *al-īmān*. The organizational level emphasizes the design of transparent, accountable, and motivational governance systems. The societal level relies on cultural engineering based on *al-ṣabr* and collective oversight. This comprehensive framework, integrating both personal and structural mechanisms, provides a foundation for building societies resilient against corruption and destructive conflicts of interest.

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References

Al-ʿAyyāshī, M. (2001). *Tafsīr al-ʿAyyāshī.* Tehran: Al-Maṭbaʿah al-ʿIlmiyyah.

Al-Bayḍāwī, ʿA. (1998). *Anwār al-Tanzīl wa Asrār al-Taʾwīl.* Beirut: Dār Iḥyāʾ al-Turāth al-ʿArabī.

Al-Ḥaskānī, ʿU. (1991). *Shawāhid al-Tanzīl li-Qawāʿid al-Tafḍīl.* Tehran: Institute of Printing and Publishing.

Al-Ḥuwayzī, ʿA. (1995). *Tafsīr Nūr al-Thaqalayn.* Qom: Ismaʿīliyyān Publications.

Al-Kulaynī, M. (1987). *Al-Kāfī.* Tehran: Dār al-Kutub al-Islāmiyyah.

Al-Qurṭubī, M. (1985). *Al-Jāmiʿ li-Aḥkām al-Qurʾān.* Tehran: Nāṣir Khusru.

Al-Suyūṭī, ʿA. (1984). *Al-Durr al-Manthūr fī al-Tafsīr bil-Maʾthūr.* Qom: Āyatullāh Marʿashī Najafī Library.

Al-Ṭabrisī, F. (1993). *Majmaʿ al-Bayān fī Tafsīr al-Qurʾān.* Tehran: Nāṣir Khusru.

Al-Ṭūsī, M. (1993). *Al-Amālī.* Qom: Dār al-Thaqāfah.

Al-Wāḥidī, ʿA. (1991). *Asbāb Nuzūl al-Qurʾān.* Beirut: Dār al-Kutub al-ʿIlmiyyah.

Al-Zamakhsharī, M. (1987). *Al-Kashshāf ʿan Ḥaqāʾiq Ghawāmiḍ al-Tanzīl.* Beirut: Dār al-Kitāb al-ʿArabī.

Annamoradnejad, D., Mohammadi, S. & Hosseini Moghadam, S. H. (2021). Legislation necessity in management of conflict of interests. *Journal of Legal Studies*, 13(4), 1-24. https://doi.org/10.22099/jls.2021.40291.4349

Auby, J. B., Breen, E., & Perroud, T. (2014). *Corruption and Conflicts of Interest: A Comparative Law Approach*. Edward Elgar Publishing.

Badini, H. & Siahbidi Kermanshahi, S. (2021). Analysis of the concept and examples of conflict of interest in private law. *The Judiciarys Law Journal*, *85*(116), 209-231. https://doi.org/10.22106/jlj.2020.129515.3474

Behnami, M. (2006). Patience in the lives of heavenly exemplars (in Persian). *Shamime Yas,* 12(38), 26–30.

Daft, R. L. (2004). *Organization Theory and Design*. Cincinnati: Southwestern Educational Publishing.

Fakhr al-Dīn al-Rāzī, M. (1999). *Al-Tafsīr al-Kabīr (Mafātīḥ al-Ghayb).* Beirut: Dār Iḥyāʾ al-Turāth al-ʿArabī.

Ghane, S. M. (2014). *Conflict Management from an Islamic Perspective.* Tehran: Institute for Humanities and Cultural Studies.

Ḥaqqī al-Bursawī, M. (1985). *Tafsīr Rūḥ al-Bayān.* Beirut: Dār al-Fikr.

Ibn Abī Jumhūr al-Aḥsāʾī, M. (1985). *ʿAwālī al-Laʾālī al-ʿAzīziyyah fī al-Aḥādīth al-Dīniyyah.* Qom: Dār Sayyid al-Shuhadāʾ.

Ibn Bābawayh, M. (1983). *Al-Khiṣāl.* Qom: Jāmiʿah al-Mudarrisīn.

Ibn Bābawayh, M. (1993). *Man lā yaḥḍuruhu al-Faqīh.* Qom: Dār al-Nashr al-Islāmī.

Izadi Yazdanabadi, A. (2000). *Conflict Management.* Tehran: Imam Hossein University Press.

Jafari, Y. (2004). Faith in the Qur'an (in Persian). *Lessons from the School of Islam,* 2(578), 19–25.

Jazāʾirī, S. N. (2002). *Qiṣaṣ al-Anbiyāʾ.* Tehran: Farhān.

Khamenei, S. A. (2020). *A Discourse on Patience* (in Persian). Tehran: Islamic Revolution Publications.

Khamenei, S. A. (2022, April 13). *Speech to Government Officials* (in Persian). Retrieved from https://farsi.khamenei.ir/speech-content?id=50037

Khomeini, R. (2001). *Commentary on Forty Hadiths* (in Persian). Qom: Institute for Compilation and Publication of Imam Khomeini's Works.

Makarem Shirazi, N. (1995). *Tafsīr Nemūneh.* Tehran: Dār al-Kutub al-Islāmiyyah.

Manzoor, D. & Abbasi kalash, M. (2019). The Role of Transparency in Reducing Corruption, Global Experiences Lessons for Iran. *QJFEP*, 7 (27), 87-103.

Mas'oudi, E. & Mirzaee, F. (2009). Conflict in the View of Islam and Managerial Theories. *Strategic Management Thought*, 3(1), 133-164. https://doi.org/10.30497/smt.2009.127

Motahhari, M. (2018). *Ten Discourses.* Tehran: Sadra Publications.

Norouzi, R. A., Ramezani, F., & Yavari, E. (2016). Social patience in the Qur'an. *Islamic Social Research,* 22(110), 159–174.

Parhizkari, S. A., & Rezghi, A. (2017). *Conflict of interest: Typology and conceptualization*. Tehran: Research Center of the Islamic Consultative Assembly.

Qarai, A. Q. (2004). *Translation of the Holy Qur'an* .London: ICAS.

Rabie, V., Mirbagherifard, S.A.A. & Hashemi Babaheidari, S.M. (2018). Investigating the Status of "Patience" in Mystical Texts of Persian Literature and its Practical Strategies in Positive Psychology. *New Literary Studies*, *52*(2), 79-103. https://doi.org/10.22067/jls.v52i2.80298

Rezaeian, A. (2003). *Conflict and Negotiation Management.* Tehran: SAMT Publications.

Siahbidi Kermanshahi, S. (2021). Investigating the Conflict of Interests of Judicial Officials. *Public Law Knowledge Quarterly*, 10(32), 19-46. https://doi.org/10.22034/qjplk.2021.222

Sohrabi, S. (2019). *Strategies for managing conflicts of interest*. Center for Empowerment and Social Governance. Retrieved from https://iran-bssc.ir/?p=2757

Soleimani, N. (2005). *Conflict Management in Schools* (in Persian). Tehran: Arman Roshd.

Soroushfar, Z. (2020). *Review of background, definitions, and strategies of conflict-of-interest management*. Center for Empowerment and Social Governance. Retrieved from https://iran-bssc.ir/?p=15448

Tabataba'i, M. H. (1995). *Al-Mīzān fī Tafsīr al-Qurʾān*. Qom: Islamic Publications Office.

Tamri, K. (2010). Patience in the Qur'an (in Persian). *Bishārat Journal, 79*, 14–16.

Vakilian, H. & Derakhshan, D. (2020). A Comparative Study on Prevention and Management of Conflict of Interest in Judicial system. *The Judiciarys Law Journal*, 84(109), 271-291. https://doi.org/10.22106/jlj.2020.105671.2658

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Constructing a Qur'anic Dataset on Human–Environment Relations: Insights and Analysis

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ABSTRACT:

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The aim of this study is to develop a comprehensive dataset for interdisciplinary research on the Qur'an and the environment. Conducted with a descriptive–analytical approach, the study examined all verses of the Qur'an based on authoritative translations and commentaries. In this process, 766 verses on human–environment relations were identified and classified into 15 categories, such as humans as part of nature, human vicegerency on earth, the subjugation of nature, legitimate use of natural blessings in this world and the hereafter, and the prohibition of corruption and destruction of the environment. In addition, 833 environmental instances were extracted and grouped into eight main categories: climate and atmosphere (27%), marine environment (1%), animal environment (10%), animal products (6%), plant environment (19%), plant products (8%), the solar system (22%), and human industries derived from nature (7%). Conceptual analysis indicated that these relations can be interpreted at three key levels, ethical, jurisprudential, and eschatological, showing that the Qur'an presents nature as a divine blessing and a trust given to humankind, emphasizing both proper utilization and the moral and eschatological consequences of environmental corruption. This dataset provides a novel foundation for future research in environmental ethics and Islamic jurisprudence, as well as for rethinking responses to contemporary environmental crises.

KEYWORDS: The Qur'an and environment, Environmental ethics, Human–nature relations, Qur'anic dataset, Interdisciplinary dataset, Environmental jurisprudence, Qur'anic ecology.

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1. Introduction

The environmental crisis is among the most pressing global challenges of the contemporary era, arising from the excessive and irrational exploitation of nature and its resources by humankind. Population growth, overconsumption of energy, deforestation, and the loss of biodiversity are some of the key factors that have intensified this crisis (Eslami 2013). In addition to these, natural phenomena such as earthquakes, volcanic eruptions, and storms also affect the environment; however, the human share in generating and exacerbating today's environmental degradation is undeniable (Deyhim 2016).

Several studies have demonstrated that the roots of this crisis are not merely biological or empirical, but also ethical and epistemological. Some scholars argue that the Abrahamic religions, by emphasizing human centrality in creation, have contributed to environmental destruction, since such a perspective implies absolute human dominance over nature. In contrast, other researchers highlight that, in the Qur'an, nature is portrayed as a divine sign (*al-āyah*), and humankind, as God's vicegerent (*khalīfah*) on earth, is responsible for its preservation and development (Beheshti 2011; Javadi Amoli 2007; Mohaghegh Damad 2014). On this basis, the environmental crisis may also be viewed as a moral crisis, and a return to religious teachings could play a constructive role in reforming the human–nature relationship. The Qur'an simultaneously emphasizes legitimate and responsible use of nature while strongly prohibiting corruption and destruction upon the earth (Q. 2:11; 30:41). This perspective fundamentally differs from materialistic approaches in modern Western thought, which regard nature merely as an instrument for human pleasure and profit (Eslami 2013; Rahmati 2008).

Given the importance of this issue, recent decades have witnessed a growing body of scholarship on the environmental dimensions of the Qur'an (Eslami 2013; Javadi Amoli 2007; Mohaghegh Damad 2014). However, most of these studies focus on a limited set of verses and lack a comprehensive and systematically classified corpus. The present study seeks to address this gap by extracting and categorizing 766 Qur'anic verses related to the environment and making them available in the form of a structured dataset. The primary contribution of this research is the provision of a database comprising 833 environmental instances, which can serve as a foundation for interdisciplinary studies in environmental ethics and Islamic jurisprudence.

From the perspective of information science, datasets are crucial tools

for organizing knowledge and enabling reproducible research. The Qur'anic dataset developed here, with its structured design, reusability for future research, and capacity for both quantitative and qualitative analysis, provides an interdisciplinary platform that goes beyond mere collection to facilitate new knowledge production at the intersection of the Qur'an and environmental studies.

2. Literature Review

In recent decades, Islamic scholars have shown increasing interest in the subject of the environment in the Qur'an. Eslami (2013) argued that the environmental crisis did not begin with religion but with the transformation of human attitudes toward nature. He emphasized that Qur'anic teachings oppose consumerism and extravagance. Javadi Amoli (2015), in Islam and the Environment, extracted around 150 relevant verses and interpreted the human–nature relationship as one of subjugation (*al-taskhīr*). He particularly stressed humanity's ethical responsibility for the cultivation and development of nature. Mohaghegh Damad (2014), in Theology of the Environment, examined about 100 verses and proposed that the root of the environmental crisis lies in humanity's estrangement from the divine ecological order. He emphasized the need for reconnecting humankind with the Creator and acknowledging the infinite divine univers. Beheshti (2011) investigated the role of humans as God's vicegerent (*khalīfah*) on earth and highlighted their responsibility to utilize and develop natural resources. Rahmati (2008), in an article on religion, ethics, and the environment, treated the environmental crisis as an ethical and psychological issue rather than merely a technical or economic challenge. Deyhim (2016) conducted a questionnaire-based study among students and faculty, concluding that Qur'anic teachings on human responsibility and care for nature are widely acknowledged within the academic community.

In addition to these Persian contributions, a growing body of international scholarship has explored the relationship between Islam, the Qur'an, and ecology. Nasr (1996) highlighted the metaphysical and religious foundations of the human–nature relationship in Islam, while Foltz et al. (2003) emphasized the ecological implications of Islamic cosmology and ethics in his seminal volume Islam and Ecology. More recently, Gade (2019) examined the religious and social foundations of Muslim environmentalism, underscoring how Qur'anic teachings continue to inform contemporary ecological discourses. These works, although not exclusively focused on Qur'anic exegesis, demonstrate that the Qur'an is increasingly being recognized as a vital source for constructing Islamic approaches to

environmental ethics.

While these studies have effectively illustrated the theological, ethical, and jurisprudential dimensions of the environment in the Qur'an and Islamic thought, they generally remain limited either to a partial set of verses or to a particular aspect of the topic. The present study innovates by systematically reviewing the entire Qur'an and, through a data-driven approach, extracting 766 verses and 833 environmental instances. The results are made available in a structured dataset hosted by the Interdisciplinary Qur'anic Studies Research Institute, Shahid Beheshti University (quran.sbu.ac.ir/peykare).

3. Methodology

This study employed a descriptive–analytical method, chosen because it enables both a comprehensive review of the Qur'anic text and the systematic organization of data for subsequent quantitative and qualitative analyses. The research was conducted in three main stages:

1. Data collection: All verses of the Qur'an were examined in full. Literal translations and authoritative exegetical works, including *al-Mīzān* (Tabataba'i 1995), *al-Kashshāf* (al-Zamakhsharī 1987), *al-Tibyān* (al-Ṭūsī 2010), and *Tafsīr Namūneh* (Makarem Shirazi 1992), were consulted in order to achieve a more precise understanding of natural referents and human–nature relations.
2. Identification and coding of relational categories: From the relevant verses, fifteen distinct types of human–nature relations were identified and systematically coded. These included, for example, creation of nature for humankind, human vicegerency, subjugation of nature, consumption as blessing, corruption in nature, and natural calamities.
3. Classification of environmental instances: Alongside the relational coding, specific environmental instances were extracted and organized into eight main groups: climate and atmosphere, marine environment, plant environment, plant products, animal environment, animal products, the cosmos, and industries based on natural resources.

By specifying the coding scheme and classification framework, the study ensures that the resulting dataset is transparent and reproducible for future scholarship. This approach also situates the work within the emerging field of digital humanities, where corpus-based methods are increasingly applied to religious texts to facilitate new forms of interdisciplinary inquiry.

4. Findings

Drawing on the Qur'anic dataset of human–nature relations, the findings are reported on three levels: types of relations between humankind and the natural world; specific environmental instances; and the semantic–ethical dimensions of these relations. A fourth subsection considers the distribution of verses across *surahs*.

4.1. Types of Human–Nature Relation

To ensure consistency, all relational labels were mapped onto fifteen standardized categories, including creation of nature for humankind, commendable use of nature, natural calamities, consumption as blessing, consumption in the hereafter, eschatological transformations of nature, subjugation of nature for prophets, subjugation of nature for humankind, prohibition of consumption, humankind originating from nature, creation of animals for humankind, human vicegerency, corruption in nature by humans, subjugation of animals, and absence of corruption. The distribution (Table 1; Figure 1) shows that the most frequent categories are creation of nature for humankind (33.3%) and commendable use of nature (21.1%), followed by natural calamities (11.3%) and consumption as blessing (11.2%). Less frequent yet conceptually significant are categories such as human vicegerency (0.5%) and corruption in nature by humans (0.5%), both of which articulate core theological and ethical principles.

Table 1. Types of human–nature relation in the Qur'an

Relation	Number of verses	Percentage
Creation of nature for humankind	248	33.3
Commendable use of nature	157	21.1
Natural calamities (punishment)	84	11.3
Consumption as blessing	83	11.2
Consumption in the Hereafter	50	6.7
Future transformations of nature (eschatological)	47	6.3
Subjugation of nature for prophets	27	3.6
Prohibition of consumption	13	1.7
Subjugation of nature for humankind	10	1.3
Humankind originating from nature	6	0.8
Creation of animals for humankind	6	0.8
Human vicegerency	4	0.5
Corruption in nature by humans	4	0.5
Subjugation of animals	3	0.4
Absence of corruption in nature	2	0.3

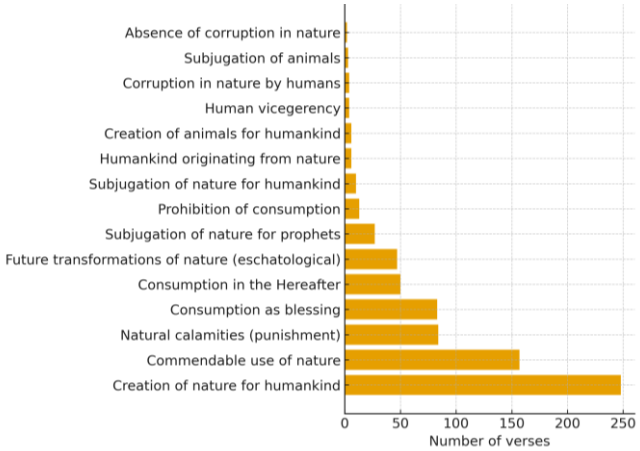

Figure 1. Types of human–nature relation in the Qur'an

These results suggest that while the Qur'an often portrays nature as a divinely created gift intended for human benefit, it simultaneously embeds strong moral constraints against misuse and corruption.

4.2. Environmental Instances in the Qur'an

As Table 2 and Figure 2 illustrate, environmental referents were extracted and organized into eight major groups: climate and atmosphere, marine environment, plant environment, plant products, animal environment, animal products, the cosmos, and industries based on natural resources. Since a single verse may contain several referents, the counts represent the number of mentions rather than the number of verses.

References to the cosmos (26.5%) are the most frequent, followed by plant environments (22.4%) and plant products (14.7%). Climate and atmosphere (11.6%) and animal products (10.7%) also occupy a substantial share, while marine environment (1.4%) is the least represented (Table 2).

Table 2. Environmental instances in the Qur'an

Category	Number of instances	Percentage
Climate and atmosphere	65	11.6
Marine environment	8	1.4
Plant environment	125	22.4
Plant products	82	14.7
Animal environment	33	5.9
Animal products	60	10.7
Cosmos	148	26.5
Industries based on natural resources	38	6.8

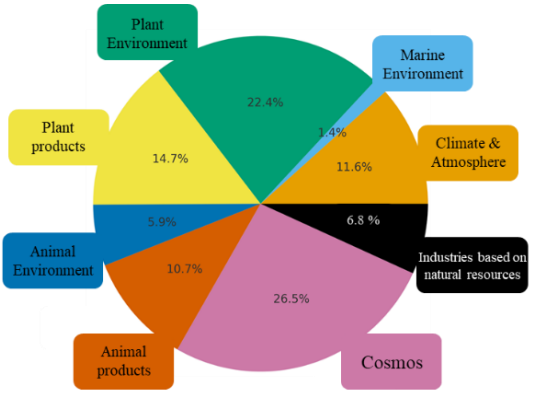

Figure 2. Distribution of environmental instances in the Qur'an

The prominence of cosmic and botanical imagery highlights the Qur'an's consistent invitation to reflection on the order of creation and the signs of divine power manifest in the natural world.

4.3. Semantic and Ethical Dimensions

Beyond descriptive references, the verses also operate on semantic and normative levels. Three interrelated dimensions were identified: ethical, legal, and eschatological (Table 3).

- Ethical: Although relatively few verses carry explicit ethical tags, more than a quarter (25%) of verses in the human vicegerency category emphasize humanity's moral responsibility toward the earth.
- Legal: In categories such as corruption in nature by humans (50%), prohibition of consumption (30.8%), and consumption as blessing (20.5%), legal implications dominate, particularly concerning permissible and impermissible uses of natural resources.
- Eschatological: This is the most pervasive dimension. In consumption in the hereafter (90%) and commendable use of nature (58.6%), verses link human engagement with nature directly to afterlife reward or punishment. Even categories such as prohibition of consumption (15.4%) and consumption as blessing (6%) retain eschatological undertones.

Table 3. Semantic–ethical dimensions of human–nature relations

Relation	Dimension	Number of verses with tag	Percentage
Human vicegerency	Ethical	1	25.0%
Consumption as blessing	Ethical	1	1.2%
Commendable use of nature	Ethical	1	0.6%
Corruption in nature by humans	Legal	2	50.0%
Prohibition of consumption	Legal	4	30.8%
Consumption as blessing	Legal	17	20.5%
Consumption in the Hereafter	Eschatological	45	90.0%
Commendable use of nature	Eschatological	92	58.6%
Prohibition of consumption	Eschatological	2	15.4%
Consumption as blessing	Eschatological	5	6.0%

Taken together, these findings reveal a tripartite Qur'anic framework: the ethical dimension, emphasizing human stewardship; the legal dimension, regulating consumption and preventing corruption; and the eschatological dimension, linking human interaction with nature to eternal accountability.

4.4. Distribution across Surahs

Finally, the dataset allows an examination of distribution across *surahs*. Raw frequency is strongly influenced by *surah* length, with long chapters such as *al-Baqarah* and *al-Aʿrāf* naturally containing more environmental verses. To obtain a more balanced view, the ratio of environmental verses to total verses in each *surah* was calculated. Results indicate that several shorter Meccan *surahs*, such as *al-Shams*, *al-Takwīr*, *al-Nabaʾ*, and *al-Insān*, exhibit the highest relative density of environmental verses. For instance, nearly half of *al-Shams* is devoted to themes of nature (Table 4).

Table 4. Surahs with the highest proportion of environmental verses

Surah	Total verses	Environmental verses	Percentage
al-Shams	15	7	46.7%
al-Takwīr	29	11	37.9%
al-Insān	31	11	35.5%
al-Nabaʾ	40	14	35.0%
al-Naṣr	3	1	33.3%
al-Kawthar	3	1	33.3%
al-ʿAṣr	3	1	33.3%
al-Ghāshiyah	26	8	30.8%
al-Muzzammil	20	6	30.0%
al-Taghābun	18	5	27.8%
al-Infiṭār	19	5	26.3%
Quraysh	4	1	25.0%
Nūḥ	28	7	25.0%
al-Ikhlāṣ	4	1	25.0%
Qāf	45	11	24.4%

This suggests that the Qur'an does not confine environmental reflection to lengthy legal or narrative passages, but also weaves it prominently into concise, rhetorically powerful chapters, especially those addressing human conscience and eschatological awareness.

5. Discussion

The findings of this study indicate that Qur'anic verses related to the environment encompass three main dimensions: ethical, legal, and eschatological. Quantitatively, the eschatological dimension was the most frequent; however, this should be interpreted within the broader framework of the Qur'an, where eschatological themes in general are highly prevalent. Thus, it would be misleading to conclude that the Qur'an pays limited attention to nature. Rather, the Qur'an establishes a close link between the enjoyment of natural blessings and human destiny in the hereafter. This result aligns with the analyses of Mohaghegh Damad (2014) and Javadi Amoli (2015), both of whom describe the environmental crisis as fundamentally an ethical and theological crisis. Although verses referring explicitly to human vicegerency on earth or to corruption in nature are few in number, they occupy a foundational place in the Qur'anic worldview. The verse of vicegerency underscores human moral responsibility toward the earth, while verses on corruption function as overarching divine warnings that frame the interpretation of all other environmental references.

The data further showed that lawful enjoyment of nature—such as foods and natural blessings—is consistently presented in both worldly and eschatological contexts. This dual framing underscores that, unlike modern materialist approaches, the Qur'an situates nature within a sacred horizon oriented toward the afterlife (Eslami 2013; Rahmati 2008). Analysis of *surah* distribution likewise revealed that shorter Meccan chapters such as *al-Shams* and *al-Takwīr* contain a high proportion of environmental verses. This is consistent with the nature of Meccan *surahs*, which emphasize monotheism, divine signs, and moral foundations, often portraying nature as a mirror of God's power. Overall, by presenting a comprehensive dataset, this study not only provides a quantitative overview of environmental verses but also opens avenues for qualitative and exegetical interpretation. The combination of quantitative and qualitative approaches makes it possible to better appreciate the central role of nature in the Qur'an and to draw upon its resources in addressing contemporary environmental crises.

6. Conclusion

Nature and the environment are introduced in the Qur'an as divine gifts and signs of God's power and wisdom. By conducting a full survey of the Qur'anic text, this study extracted 766 verses and 833 environmental instances and organized them into a structured dataset. The analysis identified fifteen main categories of human–nature relations, including the creation of nature for humankind, human vicegerency and responsibility, the subjugation of nature, lawful enjoyment of natural blessings, and the warning against corruption and destruction. Although categories such as human vicegerency or corruption in the earth appear relatively infrequent, they occupy a foundational position in the Qur'anic worldview, providing the ethical and theological framework within which other verses should be understood. By contrast, categories such as commendable use of nature and consumption in worldly and eschatological contexts are more frequent, underscoring that the Qur'an regards the enjoyment of nature not only as permissible but also as an integral part of divine grace and human moral training.

From a semantic perspective, the findings reveal that environmental verses in the Qur'an span three dimensions: ethical, legal, and eschatological. The predominance of eschatological references reflects the overall prominence of afterlife themes in the Qur'an. More importantly, it highlights that the use, or misuse, of nature is directly tied to human destiny in the hereafter, elevating nature from a mere material resource to a sacred trust linked to human responsibility. Analysis of *surah* distribution further showed that shorter Meccan chapters such as *al-Shams* and *al-Takwīr* contain a high proportion of environmental references, consistent with their thematic emphasis on divine signs, monotheism, and moral guidance.

The main innovation of this study lies in the creation of a comprehensive and indexed dataset, which enables both quantitative and qualitative analyses. This resource can serve as a basis for new exegetical research, comparative studies with other religious texts, and the development of Islamic frameworks for contemporary environmental policy. Ultimately, by emphasizing the blessed nature of creation, human responsibility for its preservation, and the link between this relationship and the afterlife, the Qur'an provides a rich foundation for environmental ethics and law. Harnessing this potential demonstrates that religion, contrary to some modern critiques, is not part of the problem but an essential part of the solution to today's environmental crises.

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References

Al-Ṭūsī, M. (2010). *Al-Tibyān fī tafsīr al-Qurʾān*. Beirut: Dār Iḥyāʾ al-Turāth al-ʿArabī.

Al-Zamakhsharī, M. (1987). *Al-Kashshāf ʿan ḥaqāʾiq ghawāmiḍ al-tanzīl waʿuyūn al-aqāwīl fī wujūh al-taʾwīl*. Beirut: Dār al-Kitāb al-ʿArabī.

Beheshti, S. (2011). The place of nature in human education from the perspective of the Holy Qur'an. *Research in Islamic Education Issues*, 19(12), 9–38.

Deyhim, F. (2016). A study of the influence of human role in environmental protection from the viewpoint of the Qur'an and Islam. *First National Conference on Sustainable Development in Energy and Environment*.

Eslami, S. H. (2013). Environmental Ethics: Backgrounds, Views and Future Prospects. *Revelatory Ethics*, 3(1), 7-36.

Foltz, R. C., Denny, F. M., & Baharuddin, A. (Eds.). (2003). *Islam and ecology: A bestowed trust*. Harvard University Press.

Gade, A. (2019). *Muslim environmentalisms: Religious and social foundations*. New York: Columbia University Press.

Javadi Amoli, A. (2015). *Islam and environment* (in Persian). Qom: Isra.

Makarem Shirazi, N. (1992). *Tafsīr nemūneh*. Tehran: Dār al-Kutub al-Islāmiyyah.

Mohaghegh Damad, S. M. (2014). *Environmental Theology* (in Persian). Tehran: Ḥikmat va Falsafah Iran.

Nasr, S. H. (1996). *Religion and the order of nature*. Oxford: Oxford University Press.

Rahmati, E. (2008). Religion, ethics, and the environment. *Information on wisdom and knowledge*, *100*, 27–37.

Tabataba'i, M. H. (1995). *Al-Mīzān fī tafsīr al-Qurʾān*. Beirut: al-Muʾassasah al-Aʿlamī lil-Maṭbūʿāt.

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Investigating the Effect of Linguistic Knowledge on Jurisprudential Inference from the Qur'anic Text: A Mixed-Methods Study

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ABSTRACT:

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The comprehension of Qur'anic legal texts (*āyāt al-aḥkām*) is a complex process central to Islamic jurisprudence. While traditional hermeneutics (*Uṣūl al-Fiqh*) provides interpretive principles, the specific cognitive-linguistic inference types mobilized by jurists and their teachability remain underexplored in empirical research. Therefore, the current research aimed to explore the inference types mobilized during the jurisprudential interpretation of Qur'anic texts and then investigate the effect of their explicit training on jurisprudential comprehension among advanced learners of seminary schools in Iran.

To this purpose, a sequential mixed-methods design was employed. The initial qualitative phase used a phenomenographic approach, analyzing data from expert interviews (n = 6), documentary research, and a literature review to identify key inference types. The subsequent quantitative phase utilized a pre-test/ intervention/ post-test design with an intact class of senior jurisprudence learners (N=17). A researcher-developed test measured comprehension before and after a five-session intervention that provided explicit instruction on the identified linguistic inferences. The qualitative

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phase identified nine core linguistic inference types essential for jurisprudential comprehension, including Backward Build-Up, Elaboration, Causation, Pragmatism, Analogy, Prediction, Instrumentation, Semantic Framing, and Cognitive Space Blending. The quantitative phase also revealed a statistically significant improvement in jurisprudential comprehension following the intervention. A paired-samples t-test showed a significant mean score increase from 11.71 (SD = 2.28) in the pre-test to 16.76 (SD = 1.20) in the post-test ($t(16) = -13.73$, $p < .001$), with a mean gain of 5.06 points. The findings confirm that jurisprudential reasoning operates through a definable set of linguistic inferences that must be learned.

KEYWORDS: The Qur'an, Inference, Instruction, Jurisprudence, Legal Verses, *āyāt al-aḥkām*, Text Comprehension, t-test.

1. Introduction

Deciphering meaning has long been a central concern across diverse philosophical and linguistic schools of thought, as meaning has functioned as a fundamental pillar of human understanding throughout history. Yunesi (2021) argues that both Eastern and Western traditions have adopted a wide range of philosophical, methodological, and hermeneutic approaches to meaning interpretation. Tayeb Hosseini (2025) further notes that interpreting meaning and unraveling, decoding, or revealing the objectives of texts has constituted a major area of inquiry within Islamic jurisprudence, emphasizing that the processes through which meaning is constructed, conveyed, and interpreted serve as a pivotal and stringent criterion for the interpretation of Qur'anic texts. In support of this position, Elahidoost and Askari (2022) maintain that semantics, namely, the conception and comprehension of literal, symbolic, and metaphorical meanings, along with their conceptual, collective, connotative, denotative, and thematic interpretations, forms the foundation of jurisprudential understanding of sacred texts and narrations.

Among the linguistic tools that exert a substantial influence on meaning construction in discourse, including legal Qur'anic discourse employed for jurisprudential interpretation, inference occupies a prominent position. Inference operates at two primary levels of linguistic analysis, namely semantics and pragmatics, and is therefore closely associated with discourse comprehension. In a similar vein, contemporary linguists and researchers have underscored the central role of inference in overall discourse comprehension, given that a significant proportion of information in any discourse remains implicit (McDonald et al. 2021).

Consistent with this perspective, numerous scholars have focused on the

types of inferences involved in textual understanding, as well as on the role of the human mind and prior knowledge in text comprehension through inferential processes (e.g., Pressley 2002; Kintsch 2004; Graesser & Kreuz 1993). Reviewing empirical studies on inference across various discourse types, Clinton et al. (2020) conclude that inference generation across text types not only facilitates the interpretation of individual pieces of information but also fundamentally enables readers to establish connections among ideas and maintain coherence throughout the discourse. Despite this, its impact on jurisprudential texts remains underexplored.

Despite the centrality of textual meaning in Islamic jurisprudence, a substantial gap persists between linguistic comprehension and jurisprudential inferencing in the interpretation of Qur'anic verses. The literature on classical principles of jurisprudence emphasizes the role of textual indications as the primary basis for deriving rulings; however, much contemporary juridical training continues to rely on implicit exegetical traditions rather than on explicit and systematic instruction in the linguistic inferencing mechanisms that mediate understanding. Inference, whether semantic, pragmatic, or discourse-based, is seldom examined as a cognitive-linguistic construct within jurisprudential pedagogy, despite functioning as the mental bridge linking literal text to juridical conclusions. This epistemic gap results in a methodological blind spot, whereby jurists frequently generate inferences without having been explicitly trained in inferencing as a cognitive-linguistic skill.

Furthermore, although modern linguistic theories have consistently demonstrated that text comprehension depends as much on the successful generation of inferences as on the decoding of explicit content (Kintsch 2004; Graesser & Kreuz 1993), jurisprudential scholarship has largely conceptualized inference as a static tool embedded within jurisprudential methodology rather than as a dynamic cognitive process subject to training, variation, or development. Consequently, students of jurisprudence may possess strong theological and methodological foundations in principles of jurisprudence (*Uṣūl al-Fiqh*), yet still encounter difficulty in deriving jurisprudential implications when the required inferential steps are pragmatically or conceptually complex.

This challenge is particularly apparent in instances where Qur'anic meaning is layered, literal, symbolic, thematic, or contextual, thus requiring multilayered inferencing skills comparable to those identified in discourse comprehension research. The problem is further exacerbated by the absence of empirical research examining whether explicit instruction in linguistic inferencing enhances jurisprudential reading comprehension. While theoretical discussions exist within both jurisprudence and linguistics, there

remains a lack of evidence-based inquiry assessing whether students' ability to engage with Qur'anic legal discourse can be measurably improved through targeted inferential training.

Accordingly, the research questions of the present study are as follows: (a) what inference types are mobilized during jurisprudential interpretation of Qur'anic texts, and (b) whether explicit training in these inference types improves jurisprudential comprehension among advanced students. It is worth noting that the current study concentrates mainly on the linguistic processes that are preconditions for jurisprudential processes of *ijtihād* rather than *ijtihād* itself. Thus, jurisprudential inferencing in the current research is limited to text interpretation that serves as a preliminary step to *ijtihād*. In other words, the present study addresses a foundational yet underexplored epistemic question: Does strengthening linguistic inferencing skills enhance the accuracy and depth of juridical understanding of Qur'anic discourse?

Bridging this gap is essential not only for improving jurisprudential pedagogy but also for ensuring that the derivation of rulings remains grounded in methodologically validated comprehension processes rather than in tacit interpretive intuition. To address these two primary research questions, an innovative mixed-methods design is employed, as elaborated below.

2. Literature Review

2.1. Theoretical Underpinnings of the Research

2.1.1. Theory of "Spirit of Meaning" (Rūḥ al-Maʿnā)

The theory of "words being coined for the spirit of meanings" is an interpretive and linguistic rule that claims that words are not coined for specific sensory or material meanings, but for a general, abstract, and comprehensive meaning called the "spirit of meaning." The spirit of meaning is the core and common element of a word that remains after removing all material and particular constraints and that encompasses all possible instances of that word, whether material or immaterial (Tayeb Hosseini 2025). For example, the word "light" is not coined merely for physical light but for the truth of being "manifest in itself and a manifestation of the other" (Khomeini 1991, 200). In the contemporary era, the scope of application of this theory has expanded and is now used as a basis for extending inference from the Qur'an toward the development of Qur'an-based humanities (Tayeb Hosseini 2025). This rule is inseparably

linked with key concepts such as the development of meaning, shared semantic domains, *taʾwīl* (esoteric interpretation), and the inner meanings of the Qur'an. According to this theory, the interpreter (here, the jurist), by referring to the "spirit of meaning" and moving beyond the apparent and limiting sense of words, attains a broad and multilayered interpretation of the verses of the Qur'an. For example, *ṣirāṭ* is not merely a physical road but a divine strategy and way of life, and *mīzān* is not only a scale but encompasses every means of measuring truth, including reason, justice, and *sharīʿah* (Ṣadr al-Dīn Shīrāzī 1982, 100). Consequently, when applied as a semantic and interpretive framework, this principle enables exegetes and jurists to abstract Qur'anic concepts from their immediate historical referents and to rearticulate them at a higher level of generality. This abstraction facilitates the extension of Qur'anic discourse to novel epistemic domains, including contemporary questions in the human sciences, without relying on literalist or historically fixed interpretations (Tayeb Hosseini 2025).

2.1.2. Relevance Theory

Relevance Theory constitutes a foundational cognitive-pragmatic framework for understanding discourse by underlining the ostensive–inferential processes involved in communication (Sperber and Wilson 1995). This theory contends that although linguistic codes (grammar, lexicon) provide the input, successful comprehension hinges on the hearer's ability to infer the speaker's intended meaning based on contextually available evidence (Wilson and Sperber 200۶). The theory is built upon two core principles. The first is a cognitive principle holding that human cognition is inherently geared toward the maximization of relevance; the second, a communicative principle, postulates that any text conveys a presumption of its own optimal relevance, thereby facilitating its own understanding (Sperber and Wilson 1995, 260). Based on these two principles, the output of this process is a continuum of meaning, ranging from explicatures (propositions developed by decoding and inferentially enriching the logical form of the utterance) to implicatures (contextually derived meanings that are fully implicit). The goal of the hearer is not to find a "correct" interpretation, but rather the first interpretation that satisfies the expectation of relevance, at which point processing stops.

In the context of the present research, the Qur'anic text, as an act of ostensive communication, carries a presumption of optimal relevance. The jurist's task is to infer the intended legal and theological meanings by decoding the linguistic input (Classical Arabic) and then enriching it into explicatures by resolving ambiguity, assigning reference, and recovering

ellipsis, while accessing a vast contextual network (co-text of other verses, *asbāb al-nuzūl* (occasion of revelation), historical knowledge, and the principles of *maqāṣid al-sharīʿah*) to derive contextual implications (legal rulings).

2.1.3. Cognitive Linguistics

This theoretical framework posits that language is not an autonomous cognitive faculty but is deeply grounded in and structured by human embodiment, general cognitive abilities, and interaction with the world (Langacker 1987; Lakoff 1987). The core tenet of cognitive linguistics is that linguistic forms (words, grammar, and syntax) are inherently meaningful because they are linked to and evoke underlying conceptual structures. Accordingly, meaning is equated with conceptualization, or the dynamic process of embodied understanding (Evans and Green 2006). Thus, the interpreter draws on embodied cognition, image schemas, conceptual metaphor and metonymy, symbolic assembly, encyclopedic semantics, and radial categories of best examples to decipher meaning.

Examining this theory from the perspective of the current research reveals that, for a study on jurisprudential inferencing of Qur'anic texts, cognitive linguistics provides a powerful toolkit for analyzing the deep conceptual structures that underpin legal reasoning. The Qur'anic text is rich in abstract theological and legal concepts that are systematically understood via embodied and metaphorical cognition. Therefore, differences in juristic inferences can be scientifically analyzed as stemming from divergent conceptualizations, namely, different mappings of conceptual metaphors, the activation of different frames, or appeals to different prototypes within a category. Moreover, consistent with the second research question, a learner's progression in interpretation can be measured by their increasing ability to articulate and reason with these underlying conceptual models, moving beyond a surface-level, literal reading of the sacred text.

2.2. Related Research

In this section, a number of Persian and English studies related to the context of the current research are briefly discussed. McDonald et al. (2021) investigated the extent to which explicit instruction in four inference types, anaphoric, background knowledge, predictive, and retrospective, can improve reading comprehension. The research is grounded in the theory that inference generation is fundamental to deep text understanding. The results showed that this explicit instruction, though initially challenging, successfully enhanced students' metacognitive awareness and reading

comprehension. The study concludes that moving beyond mere assessment to direct teaching of inferential processes is crucial for helping students become proficient readers across different academic genres.

Theoretically, this study converges with the present research by conceptualizing inference not as an automatic by-product of reading, but as a cognitive skill that can be explicitly taught and systematically developed. Practically, its findings support the pedagogical premise of the current study that explicit instruction in linguistically grounded inference types can enhance comprehension in complex, rule-governed texts, including Qur'anic legal discourse.

In a similar study, Clinton et al. (2020) systematically reviewed 19 studies to compare inferential comprehension between narrative and expository texts. The method involved a robust meta-analytic synthesis of studies that directly compared inferential comprehension scores across the two genres. The results revealed that inferential comprehension is consistently higher for narrative texts. In conclusion, the study confirms that expository texts pose a greater challenge for inference-making and calls for future research to identify the specific text features and instructional methods that could mitigate this genre disparity.

Theoretically, these findings converge with the present research by underscoring the heightened inferential demands of non-narrative, rule-governed texts, a category to which Qur'anic legal discourse closely corresponds. Practically, the study substantiates the need for targeted inferential instruction in complex expository genres, thereby reinforcing the rationale for explicitly teaching linguistic inference types to facilitate jurisprudential comprehension of Qur'anic and Classical Arabic legal texts.

In another linguistic study, McNamara (2020) argued that while integration is the keystone of comprehension, inferencing is the essential mechanism that enables it. Grounded in the Construction–Integration model, the article theoretically posits that comprehension relies on linking textual ideas with prior knowledge. Through the synthesis of diverse empirical studies, the analysis demonstrates that the perceived importance of factors such as vocabulary or working memory depends largely on how comprehension is measured; deeper comprehension tasks consistently highlight inference generation as the critical skill. The conclusion asserts that inferencing is the fundamental driver of deep understanding and learning from text.

Theoretically, this position converges with the present study by framing jurisprudential comprehension as a process of constructing and integrating multilayered meanings through inferential mechanisms rather than surface-

level decoding. Practically, it lends strong support to the instructional intervention of the current research, suggesting that enhancing learners' inferencing abilities is more decisive for understanding complex Qur'anic legal texts than improving isolated linguistic subskills alone.

In addition, several studies conducted in Iran have examined this issue from jurisprudential perspectives on semantics and meaning-making through linguistic tools, including inference. For instance, Tayeb Hosseini (2025) analyzes the theory of "words being coined for the spirit of meanings," a hermeneutical approach in Qur'anic exegesis that posits that words were originally coined for a universal, abstract essence rather than for specific, material meanings. Theoretically, the study is grounded in the frameworks of Islamic philosophy and mysticism, linking the concept to related ideas such as esoteric interpretation (*taʾwīl*), semantic extension, and polysemy. Using a descriptive–analytical method, the author traces the evolution of this theory among Shia commentators, from early figures such as Ṣadr al-Dīn Shīrāzī and al-Fayḍ al-Kāshānī to contemporary scholars including Tabataba'i, Imam Khomeini, and Javadi Amoli.

The findings indicate that while the theory was historically used to interpret divine attributes, contemporary Shia exegetes have significantly expanded its application, transforming it into a broad interpretive tool for deriving novel, context-responsive meanings from the Qur'an that address modern epistemological needs. The study concludes that this theory, when systematized, can serve as a foundational methodology for developing Qur'an-based humanities and responding to contemporary intellectual challenges.

From a theoretical perspective, this research converges with the present study by conceptualizing jurisprudential meaning construction as an inferential process operating through abstraction, semantic extension, and access to underlying conceptual essences rather than surface lexical meanings. Practically, it provides a strong jurisprudential justification for explicitly teaching semantic and conceptual inference types, as such training enables learners to systematically operationalize abstract Qur'anic meanings in legal reasoning rather than relying on intuitive or unsystematic interpretive practices.

Last but not least, Elahidoost and Askari (2022) critically examined the application of the "Spirit of Meaning" (*Rūḥ al-Maʿnā*) theory within the science of *Uṣūl al-Fiqh* (Principles of Islamic Jurisprudence). Using a theoretical and analytical methodology focused on the concept of *waḍʿ* (linguistic designation), the authors found the theory's utility in *Uṣūl al-Fiqh* to be limited. They highlight significant criticisms, particularly the

argument that a word cannot be assigned to a meaning beyond the conceptual grasp of its original coiner, and conclude that despite its value in fields such as philosophy and Qur'anic exegesis, the Spirit of Meaning theory is ultimately incompatible with the methodological foundations of *Uṣūl al-Fiqh* due to unresolved conceptual problems. This critique converges with the present research by reinforcing the need to distinguish between philosophical–semantic abstraction and methodologically regulated inferencing within jurisprudential reasoning. Practically, it underscores the importance of operationalizing linguistic inference types that remain compatible with *Uṣūl al-Fiqh*, thereby justifying the current study's focus on empirically identifiable and teachable inferential mechanisms rather than unrestricted semantic generalization.

The distinguishing features of the current research lie in its linguistic approach to implicit meaning, the results of which may offer theoretical insights into the unresolved conceptual problems outlined above. Moreover, the present study incorporates a robust experimental phase that investigates the efficacy of these insights in the actual practice of jurists.

3. Methodology

3.1. Design of the Research

The present research adopted a mixed-methods design to address both research questions. Accordingly, the study was conducted in two distinct phases. Phase One, the qualitative phase, employed an integrative qualitative design to collect primary data through phenomenography, documentary research, and a systematic review of the literature. This phase aimed to address the first research question concerning the types of inferences employed within the jurisprudential profession. The integration of these qualitative approaches was carried out in an iterative fashion until data saturation was achieved. Phase Two, the quantitative phase, employed an experimental approach to investigate the effect of linguistic instruction concerning Qur'anic inferences on jurisprudential comprehension.

These two phases were implemented sequentially, constituting an exploratory–explanatory mixed-methods design in which the findings of the qualitative phase informed the design and implementation of the subsequent quantitative phase. The rationale for adopting a mixed-methods design was to arrive at a comprehensive and nuanced understanding of the phenomenon under investigation. As noted by Creswell and Guetterman (2019), mixed-methods research enables a deeper and more robust understanding of research problems than unitary research designs.

3.2. Sampling and Participants

3.2.1. Phase One

In the phenomenographic phase of the study, a primary panel of experts, including six elite jurists, was selected from the seminary schools and two universities in the city of Qom through purposive sampling based on clearly defined inclusion criteria. According to Morse (1994), phenomenographic research is not dependent upon sample size because, in the qualitative paradigm, the generalizability of findings is not a primary objective; thus, six interviewees, in integration with a systematic review, lay the groundwork for capturing deep experiential insights. First, all participants possessed advanced expertise in jurisprudence, demonstrated through formal academic qualifications and/or long-standing professional engagement in jurisprudential practice. Second, they had substantial experience with Qur'anic interpretation and the application of jurisprudential inferences in scholarly or professional contexts. Third, participants were selected on the basis of their recognized scholarly credibility, as evidenced by peer recognition, teaching experience, publications, or institutional roles.

Finally, the number of participants was determined in accordance with phenomenographic research conventions, which emphasize depth of experience and richness of meaning over sample size and consider small, information-rich samples sufficient for achieving analytical saturation. In addition, in this phase, two primary data sources were selected through a systematic review of the literature and documentary research. The interviews from the expert panel and the data from the literature review and documentary research were examined through content analysis to shed light on the main linguistic inference types used in jurisprudential comprehension.

3.2.2. Phase Two

In the experimental phase of the study, an intact group of senior students of Islamic jurisprudence (N=17) was selected through convenience sampling from a seminary school in Qom. The use of an intact-group design was necessitated by both pedagogical and institutional constraints, as the participants constituted a naturally occurring cohort enrolled in an advanced jurisprudential course, and random assignment or group expansion was neither feasible nor ethically appropriate in this instructional context. In such educational settings, particularly within specialized and elite programs such as advanced seminary jurisprudence, intact groups with relatively small

sample sizes are common and methodologically acceptable, especially when the aim is to examine within-group change rather than population-level generalization.

Moreover, experimental studies conducted in highly specialized domains frequently rely on small but homogeneous samples, where participants share a comparable level of expertise, thereby enhancing internal validity despite limited sample size. Prior to analysis, standardized scores (z-scores) were examined to identify any values exceeding the conventional threshold (±3.00), and boxplots were inspected to detect potential extreme values. In addition, distributional assumptions were evaluated to ensure that no single observation exerted undue influence on the results. The screening process indicated that no statistically or substantively problematic outliers were present; therefore, all participants' data were retained for subsequent analyses.

3.3. Instrument

The only research instrument employed in the quantitative phase of the study was a researcher-developed jurisprudential comprehension test constructed from authentic Qur'anic passages pertaining to *āyāt al-aḥkām*. The test consisted of 20 items designed to operationalize the core linguistic inference types identified in Phase One. The items required context-sensitive interpretation rather than surface-level recall and were developed in consultation with two experts in Qur'anic jurisprudence to ensure content representativeness and textual authenticity. A parallel form of the same test, matched for difficulty, structure, and thematic scope, was prepared and administered as the posttest to minimize practice effects. Content validity was further reinforced through expert judgment, while internal consistency and item functionality were verified through pilot analysis prior to administration.

3.4. Procedure of the Study

The research was conducted in two sequential phases corresponding to the qualitative and quantitative components of the mixed-methods design.

In the first (exploratory) phase, data collection commenced with the purposive selection of a panel of six elite jurists from two universities and seminary institutions in Qom. Semi-structured interviews were conducted to elicit the experts' conceptualizations of meaning construction in Qur'anic jurisprudential interpretation. In parallel, a systematic review of jurisprudential commentaries and relevant theoretical literature was

undertaken to identify recurrent interpretive mechanisms. All interviews were audio-recorded, transcribed verbatim, and analyzed alongside the textual materials using directed content analysis.

The coding process proceeded in three iterative stages: initial open coding was employed to identify meaning units related to interpretive practices; axial coding was then used to organize these units into conceptually related categories; and finally, selective coding was applied to refine and integrate the categories into a coherent taxonomy of linguistic inference types employed in jurisprudential reasoning. To enhance the credibility and dependability of the qualitative analysis, a subset of the data was independently coded by a second researcher, and inter-coder agreement was calculated, with discrepancies resolved through discussion until consensus was reached.

The second (explanatory) phase examined the pedagogical utility of the inference types identified in the qualitative phase. An intact class of senior students of Islamic jurisprudence (N=17) was recruited, and baseline comprehension of jurisprudential Qur'anic passages was measured through a pretest. Prior to the instructional intervention, the dataset was screened for outliers and assessed for normality. Participants then received explicit, researcher-designed instruction targeting the identified inference types, implemented over a specified instructional period under controlled classroom conditions. Following the intervention, a posttest mirroring the structure, content, and difficulty level of the pretest was administered to assess changes in jurisprudential comprehension. Pretest and posttest scores were compared using a paired-sample statistical procedure to determine whether the instructional intervention resulted in a statistically significant improvement in performance.

4. Results and Discussion

4.1. Results

The current research was conducted in two different phases. The earlier qualitative phase adopted an exploratory stance and examined three sources of data (interviews with experts, documentary research, and a systematic review of the literature) to identify the major types of linguistic inferences used in jurisprudential comprehension of religious texts, particularly Qur'anic discourse. The findings of this phase are presented in table 1.

Table 1. Major types of linguistic inferences used in jurisprudential text comprehension

Inference Type	Inference Description	Linguistic Role	Qur'anic Example	Explanation
1. Backward-Build Up	Preserving coherence by bridging current linguistic data to previous Qur'anic discourse	Coherence Making	يا أيها الَّذِينَ آمَنُوا لا تَقْرَبُوا الصَّلاةَ وَ أَنْتُم سُكارى حَتَّى تَعْلَمُوا ما تَقُولُونَ (Q. ۴:۴۳)	Connecting the verse elements to purification rules elsewhere in the Qur'an.
2. Elaboration	Enriching explicit command through prior scriptural/jurisprudential knowledge	Situational Enrichment	أَقِمِ الصَّلَاةَ لِدُلُوكِ الشَّمْسِ إِلَى غَسَقِ اللَّيْلِ وَقُرْآنَ الْفَجْرِ إِنَّ قُرْآنَ الْفَجْرِ كَانَ مَشْهُودًا (Q. ۱۷:۷۸)	The verse establishes prayer times; detailed rulings (units, manner, & conditions) are derived from hadith.
3. Causation	Establishing cause–effect relations between religious commands	Causal Reasoning	يَا أَيُّهَا الَّذِينَ آمَنُوا كُتِبَ عَلَيْكُمُ الصِّيَامُ كَمَا كُتِبَ عَلَى الَّذِينَ مِنْ قَبْلِكُمْ لَعَلَّكُمْ تَتَّقُونَ (Q. ۲:۱۸۳)	Fasting is causally linked to attaining spiritual purification, forming a basis for broader causal reasoning in fasting laws.
4. Pragmatism	Interpreting implied divine intent (*maqāṣid al-sharīʿah*)	Global Meaning Making	يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَأْكُلُوا الرِّبَا أَضْعَافًا مُضَاعَفَةً (Q. ۳:۱۳۰)	From the prohibition of usury, the broader legal principle of fairness and justice is inferred.
5. Analogy	Extending rulings to unmentioned cases	Meaning Generalization	يَسْأَلُونَكَ عَنِ الْخَمْرِ وَالْمَيْسِرِ قُلْ فِيهِمَا إِثْمٌ كَبِيرٌ وَمَنَافِعُ لِلنَّاسِ وَإِثْمُهُمَا أَكْبَرُ مِنْ نَفْعِهِمَا (Q. ۲:۲۱۹)	The prohibition of wine is analogically extended to narcotics, ecstasy and etc.
6. Prediction	Anticipating upcoming ungiven information based on the current text	Ambiguity Removing	وَالسَّارِقُ وَالسَّارِقَةُ فَاقْطَعُوا أَيْدِيَهُمَا (Q. ۵:۳۸)	From the verse, legal rules of theft and robbery are predicted.
7. Instrumentation	Inferring tools/means of an action from given information and implicit details	Gap Filling	يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا قُمْتُمْ إِلَى الصَّلَاةِ فَاغْسِلُوا وُجُوهَكُمْ وَأَيْدِيَكُم (Q. ۵:۶)	The act of ablution is commanded; the instrument (water) is inferred from human prior knowledge and cognitive-semantic schemas.
8. Semantic Frame	Activating the broader legal-cultural frame of a verse	Semantic Analysis	يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا نُودِيَ لِلصَّلَاةِ مِنْ يَوْمِ الْجُمُعَةِ فَاسْعَوْا إِلَى ذِكْرِ اللهِ وَذَرُوا الْبَيْعَ (Q. ۶۲:۹)	The verse activates the full Friday prayer frame: obligation, sermon, prohibition of trade, and communal function.
9. Cognitive Space Blend	Integrating information from different legal sources into a single, coherent model	Conceptual Neologism	لَا إِكْرَاهَ فِي الدِّينِ قَدْ تَبَيَّنَ الرُّشْدُ مِنَ الْغَيِّ (Q. ۲:۲۵۶) قَاتِلُوا الَّذِينَ لَا يُؤْمِنُونَ بِاللهِ وَلَا بِالْيَوْمِ الْآخِرِ وَلَا يُحَرِّمُونَ مَا حَرَّمَ اللهُ وَرَسُولُهُ وَلَا يَدِينُونَ دِينَ الْحَقِّ مِنَ الَّذِينَ أُوتُوا الْكِتَابَ حَتَّى يُعْطُوا الْجِزْيَةَ عَنْ يَدٍ وَهُمْ صَاغِرُونَ (Q. ۹:۲۹)	Blending the principle of "no compulsion in religion" in the first verse by submission in the second, thus the emerging theme is a distinction between the sphere of faith and the sphere of political sovereignty (where force is permissible for defense and establishing justice).

The findings of the first phase of the research revealed that nine major types of linguistic inference are involved in jurisprudential understanding of the Qur'anic text. However, it is worth noting that other kinds of linguistic

inference may also be involved, but they can be subsumed under one of the aforementioned categories.

The second phase of the study examined whether raising awareness of these linguistic inference types enhances legal-jurisprudential understanding among novice students of jurisprudence. To this end, a pre-test/intervention/posttest design was employed, and the participants underwent five sessions of direct instruction on linguistic inferences used in the understanding of Arabic texts. During the instructional period, examples from classical but non-Qur'anic Arabic texts were utilized. More importantly, the inference categories employed in the intervention sessions were selected based on the findings of the first phase of the research. Subsequently, the posttest was administered, and the effect of instruction on Qur'anic text comprehension in legal verses (*āyāt al-aḥkām*) was examined through a paired t-test using SPSS software (Version 23). The findings of this section are presented below.

Table 2. Statistics for Paired Samples

Pair 1	Mean	N	Std. Deviation	Std. Error Mean
Pretest-Inference	11.7059	17	2.28486	.55416
Post-test-Inference	16.7647	17	1.20049	.29116

The descriptive statistics in Table 2 reveals that participants' mean score on inference ability increased from 11.71 (SD= 2.28) in the pretest to 16.76 (SD=1.20) in the post-test. This improvement suggests a notable enhancement in participants' inferential performance following the intervention. The smaller post-test standard deviation also indicates a reduction in score variability, implying more consistent performance across participants.

Table 3. Paired Samples Test Result

	Paired Differences					t	df	Sig. (2-tailed)
Pair 1	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pretest-Inference Posttest-Inference	-5.05882	1.51948	.36853	-5.84007	-4.27758	-13.727	16	.000

The paired-samples t-test revealed a significant difference between pretest and post-test inference scores, $t(16) = -13.73$, $p < .001$. The mean increase of 5.06 points indicates substantial improvement in participants' inferential performance after the intervention. The 95% confidence interval [–5.84, –4.28] confirms that the observed gain is statistically reliable and

unlikely to be due to chance. These findings suggest that explicit instruction in linguistic text inferences can facilitate short-term improvements in novice jurists' comprehension of Qur'anic jurisprudential discourse within the instructional context examined.

4.2. Discussion

As stated above, the present mixed-methods study first sought to identify the inferential operations jurists mobilize when interpreting Qur'anic legal texts and then to test whether explicit training in those inference types can improve jurisprudential comprehension among advanced students of jurisprudence in the seminary schools of Qom. The qualitative (phenomenographic) phase revealed nine distinct clusters of linguistic inference, ranging from backward build-up (textual bridging) to elaboration, causation, pragmatism, analogy, prediction, instrumentation, semantic frame, and cognitive space blend. These categories provide a richly articulated typology of how scholars traverse from linguistic cues to derived legal meaning in Qur'anic exegesis. This typology aligns with and extends cognitive reading research on inference as central to comprehension (e.g., McNamara 2020) by situating inference within a highly interpretive, jurisprudential domain.

In general reading research, inference is needed to connect propositions, fill gaps, and resolve ambiguity; in this study, the nine types map closely onto those general categories while also carrying juridical import—e.g., instrumentation is a gap-filling move, pragmatism negotiates implied intentions, and analogy generalizes rules to new contexts. This alignment demonstrates that reading research and jurisprudential exegesis share common cognitive machinery; however, jurisprudence demands extra rigor in boundary conditions and normative constraints.

In the quantitative phase, the intervention (five sessions of direct instruction on these inference types) yielded a strong, statistically significant gain (mean increase of approximately 5.06, $t(16) = -13.73$, $p < .001$). This result demonstrates that even advanced students' jurisprudential interpretive competence is susceptible to targeted metacognitive training. The narrowing of posttest variance suggests not only an increase in average performance but also a more uniform mastery across participants. This finding echoes prior inference–instruction studies (e.g., McDonald et al. 2021), which show that explicit inference training enhances comprehension and reduces inter-reader differences.

Beyond the statistics, the qualitative and quantitative phases inform one another: the nine inference types do not merely describe "what happens"

implicitly in expert exegetical practice, but also serve as scaffoldable strategies for learners. The intervention's success validates the typology's pedagogical viability. Yet, caution is warranted: the training used non-Qur'anic Arabic texts during sessions, which raises the question of transfer fidelity to actual Qur'anic verses under jurisprudential pressure. The strong results suggest robust transfer; however, future studies should examine longer-term retention, transfer across jurisprudential schools, and differential effects on more esoteric inference types, such as cognitive space blend.

Moreover, the study contributes to the discourse on the boundary between *tafsīr* and *fiqh*. The nine inference types dwell at the intersection of literal, coherent, and normative reading. The present study operationalizes that intersection: the inference types are linguistic–cognitive mechanisms, not purely doctrinal heuristics. Thus, learners are not forced into doctrinal stances prematurely but instead learn how meaning is constructed before determining which meaning ought to be preferred. In this light, the training can be understood as cultivating hermeneutic discipline rather than juridical allegiance.

Finally, the study points to future directions. One is cross-*madhhab* replication to test whether the nine inference types hold across legal schools or whether additional culturally or doctrinally specific inferences emerge. Another is embedding the intervention in a longitudinal jurisprudence program to determine whether scaffolding inferential reasoning early shapes students' interpretive trajectories. Additionally, pairing inference training with deliberative discussion of doctrinal choices could integrate the cognitive and normative dimensions of jurisprudence more holistically.

5. Conclusion

In summary, this study established a nine-type framework of linguistic inference as the engine of jurisprudential interpretation and empirically demonstrated that explicit instruction in those inference types significantly enhances students' comprehension of Qur'anic legal texts. The synergy between qualitative discovery and quantitative validation underscores the pedagogical value of making implicit inferential practices explicit. The current findings have implications from different perspectives. From the perspective of theory and methodology, the results bolster the view that jurisprudential meaning-making is fundamentally a cognitive–linguistic act, not merely doctrinal deduction.

The nine-type typology can serve as a lens in future *tafsīr* and *fiqh* studies

to examine how inference strategies may differ across legal traditions, textual genres, or exegetical modes. Methodologically, the mixed-methods approach points the way toward integrating qualitative, phenomenographic insight with experimental intervention in Islamic studies, a hybrid method that can mediate between deep hermeneutic insight and pedagogical efficacy. From a pedagogical perspective, for Iranian seminary schools and institutions training jurists, embedding an "Inference in Jurisprudence" module early in the curriculum may accelerate interpretive maturity. The lesson design might pair linguistic examples with authentic jurisprudential texts, progressively scaffolding from easier inferences (e.g., backward build-up) to more complex ones (e.g., cognitive space blend). Educators should monitor retention and scaffold reflection on how inference interacts with normative reasoning. Moreover, peer discussion of inference choices could foster metacognitive awareness, helping students internalize which inferential moves are permissible or preferable in specific jurisprudential contexts.

Like any other research, the current study suffered from a variety of limitations. First, the study's relatively small sample and short intervention span caution against overgeneralization. Future work should replicate the experiment with larger cohorts across legal schools and examine whether inference training influences not only comprehension but also the quality of juridical reasoning (e.g., consistency, alignment with doctrine, originality). Another fruitful direction is comparing inference usage in student versus expert jurists (e.g., through think-aloud protocols) to determine which inference types characterize mastery. Finally, tracking outcomes longitudinally can reveal whether inference training contributes to lifelong juristic maturation or whether its effects are only transient. Overall, this study offers a novel bridge between cognitive reading theory and jurisprudential education: inference is not merely a tool of comprehension but also a scaffold for responsible, nuanced legal interpretation.

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References

Clinton, V., Taylor, T., Bajpayee, S., Davison, M. L., Carlson, S. E., & Seipel, B. (2020). Inferential comprehension differences between narrative and expository texts: A systematic review and meta-analysis. *Reading and Writing: An Interdisciplinary Journal*, 33(9), 2223–2248. https://doi.org/10.1007/s11145-020-10044-2

Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. New Jersey: Pearson.

Elahidoost, H., & Askari, M. H. (2022). The application of the theory of the spirit of meaning in the science of the principles of jurisprudence. *Imamiyyeh Principles of Jurisprudence Studies*, 18, 131–142.

Evans, V., & Green, M. (2006). *Cognitive linguistics: An introduction*. New York: Routledge. https://doi.org/10.4324/9781315864327

Graesser, A. C., & Kreuz, R. J. (1993). A theory of inference generation during text comprehension. *Discourse Processes*, 16(1–2), 145–160. https://doi.org/10.1080/01638539309544833

Kintsch, W. (2004). The construction-integration model of text comprehension and its implications for instruction. In Ruddell, R. B. & Unrau, N. J. (Eds.), *Theoretical models and processes of reading* (1270–1328). Newark, DE: International Reading Association.

Lakoff, G. (1987). Cognitive models and prototype theory. In Neisser U. (Ed.), *Concepts and conceptual development: Ecological and intellectual factors in categorization* (63-100). Cambridge University Press.

Langacker R. W. (1987). *Foundations of Cognitive Grammar: Theoretical Prerequisites*. Stanford: Stanford University Press.

McDonald, A., Morrison, T. G., Wilcox, B., & Billen, M. T. (2021). Improving Children's Reading Comprehension by Teaching Inferences. *Reading Psychology*, 42(3), 264–280. https://doi.org/10.1080/02702711.2021.1888351

McNamara, D. S. (2021). If integration is the keystone of comprehension: Inferencing is the key. Discourse Processes, 58(1), 86–91. https://doi.org/10.1080/0163853X.2020.1788323

Morse, J. M. (1994). Designing funded qualitative research. In Denzin, N. K. & Lincoln, Y. S. (Eds.), *Handbook of qualitative research* (220–235). Sage Publications, Inc.

Khomeini, R. (1991). *Sharhe Chehel Hadith [Interpretation of forty hadith]*. Tehran: The Institute for Compilation and Publication of Imam Khomeini's Works.

Pressley, M. (2002). Comprehension strategies instruction. In Block, C. C. & Pressley, M. (Eds.), *Comprehension instruction: Research-based best practices* (11–27). New York, NY: Guilford.

Ṣadr al-Dīn Shīrāzī, M. (1982) *Al-Ḥikmah al-Mutaʿāliyah fī al-Asfār al-ʿAqliyyah al-Arbaʿah*. Beirut: Dār al-Iḥyā' al-Turāth al-ʿArabī

Sperber, D., & Wilson, D. (1995). *Relevance: Communication and Cognition*. Blackwell Publishing.

Tayeb Hosseini, S. M. (2025). The Theory of "Words Being Established for the Spirits of Meanings" in the Thought of Imami Exegetes. *Imamiyya commentary*, 1(1), 32-56. https://doi.org/10.22034/exeg.2025.13833

Yunesi H. A. (2021). Comparison of Mulla Sadra's Coining Words for the Spirits of Meanings and Paul Ricoeur's Theory of Interpretation. *Pazhouhesh Name-ye Qur'an va Hadith*, 14 (28), 297-318.

Wilson, D., & Sperber, D. (2006). Relevance Theory. In L. R. Horn, & G. Ward (Eds.), *The Handbook of Pragmatics*, (607-632). Blackwell Publishing. https://doi.org/10.1002/9780470756959.ch27

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The Feasibility and Challenges of Achieving Strong Artificial Intelligence in Light of Qur'anic Teachings

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ABSTRACT:

Original Paper

This research explores the arguments for and against the realization of strong artificial intelligence from the perspective of Qur'anic teachings. Opponents, citing verses from the Holy Qur'an, consider strong AI an instance of polytheism in creatorship, a tool for misguidance, human deification, alteration of divine creation, transgression into the divine domain, and a violation of human dignity and divine vicegerency. In contrast, proponents, by offering more precise interpretations of the same verses and applying principles of Islamic philosophy, demonstrate that strong AI is compatible with the teachings of the Qur'an. They argue that creation in the sense of innovation ex nihilo is exclusive to God, and what humans do is the manipulation of God's creations, which is not forbidden according to Qur'anic verses. In other cases, most of the opponents' arguments are based on limited interpretations or specific readings of Qur'anic verses. The research results indicate that there is no inherent conflict between strong AI

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and Qur'anic teachings; rather, this technology can be placed in the service of humanity within the framework of Islamic values.

KEYWORDS: The Qur'an and Science, Strong AI, Qur'anic Teachings, Divine Creatorship, Alteration of Creation, Human Dignity.

1. Introduction

The term "Artificial Intelligence" (AI) was first coined in 1956 at the Dartmouth Conference by John McCarthy and Marvin Minsky to name a specific branch of computer science (Tahmasbi 2006). According to Feigenbaum's definition, artificial intelligence is the part of computer science that deals with designing intelligent computer systems; that is, systems that exhibit characteristics associated with intelligence in human behavior, such as understanding language, learning, reasoning, problem-solving, and so on (Born 1987).

The debates in artificial intelligence mainly focus on the relationship between the mind and the computer, with two main questions: Is the mind like a computer (the functionalist view), and can a computer be like the mind? The second question is divided into three levels: (a) Can a computer perform intelligent actions? (b) Does it do so in a human-like way? (c) Does it possess mental properties such as consciousness and feeling? An affirmative answer to the first question leads to weak artificial intelligence (the engineering domain), an affirmative answer to the second question leads to advanced artificial intelligence (the cognitive psychology domain), and an affirmative answer to the third question leads to strong artificial intelligence (the philosophical domain) (Tahmasebi 2006), in which the machine, in addition to acting in a human-like way, also possesses psychological properties, meaning it has mental states and psychological qualities like consciousness and feeling (Lycan & Prinz 2008).

The primary objective of this research is to examine the relationship between advanced artificial intelligence and Qur'anic teachings. The ever-increasing expansion of AI applications in various aspects of human life has created numerous theoretical and practical challenges in different fields, including philosophy, ethics, and theology. Strong AI, which is based on creating systems with human-like understanding, thinking, and consciousness, has been criticized from various perspectives, raising the question of whether such technology is compatible with the Qur'an's view on the status of human, divine creatorship, and the system of creation.

The necessity of this research can be explained from several perspectives: First, given the rapid advancements in artificial intelligence,

clarifying its relationship with religious teachings is one of the most important issues at the intersection of science and religion in the contemporary era. Second, the Muslim community needs a clear and well-reasoned stance on this technology to be able to participate constructively in its development and guidance. Third, just as some scientific theories were previously mistakenly considered to be in conflict with religion, incorrect interpretations of religious texts may lead to a false conflict between artificial intelligence and Qur'anic teachings.

This research has been conducted using a descriptive-analytical method with a comparative approach. First, verses related to the topic have been extracted and categorized; then, their meanings and implications have been analyzed using reliable exegetical sources. In the next step, the arguments of proponents and opponents of strong AI based on these verses have been examined, and finally, the strengths and weaknesses of each argument have been assessed with a critical approach.

2. Literature Review

The relationship between artificial intelligence and Islamic teachings has attracted the attention of various researchers in recent years. Shoaib Ahmed Malik (2023) examines the challenges that AI poses to Islamic thought, especially concerning the linguistic inimitability of the Qur'an. Omar Shareef (2023), after examining views on the self and intellect, concludes that strong AI is possible from an Islamic perspective. Doko (2023) discusses the compatibility of strong AI with classical theism in Islam. Tashakori & Rajabi (2018) compare the capabilities of the human mind with those of artificial intelligence from the perspective of Qur'anic verses, highlighting how Qur'anic teachings reveal fundamental differences between natural and artificial intelligence. Additionally, Tarkhan & Musavi (2024) offer a futuristic perspective, examining the evolution of AI technology in light of the immutable divine traditions mentioned in the Qur'an, and provide a framework for predicting the limitations and possibilities of the evolution of strong AI.

The present research is innovative in several aspects: First, unlike previous studies that either did not discuss the topic from this perspective or mainly referred to some verses sporadically, this research has attempted to systematically categorize and analyze the collection of verses related to the subject. Second, by carefully examining the arguments of proponents and opponents, it provides a balanced picture of the relationship between strong AI and Qur'anic teachings. Third, instead of adopting a one-sided position, this study has tried to outline a framework for compatibility between strong

AI and Qur'anic teachings within the framework of Islamic principles and values. Fourth, it provides reasoned answers based on Qur'anic verses to new questions that have arisen for Muslim thinkers with the development of artificial intelligence. In summary, by providing a systematic and comprehensive analysis of the relationship between strong AI and Qur'anic teachings, this research aims to facilitate the active participation of Muslim thinkers in the global discourse on the future of artificial intelligence.

3. Qur'anic Arguments for and against the Realization of Strong AI

Numerous verses of the Qur'an can be cited as arguments against the realization of strong AI. In this paper, six of them are examined.

3.1. Polytheism in Creatorship

One reason some religious adherents oppose the possibility of artificial intelligence is the belief that, should robots attain human-like intelligence, they would be regarded as partners with God in creatorship—an idea that challenges core theological doctrines (Sadat Mansouri 2025, 126). The attempt to produce AI with cognitive, decision-making, and learning capacities comparable to those of humans can be interpreted as an implicit claim to creative power akin to divine creation. This objection is especially salient in the context of strong AI (SAI) or superintelligence, since such systems aim to replicate or even surpass human cognition; thereby, the project may be viewed as emulating divine creation, which is impossible:

> *Say, "Who is the Lord of the heavens and the earth?" Say, "Allah!" Say, "Have you then taken others besides Him for guardians, who have no control over their own benefit or harm?" Say, "Are the blind one and the seer equal? Or are the darkness and the light equal?" Have they set up for Allah partners who have created like His creation, so that the creations seemed confusable to them? Say, "Allah is the creator of all things, and He is the One, the All-paramount" (Q. 13:16).*

Based on this verse and others (Q. 39:62; 40:62), God alone is the true creator (Rabbani Golpaygani 2014, 1: 78), and any claim of creation similar to divine creation is considered a form of polytheism.

3.1.1. Responses

In response to the aforementioned argument, the following answers can be provided:

First: Examining the lexical and Qur'anic meaning of *al-khalq* (creation) shows that *al-khalq* does not have a single meaning. Ibn Manẓūr (1994, 5: 139) says that *al-khalq* is the origination of something that had no precedent. He quotes Ibn al-Anbārī as saying that *al-khalq* has two meanings; the first is *al-inshā'* (origination), meaning innovation, and the other is *al-taqdīr* (proportioning). In the Qur'an, it is also stated: *"So blessed is Allah, the best of creators (aḥsan al-khāliqīn)"* (Q. 23:14), where the meaning of *aḥsan al-khāliqīn* is the best of proportioners (*al-muqaddirīn*). The word *al-khalq* is used in the Qur'an both in its verbal noun form (to bring into being and innovate) and as a passive participle (the created) (Ibn Fāris 1984, 2: 213). Some Qur'anic scholars have attributed several meanings to *al-khalq*:

- Innovation and origination; such as, *"He created the heavens and the earth"* (Q. 32:4).
- Creating something from something else; such as, *"He created you from a single soul"* (Q. 7:189) and *"He created man from a sperm-drop"* (Q. 16:4). *Al-khalq* in the sense of innovation and creation from nothingness is exclusive to God.
- Transformation and manipulation of something, such as, *"when you would create from clay the form of a bird, with My leave, and you would breathe into it and it would become a bird, with My leave"* (Q. 5:110).
- If *al-khalq* is used in relation to the general public, it has two meanings: one is proportioning, and the other is falsehood; such as, *"and you invent a falsehood"* (Q. 29:17) (al-Rāghib al-Iṣfahānī 1991, 157).

The most important lexical meaning of *al-khalq* is the innovation and creation of something from nothingness which, as al-Rāghib al-Iṣfahānī and others have stated, is a meaning specific to God: *"Is there any creator other than Allah?"* (Q.35:3). Artificial intelligence is a process and a manipulation of God's creations, because its foundation is materials made by God, not by human. It is also clear that creation in the sense of originating a thing does not apply to strong AI, and the Qur'an explicitly states: *"Indeed those whom you invoke besides Allah will never create [even] a fly even if they all rallied to do so!"* (Q. 22:73), which refers to innovation ex nihilo.

Second: According to Islamic philosophers, whatever the effect possesses is a manifestation and reflection of the perfections belonging to its cause; meaning that the effect manifests the perfections of the cause and has nothing of its own. Every ability seen in human existence belongs to God, and if a person makes something with their ability, they have done so

with God's ability, and that manufactured object is the effect and creation of God, not of the human (Ṣadr al-Dīn al-Shīrāzī 1981, 1: 206), as is explicitly stated: *"when Allah has created you and whatever you make"* (Q. 37:96).

Therefore, according to Qur'anic teachings and philosophical analyses, if one day human can produce a robot similar to a human, this act will not be polytheism in creatorship and will never contradict the monotheism of God's creatorship; thus, whatever human makes can be said to be, in a way, a creation of God (Sadat Mansouri 2025, 128).

3.2. A Tool for Misguidance and Weakening of Beliefs

Some may accept that matters like cloning and strong AI are not true creation and innovation, and that if all humans gathered their thoughts, forces, and resources, they would not be able to innovate even a small thing. However, they fear that people's misunderstanding in the domain of belief may lead to the misperception of these things as creation and innovation, and that they may gradually come to believe that there is a being alongside God who can create something (Awdah 2003). On this basis, they have declared artificial intelligence to be forbidden. On the other hand, verse Q. 4:119 quotes Satan as saying: *"and I will lead them astray and give them [false] hopes"* (Q. 4:119).

Opponents of artificial intelligence can say that this technology can be a tool for misleading and deceiving people; AI can distort the truth by producing false and misleading content (like deep fakes), it can distance human from independent thought and divine servitude by creating dependency on technology, and it can pervert human nature by promoting unethical and irreligious values. New tools can be a means for misleading people, and Satan uses these tools to misguide humans (Mesbah Yazdi 2012, 2: 195).

3.2.1. Responses

In response, the following answers can be provided:

First: No technology is inherently good or evil; rather, its use determines its nature. Allameh Jafari (2008, 304), in his book "Philosophy of Religion", emphasizes that tools and means are neutral, and it is the human with their intention and application who directs them towards good or evil. Science and technology can serve religious values and pave the way for human perfection (Golshani 2019, 112).

Second: Numerous verses in the Qur'an emphasize the importance of reason, reflection, and the acquisition of knowledge; Islam is the religion of knowledge and cognition, and it encourages scientific progress as long as it is within the framework of ethical values (Beheshti 2001, 97).

Third: How can the prohibition of things like cloning and strong AI be justified by citing the weakening of people's religious beliefs? Religious rulings have their own specific foundations, and the method of deriving what is permissible and forbidden must be based on those foundations. Accepting such logic would lead us to ban many scientific achievements and leave Islamic societies behind in the caravan of scientific progress, an approach that is in clear contradiction with Islam's repeated emphasis on acquiring knowledge at any time, in any place, and from any source. Instead of imposing restrictions, it is better to raise society's religious awareness so that people view artificial intelligence and similar technologies as a testament to the Lord's greatness, base their beliefs on reason, and are freed from ignorance.

In today's world, where knowledge is spreading to the most remote corners of the globe, such restrictions will cause the backwardness of Islamic societies and the aversion of non-Muslims to Islam. Furthermore, the universality and finality of Islam require it to be responsive to all of humanity's needs, in such a way that truth-seeking researchers do not perceive it as conflicting with science—the same unfortunate event that happened to Christianity, where the conflict between science and religion shook the foundations of the Church (Maghami 2008).

3.3. Deification of the Human

The negation of God and the proposition of human's divinity on earth is an old idea that the Qur'an narrates from the mouths of some people of the past: *"saying, 'I am your exalted lord!'"* (Q. 79:24), and *"Pharaoh said, 'O [members of the] elite! I do not know of any god that you may have other than me'"* (Q. 28:38). Based on these verses, Pharaoh denies the God of Moses and presents himself as the lord. He claims that the same duties that the God of Moses performs for man are also within his power. Such a theory also exists among some Western philosophers; Nietzsche believed that the idea of God's existence should be removed from human life, and that man should be considered a god, and consequently, he should worship himself (Foroughi 1987, 3: 201).

In the field of artificial intelligence technology, humanity has achieved astonishing progress, to the extent that if humans succeed in creating an artificial superintelligence, they will have created a being that surpasses

human capabilities (Sokolovskaya 2021). Therefore, perhaps the same view of Pope John Paul II about the pioneers of cloning can be extended to researchers in the field of artificial intelligence: they probably, with undue pride, cultivate the idea that their plans for humanity are superior to the Creator's plan—an approach that leads to self-deification and going beyond human limitations and permissible boundaries (Islami 2005).

3.3.1. Responses

In response to this argument, the following answers can be provided:

First: Man, due to his special characteristics, knows no bounds when he attains a state of self-sufficiency and rides the steed of arrogance and selfishness. He transgresses and claims divinity, whether in artificial intelligence technology or in other technologies. As the Qur'an says: *"Indeed man becomes rebellious, when he considers himself without need"* (Q. 96:6-7). The state of feeling no need for God and being independent of Him can arise for a person in any condition and situation, just as when Pharaoh saw himself as the absolute ruler over the lives, property, and honor of the people, he claimed divinity. Therefore, it cannot be said that only artificial intelligence technology leads man into this valley of misguidance.

Second: Human, with the power of thought, can discover the laws governing creation and understand the details of human creation to be able to bring a human-like intelligence into existence. It may be that scientists, by observing the amazing structure of the human body, realize the greatness of Almighty God and humbly bow before the Owner of the dominion and the kingdom (Maghami 2008).

Third: Replacing man with God and denying the one Creator has never been among the goals of the creators of this technology. The fallacy (*shubhah*) of human divinity has been raised by theologians in connection with human artificial intelligence. Of course, it is possible that after every scientific discovery, abuses may occur, and artificial intelligence is no exception to this rule. However, one should not oppose such technology on the pretext of these abuses (Maghami 2008).

3.4. Alteration of Creation (khalq Allah)

Some Sunni jurists (Al-Qaradawi 2004, 219) have put forward the view that intentional alteration of divine creation is an instance of following Satan. In this view, the effort to create intelligent systems that mimic human cognitive functions can be seen as a transgression into the domain of divine creatorship. The Qur'an, in verses Q. 4:117–119, when speaking of the

polytheists, mentions Satan, who claimed he would mislead people and command them to alter God's creation: *"They invoke none but females besides Him, and invoke none but a froward Satan, whom Allah has cursed, and who said, 'I will surely take of Your servants a settled share, and I will lead them astray and give them [false] hopes, and prompt them to slit the ears of cattle, and I will prompt them to alter Allah's creation (khalq Allah)'. Whoever takes Satan as a guardian instead of Allah has certainly incurred a manifest loss"* (Q. 4:117–119).

Opponents of strong AI believe that this act is an alteration of God's creation (*khalq Allah*) and is therefore forbidden and illegitimate, because according to verse Q. 4:119, Satan vowed that he would severely mislead some people, drown them in distant hopes, and command them to cut the ears of animals and alter *khalq Allah*. They consider the creation of strong AI to be an instance of this alteration of *khalq Allah* and deem it forbidden. The focal point of this argument is the phrase *"I will prompt them to alter Allah's creation (khalq Allah)."* Based on this verse, Satan desired the alteration of *khalq Allah*. In verse 30 of Surah al-Rūm, the alteration of *khalq Allah* is also declared forbidden, stating: *"No change should there be in the creation of Allah (khalq Allah)"* (Q. 30:30). Thus, by combining these two verses, the prohibition of altering divine creation is inferred (Mazaheri & Ahmadkhan Beigi 2009).

3.4.1. Responses

In response to this argument, the following answers can be provided:

First: Some exegetes, such as al-ʿAyyāshī (1960, 1: 276), quoting Imam al-Bāqir, have stated that the meaning of *khalq Allah* is the religion and command of *Allah*. Al-Ṭūsī (2010, 3: 333), after citing various views on this matter, says that the strongest interpretation for the phrase *"No change should there be in the creation of Allah (khalq Allah)"* (Q. 30:30) is the religion of Allah. Some have interpreted *khalq Allah* as making the lawful unlawful and the unlawful lawful (al-Ṭabrisī 1993, 2: 112). Ibn Kathīr (1998, 1: 569) narrated from Ibn ʿAbbās, ʿIkrimah, and Mujāhid that they, citing verse Q. 30:30, interpreted *khalq Allah* as *dīn Allah* (the religion of Allah). According to some exegetes, the alteration of *khalq Allah* can be considered as deviating from the state of *fiṭrah* (innate disposition) and abandoning the upright religion (Tabataba'i 1996, 5: 87). Others say that they change the (pure) *khalq Allah*; they pollute the monotheistic *fiṭrah* with polytheism (Makarem Shirazi 1993, 4: 134). In the opinion of Rashīd Riḍa (n.d., 5: 424), changing and interfering in *khalq Allah* is a concept that includes both gender alteration like castration, etc., cutting and creating abnormalities in human body parts, and also spiritual change (changing the religion and human nature that God has created).

Second: Strong AI cannot be considered an alteration of divine creation in a way that creates a unique being. This process is merely a replication of an existing human with the same previous characteristics, not the creation of a completely new and unprecedented being (Maghami 2008).

Third: If any alteration in God's creation were absolutely forbidden, then no kind of change and development in the cultivation and development of the earth and its resources should be permissible. This is while the development of the earth, the optimal use of its resources, and the discovery of the secrets of the universe are considered religious duties, which include things like improving housing, health, and clothing, modifying the body, face, plants, rivers, and other cases (Maghami 2008). There is no absolute proof for the prohibition of altering creation; if every change in creation were impermissible, then all manipulations of God's creations, such as digging canals, wells, planting trees and crops, cutting nails, and other changes, would have to be forbidden, which is not acceptable (Khoei 1998, 1:258). For example, the current method of chicken production has fundamental differences from its natural process and has undergone changes, yet all rational people in the world, Muslim and non-Muslim alike, have accepted it as a necessity of life, and no jurist has issued a fatwa for its prohibition (Maghami 2008).

In addition to the permissibility of changing, developing, and utilizing the earth and its contents from a religious perspective, exploration, research, and use of the heavens are also considered permissible, as the Qur'an says: *"And in the sky is your provision and what you are promised"* (Q. 51:22). This verse indicates that the provision of humans is in the heavens and celestial bodies, and obtaining this provision from celestial bodies will not be possible except by causing change and manipulation in them. A look at the Qur'an shows that the Creator says in another verse: *"He has subjected to you whatever is in the heavens and whatever is on the earth"* (Q. 45:13). The concept of subjecting something to human is nothing but thinking about, exploring, and bringing about change and transformation in it.

This theme is also reflected in Islamic narrations; it is narrated from the Holy Prophet (PBUH): *"Reflect on the creation, and do not reflect on the Creator, for you cannot comprehend His reality"* (al-Qurṭubī 1985, 4: 314). He also said: *"Reflect on the blessings of Allah"* (al-Suyūṭī 2000, 2: 381). One of the consequences of reflecting on God's blessings is to make better use of them. If humans can find more efficient ways to use God's blessings, they have acted upon this prophetic recommendation.

3.5. Transgression into the Divine Domain

Artificial intelligence is an attempt to create an intelligence similar to human intelligence, which can be considered a kind of attempt to create artificial life. Recent advances in AI, such as deep learning, natural language processing, and the ability to self-learn, have led to the creation of systems that seemingly exhibit behaviors similar to intelligent beings. The Qur'an points to the inability of anyone other than God to create a living being: *"O mankind! Listen to a parable that is being drawn: Indeed those whom you invoke besides Allah will never create [even] a fly even if they all rallied to do so! And if a fly should take away something from them, they cannot recover that from it. Feeble is the seeker and the sought!"* (Q. 22:73). The fly, as an example of a living creature, possesses life, which according to the verse, humans are incapable of creating; thus, creating an AI that claims to simulate or even surpass human intelligence is a matter beyond human capability and a form of transgression into the divine domain.

3.5.1. Responses

In response, the following answers can be provided:

First: In the verse used for the argument, when God says, *"even if they all gathered, they could not create a fly*," He is describing a state of affairs, not issuing a prohibition. God is not saying that man should not create, but that man does not have the ability to create from nothing. It seems that humanity will never be able to create from nothingness, but changing the design of existing creatures does not conflict with these verses (Azad 2020). Verses 35 and 36 of Surah al-Ṭūr express the same concept: *"Were they created from nothing? Or are they [their own] creators? Did they create the heavens and the earth? Rather they have no certainty!"* (Q. 52:35–36).

Second: Artificial intelligence does not possess life in the real sense; rather, it is an algorithmic simulation of certain aspects of human intelligence. Some exegetes, in interpreting verse Q. 22:73, say that what is emphasized in this verse is human's inability to create life, not his inability to manufacture and produce artifacts (Fakhr al-Rāzī 1999, 23: 236). Al-Qurṭubī (1985, 12: 87), interprets this verse, emphasizing that the meaning of creation here is the creation of spirit and life, not merely forming a physical shape and external mold. Furthermore, in Islamic theology, real life requires having a soul, which is exclusively in the power of God (Tabataba'i 1996, 13: 192), as stated: *"They question you concerning the Spirit. Say, "The Spirit is of the command of my Lord"* (Q. 17:85).

3.6. Violation of Human Dignity and Divine Vicegerency

Opponents of strong AI believe that advanced computers may, in the future, be able to compete with humans in the fields of thought and consciousness, and possibly surpass them. Such a hypothesis naturally implies that these computers will perform equally or even better than humans in using the material and natural resources of the environment. In other words, they too can conquer the earth and the sky and share in the status of dignity with humans. It is not difficult to imagine such a scenario, because man's ability to dominate and exploit nature is fundamentally rooted in his creative mental power and his capacity for thought; any other being endowed with this gift could achieve the same degree of dominance that man possesses (Tashakori & Rajabi 2018).

Some proponents of the strong AI approach have predicted that a time will come when robots will achieve such power and advancement that humans will wish to be accepted as pets in their homes (Karkon Beiragh 2008). These individuals paint a picture of the future of the world in which humanity, with its own hands, creates a machine that possesses all human characteristics and functions; from the viewpoint of these theorists, because these beings are machines, their errors are much fewer than humans, or do not exist at all. As a result, these machines gradually increase their learning capabilities, and given that human errors are more frequent, they will eventually reach a stage where they gain mental superiority over humans and dominate them (Shahriari 2018); these developments are in conflict with the concepts of human dignity, vicegerency, and nobility mentioned in the Qur'an.

According to Qur'anic verses, God has established human as His caliph (*khalīfah*) and vicegerent on earth (Q. 2:30; 38:26). This position of vicegerency is so valuable that the angels were commanded to prostrate to Adam (Q. 2:34; 7:11; 17:61; 18:50; 20:116; 15:29; 38:72). In the Qur'an, in addition to the position of divine vicegerency, there is also reference to God bestowing dignity upon all Children of Adam and preferring them over many of His creations: *"Certainly We have honored the Children of Adam, and carried them over land and sea, and provided them with all the good things, and given them an advantage over many of those We have created with a complete preference"* (Q. 17: 70).

Furthermore, there are numerous verses in the Qur'an that refer to the subjugation of the sun, moon, stars, the alternation of night and day, seas, rivers, ships, and everything in the heavens and the earth for human (Q. 14:32–33; 16:12–14; 22:65; 31:20; 45:12–13). This subjugation of nature is also in line with this same position of vicegerency and serves the realization of God's main purpose in creating human.

3.6.1. Responses

In response, human's inherent dignity is related to his spiritual and innate dimension, not merely his physical or mental abilities (Tabataba'i 1996, 13: 156). This inherent dignity cannot be stripped away by any tool or technology because it belongs to the divine spirit breathed into human. Javadi Amoli (1990) explains that human dignity originates from the "breathing of the divine spirit" (*nafkh al-rūḥ*), and this has two aspects: "existential dignity" (*karāmah takwīniyyah*), which is inherent and inalienable, and "acquired dignity" (*karāmah iktisābiyyah*), which is obtained through the cultivation of moral and spiritual virtues. From an epistemological perspective as well, scientists like John Searle (1980), have addressed the issue of consciousness and the inability of artificial intelligence to acquire semantic understanding. Searle believes that machines lack semantic understanding and merely manipulate symbols. This concept is known in Islamic theology as the soul (*al-rūḥ*). Therefore, no technological advancement can eliminate the existential dignity of man, because this dignity is embedded in his original creation. Artificial intelligence, no matter how advanced, is ultimately a tool designed by humans and serves human purposes. Superior technical abilities in a specific field do not necessarily mean inherent superiority, just as a calculator can perform calculations faster than a human, but this does not diminish human dignity. Human dignity is related to the human spiritual and moral dimension, which is beyond mere technical abilities (Tabataba'i 1996, 13: 156).

4. Conclusion

This research, aimed at examining the relationship between strong artificial intelligence and Qur'anic teachings, has analyzed the views of proponents and opponents. Opponents of strong AI, citing Qur'anic verses, have put forward arguments such as polytheism in creatorship, serving as a tool for misguidance, human deification, alteration of *khalq Allah*, transgression into the divine domain, and violation of human dignity and divine vicegerency. In contrast, proponents have countered these arguments with more nuanced interpretations of the same verses and applications of principles from Islamic philosophy.

The investigations conducted in this research show that most of the opponents' arguments are based on limited interpretations or specific readings of Qur'anic verses. For example, regarding the alteration of divine creation, reputable Qur'anic exegeses indicate that the meaning of *khalq Allah* in the relevant verses primarily refers to the divine religion, not merely

the physical structure of creatures. Additionally, various verses of the Qur'an encourage humans to think and reflect on creation, and to utilize their God-given talents to discover the laws of the universe and benefit from them. On the other hand, based on philosophical analyses, a distinction can be made between "creation from nothing" (*ex nihilo*), which is exclusive to God, and "manipulation of creations," which humans are also capable of. Strong artificial intelligence, even in its most advanced state, is not creation from nothing but rather a manipulation of the structures and laws that God has placed in existence.

By analyzing the collective arguments of both sides, it can be concluded that there is no inherent conflict between strong artificial intelligence and Qur'anic teachings. Rather, this technology can, within the framework of Islamic values and while observing ethical principles derived from divine teachings, serve human and societal excellence. The important point is that technological advancements must always be accompanied by critical thinking and ethical considerations, so that they do not become tools for undermining human dignity and transcendent values.

Ultimately, this research suggests that, rather than adopting a passive or confrontational approach to new technologies, Muslim thinkers should play a more proactive role in shaping the future of artificial intelligence by actively engaging in the global discourse on artificial intelligence and enriching it with moral and spiritual teachings derived from the Qur'an.

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References

Al-ʿAyyāshī, M. (۱۹۶۰). *Tafsīr al-ʿAyyāshī*. Tehran: Maṭbaʿah ʿIlmīyah.

Al-Qaradawi, Y. (2004). *Al-ḥalāl wa al-ḥarām fī al-Islām*. Cairo: Maktabah Waḥbah.

Al-Qurṭubī, M. (1985). *Al-Jāmiʿ li-Aḥkām al-Qurʾān*. Tehran: Naṣīr Khusru.

Al-Rāghib al-Iṣfahānī, Ḥ. (1991). *Mufradāt Alfāẓ al-Qur'an*. Beirut: Dār al-Qalam.

Al-Suyūṭī, J. (2000). *Al-Durr al-manthūr fī tafsīr bil-maʾthūr*. Beirut: Dār Iḥyā' al-Turāth al-ʿArabī.

Al-Ṭabrisī, F. (1993). *Majmaʿ al-Bayān fī Tafsīr al-Qurʾān*. Tehran: Naṣīr Khusru.

Al-Ṭūsī, M. (2010). *Al-Tibyān fī Tafsīr al-Qurʾān*. Beirut: Dār al-Iḥyāʾ al-Turāth al-ʿArabī.

Awdah, R. A. (2003). *Al-Istinsākh fī mīzān al-Islām*. Oman: Dār Usāmah.

Azad, A. (2020). *Virtual meeting on the Qur'an and human cloning*. *ISNA*. https://isna.ir/xdHQN7

Beheshti, S. M. H. (2001). *Theoretical foundations of the constitution*. Tehran: Bonyād Nashr Āthār Ayatollah Beheshti.

Born, R. (1987). *Artificial intelligence: The case against*. London & New York: Routledge.

Doko, E. (2023). Islamic classical theism and the prospect of strong artificial intelligence. *Ilahiyat Studies,* 14(1), 85-105. https://doi.org/10.12730/is.1283109

Fakhr al-Rāzī, M. (1999). *Mafātīḥ al-Ghayb*. Beirut: Dār al-Iḥyā' al-Turāth al-ʿArabī.

Foroughi, M. A. (1987). *The course of wisdom in Europe*. Tehran: Zavvar.

Golshani, M. (2019). *From secular science to religious science*. Tehran: Institute for Humanities and Cultural Studies.

Ibn Fāris, A. (1984). *Muʿjam Maqāyīs al-Lughah*. Qom: Islamic publicity office.

Ibn Kathīr, I. (1998). *Tafsīr al-Qur'ān al-ʿAẓīm*. Beirut: Dār al-Kutub al-ʿIlmīyyah.

Ibn Manẓūr, M. (1994). *Lisān al-ʿArab*. Beirut: Dār al-Fikr.

Islami, S. H. (2005). Cloning from the perspective of Sunni theology. *Anjuman Ma'ārif Islāmī, (2)*, 83-116.

Jafari, M. T. (2008). *Philosophy of religion* (in Persian). Tehran: Research Institute for Islamic Culture and Thought.

Javadi Amoli, A. (۱۹۹۰). *Dignity in the Qur'an* (in Persian). Raja' Publication.

Karkon Beiragh, H. (2008). A critical look at the issue of artificial intelligence (in Persian). *Zihn,* (36–37), 59–84.

Khoei, A. (1998). *Miṣbāḥ al-fiqāhah*. Qom: Dāvarī.

Lycan, W. G., & Prinz, J. J. (2008). *Mind and cognition: An anthology*. Blackwell Publishing.

Maghami, A. (2008). Theological challenges of human cloning. *A Research Quarterly in Islamic Theology and Religious Studies,* 4(12), 153–183.

Makarem Shirazi, N. (1993). *Tafsīr Nimūneh*. Tehran: Dār al-Kutub al-Islāmīyyah.

Malik, S. A. (2023). Artificial intelligence and Islamic thought: Two distinctive challenges. *Journal of Islamic and Muslim Studies*. 8(2), 108-115 https://doi.org/10.2979/jims.00020

Mazaheri, M. M. & Ahmadkhan Beigi, K. (2009). Narrative and Qur'anic evidences on human cloning. *The growth of Qur'an education*, (26), 5.

Qarai, A. Q. (2004). *Translation of the Holy Qur'an*. London: ICAS.

Rabbani Golpaygani, A. (2014). *Evidential beliefs* (in Persian). Qom: Ḥājar

Rashīd Riḍa, M. (n.d.). *Tafsīr Al-Manār*. Beirut: Dār Al-Fikr.

Sadat Mansouri, M. (2025). *Theology of artificial intelligence* (in Persian). Qom: Islamic Seminaries Publications.

Ṣadr al-Dīn al-Shīrāzī, M. (1981). *Al-ḥikmah al-muta ʿāliyah fī al-asfār al- ʿaqliyyah al-arba ʿah*. Beirut: Dār al-Iḥyā' al-Turāth al- ʿArabī.

Searle, J. R. (1980). Minds, brains, and programs. *Behavioral and Brain Sciences,* 3(3), 417–424. https://doi.org/10.1017/S0140525X00005756

Shahriari, H. (2018). *Scientific meeting on artificial intelligence from a philosophical perspective*. https://hekmateislami.com/?p=5391

Shareef, O. (2023). *The realizability of strong AI: A deeper look from an Islamic perspective.* Bachelor's thesis, Harvard College.

Sokolovskaya, I. (2021). The artificial intelligence conflictogenicity at Z generation youth educational space. *Professional education in the modern world*, 11(4). https://doi.org/10.20913/2618-7515-2021-4-4

Tabataba'i, M. H. (1996). *Al-Mīzān fī Tafsīr al-Qur ʾān*. Qom: Jāmi ʿah Mudarrisīn.

Tahmasebi, M. (2006). The basic philosophical approaches in artificial intelligence. *Wisdom and Philosophy*, 2(2), 25-47. https://doi.org/10.22054/wph.2006.6672

Tarkhan, Q., & Musavi, S. D. (2024). Artificial intelligence futurology, based on divine laws. *Futures Studies of the Islamic Revolution*, 5(4), 35–63.

Tashakori, A., & Rajabi, M. (2018). Investigating the Power of Artificial Intelligence for Competing with the Human Mind from the Perspective of the Qur'an. *Qoran Shenakht*, 11(2), 05-20.

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A Taxonomy of Digital Business Models with a Focus on Qur'anic Promotion Entrepreneurship

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With the expansion of digital technologies and the increasing use of intelligent platforms and applications, a new space has emerged for promoting Qur'anic concepts. In this context, Qur'anic digital businesses can simultaneously pursue cultural, social, and economic objectives. The present study aims to develop a taxonomy of digital business models focusing on the promotion of the Qur'an with a global and intergenerational perspective. To this end, successful local examples such as *Habl al-Matin* and *Tanin Vahy*, as well as international applications available on Google Play and the App Store, including *Quran Companion, Muslim Pro, Ayat, and Learn Quran Tajwid*, were analyzed. This analysis was conducted based on business model dimensions, including value proposition, target customer, sales channel, and value capture. Subsequently, a conceptual framework comprising several main categories of these models is proposed. This taxonomy can serve as a foundation for the design, evaluation, and targeted support of Qur'anic digital businesses (QDB) with a social orientation, benefiting researchers, cultural policymakers, and religious entrepreneurs.

KEYWORDS: The Qur'an, Faith-Based Entrepreneurship, Qur'anic Content Promotion, Qur'anic Digital Businesses (QDB), Qur'anic Applications, Business Patterns, Intergenerational Digital Engagement.

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1. Introduction

Over the past two decades, digital transformation has profoundly reshaped numerous industries, including the domain of Qur'anic dissemination, education, and lifestyle. One of the most significant outcomes of this transformation has been the emergence of innovative Qur'anic digital business (QDB) applications, which, by leveraging advanced technologies such as artificial intelligence (AI), have fundamentally influenced the entire value chain of Qur'anic content creation, distribution, engagement, and lifecycle adoption (Arner et al. 2020). These applications, by offering innovative services in areas such as digital recitation platforms, intelligent Qur'an-learning systems, personalized interpretation tools, and AI-driven spiritual engagement, have challenged traditional modes of Qur'anic instruction and dissemination, thereby transforming the competitive and participatory structure of the broader Qur'anic digital ecosystem (Kao et al. 2020).

Among the enabling technologies, artificial intelligence (AI) remains a central fulcrum in the transformation of Qur'anic digital ecosystems. By integrating advanced capabilities such as big-data analytics, machine learning (ML), and natural language processing (NLP), AI enhances user-experience technologies, supports on-demand and inference-based service delivery, and drives responsive, context-aware Qur'anic applications. This technological convergence has redefined QDB service models, enabling personalized Qur'anic offerings, improving decision-making workflows, and elevating operational efficiency (Gabor & El-Said 2022).

Recent analyses of technological trends indicate several enabling technologies that are likely to shape the evolution of digital Qur'anic software ecosystems. Advances in AI-driven systems, including agent-based intelligence and edge computing, combined with low-code/no-code development platforms, hold significant potential to facilitate the creation of adaptive, accessible, and locally deployable Qur'anic applications—particularly in settings characterized by limited technical infrastructure or connectivity. Furthermore, emerging immersive interfaces (e.g., AR/XR), real-time data architectures, and privacy-enhancing technologies may enhance user engagement, enable personalized learning experiences, and support responsible data governance. Although these technologies are not yet uniformly implemented across the cases analyzed, they provide a critical contextual framework for anticipating future directions in the development of digital Qur'anic services, subject to empirical validation.

These combined trends illustrate how the evolving technology landscape extends far beyond traditional AI: from edge computing to immersive reality to privacy-first analytics. Within the domain of QDB, leveraging these technologies offers the potential to shift from static digital repositories toward intelligent, adaptive, immersive, and trustworthy platforms of engagement.

In addition to AI-driven analytics and immersive interfaces, recent advancements in interactive and social technologies are redefining the collective dynamics of Qur'anic engagement in the digital era. Conversational AI, voice recognition systems, augmented and mixed reality (AR/MR), gamified learning environments, and adaptive user interfaces have transformed Qur'anic interaction from a static, text-based practice into a participatory and emotionally resonant spiritual experience. Another particularly transformative dimension lies in the integration of social media ecosystems into QDBs. Mosques and Qur'anic centers increasingly maintain official social-media presences, functioning as virtual extensions of their physical communities. These pages not only facilitate Qur'anic education and event coordination but also host virtual Qur'anic circles where users across diverse regions can collectively recite, discuss, and reflect upon Qur'anic meanings.

Moreover, digital platforms now enable jurisprudential interaction by connecting believers with authoritative scholars. Through verified networks and AI-assisted knowledge-extraction tools, users can pose jurisprudential inquiries and receive guidance rooted both in the interpretive perspectives of scholars and in direct Qur'anic textual evidence. This integration promotes transparency, contextual alignment, and accessibility in religious guidance while preserving doctrinal authenticity. Another emerging trend is the incorporation of gamified community features—such as online recitation tournaments, memorization challenges, and interpretive competitions—which further enrich participation by blending spiritual devotion with social engagement. Collectively, these developments illustrate the emergence of an interactive, community-centered, and jurisprudentially integrated Qur'anic digital ecosystem, where spiritual learning, social interaction, and ethical guidance converge within the same digital environment.

Finally, Qur'anic-ecosystem stakeholders—developers, educators, and content creators—should consider not only "which features" but also "which ecosystem of technologies" will underpin next-generation growth. Agentic workflows, immersive experiences, federated learning for low-connectivity users, and ethical governance frameworks all become relevant considerations.

A review of the existing literature reveals that, despite growing scholarly attention to the transformative role of digitalization and new technological applications in QDBs, a comprehensive taxonomy of QDB business models has not yet been developed. In particular, within emerging digital religious economies, the absence of such a taxonomy has hindered the development of a nuanced understanding of how Qur'anic digital platforms can grow and adapt their business and engagement models to local socio-cultural and ethical contexts. Addressing this gap requires the formulation of an indigenous, context-sensitive classification that integrates technological innovation with religious authenticity, cultural appropriateness, and user trust within Qur'anic digital ecosystems.

2. Literature Review

The existing body of research on digital Qur'anic engagement demonstrates an evolving intersection between technology, pedagogy, and social innovation. Over the last decade, scholars have explored diverse approaches to integrating digital tools into Qur'anic education, ranging from mobile learning and gamification to artificial intelligence and mobile-based social media ecosystems. The common objective among these works is to enhance accessibility, interactivity, and the spiritual experience of Qur'anic learning in digital environments. Despite this growing interest, the literature reveals a lack of comprehensive taxonomies that classify these Qur'anic digital businesses within a systematic and comparative framework. The following review synthesizes previous studies according to four thematic clusters: digital Qur'anic learning and mobile applications; design, usability, and gamification; digital exegeses and online Qur'anic ecosystems; and AI-driven and socially oriented digital Qur'anic engagement.

The work of Ibrahim et al. (2013) surveyed the integration of the Qur'an and Arabic language learning into mobile applications for interactive and self-directed learning assistance, particularly within the Malaysian J-QAF education system. Their research found that mobile applications can serve as effective supplementary tools for classroom instruction. The study noted that interactive mobile systems enhance learners' motivation and engagement, especially among primary school students. Ibrahim et al. (2013) also pointed out the need for consistent content validation by qualified scholars to prevent misinterpretation or misuse of Qur'anic texts.

The paper by Adhoni et al. (2013a) presented an initiative to develop a comprehensive online portal and mobile-friendly Qur'an application integrating cloud technology. Their research outlined a system architecture that facilitates cross-platform accessibility and collaborative learning among

users. The study emphasized that cloud computing ensures real-time data synchronization and centralized storage of Qur'anic resources, which supports scalable deployment. In a related publication, Adhoni et al. (2013b) expanded this model into a cloud-based ecosystem for Qur'an dissemination and user engagement, demonstrating how distributed storage and remote access could enable global Qur'anic learning networks.

Elobaid et al. (2014) presented a detailed framework for designing and modeling Qur'an learning applications for Android devices. Their study adopted a user-centered design methodology and proposed specific guidelines for structuring Qur'anic educational content within digital interfaces. The paper emphasized that usability, navigation clarity, and multilingual support are critical factors in ensuring the successful adoption of Qur'anic learning applications.

Ishak et al. (2016) introduced MyQiraat, an interactive mobile application designed for learning and comparing Qur'anic *qirāʾāt* (recitation styles). Their study described the application's database structure, search capabilities, and audio features that allow users to listen to variant readings. The authors found that interactive applications can foster a deeper understanding of phonetic diversity within the Qur'an.

Senan et al. (2017) developed a Qur'an memorization mobile application specifically designed for children with autism, using the takrīr (repetition) technique. Their study combined educational psychology with assistive technology to create an inclusive learning environment. The results revealed that the integration of repetitive auditory stimuli with visual cues substantially improved memorization outcomes among children with special needs.

The study by AlMudara (2017) proposed a mobile application for Qur'an memorization that utilizes adaptive repetition techniques. The paper focused on improving learning outcomes among young users through continuous digital engagement. The research showed that the mobile format, when complemented with auditory and textual features, provides a flexible environment for repetitive recitation and self-evaluation.

The study by Ramli and Yusoff (2018) presented E-Iqraʾ, a mobile application for learning Qur'an recitation using voice-recognition technology. The system analyzed user pronunciation and provided instant corrective feedback. According to their findings, the integration of speech-recognition algorithms improved accuracy and user satisfaction compared with conventional learning methods. The authors concluded that AI-driven speech technology could revolutionize Qur'anic pedagogy by offering personalized, self-paced learning experiences.

A broader exploration of digital interpretation was undertaken by Pink (2019), who examined the transformation of Qur'anic hermeneutics in the age of new media. The author discussed how digital communication platforms reshape interpretive authority and access to knowledge. The paper argued that online environments democratize Qur'anic interpretation by enabling multiple voices and interpretive communities to emerge. However, Pink (2019) cautioned that the decentralization of authority also introduces risks of fragmentation and misinformation in digital religious discourse.

In another line of inquiry, Fanani et al. (2019) conducted a usability evaluation of a mobile-based application for learning Qur'anic writing through gamification. The paper applied heuristic evaluation and user-experience testing to measure learner engagement. According to the findings, gamified design elements, such as rewards, levels, and progress tracking, encouraged consistent participation and improved writing accuracy. Similarly, Bin Abdullah et al. (2019) reported that the TeBook mobile tool for Qur'an memorization was developed as an interactive platform that applies mobile computing to support systematic memorization. Their work described the technical architecture and user interface of TeBook, which provides verse-by-verse repetition, memorization tracking, and user feedback. The study demonstrated that the combination of mobile technologies and pedagogical techniques such as spaced repetition can increase memorization retention rates.

Finally, Buzdar and Farooq (2020) examined Qur'an memorization through mobile applications in the context of transformative marketing. Their research framed Qur'anic learning as a form of value co-creation between developers, educators, and users. The study highlighted how digital Qur'anic platforms can simultaneously pursue educational and social objectives, aligning with broader concepts of social entrepreneurship.

The contributions of Bunt (2021) offered an overview of how the Internet continues to influence Qur'anic scholarship and practice. His study traced the evolution of online Qur'anic engagement from early websites to mobile and social media platforms. Bunt (2021) emphasized that digital technologies not only increase accessibility but also redefine how religious authority and authenticity are negotiated. Similarly, Rippin (2013) discussed the implications and future possibilities of the Qur'an on the Internet, highlighting how digital tools expand interpretive possibilities and reshape pedagogical practices across Muslim communities worldwide.

The paper by Abdah (2024) presented a study on the utilization of mobile applications in supporting Qur'an and Hadith learning among Muslim learners. The author examined how mobile apps enhance accessibility and

self-directed learning, particularly in remote or under-resourced communities. Ali and Isnaini (2024) investigated the digitization of *Tafsir al-Mishbah* within the broader framework of the "living Qur'an." Their study explored how transferring traditional exegesis into digital platforms transforms interpretive engagement. The paper showed that digitization allows users to interact dynamically with exegetical texts through hyperlinks, thematic searches, and multimedia integration.

The work by Rasidin et al. (2025) analyzed Qur'anic interpretation on Instagram, focusing on how traditional methods of *tafsīr* evolve on visual social-media platforms. Their study used content analysis to examine posts, hashtags, and comment interactions that promote Qur'anic messages. The authors found that Instagram functions as a hybrid space where spiritual content, aesthetic expression, and community engagement coexist. According to Rasidin et al. (2025), this shift from textual to visual interpretation fosters a new kind of "*micro-tafsīr*" that appeals to younger audiences but requires mechanisms for theological verification.

Akem et al. (2025) addressed the opportunities and challenges of digital technology in Qur'anic learning, offering a comprehensive perspective on both pedagogical and infrastructural factors. The study discussed issues such as data privacy, technological literacy, and institutional readiness for adopting digital tools. According to Akem et al. (2025), the success of Qur'anic digitalization depends on aligning technological affordances with pedagogical frameworks rooted in Islamic values.

Collectively, these studies illustrate the multidimensional nature of Qur'anic digitalization, encompassing educational, technological, interpretive, and social dimensions. The literature demonstrates a clear evolution from early mobile-learning initiatives to complex AI-driven ecosystems and social-media-based interpretations. However, despite this progress, the reviewed works largely focus on individual applications or specific technological features without systematically categorizing their underlying business models. There remains a critical gap in understanding how Qur'anic digital businesses can be classified based on value propositions, user relationships, and socio-religious objectives. The present study addresses this gap by developing a taxonomy of digital business models for Qur'anic promotion and social entrepreneurship, thereby integrating technological innovation with religious authenticity and cultural context.

3. Research Methodology

This section outlines the research methodology. Given the novelty and

dynamic nature of Qur'an-promotion patterns with a social orientation, the study adopts a mixed qualitative–descriptive approach. This design enables both an in-depth exploration and conceptual richness of the phenomenon, while also providing a foundation for structuring and generalizing the findings. At its core, the methodology is anchored in the systematic development of a taxonomy, constructed through a multiple-case-study analysis. By leveraging multiple data sources and qualitative analytical techniques, the study extracts and validates business model patterns in Qur'anic digital businesses (QDBs).

The rationale for this approach lies in the inherent complexity of promoting Qur'anic concepts in the digital environment. This context encompasses advanced interactive technologies, including emerging trends such as, but not limited to, artificial intelligence; innovative and socially embedded business models; intricate intergenerational social interactions; the entrepreneurial and start-up ecosystem; alignment with jurisprudential principles across different Islamic branches; and, ultimately, the broader economics of Qur'an dissemination and promotion.

A purely quantitative method would not sufficiently capture the depth and qualitative mechanisms of this phenomenon, while an exclusively qualitative approach might lack structured generalizability. Accordingly, the study integrates multiple-case-study analysis to investigate leading fintech firms and taxonomy development to construct a systematic structure for understanding diverse patterns of AI-enabled business models. This combination offers a balanced integration of empirical observation and conceptual structuring.

3.1. Taxonomy and Pattern Development

This study was designed using the iterative approach proposed by Nickerson et al. (2013) and was conducted through four consecutive cycles. Figure 1 provides a summary of the iterative cycles presented in this study. The following section presents the four iterations of this study.

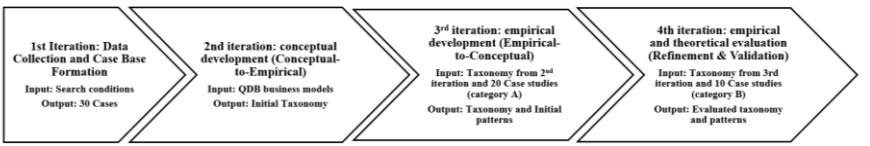

Figure 1. Framework for Business Model Pattern Classification Development Based on Nickerson et al. (2013)

3.1.1. First Iteration: Data Collection and Case Base Formation

Data were collected from the following three sources and stored in a structured database:

- Scholarly sources: To extract initial business model patterns and theoretical frameworks.
- Industry and consulting reports: To gain practical insights, understand market trends, and identify business-oriented challenges.
- Primary sources (websites, official presentations, AI search engines, executive interviews, and specialized podcasts): To obtain direct, up-to-date, and first-hand information from the companies themselves.

In this phase, keywords such as "Qur'an Promotion Business Model," "Qur'an Social Business Model," and "Qur'an Business Model" were searched on the web and via traditional and AI-based scholarly search engines. Reference frameworks, including the Business Model Canvas, as well as specific studies on value-creation patterns in Qur'anic promotion and dissemination mobile-application businesses, were identified, and their key dimensions were extracted to provide a foundation for subsequent analyses.

The unit of analysis in this study was defined as a "business model at the level of QDB" or an independent Qur'an-based product or service unit. The selection criteria for cases were as follows: the application had to meet all four of the following criteria in order to be selected.

1. Qur'anic core: The business had to be fundamentally and centrally based on the Qur'an, leveraging various technologies, including content dissemination and publishing, lifestyle services, interoperability, usage analytics, AI, and machine learning (e.g., natural language processing, computer vision, and predictive models), rather than merely using them as auxiliary tools.
2. Data accessibility: Sufficient and reliable information about various components of the business model had to be available (e.g., via reports, case studies, founder interviews, or company websites).
3. Identifiability and innovation: The company or service had to be recognizable and represent a clear innovation in Qur'anic business model practices.
4. Minimum number of installations: The selected application was required to have a minimum of 500,000 installations across all local and international mobile platforms.

For example, "*Muslim Pro*" is generally considered a lifestyle

application; however, it provides prayer times, a Qibla compass, full Qur'an text and audio, translations in multiple languages, and lifestyle content. For example, data concerning "*Quran Pro*" and its paywalled-content service were collected from academic articles, market analysis reports, and information available on the company's website and official presentations. These sources were then triangulated to construct a comprehensive understanding of its business model. Accordingly, it was selected as an independent analytical unit due to its alignment with the above criteria.

The outcome of this iteration was the formation of a case base of 30 QDBs, shown in Table 1. These cases were randomly divided into two categories:

- Development cases: Including 20 cases, which were used for the initial construction, refinement, and enrichment of the taxonomy.
- Evaluation cases: Including 10 cases, which were not utilized in the development process and were solely reserved for the final validation of the classification.

Table 1. Top Qur'anic applications worldwide. The top three scores in each column are highlighted in gray. Categories indicate first-iteration (A) and second-iteration (B). Download data and ratings are mainly based on Google Play and Apple Store platforms.

	App Name	Android (Download)	Rating	iOS (Download)	Rating	Core Digital Initiative Description	Category
١	Muslim Pro	100M	4.3	580K	4.7	Integrated platform combining recitation, translation, prayer tools, and premium subscription features.	A
٢	Quran Pro	1M	4.8	27.8K	4.8	High-quality curated recitations with multilingual translations and premium audio features.	A
٣	Quranly	1M	4.8	9K	4.9	Gamified daily Qur'an engagement with progress dashboards and habit-forming features.	A
۴	Tarteel	5M	4.7	7.8K	4.8	AI-powered recitation analysis providing real-time feedback for tajwīd accuracy.	A
۵	Quran by Quran.com	50M	4.7	4.3K	4.9	Multi-resource Qur'an interface integrating recitation, translation, *tafsīr*, and advanced search.	A
۶	Quran Majeed	10M	4.6	234K	4.8	Multilingual Qur'an interface with curated recitations and premium personalization tools.	A
٧	Tanin Vahy	200k	200k	-	-	*Tartīl* and Qur'an lifestyle app.	A
8	Islam360	10M	4.8	16.5K	4.8	Comprehensive search-based religious reference integrating Qur'an, *tafsīr*, and Hadith databases.	A
9	WeMuslim	۵۰M	4.٨	1.1K	4.9	Combined Qur'an services with prayer tools and devotional features in a unified platform.	A
10	BeHafizh	500K	4.7	-	-	Gamified memorization with spaced repetition and structured learning paths.	A
11	Bayan	1M	4.6	-	-	Structured learning modules, *tafsīr* lessons, and guided educational content.	A

	App Name	Android (Download)	Rating	iOS (Download)	Rating	Core Digital Initiative Description	Category
12	Habl al-Matin	۶M (Caffe Bazar)	4.7	-	-	Integrated platform combining Qur'an access, interpretive content, and community-based learning.	A
13	Al Quran	10M	4.9	866K	4.9	Simple, accessible Qur'an text with multi-language translations and bookmarking.	A
14	Golden Quran	5M	4.8	168.7K	4.7	Enhanced recitation experience with high-quality audio and personalized interface themes.	A
15	WeMuslim: Athan, Qibla&Quran	50M	4.8	1.1K	4.9	Multi-function worship toolkit integrating Qur'an recitation with athan and qibla features.	A
16	MyQuran Indonesia Lite	10 M	4.9	3.9 K	4.9	Resource-efficient Qur'an reader tailored for Indonesian users with offline access.	A
17	Ayah	5M	4.8	97.5K	4.8	High-fidelity Qur'an interface emphasizing readability, precision, and curated study tools.	A
18	Quran noor	١M	4.8	12K	4.5	Provides multi-language access to the *Mushaf*	A
19	Qibla Connect: Qibla Direction	5M	4.6	18.2K	4.7	Utility-focused application providing accurate qibla direction, prayer times, and lightweight Qur'an access.	A
20	Quran for Android	50M	4.7	-	-	Open-source Qur'an reader emphasizing authenticity, offline access, and community-driven translations.	A
21	iQuran Lite	1M	4.6	22K	4.8	Minimalist Qur'an reader optimized for low-resource devices with essential navigation and translation features.	B
22	Islam: The Noble Quran	10M	4.8	-	-	Text-centric Qur'an application focusing on clear *Mushaf* presentation and classical translations.	B
23	Holy Quran	5M	4.7	140K	4.6	Basic Qur'an reading app offering offline *Mushaf* access and standard recitation support.	B
24	Quran with Urdu Translation	10M	4.8	15K	4.5	Qur'an reader specialized for Urdu-speaking users with synchronized translation and *tafsīr* excerpts.	B
25	Holy Quran with Tafsir	5M	4.7	95K	4.6	Integrated Qur'an and *tafsīr* platform enabling verse-level interpretive study.	B
۲۶	Panduan Muslim	10M	4.7	-	-	Comprehensive Islamic guide including Qur'an access, prayer times, qibla direction, and devotional content for Indonesians.	B
27	MyQuran AlQuran dan Terjemahan	10M	4.9	3.9K	4.9	Localized Qur'an application providing Bahasa Indonesia translation, *tafsīr* summaries, offline access, and lightweight performance optimized for mass adoption.	B
28	Al Quran Indonesia	50M	5	-	-	Widely adopted Indonesian Qur'an app offering *Mushaf* text, official Bahasa Indonesia translation, audio recitations, and offline reading capabilities.	B
۲۹	Al Quran Bengali	2.6M	4.9			Comprehensive Bengali Qur'an reader with multiple reciters, color-coded *tajwīd*, prayer times, qibla direction, bookmarks and audio download features.	B
۳۰	Quran For Kids, *Tarteel* — NOOR	1M	4.5	-	-	Interactive, adventure-based Qur'an learning for ages ~6–12 that uses quests and gamified lessons to teach basic Qur'anic reading and concepts.	B

3.1.2. Second Iteration: Conceptual Development (Conceptual-to-Empirical)

The taxonomy was developed through three iterations. The first iteration

followed a conceptual-to-empirical approach, in which the dimensions and characteristics of Qur'an-promotion digital business models were derived from the literature. Drawing on prior findings on business models and Qur'an promotion, as outlined in the related work section, six dimensions were identified, each comprising between two and nine characteristics, based on the analysis of 20 academic papers. A summary of the results is shown in Table 2. At this stage, by drawing on the systematic literature in the fields of the Qur'an, content, and digitalization, the theoretical foundations of the framework were established.

The key components of the business model for analysis were derived from Osterwalder's business model, including:

- Target Customer: older end-users, adult end-users, child end-users, Qur'anic institutions, Qur'an education centers, etc.
- Value Proposition: automation, predictive insights, for example, the recommendation of reciting Surah al-Jumuʿah and al-Munāfiqūn on Fridays, and personalized user experience.
- Value Capture: Revenue mechanisms (subscription-based models [SaaS], pay-per-transaction, success fees in competitions, etc.).

Table 2. Second iteration of Qur'an promotion business model dimension characteristics.

Meta-Dim.	Dimensions	Question	Characteristics
Target Customers (Who)	Market	To which market does the QDB sell?	B2B (10), B2C (30), B2S (Scholars) (6), B2C2C (Customer2Consumer) (2), B2Kids (1), B2LocalC (9)
Value Proposition (What)	Product/Service	What product or service is offered to customers?	Product (30), Service (1), PSS (3)
	Value Proposition	What value does the QDB offer?	Total solution provider (14), Customization (8), Cost efficiency (11), Access/facilitation (30), Time savings (18), Transparency (15), User experience (9), Gamified *ḥifẓ* and competition (5), Advanced in-depth study (3)
Value Capture (Why)	Revenue Model	How does the QDB generate revenue from its value proposition?	Advertisement (5), Donations (16), Licensing (13), Usage fee (15), Subscription (14)
	Payer	Who ultimately pays?	Consumer (10), Customer (17), Third party (4)
	Pricing	What are the main pricing mechanisms?	Pay-per-use (3), Fixed price (17), Free (20), Freemium (in-app purchase) (14)

3.1.3. Third Iteration: Empirical Development (Empirical-to-Conceptual)

The initial framework derived from the first cycle was applied to real-world cases of Qur'an-focused companies. Data from each case were coded

and subsequently compared to identify similarities and differences. A qualitative clustering technique was employed to group similar cases, and the main super-patterns as well as the associated sub-patterns were extracted. This cycle led to the refinement of the framework and the addition of new dimensions.

The study adopted an empirical-to-conceptual approach by applying the taxonomy developed in the first iteration to 12 Category A case studies. A case was randomly selected, and qualitative structured data analysis was performed (Miles et al. 2013). Case information was coded using empirically derived characteristics through within-case analysis (Yin 2014). Each case was then classified within the taxonomy, and, when necessary, additional characteristics and dimensions were incorporated until all cases were represented.

To extract Qur'an-related business models (BMs), the taxonomy was applied to the 12 cases through within-case analysis (Yin 2014). It was observed that some cases did not adhere to a single business model but employed a combination of multiple models. Consequently, more than one characteristic per dimension could apply to each BM innovator, diverging from the approach of Nickerson et al. (2013). For enhanced clarity and practical applicability, a second qualitative cluster analysis was conducted using these six patterns to inductively generate overarching patterns. This procedure resulted in three super-patterns, each encompassing shared characteristics of their underlying sub-patterns. In total, nine patterns were identified: three super-patterns and six underlying sub-patterns.

For example, in an empirical analysis of *Muslim Pro*, it was observed that freemium subscription models with outcome-based incentives function as a key revenue mechanism. Premium features, such as ad-free usage, advanced prayer reminders (*Tahajjud*, or night prayer, etc.), or personalized content, are unlocked only after subscription, providing measurable value to users in terms of convenience and engagement. Furthermore, accountability and transparency in AI-driven features, such as prayer time calculations, Qur'anic verse recommendations, and Hijri calendar adjustments, were identified as critical dimensions for governance, ensuring users can understand and trust the application's algorithmic outputs.

3.1.4. Fourth Iteration: Empirical and Theoretical Evaluation (Refinement and Validation)

In the final iteration, the framework underwent a comprehensive validation process to establish its academic rigor and practical relevance. This stage integrated empirical testing, theoretical assessment, and

benchmarking against established business model patterns to refine its structure and enhance its explanatory and prescriptive power.

- Empirical validation: Application of the framework to six new Category B case studies in order to assess its descriptive accuracy and explanatory power.
- Theoretical validation: Evaluation of completeness, robustness, and comprehensibility through structured focus group discussions with academic experts and industry practitioners.

4. Findings

The 30 selected QDBs exhibit diverse business models. Table 1 provides a summary of the services offered by these cases.

4.1. Taxonomy for QDB Models

The taxonomy derived for Qur'anic Digital Business Models (QDBMs) comprises three meta-dimensions and six constitutive dimensions, represented by a set of 28 distinct and recurring characteristics (see Table 4). 28 characteristics mirror established digital business model patterns, while others reflect domain-specific requirements unique to Qur'an-centered platforms. Complete QDBMs emerge as combinations of these characteristics, meaning that not every characteristic is novel on its own; rather, the novelty arises from their specific configuration and interaction within the Qur'anic digital context. Collectively, these characteristics form a comprehensive structure capable of capturing the functional, educational, cultural, and spiritual purposes that distinguish QDBMs from general-purpose digital services.

4.2. Business Model Patterns for Qur'anic Digital Platforms

The cross-case synthesis of the examined applications reveals three super-patterns and multiple sub-patterns that collectively characterize emerging Qur'anic Digital Business Models (QDBMs). These patterns reflect recurring configurations of value proposition logic, customer segment focus, and revenue mechanisms. The super-patterns demonstrate how contemporary Qur'anic platforms differentiate themselves through the integration of multiple services, the personalization of learning experiences, the cultural and lifestyle expansion of Qur'anic engagement, or mission-

driven accessibility models. The identified patterns are summarized in Figure 2, with further explanatory details provided in Table 3 and Table 4.

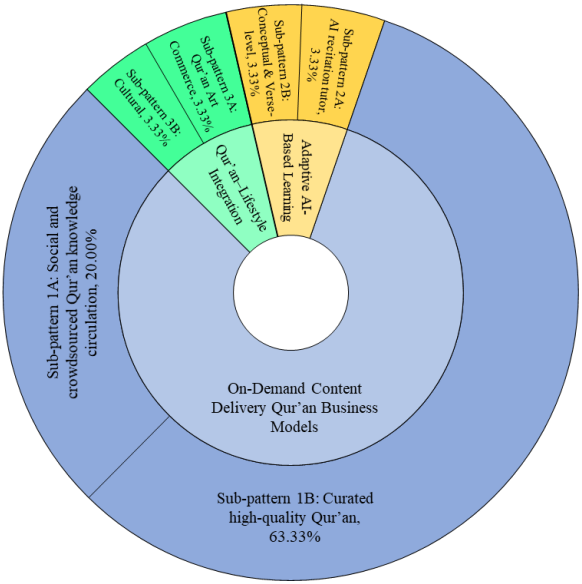

Figure 2. Sunburst taxonomy of business model patterns for Qur'an promotion. The first inner layer shows three super-patterns, and the second layer shows six sub-patterns and their respective percentages of all sub-patterns.

Table 3. Business model patterns for Qur'an promotion

	Super Pattern	Patterns	Sub-patterns
1	On-Demand Content Delivery Qur'an Business Models	Pattern 1A: Social and crowdsourced Qur'an knowledge circulation	Sub-pattern 1B1: International-oriented representation
		Pattern 1B: Curated, high-quality Qur'an content selection & representation	Sub-pattern 1B2: Niche-oriented representation
2	Adaptive AI-based personalized learning: Individualized Qur'an learning paths	Pattern 2A: AI recitation tutor (digital *tajwīd* coach)	–
		Pattern 2B: Conceptual and verse-level understanding support	–
3	Qur'an–lifestyle integration: Aesthetic & cultural extensions of Qur'anic engagement	Pattern 3A: Qur'an art commerce	–
		Pattern 3B: Cultural extensions of Qur'an content	–

4.2.1. Super Pattern 1: On-Demand Content Delivery Qur'an Business Models

Platformization QDBMs consolidate diverse Qur'an-related services within a single digital architecture. These business models are defined not by the introduction of entirely new content, but by the integration and interconnection of multiple value-adding content components, such as recitation, translation, interpretation, search, bookmarking, and multilingual capabilities, into a coherent user experience. This super-pattern combines a platform-centric value proposition, a broad customer base, and mixed revenue streams, including freemium access, subscription models, and marketplace commissions.

4.2.1.1. Pattern 1A: Social and crowdsourced Qur'an knowledge circulation

This sub-pattern incorporates community-generated knowledge into the platform's value proposition. Users, including both general audiences and specialists, contribute interpretations, reflections, and metadata. The customer segments are therefore two-sided, and revenue is often based on voluntary contributions or freemium access tiers. This aligns with crowdsourced knowledge models observed in other digital ecosystems. In some cases, this sub-pattern emphasizes free and equitable access to Qur'anic resources, often motivated by faith-based and socially oriented objectives. The value proposition includes interactive memorization tools, gamified challenges, and community-based learning structures, including the organization of interactive competitions in mosques and similar community spaces. Given its broad societal focus, the customer base spans children, teenagers, and adults alike. Revenue models are generally grounded in donations, NGO funding, or hybrid social-enterprise logic, occasionally supplemented by small-scale microtransactions or outcome-based services. This sub-pattern highlights the role of social motivation, community engagement, and gamified learning loops, aligning spiritual objectives with contemporary digital engagement mechanisms.

4.2.1.2. Pattern 1B: Curated, high-quality Qur'an content selection and representation

This sub-pattern emphasizes content curation and representational excellence as its core value proposition. QDBMs in this sub-pattern carefully select reciters, script styles, translators, and interpreters, while ensuring accurate linkage of each resource to the corresponding verses. Functional enhancements, such as rapid search tools, diverse and aesthetically refined fonts for text and translation, personalized recitation

pace adjustment, multilingual support, and detailed progress tracking and marking for daily study, further strengthen the offering. The customer base is broad, ranging from casual readers to daily reciters, while revenue models typically blend subscription income with gift-enabled subscription options. The emphasis here is not on new products but on superior orchestration of existing Qur'anic resources to maximize usability and user experience.

4.2.1.2.1. Sub-pattern 1B1: International-oriented representation

This sub-pattern primarily comprises content distribution models designed for global accessibility. Applications in this category offer standardized, language-diverse Qur'anic content intended for use by a wide international audience, regardless of geographic or cultural context. The emphasis is placed on universality, scalability, and broad linguistic coverage, enabling widespread adoption across different regions and user demographics.

4.2.1.2.2. Sub-pattern 1B2: Niche-oriented representation

This sub-pattern includes content distribution models tailored to specific linguistic, cultural, or user-group preferences. Typical examples include mobile Qur'anic applications localized for highly populated Muslim countries, such as Pakistan, Indonesia, and Iran, developed in native languages and aligned with local reading traditions. Additionally, this category encompasses specialized applications designed for distinct user segments, including children-oriented Qur'anic learning platforms, as well as tools intended for advanced study and in-depth analysis by religious scholars, theologians, philosophers, and researchers in Islamic studies. The defining characteristic of this sub-pattern is its targeted approach, prioritizing relevance and depth over broad generalization.

4.2.2. Super Pattern 2: Adaptive AI-Based Personalized Learning: Individualized Qur'an Learning Paths

AI-driven QDBMs revolve around the creation of personalized and adaptive learning experiences, enabling users to achieve precise skill development in recitation and comprehension. The value proposition centers on real-time feedback, adaptive difficulty adjustment, and machine-learning-based profiling. The primary customer segments include committed learners and reciters, while the dominant revenue logic resembles educational SaaS models, particularly subscription-based structures and premium add-on features.

4.2.2.1. Pattern 2A: AI recitation tutor (digital tajwīd coach)

This sub-pattern provides real-time audio analysis and corrective

feedback, effectively functioning as a digital *tajwīd* instructor. The value proposition is accuracy-oriented and feedback-rich; customer segments include dedicated learners and semi-professional reciters; and premium subscriptions typically underpin the revenue model.

4.2.2.2. Pattern 2B: Conceptual and verse-level understanding support

This sub-pattern focuses on comprehension rather than recitation. The value proposition includes instant conceptual clarification, *tafsīr* suggestions, and verse-linked narrative or contextual identification. Users are primarily knowledge-oriented learners, and monetization commonly relies on subscription-based access to premium interpretive tools.

4.2.3. Super Pattern 3: Qur'an–Lifestyle Integration: Aesthetic and Cultural Extensions of Qur'anic Engagement

The third super-pattern expands Qur'anic engagement beyond textual interaction into lifestyle-embedded experiences, emphasizing cultural, aesthetic, and artistic value creation. Rather than positioning the Qur'an solely as content to be consumed, these platforms transform it into an integrated component of a user's daily cultural and aesthetic life. The value proposition centers on artistic representations of verses—such as digital calligraphy, personalized artwork, poetry-linked verse experiences, posters, and customizable visual themes. Customer segments primarily include lifestyle-oriented users, art enthusiasts, younger audiences, and religious-art communities. The revenue model reflects typical long-tail economics, including niche art sales, commissions on custom orders, and digital artwork monetization.

4.2.3.1. Pattern 3A: Qur'an art commerce

This pattern represents marketplaces for Qur'an-inspired artistic products. The value proposition is built on verse-based artwork; customer segments consist of art lovers and niche cultural buyers; and revenue stems from direct sales or platform commissions.

4.2.3.2. Pattern 3B: Cultural extensions of Qur'an content

This sub-pattern enriches Qur'anic engagement through the integration of poetry, literature, and historical narratives associated with specific verses. Users are typically youth and culture-oriented audiences seeking interpretive depth and artistic inspiration. Monetization is frequently achieved through premium content access or subscription offerings.

Table 4. Relation of QDBs and business model patterns

	Super pattern	On-Demand Content Delivery Qur'an business models			Adaptive AI-based personalized learning		Qur'an-lifestyle integration	
	Pattern / QDBs	pattern 1A: Social and crowdsourced Qur'an knowledge circulation	pattern 1B: Curated, high-quality Qur'an content selection and representation — Sub-pattern 1B1: International-Oriented Representati	pattern 1B: Curated, high-quality Qur'an content selection and representation — Sub-pattern 1B2: Niche-Oriented Representation	pattern 2A: AI recitation tutor (Digital *Tajwīd* coach)	pattern 2B: Conceptual and verse-level understanding support	pattern 3A: Qur'an art commerce	pattern 3B: Cultural extensions of Qur'an content
١	Muslim Pro		*					
٢	Quran Pro		*					
٣	Quranly	*						
٤	Tarteel	*						
٥	Quran by Quran.com		*					
٦	Quran Majeed		*					
7	Tanin Vahy						*	*
8	Islam360		*					
9	WeMuslim	*						
10	BeHafizh				*			
11	Bayan					*		
12	Habl al-matin		*					
13	Al Quran		*					
14	Golden Quran		*					
15	WeMuslim: Athan, Qibla&Quran	*						
16	MyQuran Indonesia Lite			*				
17	Ayah	*						
18	Quran noor		*					
١٩	Qibla Connect: Qibla Direction		*					
٢٠	Quran for Android		*					
٢١	iQuran Lite		*					
٢٢	Islam: The Noble Quran		*					
٢٣	Holy Quran		*					
٢٤	Quran with Urdu Translation			*				
٢٥	Holy Quran with Tafsir			*				
٢٦	Panduan Muslim			*				
٢٧	MyQuran AlQuran dan Terjemahan		*					
٢٨	Al Quran Indonesia			*				
٢٩	Al Quran Bengali			*				
٣٠	Quran For Kids, Tarteel—NOOR			*				

5. Conclusion

QDBs have become a central medium through which contemporary Muslim societies, especially younger generations, engage with the Qur'an, learn it, and integrate its guidance into their daily lives. However, despite their widespread use, their development costs necessitate underlying sturdy, robust, and sustainable business model configurations that shape the structure, priorities, and long-term viability of these platforms, which have remained largely unexplored. By examining seventeen leading Qur'anic digital mobile platforms and applying a structured taxonomy-building approach, this study identifies the core strategic logics that govern how these applications create, deliver, and capture value within religiously sensitive digital ecosystems.

The cross-case analysis is organized around three foundational business model components, including value proposition, customer segments, and value capture. Three main super-patterns are extracted: on-demand content delivery, adaptive AI-based personalized learning, and Qur'an–lifestyle integration. The first and most dominant pattern illustrates that curated, high-fidelity Qur'an delivery, through careful selection of reciters, scripts, translations, and multilingual interfaces, remains the backbone of most QDBs. The second pattern demonstrates how advancements in artificial intelligence are transforming recitation training and conceptual understanding, enabling unprecedented levels of personalized learning. Finally, the third, emerging pattern shows that Qur'anic engagement is expanding beyond textual interaction toward aesthetic, cultural, and lifestyle-embedded experiences, which in some cases extend to physical artifacts and demonstrate O2O (online-to-offline and offline-to-online) user behaviors.

These patterns collectively reveal several structural dynamics within the Qur'anic digital ecosystem. First, QDBMs negotiate a continuous balance between authenticity and innovation, ensuring textual and recitational accuracy while leveraging state-of-the-art technologies. Second, they accommodate diverse user groups, from casual readers to scholars, illustrating that spiritual digital engagement is inherently multi-segmented. Third, revenue models exhibit significant heterogeneity, ranging from freemium and subscription models to donation-funded and long-tail art-commerce strategies, confirming that QDBMs operate within both commercial and faith-based paradigms.

The findings of this study allow for the articulation of a three high-level framework for understanding and guiding the development of Qur'anic digital platforms. At the content level, platforms must ensure rigorous authenticity, high-quality representation, and pedagogically sound structuring of Qur'anic material. At the technological level, developers should align system architecture with personalization capabilities, multilingual access, and secure, ethically compliant data practices. At the strategic level, stakeholders should adopt business models that balance sustainability with spiritual mission—combining transparent monetization mechanisms with the broader objective of facilitating meaningful Qur'anic engagement and ensuring long-term business model resilience under changing economic conditions.

Finally, this study provides the first comprehensive, empirically grounded mapping of business model patterns in Qur'anic digital applications. By illuminating their strategic configurations and operational logics, the research offers both a conceptual foundation and practical guidance for developers, policymakers, and religious institutions seeking to design future-ready Qur'anic digital ecosystems that are authentic, accessible, and sustainable.

Declarations

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References

Abdah, C. (2024). The The Utilization of Mobile Applications in Supporting Quran and Hadith Learning. *International Conference on Islamic Studies (ICIS)*.

Adhoni, Z.A., Al Hamad, H., Siddiqi A.A., and El Mortaji L. (2013a). Towards a comprehensive online portal and mobile friendly qur'an application. *2013 Taibah University International Conference on Advances in Information Technology for the Holy Quran and Its Sciences, IEEE*. https://doi.org/10.1109/NOORIC.2013.38

Adhoni, Z.A., Al Hamad, H., Siddiqi A.A., and Parvez, M. (2013b). Cloud-based online portal and mobile friendly application for the Holy Qur'an. *Life Science Journal*, 10(12), 524-538.

Akem, U., Hamdan, N.M., Iskandar, M.Y., Efendi, E., and Halimahturrafiah, N. (2025). Digital Technology in Quranic Learning: Opportunities and Challenges. *Journal of Quranic Teaching and Learning*, 1(2), 49-64.

Ali, R. and Isnaini S. N. (2024). Digitising interpretation: Transforming Tafsir Al-Mishbah in the context of the living Quran. *Jurnal Studi Ilmu-ilmu Al-Qur'an dan Hadis*, 25(1), 1-23. https://doi.org/10.14421/qh.v25i1.5186

AlMudara, S. B. (2017). Quran memorization using mobile app. *American Journal of Educational Research*, 5(6), 620-622.

Bin Abdullah, M.H., Aziz, Z.A., Rauf, R.H.A., Shamsudin N., and Latiff, R.A. (2019). TeBook A Mobile Holy Quran Memorization Tool. *2nd International Conference on Computer Applications & Information Security (ICCAIS)*, Riyadh, Saudi Arabia. https://doi.org/10.1109/CAIS.2019.8769472

Bunt, G. R. (2021). The Qur'an and the Internet. In *The Routledge Companion to the Qur'an*, Routledge.

Buzdar, A. Q. and Farooq, M. (2020). Memorization of Quran through Mobile Application in the Era of Transformative Marketing. *Pakistan Journal of Social Science*, 40(2), 689-698.

Elobaid, M., Hameed, K., and Eldow, M. E. Y. (2014). Toward designing and modeling of Quran learning applications for android devices. *Life Science Journal*, 11(1), 160-171.

Fanani, L., Brata, K.C., Brata, A.H., and Fauzi, M.A. (2019). Usability evaluation of mobile-based application for Al-Quran writing learning with gamification. *2019 International Conference on Sustainable Information Engineering and Technology (SIET), IEEE*. Lombok, Indonesia. https://doi.org/10.1109/SIET48054.2019.8986123

Ibrahim, N.J., Razak, Z.B., Idris, M.Y., Yusoff, Z.B., Noor, N.M., Tamil, E.M., and Rahman, N.N. (2013). Mobile Application of Al-Quran and Arabic Language for Interactive and Self Learning Assistant for support in j-QAF Learning: A Survey. *Seminar Kebangsaan Penyelidikan j-QAF*.

Ishak, S.F., Zaki, Z.M., Mohamad, K.A., Bahrin, M.A.M., Roni N.H.A., and Musa, M.A. (2016). MyQiraat: An interactive Qiraat mobile application. *2016 4th International Conference on User Science and Engineering (i-USEr), IEEE*. https://doi.org/10.1109/IUSER.2016.7857930

Nickerson, R. C., Varshney, U., & Muntermann, J. (2013). A method for taxonomy development and its application in information systems. *European Journal of Information Systems*, *22*(3), 336–359. https://doi.org/10.1057/ejis.2012.26

Pink, J. (2019). *Interpreting the Qur'an Today: Between Tradition and New Media*, OASIS.

Ramli, R., and Yusoff, Y. (2018). E-Iqra': Mobile application for learning AL-Quran using voice recognition. *Advanced Science Letters*, 24(3), 1666-1669. https://doi.org/10.1166/asl.2018.11133

Rasidin, R., Nurfadliyati, N., Syam, M.M., Taufik, T., and Ilham, M. (2025). Qur'anic Interpretation on Instagram: The Shift from Traditional to Digital

Platforms in Indonesia. *TAJDID: Jurnal Ilmu Ushuluddin*, 24(1), 376-406. https://doi.org/10.30631/tjd.v24i1.642

Rippin, A. (2013). The Qur'ān on the Internet: Implications and Future Possibilities. In: Hoffmann, T., Larsson, G. (eds). *Muslims and the New Information and Communication Technologies*. Springer. https://doi.org/10.1007/978-94-007-7247-2_7

Senan, N., Ab Aziz, W.A.W., Othman, M.F., and Suparjoh, S. (2017). Embedding repetition (Takrir) technique in developing Al-Quran memorizing mobile application for autism children. *MATEC Web of Conferences,* 135, 00076. https://doi.org/10.1051/matecconf/201713500076

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Assessing Opportunities for Nocturnal Worship Based on Surah al-Muzzammil Using Data Envelopment Analysis (DEA)

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ABSTRACT:

Original Paper

This article aims to identify the most spiritually favorable nights of the year for believers and the optimal timing for nightly devotion to God by employing the Data Envelopment Analysis (DEA) technique. Given the emphasis on nocturnal worship in *Surah al-Muzzammil*, this study explores the relationship between the length of night and the opportunities it provides for worship. Using DEA, the nights of the year are evaluated based on the duration of night and environmental conditions in order to determine those nights that offer the greatest potential for devotion and supplication. In addition to temporal variables, nocturnal temperature is also considered as an influential factor in this evaluation. DEA serves here as an analytical tool for comparative performance assessment, facilitating the identification of nights with the most favorable conditions for nighttime worship. In the methodological section, two scenarios are implemented. The first scenario constructs a composite index based on the interval between the religious midnight (half of the canonical night) and *fajr* (dawn), as well as between *fajr* and sunrise. The second scenario applies the Fair Model (KA) and the AP Model with three indices: the interval from the religious midnight to *fajr*,

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from *fajr* to sunrise, and the temperature index. For more precise evaluation, the AP and KA models are also executed for the first scenario. The findings of this research can assist believers in planning their nocturnal worship during the most spiritually advantageous periods of the night.

KEYWORDS: The Qur'an, *Surah al-Muzzammil*, Data Envelopment Analysis (DEA), Nighttime worship, *al-layl*, Religious midnight.

1. Introduction

Religion, as a comprehensive system of beliefs, ethics, and regulations responsible for organizing human society and nurturing human beings (Javadi Amoli 1992), places special emphasis on worship as the means of attaining the highest spiritual and material ranks. From this perspective, the type and quality of worship deeply affect every individual and social matter. *Surah al-Muzzammil* emphasizes such concepts as nocturnal, Qur'anic recitation, patience, and social responsibility. Pedagogically, it embodies profound teachings that may serve as a framework for a spiritual-ethical lifestyle in the modern world. Scholars have defined worship as the utmost form of humility and obedience (al-Fayyūmī 1993, 2: 142; al-Zabīdī 1993, 2: 410), a deliberate act oriented toward divine proximity and the sanctification of God's majesty (Baḥrānī 1984, 2: 177).

Nightly worship (*al-tahajjud*) is among the most significant rituals to which followers of all revealed religions have been invited. It is a form of worship accompanied by seeking forgiveness and reciting the Qur'an (Ibn Manẓūr 1994, 3: 432). The Qur'an calls all believers to nocturnal devotion in nineteen verses (Q. 3:17, 113; 17:79; 25:64; 32:16–17; 20:130; 39:9; 51:17–18; 52:48; 73:2–4, 6, 20; 76:25–26; 89:2). The significance of the night is explicitly mentioned in over twenty Qur'anic verses, and those who spend the night in devotion are highly praised. God Almighty declares: "*And keep vigil for a part of the night, as a supererogatory [devotion] for you. It may be that your Lord will raise you to a praiseworthy station*" (Q. 17:79). Similarly, the verse Q. 25:64 refers to the servants who comprehend the sanctity of the night and dedicate themselves to nocturnal devotion (Kāshānī 1985, 6: 391): "*Those who spend the night for their Lord, prostrating and standing [in worship]*" (Q. 25:64). Moreover, in verse Q. 32:16-17, God praises the devout: "*Their sides vacate their beds to supplicate their Lord in fear and hope, and they spend out of what We have provided them. No one knows what has been kept hidden for them of comfort as a reward for what they used to do*". The night-watchers have been promised a joyful delight. From the commentators' perspective, this "joyful delight" denotes a form of blessing and exaltation that represents the fulfilment of human longing, bringing great pleasure to the beholder (al-Ṭabrisī 1993, 8: 518).

God Almighty, in the verse Q. 76:26, commands: "*And worship Him for a watch of the night and glorify Him the night long.*" Exegetes have understood this verse as a recommendation for nocturnal worship, especially during long nights. According to commentators, the description of *layl* (night) as *ṭawīl* (long) is explanatory, not restrictive, that is, it does not imply that short nights should be excluded from nocturnal glorification. The term *al-tasbīḥ* (glorification) here denotes the night prayer (*ṣalāt al-layl*) (Tabataba'i 1973, 20: 141). This notion is reaffirmed in Q. 51:17: "*They used to sleep a little during the night.*" As al-Zamakhsharī (1994, 4: 116) observes, this verse employs multiple emphatic expressions: the very word *hujūʿ* implies avoidance of sleep, while the modifiers *qalīlan* (a little) and *mina al-layl* (of the night) both intensify the sense of minimal sleep. The addition of *mā* further amplifies the expression, depicting the believers as those who strive to remain awake for night prayer. Similarly, verse Q.52:49 commands: "*And also glorify Him during the night and at the receding of the stars.*" Here again, *al-tasbīḥ* signifies nocturnal worship.

Exegetes agree that in the opening verses of *Surah al-Muzzammil*, the Prophet Muḥammad (PBUH) and, by extension, the early Muslim community, is commanded to engage in nightly devotion for a considerable portion of the night, accompanied by *tartīl* of the Qur'an, that is, recitation combined with contemplative reflection on its meanings. This injunction is understood as a formative command during the earliest phase of prophet hood, intended to prepare the Prophet spiritually for the reception of divine revelation (Tabataba'i 1973, 10: 575). *Surah al-Muzzammil* is among the gradually revealed chapters of the Qur'an, consisting of two distinct revelations: verses 1–19 form a cohesive unit, while verse 20 was revealed later. Evidence for this includes the linguistic and thematic coherence of verses 1–19, their consistent syntactic structure (connected pronouns, conjunctions, and emphatic particles such as *inna*) and unified focus on nocturnal devotion, in contrast to verse 20, which is syntactically and thematically independent. The latter begins with *inna*, a particle typically used to introduce independent sections or chapters (al-Darwazah 2004; Nekounam 2001). In verse Q. 73:20, God declares:

إِنَّ رَبَّكَ يَعْلَمُ أَنَّكَ تَقُومُ أَدْنَى مِنْ ثُلُثَيِ اللَّيْلِ وَنِصْفَهُ وَثُلُثَهُ وَطَائِفَةٌ مِنَ الَّذِينَ مَعَكَ وَاللَّهُ يُقَدِّرُ اللَّيْلَ وَالنَّهَارَ عَلِمَ أَنْ لَنْ تُحْصُوهُ فَتَابَ عَلَيْكُمْ فَاقْرَءُوا مَا تَيَسَّرَ مِنَ الْقُرْآنِ عَلِمَ أَنْ سَيَكُونُ مِنْكُمْ مَرْضَى وَآخَرُونَ يَضْرِبُونَ فِي الْأَرْضِ يَبْتَغُونَ مِنْ فَضْلِ اللَّهِ وَآخَرُونَ يُقَاتِلُونَ فِي سَبِيلِ اللَّهِ فَاقْرَءُوا مَا تَيَسَّرَ مِنْهُ وَأَقِيمُوا الصَّلَاةَ وَآتُوا الزَّكَاةَ وَأَقْرِضُوا اللَّهَ قَرْضًا حَسَنًا وَمَا تُقَدِّمُوا لِأَنْفُسِكُمْ مِنْ خَيْرٍ تَجِدُوهُ عِنْدَ اللَّهِ هُوَ خَيْرًا وَأَعْظَمَ أَجْرًا وَاسْتَغْفِرُوا اللَّهَ إِنَّ اللَّهَ غَفُورٌ رَحِيمٌ (المزمل/20)

> *Indeed your Lord knows that you stand vigil nearly two thirds of the night or [at times] a half or a third of it along with a group of those who are with you. Allah measures the night and the day. He knows that you cannot calculate it [exactly], and so He was lenient toward you. So recite as much of the Qur'an as is feasible. He knows that some of you will be sick, while others will travel in the land seeking Allah's grace, and yet others will fight in the way of Allah. So recite as much of it as is feasible, and maintain the prayer and pay the zakat and lend Allah a good loan. Whatever good you send ahead for your souls you will find it with Allah [in a form] that is better and greater with respect to reward. And plead to Allah for forgiveness; indeed Allah is all-forgiving, all-merciful (Q.73:20).*

According to exegetes, the particle *faʾ* in the phrase *fa-qraʾū* indicates that this mitigation (*al-takhfīf*) arises directly from God's awareness of human difficulty in calculating the night's precise divisions. The easing of the command broadens the scope of participation in nocturnal worship, allowing each believer to worship according to personal capacity. It does not, however, abrogate the earlier prescription of spending one-third, half or less than two-third of the night in prayer for those capable of such endurance, since "*Allah does not task any soul beyond its capacity*" (Q. 2:286). Moreover, in the verse the Prophet confirmed himself and a group of believers who used to keep vigil for one-third, half, or less than two-thirds of the night and were able to maintain these measures. Therefore, the impossibility of observing this degree of night-worship is attributed to the general public, including those who did not engage in night devotion, and those who did. On this basis the obligation was mitigated in such a way that the duty itself remained for those who were able to perform it, while a more lenient level was rendered practicable for everyone. Hence the injunction, "*recite as much of the Qur'an as is feasible*" (Q. 73:20) and the practice of night-worship, whether at its maximum degree or at its minimum (reciting an attainable portion of the Qur'an), is recommended for all believers (Tabataba'i 1973, 20: 75).

In this way, the exhortation to nocturnal devotion signifies the importance of spiritual discipline, avoidance of indulgence, and ritual orderliness. Moreover, the reference in the same verse to *"maintain the prayer and pay the zakat*" and *"others will fight in the way of Allah"* reveals that individual worship is incomplete without social engagement. The gradual revelation of the surah demonstrates the Qur'anic principle of progressive spiritual training. The surah begins with personal spiritual cultivation through nocturnal devotion and later extends to social responsibilities such as *al-jihād* and *al-zakāt*. This progression mirrors the divine pedagogy that aligns religious duty with human capacity. By invoking the principle of *al-taysīr* (facilitation), the Qur'an presents a

pedagogical model harmonious with human nature and capability. God, acknowledging human limitations such as fatigue, worldly duties, and differing capacities, modulated the command of nightly worship to a level attainable by all. The adjustment from "the entire night" to "whatever is easy" prevents spiritual burden and fosters sustainable devotion.

From the authors' perspective, applying the principle of *al-taysīr* (ease and flexibility in divine injunctions) to the identification of realistic opportunities for nightly worship is of great significance. By moderating this command, the Qur'an teaches that worship should not be conceived as an isolated act detached from daily life, but rather as a harmonized component of one's regular schedule. *Surah al-Muzzammil*, through its intelligent application of the principle of *al-taysīr*, illustrates that spiritual training must be realistic, proportionate to temporal and spatial capacities, and adaptable to various life circumstances. This approach transforms night worship into a sustainable opportunity for self-cultivation while shielding the individual from psychological strain.

There are significant traditions emphasizing the performance of *ṣalāt al-layl* (night prayer) during the last third of the night. Abī Baṣīr narrates from Imām al-Ṣādiq that when he asked about night and day worship, the Imam said: "*At dawn, perform eight units (al-rakʿah) of prayer, followed by the al-witr prayer, which consists of three al-rakʿahs—two together and one separately. The best time for the night prayer is at the end of the night*" (Khoei n.d.). Likewise, Ismāʿīl ibn Saʿīd al-Ashʿarī reports that when he asked Imām al-Riḍā about the *al-witr* prayer, the Imam replied, "*The most beloved time to me is the first dawn (al-fajr al-awwal).*" When asked about the best hours of the night, he said, "*The last third of the night*" (Khoei n.d.). Regarding the time of the night prayer, this time extends from midnight until the second dawn (*ṭulūʿ al-fajr al-ṣādiq*), and the most excellent period is at the final third of the night (*al-saḥar*), particularly close to dawn (Ṭabāṭabāʾī Yazdī 1989, 1: 525). Most classical and contemporary jurists affirm this ruling and consider *al-saḥar*, the last part of the night, the most meritorious time for *ṣalāt al-layl* (Ḥakīm n.d., 5: 113; al-Najafī 1983, 7: 312; al-Ṣadūq 1997). The Qur'anic phrase *"And Allah measures the night and the day"* (Q. 73:20) indicates the precise proportioning of day and night, showing that the timing of worship is naturally dependent on these variations. The expression "*recite as much of the Qur'an as is feasible*" (Q. 73:20) reflects the principle of *al-taysīr*, ease and flexibility, in structuring nightly devotions according to one's actual capacity and opportunity.

This study employs Data Envelopment Analysis (DEA) to examine the varying conditions of nights for optimizing worship performance. The aim is to assist believers in effectively planning their nightly devotions based on two fundamental components:

1. Qur'anic and exegetical foundation: Verse Q.73:20 explicitly refers to the change in the duration of night worship according to the measurement of night and day and individual conditions. Thus, identifying the periods of the year with the longest nights and the most favorable conditions for devotion, constitutes a practical application of this verse and facilitates a more effective realization of *al-tahajjud*.
2. Scientific and empirical approach: Given the natural variations in night length throughout the year, measurable criteria, such as temperature, the interval between religious midnight and dawn, and between dawn and sunrise, must be quantitatively analyzed. The DEA method enables ranking of nights based on multiple indicators, thereby identifying those with the highest worship potential capacity.

Hence, a direct relationship exists between the content of verse Q. 73:20, emphasizing divine proportioning of night and day, and the principle of *al-taysīr* in worship, as well as the scientific necessity of this study. The objective is to integrate interpretive understanding with advanced analytical tools to propose a concrete and operational model for maximizing the spiritual opportunities of nightly worship, without departing from the Qur'anic spirit of balance and mercy. This study can therefore be classified as an interdisciplinary research (Brun et al. 2005; Klein & Newell 1997). Islamic education demands practical paradigms that embody religious teachings through lived behavior. Thus, *Surah al-Muzzammil* begins by addressing the Prophet, whose own nightly devotions, critical reflection, avoidance of superficiality, perseverance, and social responsibility serve as a living paradigm for applied spiritual training.

2. Literature Review

Data Envelopment Analysis (DEA), first introduced by Farrell in 1957, is a non-parametric method used to evaluate the efficiency of decision-making units (DMUs). DEA models can be categorized into constant returns to scale and variable returns to scale types. The constant returns to scale models, initially developed by Charnes, Cooper, and Rhodes in 1978, is known as the CCR model (Charnes et al. 1978). Later, the variable returns to scale models were introduced by Banker, Charnes, and Cooper in 1984, and is known as the BCC model. Various extensions of DEA have been proposed depending on data characteristics, such as fuzzy, interval, and stochastic approaches. Furthermore, based on network structures, several models have been developed, including network DEA and dynamic DEA models.

Other notable methods and studies in this field include: multi-objective data envelopment analysis (Chen et al. 2009); congestion measurement in DEA models using weight restrictions and output exchanges (Jahanshahloo et al. 2011); a modified common-weight set approach for completing the ranking of decision-making units (Payan et al. 2011); fair allocation of shared fixed costs using the DEA method (Khodabakhshi & Aryavash 2013); ranking units using fuzzy DEA (Khodabakhshi & Aryavash 2014); a review of methods for estimating input congestion in DEA (Khodabakhshi et al. 2014); an optimistic–pessimistic structure in cross-efficiency (Khodabakhshi & Aryavash 2017); fair ranking of decision-making units using optimistic–pessimistic weights (Jahanshahloo et al. 2017); and pattern detection in DEA using a value-efficiency approach (Nasrabadi 2019). Additionally, some applied studies in the field of data envelopment analysis include Khodabakhshi and Mirkoushesh (2024) and Besharati and Khodabakhshi (2025). Among interdisciplinary studies linking religious studies and mathematics, Khodabakhshi et al. (2025) developed a self-assessment system based on the *Khuṭbah al-Muttaqīn* narrative and examined the relationships between its sections.

3. Methodology

In this study, Data Envelopment Analysis (DEA) is employed to identify the most suitable nights of the year for nocturnal worship from a believer's perspective. DEA serves as a mathematical technique for evaluating the efficiency of different entities using available indicators and data. Two distinct scenarios are considered. In the first scenario, two temporal indices are selected, based on the Qur'anic recommendations in *Surah al-Muzzammil*, which emphasize the regulation of nightly devotion and worship. In the second scenario, in addition to the two temporal indices, a temperature index is also included. For computational purposes, the first and second indices are analyzed under weight restrictions (Wong & Beasley 1990) in the first scenario, while the first, second, and third indices (including temperature) are used in the second scenario. The models used in this study include the Andersen–Petersen (AP) model (Andersen & Petersen 1993) and the KA fairness model (Khodabakhshi & Aryavash 2012). It should be noted that the prayer-time interval indices (www.praytimes.org) and the temperature data (www.visualcrossing.com) pertain to the city of Tehran.

Index 1: The interval between Islamic midnight and the dawn call to prayer. This index represents the duration of the night suitable for nocturnal devotion and prayer. The time span between midnight and *al-fajr* reflects

the opportunity believers have for spiritual engagement and supplication. In Islamic culture, longer nights provide greater capacity for worship and self-reflection, while shorter nights limit this opportunity. Thus, this index indirectly evaluates the quantity and quality of potential time for night worship.

Index 2: The interval between dawn and sunrise. This index complements the first one, covering the period between the dawn call to prayer and sunrise. During this interval, believers can engage in various devotional acts, such as post-prayer supplications, supererogatory morning prayers, recitation of Qur'an, and *al-dhikr* (remembrance of God). Therefore, this interval also contributes meaningfully to the overall assessment of optimal times for spiritual engagement during the night and early morning hours (Figure 1).

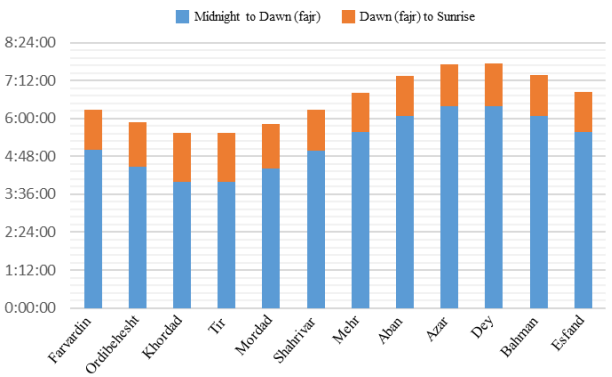

Figure 1. Bar chart of the total intervals between Islamic midnight and dawn and between dawn and sunrise for each month

Index 3: Air temperature. This index during different nights of the year plays a significant role in determining individual comfort and ease of nocturnal worship. Using this index, along with the temporal indicators, various nights of the year can be ranked from the believers' perspective to analyze the quality and suitability of night hours for devotion. To assess the temperature index for each month, a five-point Likert scale (ranging from 5=very good to 1=very poor) was defined as follows:

- Score 5 (Very Good): The average night temperature is between 20–23°C. This condition is ideal, requiring no heating or cooling systems. It represents the most favorable situation for nightly worship and should be assigned the highest output value in DEA.
- Score 4 (Good): The average night temperature is between 17–19°C and 24–25°C. Slightly less ideal but still comfortable, with only minor need

for thermal adjustment.

- Score 3 (Moderate): The average night temperature is between 14–16°C and 26–27°C. Noticeable need for heating or cooling systems; comfort is reduced.
- Score 2 (Poor): The average night temperature is between 10–13°C and 28–30°C. Discomfort is evident; significant reliance on thermal regulation is required.
- Score 1 (Very Poor): The average night temperature is below 10°C or above 30°C. Conditions are extremely unfavorable for worship, with low tolerance and continuous dependence on temperature control systems.

For quantitative evaluation in the DEA framework, the Likert scale scores were converted to corresponding output index values as follows: (1 = 0.25, 2 = 0.50, 3 = 0.75, 4 ≈ 0.90, 5 = 1.00).

Table 1. Temperature Index Values Based on the Five-Point Likert Scale

Month	Mean Night Temperature (°C)	Likert Score	Temperature Index
Farvardin (March–Apr.)	16.7	3	0.75
Ordibehesht (Apr.–May)	20.67	5	1.00
Khordad (May–June)	27.78	3	0.75
Tir (June–July)	31.17	1	0.25
Mordad (July–Aug.)	32.36	1	0.25
Shahrivar (Aug.–Sep.)	28.58	2	0.50
Mehr (Sep.–Oct.)	22.73	5	1.00
Aban (Oct.–Nov.)	13.66	2	0.50
Azar (Nov.–Dec.)	7.09	1	0.25
Dey (Dec.–Jan.)	6.04	1	0.25
Bahman (Jan.–Feb.)	8.20	1	0.25
Esfand (Feb.–Mar.)	10.13	2	0.50

Accordingly, Ordibehesht (Apr.–May) and Mehr (Sep.–Oct.) have the most favorable nocturnal temperature conditions (index=1.00). Farvardin (March–Apr.) and Khordad (May–June) display moderately favorable conditions (index=0.75), while winter months and the hottest summer months receive the lowest comfort scores (index=0.25) (Table 1).

4. Analysis and Discussion

In this section, we analyze the results derived from constructing a composite index as an independent method, as well as from implementing DEA models, and compare the two sets of findings. Using the common weighted-sum method, a composite index was created by assigning a weight

of 0.7 to the indicator "interval between Islamic midnight and dawn" and a weight of 0.3 to the indicator "interval between dawn and sunrise." The ranking of this indicator shows the months in the following order: Azar and Dey; Bahman and Aban; Esfand and Mehr; Farvardin and Shahrivar; Ordibehesht and Mordad; and finally Tir and Khordad. In each pair, the two months are placed at the same position with only a very small difference between them (Table 2 - Figure 2).

Table 2. Composite Index Derived from Two Temporal Indicators (interval between Midnight–Dawn and Dawn–Sunrise)

Month	Composite Index (hh:mm:ss)
Farvardin	03:53:22
Ordibehesht	03:33:36
Khordad	03:15:58
Tir	03:15:57
Mordad	03:30:32
Shahrivar	03:52:50
Mehr	04:16:34
Aban	04:38:09
Azar	04:52:26
Dey	04:52:42
Bahman	04:38:31
Esfand	04:16:48

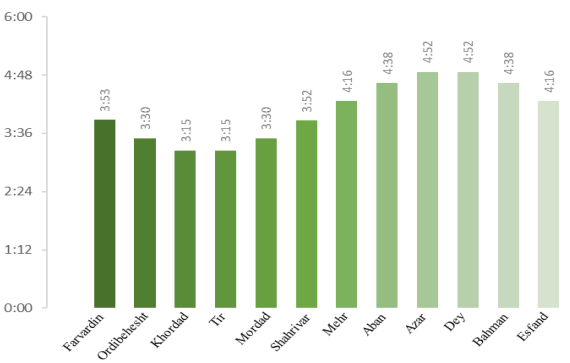

Figure 2. Bar chart of the composite index derived from the prayer-time intervals: from Islamic midnight to the Fajr (dawn), and from the Fajr to sunrise.

In the output-oriented AP model, lower super-efficiency values correspond to higher efficiency rankings. Accordingly, the ranking order is: Dey, Azar, Bahman, Aban, Mehr, Esfand, Farvardin, Shahrivar, Ordibehesht, Mordad, Khordad, and Tir (Table 3).

Table 3. Month Ranking Based on the AP Model (Scenario 1)

Month	Super-Efficiency	Rank
Farvardin	1.253871	7
Ordibehesht	1.377272	9
Khordad	1.492076	11
Tir	1.492678	12
Mordad	1.389261	10
Shahrivar	1.256556	8
Mehr	1.140666	5
Aban	1.054851	4
Azar	1.000522	2
Dey	0.999284	1
Bahman	1.050914	3
Esfand	1.139693	6

To determine the most suitable months for nightly worship, three DEA models (CCR, AP, and KA) were applied using two indicators, the interval between Islamic midnight and dawn, and the interval between dawn and sunrise. A weight restriction was imposed to reflect the greater importance of the first indicator: $u_1 = 2.3 \times u_2$

Thus, the midnight-to-dawn interval carries 2.3 times more weight than the dawn-to-sunrise interval. This decision aligns with Qur'anic and hadith-based emphases on the *final third of the night* as the most virtuous time for night prayer.

Table 4. Fairness-Based KA Model Results (Scenario 1)

No.	Month	Pessimistic Efficiency	Optimistic Efficiency	Fair Efficiency	Rank
1	Farvardin	0.079474	0.079489	0.079481	8
2	Ordibehesht	0.071180	0.082881	0.077030	12
3	Khordad	0.063608	0.095273	0.079440	10
4	Tir	0.063582	0.095479	0.079530	7
5	Mordad	0.069986	0.087355	0.078671	11
6	Shahrivar	0.079262	0.079695	0.079478	9
7	Mehr	0.077427	0.088472	0.082949	5
8	Aban	0.079447	0.096411	0.087929	4
9	Azar	0.082922	0.101439	0.092181	2
10	Dey	0.083159	0.101492	0.092326	1
11	Bahman	0.079654	0.096517	0.088085	3
12	Esfand	0.077220	0.088578	0.082899	6

Based on Table 4, the KA model ranking identifies Dey, Azar, and Bahman as the top three months, followed by Aban, Mehr, and Esfand (with nearly equal efficiency values), and finally Tir, Farvardin, Shahrivar, Khordad, Mordad, and Ordibehesht. These results indicate that winter and late autumn months show higher efficiency in terms of the studied

indicators. The KA model integrates pessimistic, optimistic, and convex-combined (fair) efficiency values, providing a balanced assessment (Figure 3). Dey ranks highest in all three perspectives, confirming its overall superiority (Figure 4).

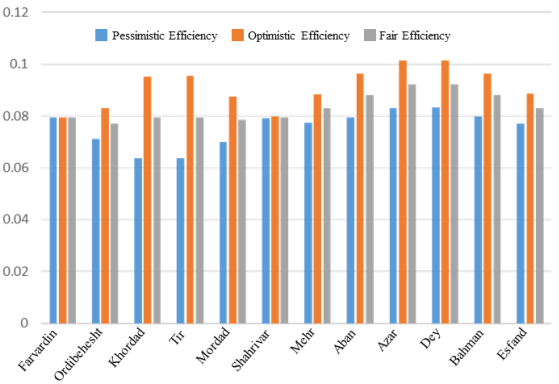

Figure 3. Bar chart of efficiency results for different months based on the fair KA model in three modes of pessimistic, optimistic, and fair efficiency in terms of two indicators.

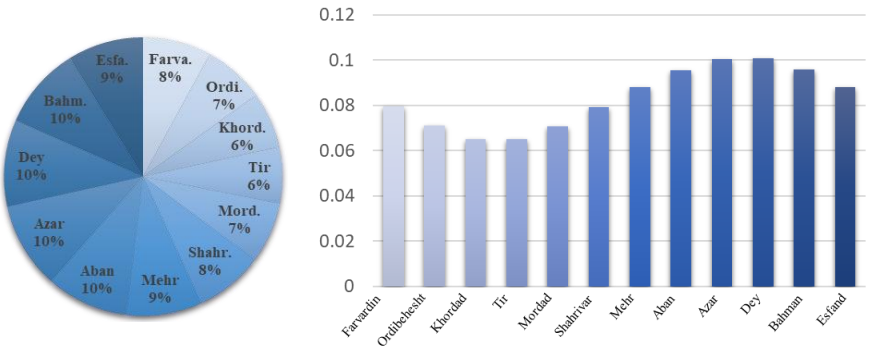

Figure 4. Pie chart and Bar chart of the efficiency of the fair model for different months in terms of two indicators

A more detailed CCR model analysis was then performed for Azar and Dey, which had the best performance across all models. The results show that seven nights in late Azar and eight nights in early Dey achieved full efficiency (score=1). These nights can thus be identified as the optimal nights of the year for worship, supplication, and night vigil, as they maximize the utilization of available devotional time according to Qur'anic guidance (Figure 5 & 6). Given Dey's top ranking in the KA model as well, a separate DEA run confirmed that the early nights of Dey represent the most favorable conditions for nocturnal devotion.

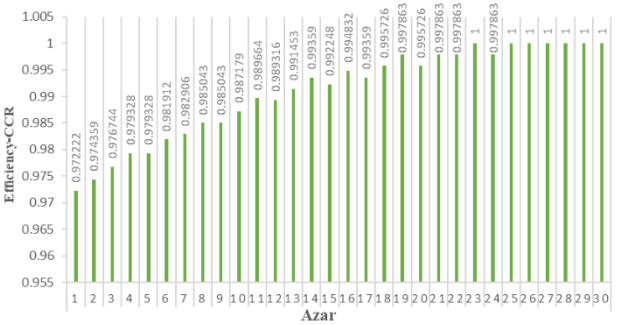

Figure 5. Efficiency of Nights in Azar Based on the CCR Model

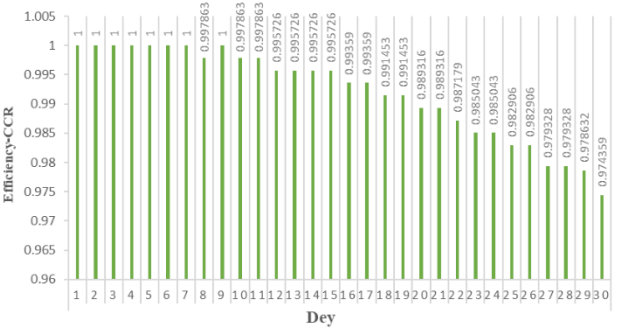

Figure 6. Efficiency of Nights in Dey Based on the CCR Model

To further refine the results, the temperature index was incorporated as a third indicator alongside the two temporal indices in the AP model (Scenario 2). The resulting month rankings are as follows: Mehr, Dey, Ordibehesht, Azar, Aban, Bahman, Esfand, Farvardin, Shahrivar, Khordad, Mordad, and Tir (Table 5).

Table 5. AP Model Results Incorporating Three Indicators (Scenario 2)

Month	Super-Efficiency
Farvardin	1.13059
Ordibehesht	1.00000
Khordad	1.31200
Tir	1.46420
Mordad	1.36823
Shahrivar	1.18572
Mehr	0.87506
Aban	1.00959
Azar	1.00050
Dey	0.99928
Bahman	1.04881
Esfand	1.08489

With the inclusion of air temperature, the analysis confirms that Mehr and Dey retain the highest efficiency levels, indicating optimal overall conditions (temporal and environmental) for nightly worship during these months.

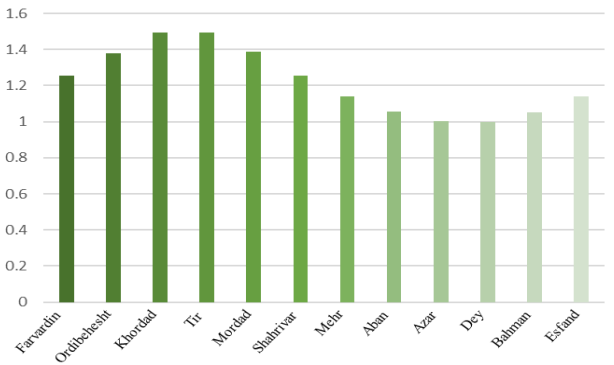

Figure 7. Bar chart illustrating super-efficiency results of the AP model based on two indicators

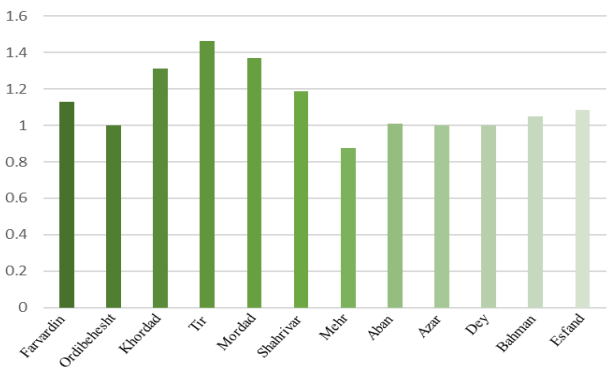

Figure 8. Bar chart illustrating super-efficiency results of the AP model based on three indicators

Figures 7 and 8 depict the bar graphs for super-efficiency values under the two- and three-indicator scenarios, respectively. In the super-efficiency model, lower numerical values correspond to higher efficiency ranks.

When the temperature indicator was incorporated, the results of the KA (fairness-based) model were obtained as shown in Table 6. The ranking order of the months in this case is as follows: Mehr, Ordibehesht, Farvardin, Khordad, Aban, Esfand, Shahrivar, Dey, Azar, Bahman, Tir, and Mordad (Figure 9).

Table 6. KA Model Results Based on Three Indicators

Month	Pessimistic Efficiency	Optimistic Efficiency	Fair Efficiency	Rank
Farvardin	0.079474	0.120000	0.098517	3
Ordibehesht	0.071180	0.160000	0.112917	2
Khordad	0.063608	0.120000	0.090107	4
Tir	0.040000	0.095479	0.066070	11
Mordad	0.040000	0.087355	0.062252	12
Shahrivar	0.079262	0.080000	0.079609	7
Mehr	0.077427	0.160000	0.116228	1
Aban	0.079447	0.096411	0.087419	5
Azar	0.040000	0.101439	0.068871	9
Dey	0.040000	0.101492	0.068896	8
Bahman	0.040000	0.096517	0.066558	10
Esfand	0.077220	0.088578	0.082557	6

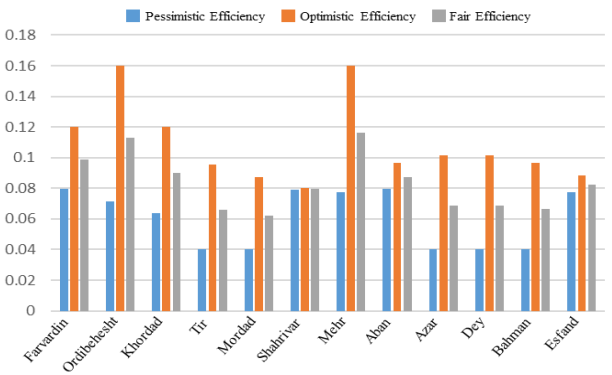

Figure 9. Bar chart illustrating pessimistic, optimistic, and fair efficiencies of the months according to the KA model under the three-indicator scenario.

Table 7 presents a comparison of the ranking of months across the year based on the AP and KA models for each of the two scenarios.

Table 7. Comparison of monthly rankings in the AP and KA models for the two scenarios

Month	AP (rank) Scenario 1	AP (rank) Scenario 2	KA (rank) Scenario 1	KA (rank) Scenario 2
Farvardin	7	8	8	3
Ordibehesht	9	3	12	2
Khordad	11	10	10	4
Tir	12	12	7	11
Mordad	10	11	11	12
Shahrivar	8	9	9	7
Mehr	5	1	5	1
Aban	4	5	4	5
Azar	2	4	2	9
Dey	1	2	1	8
Bahman	3	6	3	10
Esfand	6	7	6	6

The observed discrepancies between the AP model and the composite index reflect the additional influence of the temperature variable in the multi-indicator DEA framework (Table 7). The interpretive implications can be summarized as follows:

Mehr: Ranked *first* in the AP model due to the inclusion of the temperature factor, highlighting its moderate climate as a favorable condition for nocturnal worship. However, it ranks *sixth* in the composite index, which is purely based on prayer-time intervals. This demonstrates that environmental comfort significantly impacts its prioritization when temperature is considered.

Dey: Retains a consistently high ranking (*second in AP, first in the composite index*), indicating that time-based indices alone are sufficient to confirm Dey's exceptional suitability for night worship. The minor difference implies that the cold temperature does not diminish its devotional potential.

Ordibehesht: Shows a six-rank improvement in the AP model, underscoring the positive impact of mild temperatures on efficiency during this month. Time intervals alone placed it lower in the composite index, suggesting that thermal comfort substantially enhances its devotional feasibility.

Azar and Aban: Both experience slightly lower rankings in the AP model compared to the composite index. This suggests that temperature plays a lesser role during these cooler months, with time intervals being the more decisive factor in their ranking. In essence, their temporal efficiency already approaches the optimum, leaving limited room for environmental improvement.

Bahman and Esfand: These two months show minimal discrepancies between the AP model and the Composite Index (a maximum ranking difference of 3). In these months, the temperature index in the AP model may exert greater influence compared to the prayer-time intervals, yet the winter-adjacent months generally achieve higher ranks in the Composite Index.

Farvardin and Tir: Interestingly, Farvardin ranks eighth in both models, indicating a nearly identical evaluation. This similarity suggests that temperature effects during this month are less pronounced, while the timing of prayer intervals has a greater impact on the rankings. Tir also maintains the same twelfth position across both models.

Shahrivar: ranks ninth in the AP model and seventh in the Composite Index. This implies that in the AP model, temperature may have reduced its

rank, whereas in the Composite Index, the weighting of prayer-time intervals slightly improved its position.

Mordad and Khordad: Finally, Mordad and Khordad differ by only one rank between the two models, indicating that temperature effects were similar for these months.

This analysis demonstrates that the temperature index in the AP model significantly influences the rankings compared to the Composite Index. Overall, incorporating temperature into the AP model causes noticeable changes in certain months, particularly those with extreme thermal conditions. Comparative analysis reveals that the inclusion of temperature as a third variable leads to greater overall change in the KA model than in the AP model. In general, it can be stated that in the absence of sufficient heating or cooling systems, the three-index model yields more accurate results for planning night worship, while the two-index model is more suitable when such systems are available. It should be noted that since both prayer-time intervals and temperature indices are based on data from Tehran, the findings are context-specific and not directly generalizable to all cities.

5. Conclusion

The objective of this study was to produce a comprehensive ranking of nights according to their relative suitability for night worship, rather than merely identifying the longest night of the year. Using quantitative analysis based on Data Envelopment Analysis (DEA), the ranking is precise and reproducible. The analysis revealed a cyclic proportionality among prayer-time intervals across months, reflecting the natural alternation of night and day. Two analytical scenarios were considered. In Scenario 1, two indices were employed: the intervals midnight–Fajr and Fajr–sunrise. In Scenario 2, in addition to these two temporal indices, air temperature was included as a third indicator. All indices were computed for the city of Tehran. Scenario 1 demonstrated similar efficiency values for paired months (for example, Farvardin–Shahrivar, Ordibehesht–Mordad, Khordad–Tir, Mehr–Esfand, Aban–Bahman, and Azar–Dey). Another notable result was the continuity between the last ten days of Azar and the first eleven days of Dey, which exhibited nearly identical efficiency values and indicate a seamless transition suitable for structured planning of nocturnal worship. The final monthly rankings under the AP model in the first scenario are as follows: Dey, Azar, Bahman, Aban, Mehr, Esfand, Farvardin, Shahrivar, Ordibehesht, Mordad, Khordad, and Tir, while in the second scenario (which adds air temperature), the order is: Mehr, Dey, Ordibehesht, Azar,

Aban, Bahman, Esfand, Farvardin, Shahrivar, Khordad, Mordad, and Tir. In summary, the three-index model is preferable in contexts lacking adequate climate-control systems, whereas the two-index model is better suited to environments that are equipped with heating and cooling.

5.1. Recommendations

Future studies are encouraged to incorporate additional variables such as daily workload, the nature and intensity of hardships, social and religious conditions, and individual spiritual inclination. By quantifying these factors, it would be possible to design a personalized algorithm to determine the most effective nighttime periods for worship tailored to each individual. It is also recommended that subsequent research systematically account for seasonal variations in human activity patterns.

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References

Al-Fayyūmī, A. (1993). *Al-Miṣbāḥ al-munīr fī gharīb al-sharḥ al-kabīr lil-Rāfiʿī.* Qom: Dār al-Hijrah.

Al-Najafī, M. Ḥ. (1983). *Jawāhir al-kalām fī sharḥ sharāʾiʿ al-Islām.* Beirut: Dār Iḥyāʾ al-Turāth al-ʿArabī.

Al-Ṣadūq, M. (1997). *Al-Hidāyah.* Qom: Muʾassasah al-Imām al-Hādī.

Al-Ṭabrisī, F. (1993). *Majmaʿ al-Bayān fī Tafsīr al-Qur'ān*. Tehran: Nāṣir Khusru.

Al-Zabīdī, M. M. (1993). *Tāj al-ʿarūs min jawāhir al-qāmūs.* Beirut: Dār al-Fikr.

Al-Zamakhsharī, M. (1994). *Al-Kashshāf ʿan ḥaqāʾiq ghawāmiḍ al-tanzīl wa ʿuyūn al-aqāwīl fī wujūh al-taʾwīl.* Qom: Nashr al-Balāghah.

Andersen, P., & Petersen, N. C. (1993). A Procedure for Ranking Efficient Units in Data Envelopment Analysis. *Management Science*, *39*(10), 1261–1264.

Baḥrānī, Y. (1984). *Al-Ḥadāʾiq al-nāḍirah.* Qom: Muʾassasah al-Nashr al-Islāmī.

Besharati, R., & Khodabakhshi, M. (1404). An Overview of the Researches Conducted in the Field of Evaluating the Performance of Pension Funds Using Data Envelopment Analysis. *The Decision Science and Intelligent Systems*, 2(2), 1-39.

Brun, H., Hukkinen, J., Huutoniemi, K., & Klein J. T. (2005). *Promoting Interdisciplinary Research: The Case of the Academy of Finland.* Publications of the Academy of Finland

Charnes, A., Cooper, W. W., & Rhodes, E. (1978). Measuring the efficiency of decision-making units. European Journal of Operational Research, 2(6), 429–444. https://doi.org/10.1016/0377-2217(78)90138-8

Chen, Y.-W., Larbani, M., & Chang, Y.-P. (2009). Multiobjective data envelopment analysis. *Journal of the Operational Research Society*, 60(11), 1556–1566. https://doi.org/10.1057/jors.2009.92

Darwazah, M. I. (2004). *Al-Tafsīr al-ḥadīth.* Cairo: Dār Iḥyāʾ al-Kutub al-ʿArabiyyah.

Ḥakīm, S. M. (n.d.). *Al-Mustamsak al-ʿurwah al-wuthqā.* Beirut: Dār Iḥyāʾ al-Turāth al-ʿArabī.

Ibn Manẓūr, M. (1994). *Lisān al-ʿArab.* Beirut: Dār al-Fikr.

Jahanshahloo, G. R., Sadeghi, J., & Khodabakhshi, M. (2017). Fair ranking of the decision making units using optimistic and pessimistic weights in data envelopment analysis. *RAIRO-Oper. Res.*, *51*(1), 253–260. https://doi.org/10.1051/ro/2016023

Jahanshahloo, G., Khodabakhshi, M., Lotfi, F., & Moazami Goudarzi, M. (2011). Computation of Congestion in DEA Models with Productions Trade-offs and Weight Restrictions. *Applied Mathematical Sciences*, *5*, 663–676.

Javadi Amoli, A. (1992). *Shariʿah in the mirror of knowledge* (in Persian). Tehran: Rajāʾ.

Kāshānī, M. F. (١٩٥٨). *Tafsīr minhāj al-ṣādiqīn fī ilzām al-mukhālifīn*. Tehran: Ketabforoushi Elmi.

Khodabakhshi, M., & Aryavash, K. (2012). Ranking all units in data envelopment analysis. *Applied Mathematics Letters*, *25*(12), 2066–2070. https://doi.org/https://doi.org/10.1016/j.aml.2012.04.019

Khodabakhshi, M., & Aryavash, K. (2013). The fair allocation of common fixed cost or revenue using DEA concept. *Annals of Operations Research*, *214*. https://doi.org/10.1007/s10479-012-1117-2

Khodabakhshi, M., & Aryavash, K. (2014). Ranking units with fuzzy data in DEA. *Data Envelopment Analysis and Decision Science*, *2014*, 1–10. https://doi.org/10.5899/2014/dea-00058

Khodabakhshi, M., & Aryavash, K. (2017). The cross-efficiency in the optimistic–pessimistic framework. *Operational Research*, *17*(2), 619–632. https://doi.org/10.1007/s12351-016-0243-z

Khodabakhshi, M., & Mirkooshesh, M. (2025). Performance Analysis of Capital Development Funds in Lorestan Province by COFOG Divisions and Groups Using Data Envelopment Analysis. *The Decision Science and Intelligent Systems*, 1(2), 22-52.

Khodabakhshi, M., Anvaripoor, M., & Mohases, M. (1404). Designing a Self-Assessment System Based on the Sermon of Hammam and Analysing the Interrelations Between its Various Sections. *The Decision Science and Intelligent Systems*, *2*(1), 1-20.

Khodabakhshi, M., Hosseinzadeh Lotfi, F., Aryavash, K. (2014). Review of Input Congestion Estimating Methods in DEA, *Journal of Applied Mathematics*, 9. https://doi.org/10.1155/2014/963791

Khoei, A. (n.d.). *Minhāj al-ṣāliḥīn.* Qom: Dhawī al-Qurbā.

Klein, J. T., and Newell, W. (1997). Advancing interdisciplinary studies. In J. Gaff and J. Ratcliffe (Eds), *Handbook of the undergraduate curriculum: A comprehensive guide to purposes, structures, practices, and changes* (pp. 393-415). San Firancisco: Jossey-Bass.

Nasrabadi, N. (2019). Pattern recognition in data envelopment analysis with value efficiency approach. *New Researches in Mathematics, Islamic Azad University, 5*(17), 51–72.

Nekounam, J. (2001). *An Introduction to Qur'anic chronology* (in Persian). Tehran: Hastinama.

Payan, A., Lotfi, F., Noora, A., & Khodabakhshi, M. (2011). A modified common set of weights method to complete ranking DMUs. *Mathematical Models and Methods in Applied Sciences*, *5*, 1143–1153.

Qarai, A. Q. (2004). *Translation of the Holy Qur'an*. London: ICAS.

Ṭabāṭabāʾī Yazdī, S. K. (1989). *Al-ʿUrwah al-wuthqā*. Beirut: Muʾassasah al-Aʿlamī lil-Maṭbūʿāt.

Tabataba'i, M. H. (1973). *Al-Mīzān fī tafsīr al-Qurʾān*. Beirut: Muʾassasah al-Aʿlamī lil-Maṭbūʿāt.

Wong, Y. H. B., & Beasley, J. E. (1990). Restricting weight flexibility in data envelopment analysis. *Journal of the Operational Research Society*, 41(9), 829–835.

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Qur'anic Perspective on the Right to Be Forgotten: A Conceptual Reappraisal of al-Nisyān, al-ʿAfw, and Identity Reconstruction

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ABSTRACT:

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The "right to be forgotten" is an emerging concept in the field of digital rights, referring to the possibility of removing or restricting access to individuals' past information within public and technological environments. Despite its contemporary origin, this concept can be reinterpreted within the theological and epistemological framework of Islam. The present article aims to elucidate the Qur'anic foundations of this right by analyzing three key concepts in the Qur'an, *al-nisyān* (forgetfulness), *al-ʿafw* (forgiveness), and identity reconstruction, and by examining their theoretical potential for the reconstitution of personal identity within society. The study also draws upon Shia traditions and supplicatory texts to explore the concept of *satr al-ʿuyūb* (concealment of faults) as a complementary dimension of this right. The role of this concept in safeguarding human dignity and preventing the reproduction of damaged identities is critically assessed. The findings indicate that, from the perspective of the Qur'an and Hadith, the possibility of forgetting a person's sinful past, conditional upon repentance, is not only legitimate but essential for the preservation of human dignity and the individual's reintegration into social life. Accordingly, it is possible to construct a defensible, indigenous Islamic theoretical model of the right to be forgotten that remains ethically and theologically grounded while simultaneously responding to the transformations of the contemporary digital sphere.

KEYWORDS: The Qur'an, Right to be forgotten, *al-nisyān*, *satr al-ʿuyūb*, *al-ʿafw*, identity reconstruction, human dignity.

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1. Introduction

Human life is intertwined with experiences that sometimes involve lapses, errors, and decisions which, over time, no longer correspond to an individual's reconstructed identity. In the age of information technology and digital memory, where data recorded on the internet is preserved in an almost permanent manner, this concern has evolved into a global demand: does a human being have the right for their past to be forgotten? In contemporary legal discourse, this demand is articulated through the notion of the "right to be forgotten," a right that emphasizes the possibility of removing personal information from the public digital sphere and restoring individuals' reputation and identity. This right specifically emphasizes the principle that individuals should, under certain conditions, be able to remove their personal data from public spaces and online platforms in order to free themselves from the ongoing social, psychological, and identity-related harms resulting from the circulation of their past. This concern is particularly significant for individuals who have changed their life trajectory and have reconstructively reformed their personal and social identities.

This raises a fundamental question: is such a right merely a product of legal and technological developments in the modern world, or can its roots be traced within the Islamic epistemic system, particularly in the Qur'an? From a Qur'anic perspective, the human being is a volitional and fallible agent who nonetheless remains capable of return and renewal, an entity endowed with the capacity for *al-nisyān* (forgetfulness), while God simultaneously opens the pathways of repentance, forgiveness, concealment, and reconstruction.

Numerous Qur'anic verses, from the forgetfulness of Adam and his subsequent return (Q. 20:115), to the transformation of evil deeds into good ones for those who repent (Q. 25:70), indicate that forgetting the past, when accompanied by repentance and moral reform, is not only possible but desirable and legitimate. Within this framework, concepts such as *al-nisyān*, *al-ʿafw*, *al-maḥw al-sayyiʾāt* (the erasure of sins), *al-satr* (concealment), *al-tawbah* (repentance), and the intrinsic dignity of the human being can provide robust foundations for articulating a form of the right to be forgotten from a divine and human-centered perspective.

This article seeks to develop a conceptual framework for the right to be forgotten through an examination of three foundational Qur'anic concepts, *al-nisyān*, *al-ʿafw*, and identity reconstruction. Unlike approaches that treat this right in purely legalistic or instrumental terms, the proposed framework is grounded in a theocentric worldview, ethical justice, and the mutual moral

responsibility of human beings toward one another. Such an approach not only enables individuals to be liberated from the burden of their past, but also creates the conditions for growth, return, and the restoration of lost personal and social dignity.

Despite the prominent position of this right in Western legal literature, especially in European Union instruments such as the General Data Protection Regulation (GDPR), its ontological and foundational underpinnings have received comparatively limited attention. From the perspective of Islam, and particularly the Qur'an, the human being not only possesses the right to repentance and identity reconstruction, but numerous verses explicitly emphasize the necessity of erasing the traces or effects of the past in cases of genuine repentance:

> *Excepting those who repent, attain faith, and act righteously. For such, Allah will replace their misdeeds with good deeds, and Allah is all-forgiving, all-merciful (Q. 25:70).*
> *Indeed Allah will forgive all sins. Indeed He is the All-forgiving, the All-merciful (Q. 39:53).*

In this regard, numerous verses not only testify to the divine capacity for concealing sin and reconstructing human worth, but also frame concepts such as *al-ʿafw* (forgiveness), *al-satr* (concealment), *al-tawbah* (repentance), and even *al-maḥw* (erasure) as ethical, pedagogical, and epistemic mechanisms oriented toward the legitimate forgetting of the past.

In Western discourse, the right to be forgotten is often framed through an individual-centered lens and discussed primarily in terms of "data" and "information control." The Qur'an, by contrast, situates this issue within a deeper spiritual and moral framework focused on the reconstruction of personality, the recovery of dignity, and the return to the divine disposition. Accordingly, this study asks: What Qur'anic foundations support the idea of a right to be forgotten, and how can a spiritual and epistemological framework for that right be developed through key Qur'anic concepts such as *al-nisyān* (forgetfulness), *al-ʿafw* (forgiveness), *al-satr* (concealment), and identity reconstruction? Addressing this question can enrich Islamic discussions of data ethics and socio-identitarian reconstruction and help establish an epistemic basis for a humane, theologically grounded understanding of error, repentance, and the possibility of salvation. Although the Qur'anic teachings invoked here primarily address moral transgressions and individual repentance, the right to be forgotten may be extended to digital contexts, provided such an expansion respects practical safeguards and necessary limitations to protect public interests, social security, and the rights of others.

2. Literature Review

At the global level, the concept of the right to be forgotten gained prominence following the 2014 ruling of the Court of Justice of the European Union (CJEU) in a landmark case, and subsequently acquired legal force through Article 17 of the General Data Protection Regulation (GDPR) in 2018, where it is framed as the "right to erasure" (European Union 2016). This development, particularly in relation to human dignity, digital identity, and informational autonomy, has attracted substantial scholarly attention. Since then, numerous studies have been published addressing the philosophical, ethical, and technological dimensions of this right.

Mayer-Schönberger (2011), in "Delete: The Virtue of Forgetting in the Digital Age," emphasizes the importance of "forgetting" as a civic virtue in the age of data, presenting it as a vital necessity for preserving personal dignity. Floridi (2015), in "The Right to Be Forgotten: A Philosophical view," conceptualizes forgetting as a phenomenon closely tied to the rethinking of "moral identity." Zhang et al. (2023), in "The Right to Be Forgotten in the Era of Large Language Models: Implications, Challenges, and Solutions," examine the challenges of implementing this right within artificial intelligence systems and introduce technical solutions such as machine unlearning and model management. Vilella and Ruffo (2025), in "(De)-Indexing and the Right to Be Forgotten," address the technical complexities associated with this issue and analyze information-retrieval models capable of effectively representing content removal or forgetting within modeling processes.

In Persian-language legal scholarship, Eslami and Feyzi (2016) identify freedom of expression as one of the most fundamental challenges confronting the right to be forgotten and provide a detailed analysis of this tension. Hataminia and Sheikholeslami (2018) examine this right and outline several challenges facing its implementation. Shokri (2023) offers a general assessment of the strengths and weaknesses of this right. Khubyari (2024) concludes that, based on an analysis of proponents' and opponents' arguments, the implementation of this right often conflicts with other fundamental rights such as freedom of expression and free access to information. Consequently, he argues that the general presumption should favor the non-removability of data, although this principle is more applicable in the context of children's rights regarding personal data deletion.

Within Islamic and Qur'anic scholarship, a limited number of recent

studies have sought to explore the capacity of Islamic foundations in relation to this right. For example, Osman (2023) examines this right from within the Islamic tradition, proposing the concept of *al-satr* (concealment) as a Qur'anic basis for it. While acknowledging certain challenges, the study argues that the right to be forgotten is defensible from within the Islamic tradition. Nevertheless, despite its effort to adopt a Qur'anic and Islamic approach, the study remains largely general in its focus on *al-satr* alone and exhibits limited conceptual proximity to what is termed the "right to be forgotten" in Western discourse, thereby failing to establish a robust analytical connection.

Despite these contributions, the direct and systematic relationship between Qur'anic concepts such as *al-nisyān*, *al-ʿafw*, *al-tawbah*, and identity reconstruction, on the one hand, and the right to be forgotten, on the other, has yet to be thoroughly examined. This gap within religious and Qur'anic scholarship defines the distinctive position of the present study. By focusing exclusively on the Qur'an, this research seeks to offer a conceptual and semantic framework for the right to be forgotten, not merely as a legal entitlement, but as an educational, ethical, and profoundly human reality grounded in divine revelation.

3. Theoretical Framework

In contemporary legal discourse, the right to be forgotten is grounded in concepts such as individual autonomy, identity reconstruction, personal data protection, and the possibility of severing the connection between the past and the present (Mantelero 2013). Within the Qur'anic framework, however, this right does not derive from liberal individualism; rather, it acquires meaning within a worldview in which the human being is a responsible and volitional agent who nevertheless remains dependent upon divine mercy and embedded within a theocentric moral order. From this perspective, three foundational Qur'anic components can be identified that are directly or indirectly related to the right to be forgotten and that together form the theoretical basis of this study.

3.1. Al-Nisyān: Natural and Volitional Forgetfulness

The Qur'an treats *al-nisyān* (forgetfulness) as an intrinsically human phenomenon that may, in certain contexts, carry a purposeful dimension. In some instances, forgetfulness is presented as a natural limitation of human beings, as illustrated in the verse: *"Certainly We had enjoined Adam earlier; but he forgot, and We did not find any resoluteness in him"* (Q. 20:115).

Similarly, Moses implores God not to hold him accountable for his forgetfulness: *"He said, 'Do not take me to task for my forgetting, and do not be hard upon me'"* (Q. 18:73). An especially poignant expression of forgetfulness appears in the account of Mary during the agonizing moment of childbirth, when she declares: *"I wish I had died before this and become a forgotten thing, beyond recall"* (Q. 19:23). This statement does not merely articulate an inner pain; rather, it unveils a profound psycho-social reality: at times, human beings fear the persistence of others' gaze and social judgment more than the event itself. This concern resonates directly with the contemporary discourse on the right to be forgotten, wherein individuals seek liberation from past judgments, identity-destructive data, and humiliating collective and digital memories.

Conversely, *al-nisyān* is at times presented in the Qur'an as a form of divine retribution for human neglect: "*They have forgotten Allah, so He has forgotten them*" (Q. 9:67; see also 20:126; 32:14; 36:78; 38:26; 58:19; 59:19; 87:6). In these verses, forgetfulness primarily governs the relationship between the human being and God. This bidirectional structure of *al-nisyān* in the Qur'an provides a conceptual space in which the right to be forgotten may be understood not merely as the erasure of a sinful past, but as part of a broader process of human transformation, self-return, and renewed beginning. Nevertheless, invoking verses that refer to "divine forgetfulness" in the context of the right to be forgotten requires careful semantic and theological distinction. Without such differentiation, one risks conflating metaphorical forgetfulness with the notion of data deletion.

Accordingly, it should be noted that divine forgetfulness constitutes a form of rational metaphor (*al-majāz al-ʿaqlī*) and signifies the withdrawal of divine support, not literal oblivion. The right to be forgotten pertains to the regulation of public representations within data-driven environments. These two domains intersect only at the level of the basic semantic notion of non-remembrance, not at the level of ontological function. Therefore, references to *al-nisyān* in this study are not intended to demonstrate the historical deletion of the past, but rather to explore the normative plausibility of regulating social and digital memory within an ethical–Qur'anic framework.

3.2. Al-ʿAfw and al-Satr: Erasure and Concealment of Faults

Al-ʿafw (forgiveness) is one of the central Qur'anic concepts indicating the possibility of disregarding the past. The Qur'an commands: *"Let them excuse and forbear. Do you not love that Allah should forgive you? And*

Allah is all-forgiving, all-merciful" (Q. 24:22). Human beings themselves aspire to divine forgiveness, as reflected in the following poem attributed to Abū al-ʿAtāhiyah: *"By God, I hope for none but You, And I fear nothing but my sins. So forgive my sins, O Merciful One. For You are the Concealer of faults"* (Ibn Abī al-Ḥadīd 1984, 18: 233). Here, the poet stands before the mirror of truth, fully aware of his vulnerabilities and transgressions, yet hopeful because he faces a God who not only knows but also conceals. A similar theme appears in a supplication reported by Ibn Ṭāwūs (1997, 1: 161): *"O Concealer of faults, Forgiver of sins, Knower of the unseen: You conceal sin through Your generosity and delay punishment through Your forbearance."* In this prayer, God is portrayed not as ignorant of wrongdoing, but as deliberately concealing it through knowledge, generosity, and forbearance, thereby granting the human being an opportunity for repentance and self-reform without the loss of dignity.

Likewise, *al-satr* (concealment) is identified in Shia narrations as a divine attribute, encapsulated in the designation *Sattār al-ʿUyūb* (the One who conceals faults) (Ibn Bābawayh 1983, 22). This conceptual reservoir within religious texts provides fertile ground for theorizing the permissibility of removing harmful traces of the past. Importantly, *al-satr* is not merely a spiritual exhortation; it possesses significant implications for ethics, justice, and even digital rights. In a world where personal data and past actions are persistently recorded and indefinitely retained within technological systems, the idea of concealment can serve as a theoretical foundation for defending the human right to cleanse one's past. This is not merely an individual desire but reflects a divine principle: God conceals so that human beings may rise again.

Such a perspective stands in direct opposition to contemporary cultures of scandalization and unrestrained exposure. Religious ethics, particularly within Shia teachings, begin with God's being *Sattār al-ʿUyūb* and extend to a call for reciprocal concealment within society. Consequently, this doctrine can provide an epistemic and theological foundation for the idea of the right to be forgotten, or at least for the possibility of past data erasure, within contemporary ethics and human rights discourse. However, narrations and supplications concerning *satr al-ʿuyūb* primarily address the prohibition of unethical exposure and the concealment of individual moral faults; they do not, in themselves, entail an obligation to publicly erase information or historical events.

3.2.1. The Limits and Exceptions: Balancing al-Satr and Public Interest

Although the teachings of *satr al-ʿuyūb* (concealment of faults) and *al-ʿafw* (forgiveness) occupy a central position in Islamic ethical thought, as evidenced in the Qur'an (e.g., Q. 24:22; 64:14) and in Hadith (Ibn Bābawayh 1983), these concepts are neither absolute nor unrestricted within the framework of Islamic law. An examination of Qur'anic verses and narrations reveals that the religious tradition clearly distinguishes between private, non-harmful wrongdoing and public, corruption-generating misconduct. This distinction provides a normative basis for delineating the scope and exceptions of the right to be forgotten in contemporary social and legal contexts.

Numerous Qur'anic verses emphasize the obligation to disclose truth in cases where public rights or social justice are at stake. The prohibition against concealing testimony (Q. 2:283) indicates that secrecy is impermissible when another person's right is endangered. Likewise, the obligation to uphold justice and establish equity (Q. 57:25; 4:135) affirms that justice cannot be realized without an appropriate degree of transparency. In the criminal domain, verses addressing *al-ḥudūd* and *al-qiṣāṣ* (Q. 24:2–4; 2:178) stress the necessity of evidentiary proof and public acknowledgment of wrongdoing within legal procedures. Collectively, these verses articulate a framework in which disclosure does not constitute a violation of personal dignity, but rather serves as a means of protecting public rights.

Moreover, Islamic traditions play a decisive role in defining the boundary between cases warranting concealment and those requiring disclosure. The Prophet Muhammad (PBUH) is reported to have said: "*Whoever openly exposes his wrongdoing before us, we shall enforce upon him the punishment prescribed by God*" (al-Kulaynī 2008, 7: 180). This narration indicates that public commission or disclosure of sin generates judicial responsibility for the governing authority. Conversely, numerous narrations emphasize that "*Whoever conceals the fault of a believer, God will conceal his faults*" (Ibn Bābawayh 1983), suggesting that when an individual commits a private wrongdoing that does not harm others, concealing it is considered a moral virtue. Thus, the distinction between private, non-harmful sin and public, socially disruptive corruption is strongly foregrounded in the traditions.

Similarly, within the framework of *maqāṣid al-sharīʿah* (the higher objectives of Islamic law), the right to be forgotten is valid only insofar as it does not conflict with overarching aims such as the preservation of life,

property, social order, and the prevention of corruption. According to *maqāṣid* theory, whenever the preservation of individual dignity comes into tension with public security and social justice, priority is accorded to public interests (al-Shāṭibī 1920, 2: 295). This principle offers a systematic foundation for regulating exceptions to the right to be forgotten within the domain of data law and information ethics.

Accordingly, the right to be forgotten, understood as deletion of data-based representations of the past or restriction of access to records of wrongdoing, is a qualified and conditional right in Islamic tradition. It applies only when it does not infringe on others' rights (such as financial claims, victims' rights, or others' psychological security); does not obstruct judicial processes, particularly in crimes subject to *al-ḥadd* or *al-qiṣāṣ*; does not enable recurrence of corruption or pose a social threat; and does not undermine governmental decisions regarding public security and social order.

By contrast, in cases where wrongdoing is private, non-harmful, and rectifiable, especially in contexts of repentance and identity reconstruction, religious and ethical doctrines of concealment can legitimately support social forgetting and the removal of unnecessary data. In this way, the Islamic normative system not only acknowledges the right to be forgotten at ethical and legal levels, but also establishes clear and defensible boundaries for its exceptions, upon which the present study has relied to articulate a coherent linkage between traditional concepts and contemporary challenges in data protection.

3.3. Repentance (Al-Tawbah) and Identity Reconstruction

In the Qur'an, *al-tawbah* (repentance) signifies not merely the purification of the past, but the comprehensive reconstruction of human identity. A pivotal verse states: *"Excepting those who repent, attain faith, and act righteously. For such, Allah will replace their misdeeds with good deeds, and Allah is all-forgiving, all-merciful"* (Q. 25:70). This verse indicates that spiritual and personal reconstruction in the Qur'an presupposes not only the forgiveness of past wrongdoing, but its transformative reconfiguration. Within such a framework, the legitimacy—and indeed the necessity—of creating an opportunity for forgetting the past and beginning anew becomes evident. Accordingly, the right to be forgotten may be understood not merely as a permissive option, but, under specific conditions, as an ethical obligation.

4. Qur'anic Analysis of al-Nisyān, al-ʿAfw, and Identity Reconstruction

One of the conceptual foundations of the right to be forgotten within the Qur'anic framework lies in the understanding of triadic *al-nisyān* (forgetfulness), *al-ʿafw* (forgiveness), and identity reconstruction. Although articulated through diverse linguistic and exegetical forms, these concepts converge semantically to provide an Islamic basis for restoring dignity and removing the destructive effects of a person's past.

4.1. Al-Nisyān: Forgetfulness as a Cognitive and Theological Process

In numerous Qur'anic verses, *al-nisyān* is portrayed not merely as a psychological deficiency, but at times as a volitional or even punitive phenomenon. For instance, in the verse "They forgot God, so He forgot them" (Q. 9:67), divine forgetfulness toward those who have forgotten Him does not imply any lapse in divine memory; rather, it signifies the deprivation of mercy and guidance. In other words, God's forgetfulness denotes abandonment and withdrawal of grace, corresponding to the servant's forgetfulness rooted in heedlessness and deliberate turning away (al-Ṭabarī, 1985, 10: 121; al-Zamakhsharī, 1986, 2: 287; Tabataba'i 1996, 9: 335). This form of forgetfulness may be interpreted as punitive metaphor, that is, a mode of retribution manifested through the loss of divine attention and care. From this perspective, *al-nisyān* is not merely a cognitive failure, but an ontological response from God that arises in reaction to the human being's voluntary actions.

4.1.1. A Critique of the Equivalence between Divine al-Nisyān and the Right to Be Forgotten

It should be noted that Qur'anic verses in which *al-nisyān* (forgetting) is attributed to God, such as "*They have forgotten Allah, so He has forgotten them*" (Q. 9:67), 20:126, 32:14, 45:34, and 59:19, although capable, from the perspective of Qur'anic linguistics, of providing conceptual material for analyzing the suspension of remembrance, do not, from a hermeneutical standpoint, signify the erasure of information or the deletion of historical facts. Rather, they denote the withdrawal of mercy, the removal of divine solicitude, or punishment consequent upon human action.

Classical exegetes such as al-Ṭabarī (1985, 27: 35), al-Zamakhsharī (1986, 4: 293), al-Ṭabrisī (1993, 9: 121), and Tabataba'i (1996, 18: 190)

have interpreted this form of *al-nisyān* as a case of rational/metonymical attribution (*al-majāz al-ʿaqlī*), belonging to categories such as withholding beneficence, neglect, or cessation of grace, rather than the obliteration of knowledge or the historical elimination of events. From Tabataba'i's general exposition of Q. 59:19, it is evident that genuine forgetfulness on the part of God is impossible; what is meant by such "forgetting" is that those who were once objects of divine attention are now subject to divine disregard (Tabataba'i 1996, 19: 219). Precisely because privative acts such as *al-nisyān* are not literally attributable to God but are the consequence of human action, al-Samarqandī (1995, 3: 432) explains the attribution of *al-nisyān* to God as meaning that God causes individuals to forget their own condition and ultimate destiny, such that they perform no salvific act for themselves and advance no good on their own behalf.

On this basis, equating divine *al-nisyān* with the "right to be forgotten" as a claimable legal right is indefensible from the standpoint of Qur'anic exegesis and the principles of religious reasoning. In these verses, *al-nisyān* does not signify the deletion of prior realities, the erasure of records, or the annulment of the external consequences of human acts; rather, it refers to the rupture of the relationship of divine grace, guidance, and solicitude as a result of deliberate human conduct. More precisely, divine *al-nisyān* functions as an ethical–penal mechanism within the theology of recompense, not as a social or legal regulatory norm governing human relations. Consequently, transforming this concept into a juridical basis for data deletion or the cleansing of collective memory entails an unwarranted transfer from the theological–exegetical domain to that of public law. Such a transfer, absent mediation through independent juristic rules and legal principles, conflicts with the principle that divine rulings cannot be analogically extended to humanly constructed legal relations. Therefore, the function of the *al-nisyān* verses is, at most, ethically inspirational and pedagogically admonitory, not evidentiary for the direct establishment of the right to be forgotten as a positive, enforceable legal right.

Accordingly, in this study, the relationship between divine *al-nisyān* and the "human right to be forgotten" is not one of equivalence, but is invoked solely to extract a semantic configuration of concepts such as "non-remembrance" and "the suspension of attention." As a result, the article emphasizes that the right to be forgotten in the digital context pertains exclusively to the management of representations of the past within data environments, rather than to the erasure of truth or the denial of external reality.

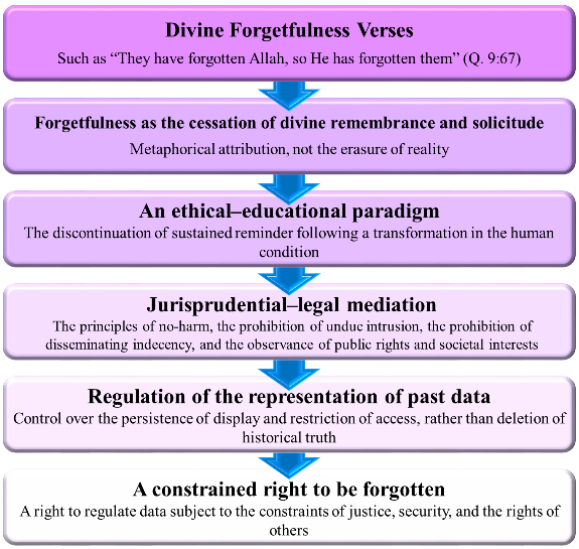

Figure 1. The normative pathway for employing the concept of divine al-nisyān in articulating a constrained right to be Forgotten

Figure 1 illustrates that, despite lacking direct indication of a "positive right to forgetting," verses concerning divine *al-nisyān* possess a normative capacity for ethical inspiration. Such capacity can be translated into a legal model only through mediation by juristic doctrines and principles of public law, thereby elevating it to the level of regulating data representation. Within this framework, the right to be forgotten is defined not as the erasure of truth or the deletion of history, but as a qualified right to control the continued representation of past information and to prevent disproportionate harm to human identity.

4.1.2. Practical Criteria for the Right to Be Forgotten in an Indigenous Model

Based on the exegetical, juristic, and legal findings of this study, the right to be forgotten within an indigenous model grounded in Qur'anic concepts is not conceived as an absolute and unconditional right, but rather as a qualified, supervisable, and interest-oriented right. Transforming this right from a moral value into an enforceable rule requires the articulation of clear practical criteria across four domains: the subject matter of the right, conditions of implementation, decision-making mechanisms, and constraints imposed by public interest.

4.1.2.1. Types of Information Covered by the Right to Be Forgotten

Within the proposed model, only those data qualify for the right to be forgotten that simultaneously meet the following conditions:

They are personal and private in nature, and their disclosure directly affects human dignity, social reputation, or the individual's psychological well-being;

The continued representation of such data results in disproportionate and unnecessary harm, without yielding a defensible rational or public benefit;

They pertain to a past in relation to which the individual has demonstrably undergone repentance, behavioral reform, or a sustained transformation of identity.

Accordingly, the mere antiquity of information or an individual's desire to erase a record does not, by itself, render data eligible for the right to be forgotten.

4.1.2.2. Conditions of Application and Scope of Exceptions

The exercise of the right to be forgotten is contingent upon the absence of serious conflict with public interests. Therefore, information falling into any of the following categories is, in principle, excluded from the scope of this right: public or organized crimes; matters involving the violated rights of third parties; information whose deletion or restriction would undermine judicial justice, public security, or the prevention of social corruption. This limitation is rooted in the Qur'anic logic that accords priority to *qiṣṭ* (equity), justice, and the preservation of social order over individual interests.

4.1.2.3. Judicial Standards and Decision-Making Mechanisms

The right to be forgotten is not regarded as a self-executing right; rather, its application requires determination by a competent authority. The identification of relevant cases must be conducted by judicial institutions or legally qualified expert bodies in order to: assess the proportionality between individual harm and public interest; prevent the misuse of the right to be forgotten as a means of evading legal responsibility; uphold the principle of prioritizing overriding interests in situations of normative conflict. Within this framework, the preferred solution is not the absolute deletion of data, but the regulation of access levels, restriction of redistribution, or removal from public search results.

4.1.2.4. Protection of Victims' Rights and Social Interest

One of the fundamental constraints of the indigenous model is the priority accorded to victims' rights over the preferences of the data subject. Whenever the retention or disclosure of information is necessary for restoring victims' rights, preventing the recurrence of harm, or ensuring social accountability, the application of the right to be forgotten lacks both juristic and legal legitimacy. This constraint prevents concepts such as forgiveness (*al-ʿafw*) and concealment (*al-satr*) from becoming instruments for the violation of others' rights.

4.1.2.5. Governing Juristic and Qur'anic Principles

The proposed framework is grounded in a set of general juristic principles, including: the principle that harm must be eliminated (*al-ḍarar yuzāl*) in preventing the persistence of disproportionate harm; the prohibition of intrusive surveillance (*al-tajassus*) and the prohibition of backbiting (*al-ghībah*) in limiting the unnecessary reproduction of harmful information; the principle of concealment of faults (*satr al-ʿuyūb*) as an ethical norm of social conduct rather than an obligation to erase truth; and the overarching principle of preserving order, justice, and public interest.

Taken together, not in isolation but through balanced proportional assessment, these principles enable the articulation of the right to be forgotten as a qualified, rational, and context-sensitive legal norm.

4.2. Al-ʿAfw: Forgiveness Oriented toward Forgetting

In the Qur'an, *al-ʿafw* (forgiveness) is often presented as the removal of the effects of sin or wrongdoing. In the verse "*wa yaʿfū ʿan kathīr*" (Q. 42:30), divine forgiveness signifies not merely the suspension of punishment, but the erasure and forgetting of the effects of sin. Fakhr al-Dīn al-Rāzī (1999, 4: 225) explicitly states that forgiveness is more comprehensive than absolution, because *al-ʿafw* entails the erasure of the effect as though it had never occurred.

Tabataba'i (1996, 18: 86) likewise maintains that the calamities and hardships afflicting society are, in reality, manifestations of sins and errors committed by people. This indicates that many of these sins, despite having genuinely occurred, are nevertheless encompassed by divine forgiveness, such that God does not fully reckon with or punish them. From this perspective, divine acts of forgiveness far exceed human transgressions, and many negative consequences of sin remain concealed at the level of divine pardon. Accordingly, people should not assume that all difficulties and

afflictions in life are immediate and direct consequences of their sins; rather, such afflictions are more accurately understood as the cumulative outcome of transgressions that God largely overlooks and does not punish. This understanding should not lead to despair, but rather encourage repentance, moral reform, and renewed hope in divine mercy. This level of *al-ʿafw* points to a form of ontological rewriting of human identity, whereby sin is removed from the very constitution of the individual's selfhood.

From the standpoint of modern analysis, public memory can function as a mechanism for the reproduction of shame or discrimination. Consequently, digital forgiveness or the deletion of past information may be regarded as a novel form of restorative justice (Mantelero 2013). This approach bears a striking affinity with the Qur'anic concept of *al-ʿafw*, which leads to the reconstruction of the individual's personality as a new human.

4.3. Identity Reconstruction in Light of Repentance and Forgiveness

In the Qur'an, *al-tawbah* (repentance) functions not merely as an ethical return, but as a constitutive possibility for the re-creation of identity. The verse, "*excepting those who repent, attain faith, and act righteously. For such, Allah will replace their misdeeds with good deeds, and Allah is all-forgiving, all-merciful*" (Q. 25:70) explicitly refers to an ontological transformation. According to Ibn ʿĀshūr (1984, 19: 256), this transformation is not metaphorical; rather, it entails the real conversion of negative effects into new ethical capital. At this level, repentance and forgiveness bring about a rewriting of the individual's religious and social identity. By removing the negative collective memory of one's past and replacing it with an ethical identity, the conditions for realizing the right to be forgotten are established, a right grounded in divine justice, human dignity, and the possibility of moral reform (Floridi 2015).

A conceptual examination of *al-nisyān*, *al-ʿafw*, and identity reconstruction in the Qur'an demonstrates that these three notions, through their semantic and functional interconnection, provide a rich framework for justifying and explaining the right to be forgotten. Unlike purely psychological or legal approaches in Western literature, which focus on the deletion of harmful data or the rehabilitation of public image, the Qur'an adopts an ontological and ethical approach aimed at the existential and spiritual reconstruction of the human being. Divine *al-nisyān*, in the cited verses, carries a punitive connotation, signifying the severance of guidance and divine grace from those who themselves have forgotten the truth. This form of forgetting functions as a warning, urging humans to return to remembrance of truth and responsibility.

Divine *al-ʿafw*, by contrast, signifies an intentional and positive forgetting of sins and their effects, not merely pardon. This forgiveness culminates in a form of ontological purification through which wrongdoing is removed from both divine and social memory. Identity reconstruction through repentance constitutes the practical realization of this forgetting. The expression "the conversion of evil deeds into good deeds" (Q. 25:70) clearly indicates that, through conscious choice and commitment to change, a person may detach from a prior sinful memory and re-enter human society with a new identity defined by God. As Tabataba'i (1996, 15: 242) explains, every sin committed by such individuals is transformed into good deeds, not into punishment, negative traits, or influences on future actions. Rather, the historical record of their past sins is, through divine mercy, converted into virtuous deeds. This interpretation reflects the apparent meaning of the verse and must be preserved and upheld on that basis.

This level of analysis demonstrates that, within Qur'anic logic, forgetting is not merely a passive or natural phenomenon, but a divine act, an ethical process, and a social possibility for reconstructing relationships and identities. Accordingly, the right to be forgotten in the Qur'an is not only legitimate, but constitutes an element of restorative justice, human dignity, and the divine program enabling return, growth, and liberation from the past. Unlike liberal legal systems, which tend to confine this right to the realm of data privacy or information control, the Qur'an anchors it in the spiritual core of the human being.

Therefore, the expression "the conversion of evil deeds into good deeds" (Q. 25:70) refers to the ethical and existential transformation of the repentant individual; that is, sincere faith and repentance alter the evaluative status and eschatological consequences of past sins, thereby reconstructing the individual's moral structure. This transformation does not entail the literal erasure of historical events, the deletion of past data, or an ontological alteration of factual occurrences. Nevertheless, this Qur'anic logic of personal reconstruction conveys an important social message: the community of believers should not fix the repentant individual within their past, nor define their identity by prior wrongdoing. This humanistic and value-oriented implication does not constitute a direct legal rule, but rather an ethical–theological foundation for designing systems that support identity reconstruction. In this sense, while the verse does not establish a legal norm, it provides a moral basis for resisting perpetual social labeling and the continuous pursuit of recorded past errors. The right to be forgotten in contemporary data-driven contexts can likewise be understood at this foundational level: enabling liberation from the past and the opportunity to redefine identity on the basis of repentance, reform, and genuine behavioral change.

5. Jurisprudential and Legal Implications of the "Right to Be Forgotten" in Light of Qur'anic Concepts

Following the preceding discussion, a fundamental question arises: does the apparatus of Islamic jurisprudence (*fiqh*) and Islamic law possess the conceptual and evidentiary capacity to accommodate and articulate the right to be forgotten? A re-examination of Qur'anic concepts such as *al-nisyān*, *al-ʿafw*, *satr al-ʿuyūb*, and *tabdīl al-sayyiʾāt bil-ḥasanāt* (transformation of evil deeds into good ones) indicates that the epistemic foundations of this right not only do not conflict with Islamic teachings, but are in fact consonant with some of their core principles, most notably human dignity, the acceptability of repentance (*al-tawbah*), and the possibility of identity reconstruction.

From this perspective, the right to be forgotten is not merely concerned with the deletion of past information, but rather with the preservation of personal dignity, the provision of opportunities for moral return, and the social reintegration of the repentant individual. This understanding yields significant implications in two principal domains. First, in individual and social jurisprudence, where issues such as the preservation of secrets, the prohibition of disclosure, and the legitimacy of reconstructing an individual's religious identity are addressed. Second, in public and judicial law, particularly with regard to data governance policies and the reconfiguration of criminal justice in light of repentance and concealment.

Accordingly, this section seeks, through recourse to Qur'anic verses, Shi'i traditions, and jurisprudential principles, to outline the capacities and requirements for incorporating the right to be forgotten into the framework of Islamic jurisprudence and law. Such an effort represents a step toward enabling religion to respond meaningfully to the emerging challenges of the contemporary world. It should be emphasized that this study does not equate divine forgetting with the ontological erasure of historical events. Rather, its objective is to extract a Qur'anic model grounded in the priority of the present over a harmful past and the suspension of detrimental representations of prior misconduct. This distinction constitutes the analytical foundation for the jurisprudential and legal implications discussed below.

Before turning to these legal implications, it is necessary to clarify the relationship between the Qur'an's ethical foundations and contemporary legal norms. Within the framework of this study, concepts such as *satr al-ʿuyūb*, *al-ʿafw*, and *tabdīl al-sayyiʾāt bil-ḥasanāt* are not treated as autonomous legal rules, as none of them directly mandate data deletion or

the erasure of historical records. Nevertheless, these foundational concepts converge on a shared principle: the possibility of identity reconstruction and the illegitimacy of perpetually prosecuting the repentant individual's past.

In modern legal systems, including the General Data Protection Regulation (GDPR), the right to be forgotten initially emerged as an ethical principle rooted in human dignity, and only subsequently acquired binding legal force. Similarly, within the Qur'anic tradition, an ethical logic centered on refraining from constant recollection of past wrongdoing, safeguarding human dignity, and recognizing inner transformation can inspire supportive social norms. Hence, invoking Qur'anic ethical concepts does not entail the direct derivation of legal rulings, but rather the identification of conceptual capacities capable of underpinning Islamic data-oriented policies that support forgetting and identity reconstruction.

5.1. Human Dignity and the Jurisprudential Grounding of Forgetting the Past

One of the most fundamental Qur'anic teachings underpinning the right to be forgotten is the affirmation of intrinsic human dignity: *"Certainly We have honoured the Children of Adam"* (Q. 17:70). Dignity constitutes the most essential characteristic of the human being (al-Shawkānī 1993, 3: 290), and the use of the intensive verb *karramnā* underscores the strength of this honor (Abū ʿUbaydah 1962, 1: 386). This dignity encompasses both the righteous and the sinful, insofar as human beings possess innate rational and natural qualities that elevate them above other creatures (al-Ālūsī 1995, 8: 112). Such dignity provides the foundation for reconstructing identity after repentance, provided that repentance occurs in due time and the individual has not undergone complete moral deformation. Certain extended traditions report that Imam ʿAlī (PBUH) warned specific individuals during his lifetime that they would later be responsible for the killing of his son; such individuals had already committed grave shortcomings that were no longer subject to forgiveness (Abū Ḥamzah al-Thumālī 1999, 1: 235).

Islamic jurisprudence, inspired by this principle, has developed numerous rulings aimed at preserving honor and enabling individuals to return to healthy social life. Many jurists, such as al-Ṭūsī in *al-Khilāf* (1999, 2: 253) and al-Muḥaqqiq al-Ḥillī in *al-Sharāʾiʿ* (1987, 4: 152), have argued, based on verses concerning repentance and traditions related to *al-satr* and non-disclosure, that exposing the criminal past of a repentant individual is religiously impermissible. Consequently, once sincere repentance has been realized, society is not only prohibited from recalling the individual's past but is positively obliged to facilitate their reintegration into the society.

5.2. Al-Nisyān and al-ʿAfw as Normative Foundations in Jurisprudence

The Qur'an emphasizes *al-nisyān* not merely as a psychological phenomenon, but as an ethical and juridical mechanism. Verses such as *"Indeed Allah loves the penitent"* (Q. 2:222), *"excepting those who repent, attain faith, and act righteously, for such, Allah will replace their misdeeds with good deeds, and Allah is all-forgiving, all-merciful"* (Q. 25:70), and *"whether you disclose what is in your hearts or hide it, Allah will bring you to account for it"* (Q. 2:284) reveal a profound interrelation between forgetting and pardon.

Tabataba'i (1996, 15: 243), argues that the transformation of evil deeds into good ones signifies the removal of the very designation of "sin" and its replacement with merit and reward, amounting to a complete redefinition of personal identity in light of repentance. Likewise, Fadlallah (1999, 17: 79) maintains that the verse indicates the erasure of the effects of prior sins rather than an arithmetic equivalence between sins and good deeds; the transformation signifies forgiveness and purification.

Al-Shawkānī (1993, 3: 103) similarly interprets the verse to mean that for those who repent, believe, and act righteously, God effaces their sins and replaces them with righteous deeds, an event that occurs in this world rather than the hereafter. This understanding is reflected in jurisprudence as well. Shaykh al-Anṣārī (1991, 2: 325) emphasizes that disclosing the past sin of a repentant individual constitutes *iʿānah ʿalā al-ithm* (assistance in sin), which is categorically prohibited under Islamic law.

5.3. Society, Collective Memory, and Responsibility in Forgetting

Forgetting in the Qur'an is not limited to an individual dimension; rather, it places a significant social responsibility upon the community. The well-known prophetic tradition, *"Whoever conceals the disgrace of a believer, God will conceal him on the Day of Resurrection"* (Qomi 1994, 2: 117), as well as the narration from Imam al-Ṣādiq (PBUH) stating, *"Whoever conceals a believer's fault that he fears will be exposed, God will conceal seventy of his faults in this world and the Hereafter"* (al-Kulaynī 2008, 3: 511), underscores this collective obligation.

Accordingly, in Islamic social jurisprudence, acts such as backbiting (*al-ghībah*), spying (*al-tajassus*), and the disclosure of secrets, particularly after repentance, are regarded as independent and grave sins (al-Narāqī 1995, 11:

275). This doctrinal stance provides a theoretical foundation for the contemporary notion of the right to be forgotten, understood here as the necessity of purifying collective memory from individuals' past moral failures.

5.4. Media Jurisprudence and the New Challenges of Digital Memory

In the age of new media, the preservation of personal dignity and the erasure of digital traces have emerged as unprecedented concerns. Digital memory, characterized by its effective irreversibility and resistance to erasure, stands in tension with Qur'anic foundations such as repentance (*al-tawbah*), pardon (*al-ʿafw*), and forgetting (*al-nisyān*). Some contemporary jurists, have ruled in their media-related legal opinions that disclosing individuals' past mistakes on social networks is religiously prohibited, especially when the individual has repented (al-Sistani n.d.). From this perspective, Islamic jurisprudence, drawing upon principles such as the prohibition of spying (Q. 49:12), the prohibition of publicizing sin (Q. 24:19), and the obligation to preserve a believer's honor, possesses a broad conceptual capacity to articulate an indigenous theory of the right to be forgotten within the contemporary legal order.

5.4.1. From Theology to Law: Theoretical Capacity for the Right to Be Forgotten

One of the most significant theological messages of the Qur'an and the Sunnah is that the human being, in the religious worldview, is not a closed or exhausted entity that is, one is not permanently imprisoned by one's past, and the possibility of liberation and reconstruction always remains open. It is precisely within this horizon that concepts such as *al-ʿafw*, *al-nisyān*, and *al-satr* acquire meaning. What merits attention, however, is that these concepts are not confined to devotional or spiritual domains; rather, they are capable of entering the sphere of public and social law. In an era in which technology has externalized human memory into machines, from search engines to databases that permanently archive individuals' pasts, the following questions have become increasingly urgent: Does a person have the right to erase their past? Should individuals be granted a renewed opportunity to redefine themselves? Islamic theology, unlike certain rigid moral frameworks, affirms this right, not merely as a psychological or personal possibility, but as a divinely sanctioned tradition.

When the Qur'an declares, *"Allah will replace their misdeeds with good*

deeds" (Q. 25:70), it effectively authorizes human beings not only to compensate for their past, but to convert it into a positive point of departure. This vision stands in sharp contrast to approaches that deprive individuals of social, professional, or even basic human rights due to mistakes committed years earlier. At this juncture, *al-satr* enters the scene. Put simply, *al-satr* represents a dignity-oriented culture of silence. The ethic of *al-satr* holds that once a person has repented, there is no justification for repeatedly invoking their past. If properly understood and theorized, this religious principle can serve as the conceptual foundation of the right to be forgotten in legal and social contexts. In other words: if God conceals, why should we expose? If God grants the opportunity for reconstruction, why should society deny it?

This perspective can find expression in modern Islamic legal systems, in which an individual who has moved beyond their past may request platforms to delete personal data, or petition judicial institutions to restrict public access to past criminal records, provided that genuine reform has occurred. This is neither injustice nor an evasion of responsibility; rather, it is the continuation of the divine tradition of *al-satr* within today's social context. Thus, the right to be forgotten is far more than a modern slogan. It is deeply rooted in religious teachings, where God not only forgives wrongdoing, but also conceals it from the gaze of others. On this model, a religious society must likewise provide individuals with the opportunity to reconstruct their identity and life. This is the true meaning of preserving human dignity in a theistic worldview.

6. Conclusion

The right to be forgotten, as one of the emerging issues of the data-driven age, is not merely a technological or legal concern; it is a profoundly human and ethical question. Human beings need to move beyond their past—not by denying or evading responsibility, but in order to reclaim dignity, hope, and the possibility of identity reconstruction. In this regard, Islamic teachings offer exceptional resources for rethinking this right within a theologically grounded and ethically oriented framework.

The Qur'an, through concepts such as *al-nisyān*, *al-ʿafw*, and *tabdīl al-sayyiʾāt bil-ḥasanāt* (the transformation of evil deeds into good), outlines the epistemic foundations of this right, whereby the repentant individual not only overcomes error, but transforms that passage into spiritual growth. Alongside this, Shi'i traditions, emphasizing God as *Sattār al-ʿUyūb* (the Concealer of faults), stress the necessity of covering past errors not only on God's part, but also on the part of society.

Ultimately, the right to be forgotten in the Islamic intellectual tradition signifies far more than the deletion of data; it represents the revival of human identity, an identity that emerges from acceptance, concealment, and reconstruction, rather than exposure, humiliation, and perpetual inscription of error. This vision is not only more theological, but also more humane, for instead of chaining individuals to the past, it opens a path toward the future. From this standpoint, Islamic legal systems possess the capacity, by drawing upon these profound Qur'anic concepts, to design innovative and indigenous models for supporting the right to be forgotten: models that safeguard truth while simultaneously honoring dignity, repentance, and transformation. Perhaps this is precisely what God promises in the well-known verse: *"Indeed good deeds efface misdeeds"* (Q. 11:114), affirming that the human being is ultimately worthy of a new beginning.

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References

Abū Ḥamzah al-Thumālī, Th. (1999). *Tafsīr al-Qurʾān al-Karīm*. Beirut: Dār al-Mufīd.

Abū ʿUbaydah, M. (1962). *Majāz al-Qur'ān*. Cairo: Maktabah al-Khānajī.

Al-Ālūsī, M. (1995). *Rūḥ al-Maʿānī fī Tafsīr al-Qur'ān al-ʿAẓīm*. Beirut: Dār al-Kutub al-ʿIlmīyyah.

Al-Kulaynī, M. (2008). *Kitāb al-Kāfī*. Qom: Dār al-Hadith.

Al-Muḥaqqiq al-Ḥillī, J. (1987). *Sharāʾiʿ al-Islām*. Qom: Ismāʿīlīyān.

Al-Samarqandī, N. (1995). *Baḥr Al-ʿUlūm*. Beirut: Dār al-Fikr.

Al-Shāṭibī, I. (1920). *Al-Muwāfiqāt*. Egypt: Dār al-Rashād al-Hadīthah.

Al-Shawkānī, M. (1993). *Fatḥ al-Qadīr*. Damascus: Dār Ibn Kathīr.

Al-Sistani, A. (n.d.). *Istiftaʾāt*. Social relations section, Question 462. Retrieved from: https://www.sistani.org

Al-Ṭabarī, M. (1985). *Jāmiʿ al-Bayān*. Beirut: Dār al-Fikr.

Al-Ṭūsī, M. (1999). *Al-Khilāf*. Qom: Jāmiʿah Mudarrisīn.

Al-Zamakhsharī, M. (1986). *Al-Kashshāf ʿan Ḥaqā'iq Ghawāmiḍ al-Tanzīl*. Beirut: Dār al-Kitāb al-ʿArabī.

Shaykh al-Anṣārī, M. (1991). *Al-Makāsib*. Qom: Dār al-Dhakhāʾir.

Court of Justice of the European Union. (2014). *Google Spain SL and Google Inc. v Agencia Española de Protección de Datos (AEPD) and Mario Costeja González* (Case C-131/12). ECLI:EU:C:2014:317. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62012CJ0131

Eslami, R. & Feizi, F. (2016). The Right to Be Forgotten and the Challenges Ahead. *The Judiciarys Law Journal*, 80(94), 13-47. https://doi.org/10.22106/jlj.2016.21938

European Union. (2016). Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation). *Official Journal of the European Union*, L119, 1–88. https://eur-lex.europa.eu/eli/reg/2016/679/oj

Fadlallah, M. H. (1999). *Tafsīr min waḥy al-Qur'ān*. Beirut: Dār Al-Milāk.

Floridi, L. (2015). The right to be forgotten: A philosophical view. *Jahrbuch für Recht und Ethik/Annual Review of Law and Ethics*, 23, 163–179.

Hataminia, H. & Sheikholeslami, A. (2018). The right to be forgotten from the perspective of juvenile delinquency. In *Proceedings of the First National Conference on the Globalization of the Rights of Children and Adolescents from Legal and Psychological Perspectives*. Mashhad, Iran.

Ibn Abī al-Ḥadīd, ʿA. (1984). *Sharḥ Nahj al-Balāghah*. Qom: Āyatullāh al-Marʿashī al-Najafī Library.

Ibn Bābawayh, M. (1983). *Ṣifāt al-Shīʿah*. Tehran: Aʿlamī Publications.

Ibn Ṭāwūs, ʿA. (1997). *Al-Iqbāl bil-Aʿmāl al-Ḥasanah*. Qom: Tablīghāt Eslāmī.

Khubyari, H. (2024). A Review of Principles Governing the budgeting system in Iran and France. *Journal of Research and Development in Comparative Law*, 7(23), 127-152. https://doi.org/10.22034/law.2024.2028152.1335

Mantelero, A. (2013). The EU Proposal for a General Data Protection Regulation and the roots of the 'right to be forgotten.' *Computer Law & Security Review*, 29(3), 229–235.

Mayer-Schönberger, V. (2011). *Delete: The virtue of forgetting in the digital age*. Princeton University Press.

Al-Narāqī, A. (1995). *Mustanad al-Shīʿah fī Aḥkām al-Sharīʿah*. Qom: Muʾassasah Āl al-Bayt.

Osman, A. (2023). The Right to Be Forgotten: an Islamic Perspective. *Hum Rights Rev*, 24, 53–73. https://doi.org/10.1007/s12142-022-00672-2

Qarai, A. Q. (2004). *Translation of the Holy Qur'an* .London: ICAS.

Qomi, A. (1994). *Safīnah al-Biḥār*. Qom: Osveh Publications.

Rosen, J. (2012). The Right to Be Forgotten. *Stanford Law Review Online*, 64, 88–92.

Shokri, A. (2023). A review of the right to be forgotten on the Internet. In *Proceedings of the Third International Conference on New Research and Achievements in Science, Engineering, and New Technologies*. Tehran, Iran.

Tabataba'i, M. H. (1996). *Al-Mīzān fī Tafsīr al-Qur'ān*. Qom: Jāmiʿah Mudarrisīn.

Vilella, S., & Ruffo, G. (2025). (De)-Indexing and the right to be forgotten. arXiv:2501.03989. https://doi.org/10.48550/arXiv.2501.03989

Zhang, D., Finckenberg-Broman, P., Hoang, T., Pan, S., Xing, Z., Staples, M., & Xu, X. (2023). Right to be forgotten in the era of large language models: Implications, challenges, and solutions. arXiv:2307.03941. https://doi.org/10.48550/arXiv.2307.03941

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The Miraculous Nature of the Qur'an and Infinite Complexity in Fractal Geometry

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ABSTRACT:

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The Qur'an possesses a form of infinite complexity and depth, from which new dimensions of scientific insight continue to emerge as scientific knowledge advances. As time progresses, an increasing number of findings from contemporary sciences become evident. Some researchers have examined these sciences and concluded that they correspond with the teachings of the Qur'an, thus serving as evidence for its scientific miracles. The deeper we explore the scientific aspects of this subject, the more profound and intricate these miracles become. This complexity is reminiscent of the infinite structures found in fractal systems. Consequently, this study investigates various scientific data that have been revealed over time and are also referenced in the Qur'an, focusing on the notion of scientific miracles within the text. By employing descriptive, analytical, and comparative methods, this research aims to demonstrate the existence of such data within the Qur'an, particularly in relation to its complexity, which resembles that of fractals. It must be acknowledged that some of the data present in the Qur'an can only be understood through the passage of time and the emergence of new scientific knowledge. This process reflects the

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ongoing harmony between the Qur'an and human scientific inquiry. Addressing complex scientific topics not only highlights the enduring relevance of the Qur'an but also underscores its timelessness, as it was revealed for all times and generations.

KEYWORDS: The Qur'an, Infinite complexity, Fractal, Scientific miracles, Scientific interpretation, Cosmic expansion.

1. Introduction

Numerous studies have been conducted on the miraculous nature of the Qur'an, a topic that has consistently captivated researchers across different historical periods. Consequently, a substantial body of literature exists on this subject. The majority of scholars and researchers are well aware of the Qur'an's miraculous quality. However, differences arise in the manner of articulating this notion. These differences are influenced by the perspectives and historical contexts of individual exegetes and researchers.

Contemporary Qur'anic scholars have also contributed significantly to this discourse. For instance, Mohammad Hossein Baroomand (2005, 226), in his book *"Critique and Assessment of Methods for Establishing the Veracity of the Qur'an,"* not only evaluates the views of various commentators on this topic but also highlights aspects of the Qur'an's miraculousness that pertain to specific historical contexts. He argues that, in an era of scientific advancement, the most compelling approach to affirming the Qur'an's authenticity for contemporary researchers and scientists, particularly in the empirical sciences, is to examine the truths articulated in the Qur'an that may not have been comprehensible in earlier ages.

To date, no independent research has emerged that explicitly aligns the characteristics of fractal systems with the Qur'an or its components. However, a study titled *"Fractal Geometry in Fuzziology and Its Role in the Modeling of Understanding the Language of the Qur'an"* (Bagherian et al. 2022) has been undertaken to model the comprehension of meaning and language in the Qur'an using a fractal framework.

Additionally, another noteworthy article, *"A Systemic Approach to the Fractal Cohesion of Surah Structure with Emphasis on Opening and Closing: The Case of Surah Ar-Rum"* (Assadi et al. 2021), explores the interrelationships among the components of a surah using fractal concepts. By examining elements such as the opening and closing verses, the article investigates the potential for structural harmony governing the composition of the surah.

The present study employs descriptive, analytical, and comparative methods to explore the congruence of scientific miracles in the Qur'an with the attributes of infinite complexity found in fractals. It seeks to address the question of the relationship between complexity in fractal systems and the scientific miracles of the Qur'an. Furthermore, it examines how this complexity may be illustrated in relation to the Qur'an, which is here considered as a fractal system.

2. Fractals

The limitations of Euclidean geometry in elucidating natural order and in modeling various components of nature have paved the way for the emergence of fractal geometry, which is, in fact, a more advanced form of geometry. The term "fractal" derives from the Latin word *fractio,* meaning "to break" or "to create irregular fragments" (Mandelbrot 1983). Fractal geometry was first proposed by Benoit Mandelbrot in 1975 (Ghobadian 2013). Its applications primarily involve the description and modeling of structures characterized by repetitive patterns at smaller scales (Bovill 1996). Thus, at a fundamental level, fractal geometry provides a new language for analyzing the complex shapes found in nature (Peitgen et al. 1993).

2.1. Infinite Complexity and the Generative Capacity of Fractals

Any attempt to define fractals remains incomplete due to their intrinsic structure, which encompasses multiple interrelated features (Pickford 1996). Given that the characteristics of fractals are interconnected like pieces of a puzzle, features such as interconnectedness, evolution, and infinite complexity—a central focus of this study—are deeply interdependent. Among these, infinite complexity is closely linked with other fractal properties.

Complexity in fractals increases with magnification. As one zooms into a fractal structure, new details continuously emerge (Pickford 1996; Mandelbrot 1983; Albers 2008). The concept of infinite detail, or infinite complexity, constitutes the core of Mandelbrot's definition of fractals, which he explores in various forms throughout his work. The infinite complexity in fractals does not only signify the existence of details at every scale. It also reflects the generative capacity of the structure itself. This complexity is the result of the infinite iteration of a simple rule or generating principle. In other words, a fractal structure follows a simple initial law.

With each repeated application of this law (iteration), new layers of complexity and detail are produced. Consequently, this complexity is not random chaos but rather a form of lawful or structured complexity. It demonstrates the capacity to generate infinite patterns and details from a single origin (Mandelbrot 1983). It is this generative and repeatable nature that distinguishes fractal complexity from other types of complexity, thereby making it particularly suitable for modeling layered systems such as the meaning of the Qur'an.

2.2. Exemplifications of Infinite Complexity

One significant outcome of the infinite complexity inherent in fractals is that they do not possess a definitive characteristic scale. In a Euclidean shape, such as a square, there exists a specific characteristic length — namely, the length of a side. If magnified, the structure eventually simplifies and resolves into a straight line. However, in a fractal, no particular scale exists at which details vanish or the structure simplifies. This implies that complexity is present at all levels, from the largest to the smallest, thereby affirming the boundless nature of detail. Stephen Strogatz (2015), in his discussion on fractals, emphasizes that, unlike systems with defined temporal or spatial scales, fractals do not possess such attributes. Accordingly, regardless of the degree of magnification, new intricate patterns and details continuously emerge. This continuity of detail across all scales directly reflects the concept of infinite complexity.

2.3. An Exemplification of Infinite Complexity in Nature

Nature is abundant with phenomena that exhibit fractal characteristics and infinite complexity. Coastal lines provide a classic example of this, as illustrated in Figure 1. Imagine observing the coastline of a continent from a distance. At this scale, one perceives only broad outlines and large bays. As one approaches (i.e., zooms in), capes, indentations, and smaller river entrances become apparent. If one continues to zoom in further, finer details, such as pebbles, grains of sand, and even microscopic irregularities on rock surfaces—come into view. This process of revealing increasingly intricate details at smaller scales can continue indefinitely. The length of a coastline can never be measured precisely, as it depends on the length of the measuring unit. The shorter the step (that is, the greater the precision), the longer the measured length becomes, since more details are encompassed. This scale-dependent irregularity across all levels embodies the essence of infinite.

Figure 1. Illustration of infinite complexity in a coastline, presented as a classic example of a fractal structure in nature (Mandelbrot 1983).

2.4. An Exemplification of Infinite Complexity in the Mandelbrot Set

The Mandelbrot set, depicted in Figure 2, stands as one of the most prominent and well-known instances of infinite complexity in mathematics. It is defined by a simple iterative mathematical formula, $Z_{n+1}= Z_n^2 + C$ (Roozitalab 2009), yet its boundaries exhibit extraordinary intricacy. Upon magnifying the borders of the Mandelbrot set, one observes countless layers of detail, including miniature structures and repeating patterns. These patterns often resemble the entire set or specific portions of it, demonstrating a property of self-similarity.

This process of detail discovery is effectively unbounded. The more one zooms in, the more novel and increasingly intricate structures are revealed, thereby emphasizing its infinite nature. The production of this seemingly limitless complexity from a simple mathematical rule represents one of the clearest demonstrations of the generative power underlying fractal geometry.

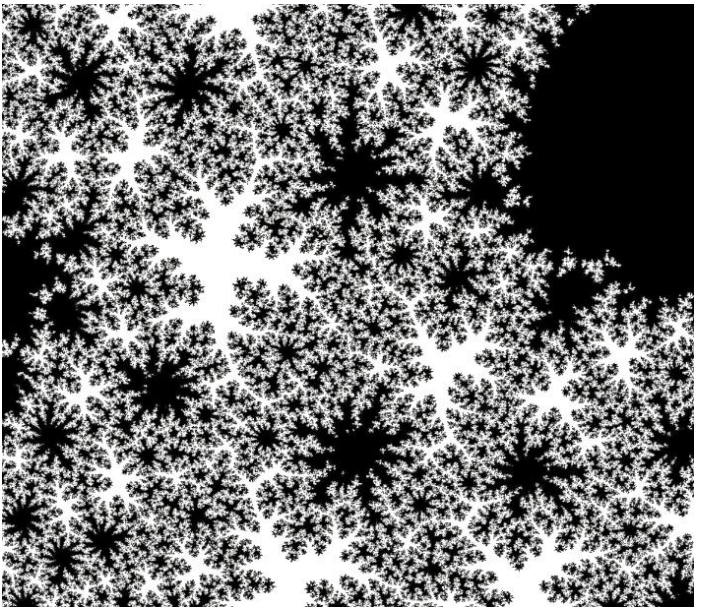

Figure 2. Example of the Mandelbrot Set, illustrating the emergence of infinite complexity from a simple mathematical rule (Mandelbrot 1983).

3. The Miracle of the Qur'an

The term *iʿjāz* (miracle), derived from the Arabic root *ʿ-j-z*, signifies a state of incapacity or inability (Al-Khoei 2006; Zurqānī n.d., 2:227). In a religious context, a miracle refers to an extraordinary event that serves to validate a claim of prophet hood, such that opponents are unable to produce anything comparable (Rezaei Esfahani 2002, 1:68; Al-Khoei 2015; Tabataba'i 1970, 1:86).

There are several approaches to examining the miraculous aspects of the Qur'an (Talebpour 2022). These facets can broadly be divided into two categories: intrinsic and extrinsic aspects. The extrinsic aspect primarily relates to external factors such as preservation, whereas the intrinsic aspects encompass multiple dimensions. These intrinsic dimensions include the following: literary excellence (Arabic rhetoric and eloquence), knowledge of the unseen, influence and persuasive power, aesthetic quality and structural harmony, scientific and factual correspondence, methodology of guidance, psychological considerations, spiritual elements, numerical significance, and universality and permanence (Joudavi et al. 2023).

Notably, among these facets, the dimension concerning scientific truths aligns remarkably with the concept of infinite complexity found in fractals,

particularly due to the evolving and relative nature of human knowledge over time. Therefore, this study focuses on this specific aspect of the Qur'anic miracle and will further explore it through selected examples.

3.1. Scientific Miracle (Justification Based on Science and Truths)

The scientific justification for the miracle of the Qur'an aims to assert the inimitability of the text by emphasizing the alignment between the Qur'an and human knowledge. As time progresses, the Qur'an not only remains relevant but appears to correspond with developments in contemporary science. This dynamic correspondence underscores its uniqueness and distinguishes it from ordinary human productions (Baroomand 2005). This section presents selected examples of the Qur'an's scientific miracles. However, it should be noted that the notion of scientific justification remains a subject of scholarly debate, with both proponents and detractors. Baroomand notes the tendency of some advocates to overlook the external realities of the Qur'an and to become influenced by personal motivations and expectations. He observes that if proponents of the scientific justification defend their stance until the Day of Resurrection, yet lack a genuine connection to the Qur'an and to empirical scientific findings, what benefit can they offer to humanity other than hollow results? How enduring can such constructed connections be? Conversely, if opponents of this theory persist in their rejection, what do they achieve other than alienation from the Qur'an, particularly for those unfamiliar with its message? In such a case, do they not fail both the text and the broader human community?

3.2. Cosmic Expansion

The expansion of the universe is one of the most fundamental and astonishing concepts in modern cosmology. This phenomenon does not simply refer to galaxies moving through space away from one another; rather, it describes the expansion of space itself between galaxies. In other words, the very fabric of space-time is continuously stretching, leading to an increase in distance between cosmic objects that are not gravitationally bound (such as distant galaxies and galaxy clusters). The expansion of the universe is a key feature of the Big Bang cosmological model. This phenomenon can be illustrated through the analogy of an inflating balloon. If points are drawn on the surface of the balloon, the distance between these points increases as the balloon expands, even though the points themselves do not move across the surface. In this analogy, galaxies are analogous to

the points, while the surface of the balloon represents expanding space. Among the key observational evidence for the expansion of the universe, which highlights the evolving nature of scientific understanding and may be interpreted as aligning with the intricate features discussed in relation to the miraculous nature of the Qur'an, the following is particularly significant:

a) Hubble's Law and Redshift: The first compelling evidence for the expansion of the universe was presented in the late 1920s by the American astronomer Edwin Hubble. By combining his own measurements of the distances to galaxies with redshift data obtained by other astronomers, he identified a linear relationship between distance and recessional velocity, now known as Hubble's Law: $V = H_0 \cdot d$

V represents the velocity at which a galaxy is receding. H_0 denotes Hubble's constant, indicating the current rate of expansion of the universe. D represents the distance to the galaxy. The initial evidence for cosmic expansion originated from Hubble's Law, which demonstrated that galaxies at greater distances are receding from us at higher velocities (Hubble 1929).

b) Cosmic Microwave Background (CMB): The existence of the Cosmic Microwave Background radiation, a remnant from the early universe, represents one of the strongest pieces of evidence supporting the Big Bang model and its subsequent expansion. More precisely, the CMB originated approximately 380,000 years after the Big Bang, when the universe had cooled sufficiently for neutral atoms to form, allowing photons to travel freely through space. The CMB is observed as uniform and isotropic radiation in all directions across the sky. Initially, this radiation was exceedingly hot. However, over 13.8 billion years of cosmic expansion, the wavelengths of these photons have been dramatically stretched, a phenomenon known as cosmological redshift, making them detectable today as microwave radiation at approximately 2.73 Kelvin, close to absolute zero. This cooling and wavelength stretching are direct consequences of the universe's expansion (Penzias & Wilson 1965).

c) Abundance of Light Elements: The observed ratios of light elements in the universe correspond closely with predictions from the Big Bang model and the early expansion of the universe. Specifically, the Big Bang theory posits that during the universe's initial moments, extremely high temperatures and densities enabled nuclear reactions (nucleosynthesis), leading to the formation of light elements such as hydrogen, helium, and lithium in precise ratios. The measured ratios of these elements in the current universe are in remarkable agreement with theoretical predictions, providing evidence that the universe was once extremely hot and dense before undergoing expansion and cooling (Kolb & Turner 1990).

3.3. The Phenomenon of Cosmic Expansion in the Qur'an

In verse 47 of Surah Al-Dhāriyāt, the Qur'an states:

وَ السَّماءَ بَنَيْناها بِأَيْدٍ وَ إِنَّا لَمُوسِعُونَ (الذاريات/47)

We have built the sky with might, and indeed it is We who are its expanders (Q. 51:47).

One of the criticisms leveled by literary scholars against the Qur'an prior to the discovery of cosmic expansion concerned an alleged temporal inconsistency. Critics argued that the verse begins with *banaynāhā* (We constructed it) and then shifts to *innā lamūsiʿūn* (We are expanding it). They contended that the past tense, *awsaʿnāhā* (We expanded it), should have been used instead. Historically, interpretations from the early Islamic period up to the era preceding the discovery of cosmic expansion rendered *innā lamūsiʿūn* as a reference to abundance, power, and vastness, which was contextually appropriate for contemporary audiences. However, in the modern era, based on established scientific knowledge, the true meaning of the verse becomes more apparent, particularly as external evidence, i.e., verified scientific facts, corroborates it (Baroomand 2005).

Hence, science has demonstrated that the universe is indeed expanding, and the Qur'anic term *mūsiʿ*, linguistically an active participle from the trilateral root *w-s-ʿ*, encapsulates this notion accurately. From a theological perspective, had the phrase been expressed as "We expanded it," it could have implied a limitation in divine knowledge regarding the ongoing expansion of the universe. Interestingly, this complexity does not terminate here; it appears to extend infinitely, reflecting the relative and continuously evolving nature of scientific knowledge. It is plausible to assert that this dynamic and unfolding complexity aligns seamlessly with the characteristics of infinite complexity observed in ideal fractal systems. As previously noted, this ongoing and progressive complexity is further substantiated by contemporary scientific discoveries related to cosmic expansion.

3.4. Unveiling Complexities and Nuances of Cosmic Expansion in Recent Research

Observations of Type Ia supernovae in the late 1990s revealed not only that the universe is expanding, but also that this expansion is accelerating (Riess et al. 1998; Perlmutter et al. 1999). This remarkable discovery led to the introduction of the concept of dark energy. Dark energy is a hypothetical

form of energy that is uniformly distributed throughout space and exerts negative pressure, analogous to a gravitational repulsion. This negative pressure drives an increasing rate of cosmic expansion. The precise nature of dark energy remains one of the greatest enigmas in contemporary cosmology (Lodha et al. 2025). Nonetheless, the most recent and arguably most significant discovery concerning cosmic expansion, particularly from 2019 to 2024, has profoundly engaged the cosmological community and is referred to as the Hubble Tension. This tension arises from a notable discrepancy between the values of H_0 measured from early-universe observations (Planck Collaboration 2020) and those derived from local measurements (Riess et al. 1998).

In 2023 and 2024, extensive efforts were undertaken to resolve or further illuminate the Hubble Tension. The James Webb Space Telescope (JWST) recently confirmed distance ladder measurements, thereby reducing the likelihood of systematic errors in this methodology and sustaining the Hubble Tension. Previously, concerns had been raised regarding potential systematic errors in measurements obtained from the Hubble Space Telescope (HST), particularly those related to Cepheid variables in crowded stellar environments. The SH0ES team and others, utilizing the unprecedented precision of the JWST, confirmed Hubble's measurements in 2023 and early 2024. These observations indicated that measurement errors from the HST were not significant, and thus the Hubble Tension persists (Riess et al. 2023). Consequently, the probability that this tension merely reflects observational error has been markedly diminished.

Recent findings, such as data from the Dark Energy Spectroscopic Instrument (DESI), have further complicated this enigma. DESI, operational in Arizona, provided an independent measurement of H_0 of approximately 80.0 ± 68.53 km/s/Mpc. This value is closer to that measured by Planck and exhibits a 3.4σ tension with SH0ES. These results add another layer of complexity to the Hubble Tension conundrum, suggesting that early-universe methods and distance-based expansion approaches continue to converge on lower H_0 values, whereas local measurements yield systematically higher values (CERN Courier 2025).

Therefore, if this tension is genuine and not a byproduct of measurement error, it may indicate one of the following possibilities: a) New Physics: Our standard cosmological model (ΛCDM) may be incomplete, and there could exist new physical phenomena in the universe yet to be discovered. This may involve modifications to the nature of dark energy, dark matter, or even the laws of gravity during the early universe. b) Unknown Systematic Errors: Although the probability is low, unknown systematic errors in one or both measurement methods could contribute to this discrepancy.

This Hubble Tension is recognized as a crisis in modern cosmology that may point toward new physics (Cooper 2025). It illustrates that, despite monumental advancements, there remain unexplored facets of fundamental physics regarding the universe, resonating with the concept of infinite complexity observed across fractal scales. Thus, within the Qur'an, we may also identify an analogy to a fractal system, wherein infinite complexity manifests across multiple levels and scales, mirroring the ongoing discovery and unfolding of cosmic phenomena.

4. The Convergence of Scientific Miracles in the Qur'an and the Infinite Complexity of Fractals

The primary basis for relating the scientific miracle (*iʿjāz*) of the Qur'an to the characteristics of infinite complexity in fractal geometry lies in the Qur'anic concept of the infinity of Divine words. Verse 109 of Surah Al-Kahf explicitly illustrates this point:

قُل لَّوْ كَانَ الْبَحْرُ مِدَادًا لِّكَلِمَاتِ رَبِّي لَنَفِدَ الْبَحْرُ قَبْلَ أَن تَنفَدَ كَلِمَاتُ رَبِّي وَلَوْ جِئْنَا بِمِثْلِهِ مَدَدًا (الكهف/109)

Say, "If the sea were ink for the words of my Lord, the sea would be spent before the words of my Lord are spent, though We brought another like it for replenishment" (Q. 18:109).

This verse indicates that the Divine Word, like the details of a fractal, possesses a depth and scope that cannot be fully encompassed or exhausted by any material measure. Consequently, this inherent endlessness provides a conceptual framework for modeling infinite generative complexity, a model in which each new scientific discovery represents not the culmination of knowledge but merely an iteration in the unfolding of the endless details latent in both the text and the universe, thereby strengthening the analogy with fractals.

Although references to this topic have appeared in previous sections, it is beneficial to address it independently. Based on the points already stated, one may observe a correlation among science, the Qur'an, and fractals. However, as frequently emphasized, the alignment is specifically between the scientific miracles of the Qur'an and the infinite complexity inherent in fractals, warranting a more detailed exploration of this subject. Before delving further, it is imperative to consider a crucial point raised by Baroomand (2005): The justification for the scientific miracle does not require mentioning all discovered or undiscovered phenomena. Rather, it suffices to highlight examples pertinent to the specific advancements of each

era. Those who adopt an exaggerated stance must provide substantiation for their claims. It is virtually impossible to encapsulate all new discoveries across diverse fields within a single text. Who among us possesses the capacity to identify them all?

Thus, for the scientific miracle in the Qur'an to manifest and gain universal recognition, the scientific topic must be validated within its respective scientific framework, and the Qur'anic implications of the topic must be unequivocal. It is widely acknowledged that certain subjects in the Qur'an present propositions that remain unverified scientifically, and conversely, some scientific discoveries are not explicitly mentioned in the Qur'an. This observation closely aligns with the premise discussed in this research, thereby strengthening the foundation for this convergence.

Building upon the aforementioned considerations, we can discern the definitive nature of the scientific evidence regarding cosmic expansion and its unequivocal implications in the Qur'an. Consequently, one can observe the infinite complexity present both in the Qur'an and in scientific discovery, which aligns with the principles of fractal geometry. Notably, this complexity, reflected across various segments of the Qur'an, is manifest in themes such as cosmic expansion, where both the scientific validation and Qur'anic relevance are conclusive. Thus, by engaging with recent findings, we deepen our understanding of infinite complexity in science, which resonates harmoniously with the Qur'an. This convergence not only aligns with the relative nature of scientific knowledge but also corresponds with the Qur'anic implications, framing the Qur'an as a fractal system. In simpler terms, the infinite complexity observed in fractals parallels the infinite complexity in scientific discovery, which aligns with the teachings of the Qur'an.

It is important to note that this research focuses specifically on the characteristic of infinite complexity from the perspective of generative capacity. In fractal geometry, infinite complexity is achieved through the repeated application of a simple rule or generator to an initial shape. This concept is directly applicable to modeling the relationship between the Qur'an and science. In this framework, the Qur'anic verses and comprehensive expressions serve as the Initial Generator, while each new scientific discovery throughout history, for example, the proof of cosmic expansion, represents an Iterative Step, revealing new and infinite layers of semantic detail and complexity. This process of infinite iterative generation elevates the Qur'an's scientific miracle from a mere "evolutionary understanding" to an "infinite generative structure," the mathematical description of which is confirmed by the fractal model (emphasizing infinite dimension and iteration). This demonstrates the coherence of the Qur'an as a fractal system, were divine knowledge and natural phenomena interconnect across infinite scales of complexity.

5. Conclusion

In light of the concepts and discussions presented, the following conclusions can be drawn:

- Scientific justifications grounded in knowledge and truth, given the relative and evolving nature of understanding over time, can be effectively associated with the infinite complexity observed in fractals.
- The close relationship between the infinite complexity inherent in fractals and the scientific miracles of the Qur'an is elucidated through their convergence under the broader concept of infinite complexity in science, exemplified by phenomena such as cosmic expansion.
- To classify a scientific topic as a Qur'anic miracle, it is essential that both the Qur'anic implications and the corresponding scientific validation are definitive and unambiguous.
- Through the established correlations, we gain insight into the nature of infinite complexity and appreciate how our comprehension of various scientific and natural phenomena evolves over time.
- By examining the scientific miracles in the Qur'an and their alignment with the characteristics of infinite complexity in fractals, we develop a deeper understanding of the operational nature of the Qur'an as a fractal system.

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References

Al-Khoei, A. (2006). *The boundaries of miracles* (in Persian). Qom: Imam Sadiq Institute.

Al-Khoei, A. (2015). *Al-Bayān fī Tafsīr al-Qurʾān*. Qom: 'Ilmī.

Assadi, S., Zare' Zardini, A., Moti', M., & Horri, A. (2021). A systemic approach to the fractal cohesion of surah structure with emphasis on opening and closing: The case of Surah Ar-Rum. *Literary Quranic Researches*, 8(4), 1–33. https://doi.org/10.1001.1.23452234.1399.8.4.1.2

Bagherian, H., Delafkar, A., & Alamolhoda, S. A. (2022). Fractal geometry in fuzziology and its role in the modeling of understanding the language of the Qur'an. *Science and Religion Studies*, 13(1), 27–51. https://doi.org/10.30465/srs.2021.38431.1907

Baroomand, M. H. (2005). *Critique and assessment of methods for establishing the veracity of the Qur'an* (in Persian). Qom: Arshe Andisheh.

Bovill, C. (1996). *Fractal geometry in architecture and design*. Boston: Birkhäuser.

CERN Courier. (2025). *The Hubble tension*. CERN Courier. https://www.cerncourier.com/

Cooper, K. (2025). Hubble tension is now in our cosmic backyard, sending cosmology into crisis. *space.com*

Hubble, E. (1929). A relation between distance and radial velocity among extragalactic nebulae. *Proceedings of the National Academy of Sciences*, 15(3), 168–173.

Joudavi, A., Baroomand, M. H., Talebiyan Ashkzari, N., & Khezrinejad, R. (2023). *Comparative identification of Nour al-Din Attar's perspective and method in the book Ulum al-Quran al-Karim in explaining Qur'anic studies* (in Persian). Shiraz: Shahcheragh Publications.

Kolb, E. W., & Turner, M. S. (1990).*The Early Universe*. Addison-Wesley.

Lodha, K., Calderon, R., Matthewson, W. L., Shafieloo, A., Ishak, M., Pan, J.,… & Zou, H. (2025). Extended dark energy analysis using DESI DR2 BAO measurements. *Physical Review D*, 112, 083511. arXiv preprint arXiv:2503.14743.

Mandelbrot, B. B. (1983). *The fractal geometry of nature*. New York: Freeman.

Peitgen, H.O., Jürgens, H., & Saupe, D. (1993). *Chaos and fractals: New frontiers of science*. Berlin: Springer-Verlag.

Penzias, A. A., & Wilson, R.W. (1965). A Measurement of Excess Antenna Temperature at 4080 Mc/s. *The Astrophysical Journal*, 142(1), 419-421.

Perlmutter, S., Aldering, G., Goldhaber, G., Knop, R. A., Nugent, P., Castro, P. G., & Pain, R. (1999). Measurements of Ω and Λ from 42 high-redshift supernovae. *The Astrophysical Journal*, 517(2), 565–586. https://doi.org/10.1086/307221

Pickford, C. (1996). *Fractal horizons: The future use of fractals*. New York: St. Martin's Press.

Planck Collaboration. (2020). Planck 2018 results. VI. Cosmological parameters. *Astronomy & Astrophysics*, 641, A6. https://doi.org/10.1051/0004-6361/201833910

Qarai, A. Q. (2004). *Translation of the Holy Qur'an*. London: ICAS.

Rezaei Esfahani, M. A. (2002). *A research on the scientific miracle of the Qur'an* (in Persian). Rasht: Ketab Mobin.

Riess, A. G., Filippenko, A. V., Challis, P., Clocchiatti, A., Diercks, A., Garnavich, P. M., … & Schmidt, B. P. (1998). Observational evidence from supernovae for an accelerating universe and a cosmological constant. *The Astronomical Journal*, 116(3), 1009–1038. https://doi.org/10.1086/300499

Riess, A. G., Yuan, W., Macri, L. M., Brout, D., Hoffmann, S. L., Jones, D. O., … & Pelliccia, D. (2023). A new resolution of the Hubble tension with the James Webb Space Telescope. *The Astrophysical Journal Letters*, 950(2), L16. https://doi.org/10.3847/2041-8213/acdf6a

Roozitalab, A. (2010). *Introduction to fractal geometry* (in Persian). Shiraz: Takhte Jamshid.

Strogatz, S. H. (2015). *Nonlinear dynamics and chaos: With applications to physics, biology, chemistry, and engineering*. Westview Press.

Tabataba'i, M. H. (1970). *Al-Mīzān fī Tafsīr al-Qurʾān*. Beirut: Muʾassisah al-ʿIlmī lil-Maṭbūʿāt.

Talebpour, A., Rohani Mashhadi, F., & Moradi, M. (2022). Introducing an original method in evaluating the scientific miracle of the Qur'an. *Journal of Interdisciplinary Qur'anic Studies*, 1(1), 5–21. https://doi.org/10.37264/jiqs.v1i1.1

Zurqānī, M. A. (n.d.). *Manāhil al-ʿIrfān fī ʿUlūm al-Qurʾān*. Beirut: Dār Iḥyāʾ al-Tarāth al-ʿArabī.

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A Qur'anic Conceptual Model of the Relationship between Civilization and Lifestyle: A Structural and Quantitative Analysis of Surah al-Ḥadīd

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ABSTRACT:

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This article conceptualizes the relationship between the components of modern Islamic civilization and the indicators of Islamic lifestyle on the basis of a structural analysis of the geometric organization of Surah al-Ḥadīd. It addresses the main question of how the Islamic lifestyle in the modern age can be modeled in light of civilizational components such as faith and a monotheistic worldview, rationality, spirituality, economic justice, Islamic governance, and faith-based, mission-driven management. The methodological approach relies on analyzing the four thematic segments of the surah, identifying the relevant components, and assessing their connections with both theoretical and practical lifestyle indicators, while quantifying verse–indicator relations and employing measures such as the number of possible links, a "decision number," and TF–IDF weighting. The findings indicate that, at the civilizational level, faith and a monotheistic worldview occupy the central position of the model, with rationality, spirituality, and Islamic governance forming the main pillars of Islamic civilization, and economic justice and faith-based, mission-driven management also playing indispensable roles. At the lifestyle level, emulation of the Prophet and the infallibles in the theoretical domain, and

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divine servitude in the practical domain, emerge as the key axes that orient other indicators and function as the connective link between the monotheistic worldview and the regulation of economic, social, and moral relations within the framework of Islamic governance.

KEYWORDS: The Qur'an, Civilization-building components, Conceptual model, Lifestyle, Surah al-Ḥadīd

1. Introduction

In social studies, "lifestyle" is commonly defined as an individual's characteristic way of living. In this sense, lifestyle can be understood as a combination of values, preferences, and worldviews that emerge within a community and shape its distinctive identity (Fadaii 2016). Lifestyle has many components which, when shaped by Islamic notions and derived from Qur'anic concepts and the teachings of the Prophet and his family, are referred to as the "Islamic lifestyle" (Ajdari 2015). An individual's lifestyle exhibits multiple defining characteristics. In Western culture, the notion of civilization is primarily associated with the concepts of the "citizen" and the "city-dweller." It encompasses attributes such as graciousness, tact, and competence, all of which are regarded as necessary for the advancement of individual and social life. A component serves as a yardstick for measuring something else. In the Western sense, civilization is represented by several components, including civic sustainability, governance, specialized institutions, executive branches, a fixed set of rules, economic centers, scientific institutions, and adherence to a moral code. Modern Western civilization is often characterized by components that secure shared goals of economic development and personal growth (Akbari & Rezaei 2018, 87-89).

Furthermore, an individual's lifestyle provides insight into patterns of time and resource management and into personal priorities, including career, recreation, social interactions, physical exercise, and spirituality. A healthy lifestyle can enhance quality of life, increase longevity, and reduce the risk of mental and physical illnesses. In recent decades, lifestyle has become a key area of focus in psychology, sociology, medicine, marketing, and environmental studies. Lifestyle is not only a contributing factor to individual health and well-being, but also a defining element in macro-level social and cultural policies. Therefore, in the Western sense, lifestyle contributes to societal health and well-being while encompassing multiple civilizational components, including governance, social and cultural cohesion, economic development, and education, all of which ultimately support individual well-being. What stands out in this interpretation of

lifestyle is the relatively less pronounced role accorded to moral and spiritual values. Human beings, due to their limited rational capacities, cannot fully realize their aspirations through civilizational components alone. For this reason, it falls upon the prophets to enlighten humankind about these components through the word of God, whether directly or indirectly. It should be noted that both civilizational components and the Islamic lifestyle are shaped by scientific developments and technological advancements. Accordingly, human beings can shape their lifestyle by drawing on divine teachings alongside advances in science and technology, thereby formulating optimal criteria for an Islamic civilization that, in turn, refines and elevates their lifestyle.

Surah al-Ḥadīd is the fifty-seventh surah of the Qur'an, a Medinan chapter consisting of twenty-nine verses that address various themes, including ideological and social issues as well as matters of governance. The name "al-Ḥadīd" is derived from the Arabic term for "iron," which appears in verse 25 of the surah. This surah was chosen as the primary subject of the present study because of its coherent thematic structure, which articulates key ideological and civic principles. Furthermore, Surah al-Ḥadīd highlights ideological, political, social, and individual themes, making it a particularly suitable text for expounding the civilizational components of lifestyle. Accordingly, the present study aims to extract indicators of an Islamic lifestyle in the modern era from the verses of Surah al-Ḥadīd, taking into account their semantic alignment with the components of Islamic civilization.

2. The Novel Components of Islamic Civilization

Sociologists have introduced two categories for Islamic civilization: the "classical" and the "novel" forms. Ayatollah Khamenei is one of the highly regarded scholars and theorists of modern Islamic civilization. This paper seeks to identify the civilization-building components of the Islamic lifestyle on the basis of his teachings. According to Ayatollah Khamenei, the components of novel Islamic civilization focus on fulfilling all innate and God-given human capacities in the material and spiritual domains, thereby securing human flourishing in this world and salvation in the hereafter. He lists the classical components of Islamic civilization as follows: faith, the centrality of Qur'anic principles, intellectual reflection, rationality, science, morality, perseverance, people-centered governance, avoidance of dogmatism, facilitation of public welfare, the maintenance of justice, and the protection of the economy from *ribā* and special interests. Since life in the modern world requires a new approach, Ayatollah

Khamenei has proposed additional novel components of Islamic civilization, including effort, creativity, modern media, the improvement of international relations, and jurisprudential rulings responsive to humanity's needs in the contemporary world (Akbari & Rezaei 2018, 85-108).

According to Ayatollah Khamenei, Islamic civilization provides a space in which human beings can unfold their capacities in the material and spiritual realms and find their path toward salvation. Within such a civilization, individuals, at both the personal and social levels, enjoy a sense of dignity, power, wisdom, determination, and purposeful initiative. In this sense, three points should be taken into account with regard to Islamic civilization. First, it was initiated by the Prophet Muhammad (PBUH) on the basis of the teachings of the Qur'an. Second, it encompasses the material, spiritual, personal, and social dimensions of human life. Third, Islamic civilization has dynamic and flexible components that can be adapted to different times and contexts (Akbari & Rezaei 2018, 85-108).

In this article, by reflecting on Surah al-Ḥadīd and deriving its guiding contextual cues, elements such as faith and monotheistic thought, spirituality and ethics, knowledge and wisdom, economic justice, rationality and reasoning, striving and faith-based, mission-driven management, and the system of Islamic governance are examined.

3. Analysis of the Civilization-Building Components in Surah al-Ḥadīd

Surah al-Ḥadīd, a Medinan surah, consists of twenty-nine verses and follows four major contextual flows. The surah opens by praising God and proceeds to describe the divine attributes associated with monotheism (*tawḥīd*). The first contextual flow exhibits verbal symmetry, represented by the repeated use of the pronouns *hu* (him) and *huwa* (he), and a spiritual analogy that begins with the first verse and concludes with the sixth. *Tasbīḥ*, in a semantic sense indicates divine transcendence and freedom from all imperfection and need. The use of the term *sabbaḥa* in the past tense denotes stability and continuity, suggesting both the developmental and verbal dimensions of *tasbīḥ*. Accordingly, the verses that refer to *tasbīḥ* deepen the understanding of monotheism and leave no room for ambiguity regarding humanity's absolute dependence on God.

In the verses that follow, up to verse six, alongside God's unchallenged sovereignty over the cosmos, references are made to the creation of the heavens and the earth, the establishment of the *al-ʿArsh*, the creation of night and day, and God's infinite will, power, and knowledge. These themes

reinforce belief in *tasbīḥ* while emphasizing the divine aseity of God (al-Ṭabrisī 1993, 9:346). The verses within this contextual flow address core concepts such as faith, the *monotheistic* worldview, knowledge, wisdom, intellectual reflection, and rationality.

The key verse within this framework is the opening verse: "*Whatever there is in the heavens glorifies Allah and [whatever there is on] the earth and He is the All-mighty, the All-wise*" (Q. 57:1). This verse simultaneously emphasizes faith and a *monotheistic* worldview while affirming the universal glorification of God by the cosmos. According to the first contextual framework of *Surah al-Ḥadīd*, these verses, while foregrounding rationality and intellectual engagement, enhance the reader's understanding, knowledge, and awareness, thereby assisting them on the path toward true servitude to God within the order of creation.

The second contextual framework of the surah begins with verse seven and concludes with verse fourteen, supporting the principles of spirituality, morality, economic justice, rationality, and the Islamic system of governance (Sabuhi 2023a; 2023b). Within this framework, the verse "*Have faith in Allah and His Apostle, and spend out of that wherein He has made you successors. Those of you who have faith and spend [in Allah's way] there is a great reward for them*" (Q. 57:7) introduces two fundamental commands: belief in God and spending in charity, both addressed to "those of you who believe." This doctrinal pairing is reiterated, both literally and figuratively, throughout the passage up to verse fourteen.

Verses seven through eleven emphasize the convergence of faith and opportunity, understood as the ultimate test of belief, which entails renouncing worldly attachment and entrusting to God all that has been granted to human beings, including life and property, in the path of servitude. In this context, verse eleven presents spending in charity (*infāq*) as a loan extended to God, which is multiplied and returned in abundance. In verse eight, individuals are reproached for their failure to believe in the Prophet, which—when read in light of the earlier emphasis on faith and opportunity in verse seven—highlights the concept of practical faith.

The emphasis on the term *al-rasūl* (Apostle), combined with the reference to *al-qitāl* (fighting) in verse ten, signals a call toward collective struggle and purposeful movement in the path of God, carried out under the leadership of the Prophet. In the second segment of this contextual framework (verses twelve to fifteen), the text discusses the timing and nature of the heavenly reward granted to believing men and believing women. The reward promised to those who have loaned to God ultimately arrives: "*The day you will see the faithful, men and women, with their light moving swiftly*

before them and on their right, [and greeted with the words:] "There is good news for you today! Gardens with streams running in them, to remain in them [forever]. That is the great success" (Q. 57:12). These individuals are portrayed as those who demonstrated their faith through action. Notably, in verse twelve, the role of women is explicitly affirmed, as "believing men" are mentioned alongside "believing women."

Verse thirteen, by contrast, depicts the condition of the hypocrites through a dialogue between them and the believers on *yawm al-qiyāmah* (Judgment Day). A barrier separates the believers from the hypocrites, prompting the latter to plead: "*Let us borrow a light from your light!*" and "*Were we not with you?*" The believers respond: "*Yes! But you cast yourselves into temptation, and you awaited and were doubtful, and [false] hopes deceived you until the edict of Allah arrived*" (Q. 57:14) (Sabuhi 2023a; 2023b). Ultimately, the hypocrites lament their actions as they face divine punishment, a consequence of worldliness, disbelief, and the absence of *infāq*. The surah concludes with the decisive declaration: "*So today no ransom shall be taken from you, nor from the faithless. The Fire will be your abode: it is your [ultimate] refuge and an evil destination*" (Q. 57:15).

The third contextual framework begins with verse sixteen and concludes with the same verse, encompassing the notions of spirituality and morality, both in general terms and through specific examples. The verses within this framework invite believers to engage their hearts in all humility in the remembrance of God and of the truth which has been revealed (to them) (Q. 57:16). Based on the preceding and subsequent contextual frameworks, the phrase "the remembrance of God and the truth which has been revealed to them" refers to the restoration of belief in God and commitment to spending in charity. This call is of paramount significance, particularly when contrasted with the doctrines of other religious traditions that promote worldliness and transgression. Because the lack of humility of the hearts of the People of the Book towards the truth caused the fulfillment of the divine promise to take a long time and their hearts grew hard, rendering them transgressors (Q. 57:16).

In verse seventeen, "*Know that Allah revives the earth after its death. We have certainly made the signs clear for you so that you may apply reason*" (Q. 57:17), God introduces a powerful analogy while continuing His discourse on the components of Islamic civilization, including rationality, intellectual reflection, wisdom, and knowledge. The comparison between barren, hardened land and fertile, cultivable soil symbolizes the contrast between hardened hearts and hearts receptive to divine revelation. A believer whose heart is soft and receptive demonstrates faith through acts of charity and by devoting life and livelihood to God. From this perspective,

verses sixteen and seventeen are contextually interconnected. The annual revival of the earth points to the reality of life after death, and belief in life after death naturally facilitates belief in resurrection and openness to the Word of God (al-Mughniyyah 2003, 7:416). In a hadith attributed to Imam al-Ṣādiq (PBUH), it is stated that verse seventeen of *Surah al-Ḥadīd* alludes to the revival of the earth through justice and equity following deliverance (al-Kulaynī 1986, 8:267; al-Qurṭubī 1995, 17:252; al-ʿArūsī al-Ḥuwayzī 1994, 5:243). Together, these verses underscore essential components of Islamic civilization, namely rationality, intellectual inquiry, knowledge, and wisdom.

The following verse further elaborates on these themes: "*Indeed the charitable men and charitable women, and those who lend Allah a good loan it shall be multiplied for them, and there is a noble reward for them*" (Q. 57:18). The concept of giving in charity is expressed through the term *al-muṣṣaddiq*, an active participle with an intensive meaning, meaning a giver of *ṣadaqah* who is persistent in this act. Accordingly, *ṣadaqah* is conceptually equivalent to *infāq*, offering believers a concrete means of demonstrating faith in practice (Tabataba'i 1996, 19:285). By employing the term *al-muṣṣaddiqāt*, which denotes women who give in charity, God explicitly highlights the role of women in social cooperation and collective responsibility. Furthermore, the phrase "loan to God a beautiful loan" elaborates upon the concept of *al-qarḍ al-ḥasan*, which is mentioned twice in verses 11 and 18 of this surah. This verse presents a vivid illustration of renouncing worldly attachment in exchange for divine recompense, thereby reinforcing a monotheistic worldview and a commitment to justice.

In verse nineteen, in an effort to introduce a practical method for humbling one's heart before God, the complementary yet contrasting approach of good tidings (*tabshīr*) and warning (*indhār*) is presented. The righteous and the martyrs are portrayed as those who receive God's abundant reward for their faith in God and His Apostle, whereas those who deny the Word of God and reject the truth are destined to burn in Hell. What ultimately prevents human beings from dedicating their lives to the practice of true faith is worldliness, a notion that is explicitly addressed in verses twenty to twenty-four. In these verses, God exhorts humanity to employ insight, wisdom, and knowledge in order to perceive worldly life for what it truly is: a frivolous play centered on vain glory and competitive accumulation of wealth and children, that is, riches and power. Verses seventeen and twenty, within this contextual framework, present the correct attitude toward both worldly life and the hereafter, urging believers to "know" the fundamental difference between the two (Q. 57:20). God likens worldly life to rainfall that stimulates growth and vegetation, delighting

farmers; yet these crops soon wither, leaving behind nothing but dry stubble and dust. Such are worldly pleasures: fleeting and impermanent (Ḥusaynī Shāh ʿAbdulʿaẓīmī 1984, 13:37). By contrast, the life to come may culminate either in salvation and eternal bliss or in unceasing pain and torment. Human beings are therefore called to strive for divine forgiveness and heavenly reward, which are promised to the believers and the Prophet. Only through the practice of faith and sincere belief in the Word of God and His Apostle can one secure salvation and attain a place in Paradise.

The subsequent verses within this contextual framework emphasize that human beings should neither grieve excessively over the loss of loved ones or property, since all worldly things are destined to perish. The Qur'anic teaching discourages attachment to material possessions, reminding believers that whatever is lost in this world will be recompensed abundantly in the hereafter by Almighty God. Nothing is ultimately lost in this divine economy. In the final verses of this contextual framework, God reproaches those who, out of covetousness, oppose charitable giving. Indeed, elsewhere within this same framework, covetousness is identified as the root cause of worldliness and the absence of generosity. In other words, no true loss exists in worldly life: all deprivation, whether of property or loved ones, is recorded and rewarded in the hereafter. Believers are therefore instructed neither to despair over what they lose nor to exult over what they gain in this world. Through this warning, Almighty God admonishes those who hoard wealth and prevent others from engaging in *infāq* (Sabuhi 2023a; 2023b). Thus, within verses sixteen to twenty-four, covetousness is condemned, while *infāq* is affirmed as a moral virtue, and spirituality and ethical commitment are emphasized as foundational components of Islamic civilization.

The final contextual framework of *Surah al-Ḥadīd* addresses the component of Islamic governance, which enables the realization of the objectives of the other elements of Islamic civilization. Verses twenty-five to twenty-nine elaborate on the purpose behind the sending of the apostles and "the Book." Central to this framework is the emphasis on establishing "the Balance (of Right and Wrong)" within human societies as a shared objective toward which people are called to rise. The apostles are sent with "Clear Signs," "the Book," and "the Balance" in order to restore justice in human societies, as articulated in the verse: "*Certainly We sent Our apostles with manifest proofs, and We sent down with them the Book and the Balance, so that mankind may maintain justice; and We sent down iron, in which there is great might and uses for mankind, and so that Allah may know those who help Him and His apostles in [their] absence. Indeed Allah is all-strong, all-mighty*" (Q. 57:25).

Although the apostles are equipped with clear signs, the Book, and the Balance, they may nevertheless face resistance from those who obstruct the dissemination of divine truth. Consequently, it becomes the responsibility of the people of faith to confront these obstacles and support the apostles in fulfilling their mission. While God is omnipotent and requires no assistance, the apostles depend upon the support of believers to establish justice on earth. In recalling earlier apostles such as Noah and Abraham, who sought to perpetuate the legacy of prophet hood through divine revelation, God draws attention to those transgressors who failed to support them and thereby hindered the realization of the divine purpose. Verse twenty-seven further illustrates this theme by explaining how the people of Prophet Jesus obstructed his mission, preventing the full realization of God's purpose on earth.

In the following verse, "O you who have faith! Be wary of Allah and have faith in His Apostle. He will grant you a double share of His mercy and give you a light to walk by, and forgive you, and Allah is all-forgiving, all-merciful" (Q. 57:28), God addresses the people of the Prophet and calls upon them to assist the apostles in their divine mission of restoring justice in the world. The phrase "a double portion of His mercy" refers to benefiting from divine goodness in both this world and the hereafter, while also removing the veil that covers the hearts of the believers. God is the sole Creator of humanity and the cosmos. He is Rabb that is, the Lord, guide, and nurturer of all human beings (Q. 96:1-5). Through the sending of apostles and revealed scriptures, God guides humanity toward both material and spiritual fulfillment. The prophets promote a civilizational model grounded in balance, one that rejects extravagance, transgression, and avarice. For this reason, they were commissioned to elevate the human soul through monotheism and purification, which constitute the essential prerequisite for establishing a world governed by justice and balance (Q. 57:24).

According to this perspective, the realization of this ideal ultimately culminates in the advent of the final savior, when Islamic governance will prevail globally. In this light, verse twenty-nine highlights the delicate responsibility of contemporary Muslim believers. Because earlier societies failed to uphold this mission, the present community is required to demonstrate steadfast support for the Prophet in the pursuit of global justice (Sabuhi 2023a; 2023b). A comprehensive analysis of the four contextual frameworks of *Surah al-Ḥadīd* allows for the identification and categorization of the components of Islamic civilization, which are summarized in Table 1.

Table 1. Islamic Civilization Components Derived from the Verses of Surah al-Ḥadīd

Islamic Civilization Component	Verses Related to the Component	Number of Verses
Faith and monotheistic worldview	1–6, 12–29	24
Rationality and intellectual thinking	1–6, 10, 16–26	18
Economic justice	7–11, 25	6
Spirituality and morality	7–29	23
Islamic governing system	7–8, 10, 13–14, 16–17, 25–29	12
Faith-based mission-driven management	25, 27–29	4
Estimated relationships between components	—	15
Total number of verses	—	87
Decision metric average	—	5.8

The conceptual model of Islamic civilization consists of four primary civilization-building components. The degree to which *Surah al-Ḥadīd* elaborates each component is determined by the number of verses that explicitly refer to that component. Similarly, the degree of interdependence among the components is identified based on the number of verses that make joint references to them. Accordingly, the conceptual model of Islamic civilization is structured around the following four components: faith and the monotheistic worldview (*tawḥīdī*), as the most pivotal element, rationality, spirituality, and the Islamic governing system. The components of faith-based, mission-driven management and economic justice were initially excluded from the model due to their comparatively lower quantitative representation.

Table 1 illustrates the apparently limited significance of the components of economic justice and faith-based, mission-driven management. To address this limitation, the TF-IDF measure was applied, and Figure 1 presents the results of this analysis. As demonstrated in the graph, the component of faith-based, mission-driven management emerges as significant within the conceptual model. Moreover, the component of economic justice should likewise not be disregarded. Under this measure, the standard deviation indicates that all components warrant inclusion in the final model. From this perspective, it can be argued that the apparent marginalization of certain components results from the dominant influence of the monotheistic worldview, which initially led to their exclusion from the conceptual model. Consequently, the incorporation of the TF-IDF measure is essential for this study.

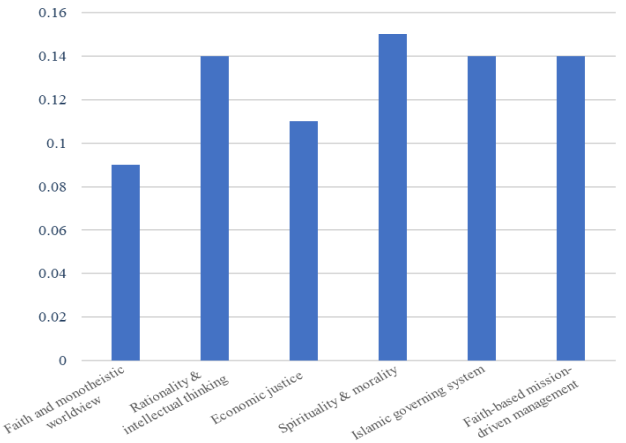

Figure 1. The effectiveness of civilization-building components using the TF-IDF measure

As illustrated in the conceptual model of Islamic civilization, the components most frequently referenced in the verses are faith and the monotheistic worldview. The monotheistic worldview encompasses several foundational notions, including the source of creation, resurrection, divine governance and guardianship over humanity, and the sending of apostles. The monotony of everyday life may entrap individuals in habitual routines, potentially resulting in negligence and diminished spiritual awareness. Recitation and contemplation of the verses of the Qur'an, however, revive the innate divine and God-seeking disposition of human beings.

To wholeheartedly believe in God and to manifest faith through practice signifies belief in an omnipotent Creator who brought humanity and the entire cosmos into existence, and who guides and sustains the universe through divine knowledge, wisdom, and power. By negating any notion of divine deficiency or need, *Surah al-Ḥadīd* affirms that all beings in the heavens and on earth glorify God. This form of divine knowledge is not merely abstract, but rather a practical understanding attained through rationality and intellectual reflection. The conceptual framework of this study indicates that the verses of *Surah al-Ḥadīd* most frequently emphasize these two civilization-building components.

Accordingly, it can be suggested that the monotheistic worldview, rooted in rational reflection, produces tangible outcomes in both personal and social life. This is why God repeatedly calls upon believers to contemplate Qur'anic verses that refer to creation and the Clear Signs. Conversely, reflecting on the fate of earlier communities during the era of the apostles reinforces belief in God's uncontested sovereignty over the cosmos. Once

such a worldview is internalized, individuals are able to formulate a comprehensive life plan that serves them both in this world and in the hereafter.

Such a plan must be grounded in the Qur'an and teachings of the Prophet and his family. It should prioritize spiritual development and adherence to moral standards within both personal and social domains, an approach strongly supported by the monotheistic worldview and rational thought. In this sense, the conceptual model suggests that the Islamic governing system, spirituality, and rationality exert comparable influence as civilization-building components. Nevertheless, the relationship between the Islamic governing system and the monotheistic worldview is slightly more pronounced than that of the other components.

Therefore, it may be concluded that observing divine rule in one's life, alongside devotion to the servitude of God, necessitates adherence to an organized, lawful governing system that regulates social life. Such a system must pursue justice and collective welfare, thereby creating conditions conducive to the flourishing of individual talents and creativity across society.

4. Characteristics of the Islamic Lifestyle

To determine the characteristics of the Islamic lifestyle, both theoretical and quantitative approaches must be employed in order to evaluate its strengths and limitations within Muslim societies. The Islamic lifestyle, which, in Ayatollah Khamenei's (2012) view, equips individuals with common sense, facilitates both material and spiritual well-being. Ayatollah Khamenei distinguishes between two forms of Islamic lifestyle, namely monotheistic (*tawḥīdī*) and non-monotheistic (*non-tawḥīdī*), corresponding respectively to the theoretical dimension (values and identity) and the practical dimension (pragmatic and applicable conduct) of Islamic living.

The practical dimension of the Islamic lifestyle encompasses social, familial, and personal practices, while the theoretical dimension consists of faith, knowledge, awareness, independent thought, attentiveness to religious, cultural, and historical symbols, and modeling the way of life of the infallibles. The personal attributes associated with the Islamic lifestyle include servitude, adherence to moral standards, and patterns of consumption. Its social dimension comprises discipline, cooperation, and *infāq*. Finally, the familial dimension of the Islamic lifestyle encompasses marriage, family relations, and reproduction (Amini & Halalkhor 2015).

In this paper, the characteristics of the Islamic lifestyle, derived from

Ayatollah Khamenei's thought and the teachings of *Surah al-Ḥadīd*, are examined as follows:

- At the ideological level: knowledge, awareness, refraining from imitation, emphasis on religious symbols and cultural values, and modeling the infallibles.
- At the personal level: servitude, adherence to moral standards, and consumption patterns.
- At the social level: discipline, lawfulness, cooperation, and *infāq*.

5. Data Analysis and Conceptual Modeling of the Islamic Lifestyle

Given that only eleven characteristics have been identified for the Islamic lifestyle, the conceptual model is developed according to the following criteria:

- The characteristics are divided into two categories: theoretical (five characteristics) and practical (six characteristics).
- Within each category, only verses that address at least two characteristics simultaneously are analyzed, and the number of such verses is recorded as a communication branch between the corresponding characteristics.
- In each category, the characteristic most frequently referenced in the surah is designated as the core element of the conceptual model.
- To simplify the model, only communication branches exceeding the decision metric are documented and represented graphically.
- The decision metric is calculated by dividing the number of potential communication branches between characteristics by the total number of verses referencing those characteristics.

Table 2 illustrates the number of verses in *Surah al-Ḥadīd* that refer to the theoretical characteristics of the Islamic lifestyle. At the core of this conceptual model lies modeling the way of life of the infallibles. Moreover, the decision metric for excluding characteristics is 5.7. Accordingly, the characteristics of refraining from imitation and emphasis on religious symbols are less prominent in this surah.

Table 2. Theoretical characteristics of the Islamic lifestyle derived from the verses of Surah al-Ḥadīd

Theoretical Characteristics of the Islamic Lifestyle	Verses related to the characteristic	Number of verses related to the characteristic
Knowledge and awareness	1–6, 16, 17, 20, 25–27	12
Emphasis on cultural and historical values	7–16, 18–21, 23–29	20
Modeling the infallibles	7–15, 18–29	21
Refraining from imitation	16, 29	2
Emphasis on religious symbols	9, 18	2
Estimated relationships between the characteristics	—	10
Total number of verses	—	57
Decision metric (average)	—	5.7

Figure 2 presents the conceptual model of the theoretical characteristics.

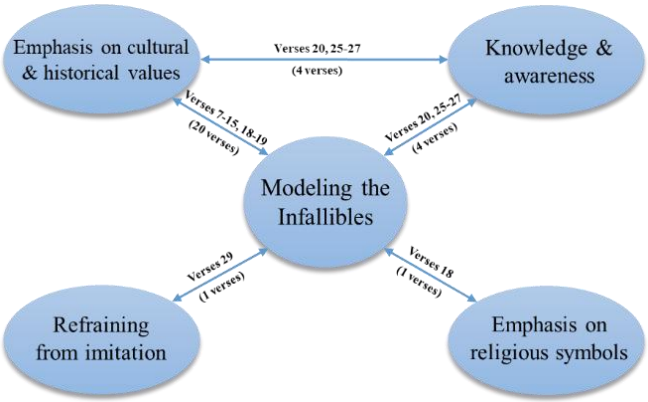

Figure 2. Relationships between the theoretical characteristics of the Islamic lifestyle according to Surah al-Ḥadīd

Table 3 and Figure 3 illustrate the verses that refer to the practical characteristics and the resulting conceptual model. At the center of this model lies the notion of servitude, while the characteristics of discipline and lawfulness also emerge as significant. To derive an integrated framework based on the relative effectiveness of the characteristics of the Islamic lifestyle, verses that refer to two or more characteristics simultaneously were first examined. Figure 4 demonstrates the extent to which each characteristic influences the others. As indicated by the diagram in Figure 4, servitude, modeling the infallibles, emphasis on cultural values, and *infāq* exert the greatest influence on the remaining characteristics.

Table 3. Practical characteristics of the Islamic lifestyle derived from the verses of Surah al-Ḥadīd

Practical Characteristics of the Islamic Lifestyle	Verses related to the characteristic	Number of verses related to the characteristic
Discipline and lawfulness	8–11	4
Consumption patterns	7–11, 23–27	11
Infāq	7–11, 16, 18, 21–27	14
Adherence to moral standards	12–16, 19–29	16
Cooperation and collaboration	7–11, 18, 24–29	13
Servitude of God	1–29	29
Estimated relationships between the characteristics	—	15
Total number of verses	—	87
Decision metric (average)	—	5.8

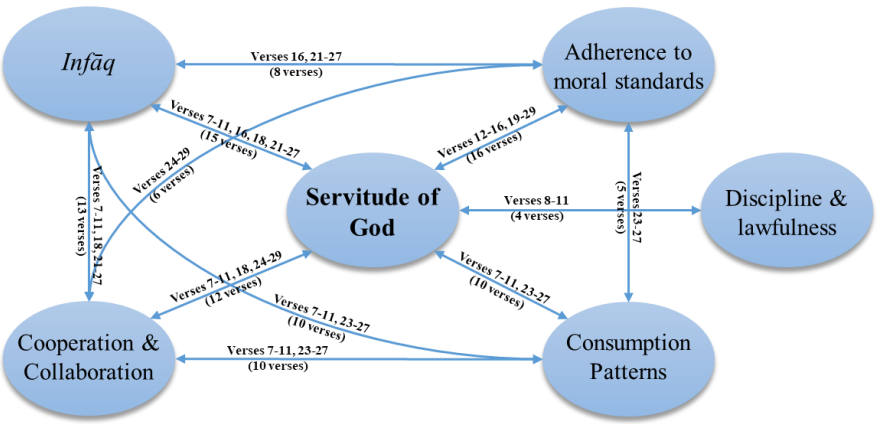

Figure 3. Relationships between the practical characteristics of the Islamic lifestyle according to Surah al-Ḥadīd

In this section, drawing on the conceptual models presented in Figures 2 and 3, the Islamic lifestyle is examined in greater depth. As illustrated in Figure 2, knowledge and refraining from imitation function as identity-forming theoretical characteristics of the Islamic lifestyle. These characteristics foster a scientific and reflective approach to new experiences, enabling individuals to engage constructively with society. This does not imply, however, that cultural and historical values should be neglected. Rather, such values should also be approached critically and consciously, free from blind imitation.

Given the fallible nature of human beings, the realization of an Islamic lifestyle necessitates a perfect and infallible role model. For this reason, modeling the way of life of the infallibles occupies a central position in the Islamic lifestyle. A collective commitment to embodying the attributes of the Prophet and the infallibles can guide societies toward progress, excellence, and moral refinement. Human beings are naturally inclined to seek role models, and the infallibles, endowed with qualities such as chastity, wisdom, and divine knowledge, provide exemplary paradigms for humanity. Following their example can pave the way toward nearness to God and enable individuals to attain fulfillment in both worldly life and the hereafter.

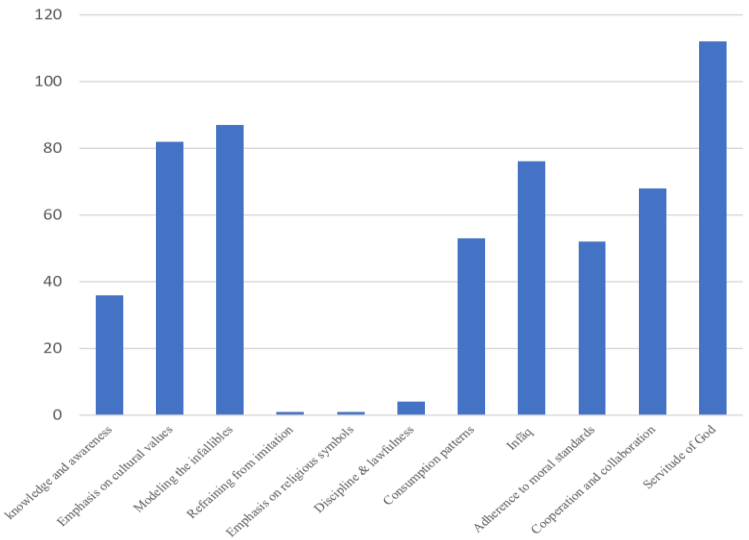

Figure 4. Mutual influence of the characteristics of the Islamic lifestyle in Surah al-Ḥadīd

According to Figure 3, servitude of God emerges as the most significant practical characteristic of the Islamic lifestyle. This notion is closely intertwined with adherence to moral standards, discipline, lawfulness, the reform of consumption patterns, and the practice of *infāq*. A person who submits wholeheartedly to the divine will and seeks God's pleasure as the primary aim of all actions is inclined to treat others with patience, justice, and dignity. In striving to serve God, such an individual does not hesitate to sacrifice personal interests and material possessions in the path of *infāq*. Ultimately, when these principles are upheld through cooperation and collaboration within society, they lead to more effective outcomes and a more harmonious social order.

6. Relationship between Civilization-Building Components and Islamic Lifestyle

In the first contextual framework of Surah al-Ḥadīd, faith is presented simultaneously as a theoretical and practical characteristic of the Islamic lifestyle, firmly rooted in the civilization-building component of the monotheistic worldview. The opening six verses of the surah, through their emphasis on *tasbīḥ*, lay the groundwork for the realization of authentic faith—a theme that is further elaborated in the subsequent verses. According to narrations attributed to the nfallibles, these verses, together with Surah al-Ikhlāṣ, encapsulate the essence of the monotheistic worldview and divine insight. When combined with other lifestyle characteristics such as rationality, intellectual reflection, knowledge, and awareness, this worldview guides believers toward servitude to God (*al-ʿubūdiyyah*) and submission to His will.

The verses of the second contextual framework elaborate on nearly all the defining characteristics of the Islamic lifestyle. For instance, verse 8 adopts a reproachful tone, urging believers to actualize faith through practice, particularly through *infāq*, while reminding them of their primordial covenant: "*Why should you not have faith in Allah while the Apostle invites you to have faith in your Lord, and He has certainly made a covenant with you, should you be faithful?*" (Q. 57:8). A similar admonition appears in verse 10, where believers are questioned about their reluctance to spend in the cause of God: "*Why should you not spend in the way of Allah, while to Allah belongs the heritage of the heavens and the earth?*" (Q. 57:10). This verse clearly identifies *infāq* as a practical indicator of genuine faith. Furthermore, by distinguishing between those who spent and struggled before the victory and those who did so afterward, the verse highlights additional lifestyle characteristics such as situational awareness, obedience to the Prophet (modeling the infallibles), and lawfulness. Within this framework, the foundation of economic justice, a key civilization-building component, is linked to lifestyle characteristics including reforming consumption patterns, adherence to moral standards, cooperation, collaboration, and collective *infāq*. Thus, the second contextual framework offers a comprehensive exposition of economic justice as a lived social ethic grounded in divine governance and prophetic modeling.

The third contextual framework, while implicitly referencing all Islamic lifestyle characteristics, places particular emphasis on modeling the infallibles at the theoretical level and reforming consumption patterns at the practical level. These two characteristics directly influence both personal conduct and social responsibility, reinforcing the integration of belief and

action within the Islamic lifestyle.

Within the fourth contextual framework, verse 25 occupies a central position: "*Certainly We sent Our apostles with manifest proofs, and We sent down with them the Book and the Balance, so that mankind may maintain justice; and We sent down iron, in which there is great might and uses for mankind, and so that Allah may know those who help Him and His apostles in [their] absence. Indeed Allah is all-strong, all-mighty*" (Q. 57:25). This verse identifies the establishment of justice as the ultimate objective behind sending the apostles, the revealed Book, and the Balance. The reference to iron, symbolizing power, defense, and social order, underscores the necessity of active human participation in supporting divine justice. Collectively, the verses of this framework elaborate on the majority of the civilization-building components and lifestyle characteristics that constitute the Islamic governing system.

A particularly strong and inseparable relationship is observed between the monotheistic worldview and *infāq*. Ayatollah Khamenei (1991) explains *infāq* as a practice with dual benefits: a collective and assured benefit for the giver and a tangible, individual benefit for the recipient. Faith in God, resurrection, and divine ownership, when translated into acts of *infāq*, purifies the soul and liberates it from worldliness. Moreover, as emphasized in various statements by Ayatollah Khamenei (1992), *infāq* transcends mere financial charity and encompasses all actions undertaken to establish social justice. Acts such as kindness, poverty alleviation, and resistance to deprivation, when performed with divine intention, align with core lifestyle characteristics including cooperation, collaboration, consumption reform, and adherence to moral standards.

Surah al-Ḥadīd thus makes it clear that the transition from the theoretical foundations of monotheism (*tawḥīd*) to the practical realization of Islamic civilization necessitates passing through the dual gateway of faith and *infāq* (Darabi & Sabuhi 2017). To elucidate this relationship, verses that simultaneously reference both civilization-building components and lifestyle characteristics were examined. The frequency of such co-occurrences highlights the strength of interaction between these domains. As illustrated in Figure 5, the components exerting the greatest influence on Islamic lifestyle characteristics are the monotheistic worldview, spirituality and morality, and the Islamic governing system.

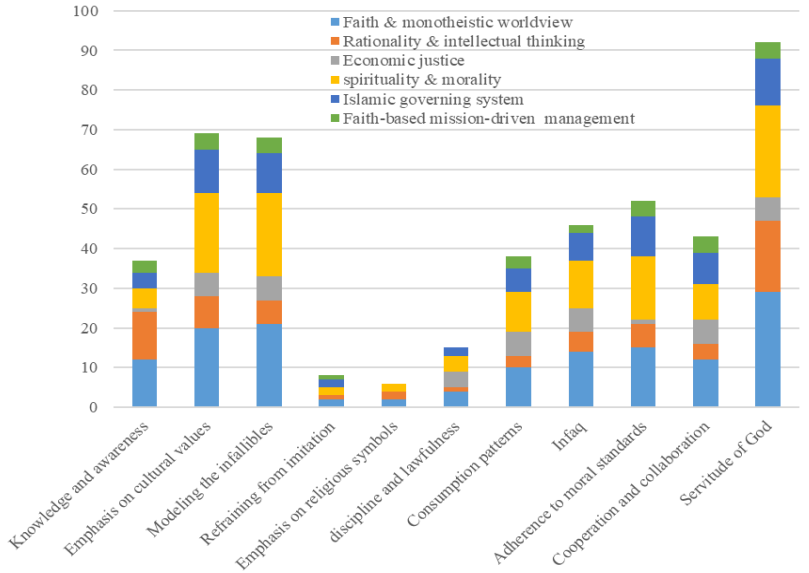

Figure 5. The relationship between Islamic civilization-building components and Islamic lifestyle characteristics in Surah al-Ḥadīd

7. Conclusion

The relationship between civilization-building components and lifestyle indicators yields a model of lifestyle whose foundations are faith and servitude, rationality and prudence, knowledge and awareness, economic justice, and emulation of the infallibles. Rationality and prudence, along with knowledge and awareness as components of Islamic civilization, create the conditions for divine servitude and submission to God's commands and prohibitions as defining features of lifestyle. A component such as economic justice, in the practical sphere of life, reforms patterns of consumption as a lifestyle indicator: *infāq*, mutual cooperation, and social solidarity, as lifestyle markers, provide the infrastructure necessary for economic justice. Emulation of the Prophet under divine guardianship and governance leads to ethical orientation, reformation of consumption patterns and abstention from extravagance and wastefulness, promotion of mutual cooperation within society, and the permeation of charity across all spheres of life.

Accordingly, one can conclude that components of Islamic civilization, such as faith and rationality, spirituality, ethics, and economic justice, facilitate faith-based, mission-driven management within the Islamic system. In an Islamic structure grounded in the lifestyle components of the Qur'an, a monotheistic worldview fosters *infāq*, and *infāq*, in turn, regulates

economic relations. Divine servitude and emulation of the infallibles, as two major lifestyle indicators, play a decisive role in other lifestyle dimensions. Both indicators are in turn derived from faith, monotheistic thought, and spirituality as components of Islamic civilization. Therefore, the role of the Islamic governing system is pivotal across all indicators. Put differently, the Islamic government can prepare the prerequisites for the advent of the final savior only if all lifestyle indicators are uniformly manifested in individual and social life.

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Declarations

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Conflict of Interest: The authors declare no competing interests.

References

Ajdari, M. (2015). A Study of the components of lifestyle in Islam and the teachings of the infallible imams (PBUTh) and their comparison with the capitalist lifestyle. *Culture of the Iranian people,* 40-41, 213-239.

Akbari, M. & Rezaei, F. (2018). An analysis of the characteristics of the new Islamic civilization in the thought of the Supreme Leader. *Iranian Patterns of Progress,* 3(5), 85-105.

Al-ʿArūsī al-Ḥuwayzī, A. A. (1994). *Tafsīr Nūr al-Thaqalayn*, ed. Rasūlī Maḥalātī. Qom: Ismāʿīliyān.

Al-Kulaynī, M. (1986). *Kitāb al-Kāfī*. Tehran: Dār al-Kutub al-Islāmīyyah.

Al-Mughniyyah, M. J. (2003). *Tafsīr Al-Kāshif*. Tehran: Dār al-Kutub al-Islāmīyyah.

Al-Qurṭubī, M. (1995). *Al-Jāmiʿ li-Aḥkām al-Qurʾān*. Tehran: Naṣīr Khusru.

Al-Ṭabrisī, F. (1993). *Majmaʿ al-Bayān fī Tafsīr al-Qurʾān*. Tehran: Naṣīr Khusru.

Amini, N. & Halalkhor, K. (2015). Components of the religious lifestyle in the thought of the supreme leader. *Mohandesi Farhangi,* 84, 10-29.

Darabi, M. & Sabuhi, A. (2017). Surah al-Hadid: a pathway to the reappearance. *The National Conference of Islamic Sciences*. Qom, Iran.

Fadaii, M. (2016). Alfred Adler on the relation of lifestyle to the meaning of life. *Research Bulletin for Lifestyle,* 2(2), 65-76.

Ḥusaynī Shāh ʿAbdulʿaẓīmī, Ḥ. (1984). *Tafsīr Ithnā ʿasharī*. Tehran: Mīqāt.

Khamenei, Sayyid Ali (1991). *Statements at the eighth session of the interpretation of Surah Al-Baqarah*. https://khl.ink/f/17171

Khamenei, Sayyid Ali (19۹۲). *Statements at the meeting of the officials of the Imam Khomeini Relief Committee*. https://khl.ink/f/2599

Khamenei, Sayyid Ali (2012). *Statements at the meeting of the youth of North Khorasan Province*. https://khl.ink/f/21252

Qarai, A. Q. (2004). *Translation of the Holy Qur'an*. London: ICAS.

Sabuhi, A. (2023a). *An Introduction to Tadabbur on the Surahs of the Holy Qur'an.* Qom: Tadabbur Publications.

Sabuhi, A. (2023b). *Tadabbur on the Holy Qur'an. Vol 2: From Najm Surah to Surah al-Ḥadīd.* Qom: Moalef Publications.

Tabataba'i, M. H. (1996). *Al-Mīzān fī Tafsīr al-Qur'ān*, transl. Mousavi Hamedani. Qom: Enteshārāt Islāmī.

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Two or Three Authors	(Laudon & Laudon 2003) (Coveney, Ganster & King 2003)
	Laudon, K.C. and Laudon, J.P. (2003). Essentials of management information systems: Managing the digital firm. United States: Prentice Hall. Coveney, M., Ganster, S. and King, D. (2003). The strategy gap: Leveraging technology to execute winning strategies. Germany: Wiley.
More than Three Authors	(Jones et al. 1999: 34) Jones et al. (1999: 34) suggested that …
	Jones, P., Smith, A., Hudson, T., Etherton, J., Connelly, W. and Gardener, J. (1999). Business management for the new era. Adelaide: Wyland Publishing.
Book Editor	(ed. Shaw 2003) Shaw (ed. 2003: 87) indicates that …
	Shaw, M.J. (ed.) (2003). Ebusiness management: Integration of Web technologies with business models. London: Kluwer Academic.
Second, further or revised editions	Dyson, Geoffrey H.G. (1977). The mechanics of athletics. 7th edn. New York: Homes and Meier. Cohen, Jacob (1977). Statistical power analysis for the behavioral sciences. rev. edn. New York: Academic Press.
Translated works	Bakhtin, M. (1984). Rabelais and his world. transl. H. Iswolsky. Bloomington: Indiana University Press.
No date can be established	(Lansdown n.d.).
	Lansdown, M. (n.d.). Bridging courses. Rockhampton: Central Queensland University.

Journals

Single author	(Rohani Mashhadi 2018)
	Rohani Mashhadi, Farzaneh (2018). The Analogy between Jesus and Adam Based on the Analysis of Key Concepts in the System of Human Creation Verses. Qur'anic Sciences and Tradition, 51(1), 67-87.
Two or three authors	(Lamb & Kling 2003) (Darzi, Pakatchi, & Faramarz Gharamaleki 2017)
	Lamb, R. and Kling, R. (2003). Reconceptualizing users as social actors in information systems research. MIS Quarterly, 27(2), 197. Darzi, G., Pakatchi, A. and Faramarz Gharamaleki, A. (2017). The Methodological Necessities of Quranic Interdisciplinary Studies. Quran and Hadith Studies, 10(1), 35-71.
More than three authors	(Lips et al. 2020)
	Lips, C., Ritterhoff, T., Weber, A., Janowska M.K., Mustroph, M., Sommer T., Klevit, R.E. (2020). Who with whom: functional coordination of E2 enzymes by RING E3 ligases during poly-ubiquitylation. The EMBO Journal, 39(22).
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Other References

Conference paper	(Fitzsimmons 2005)
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	Rouse, A.C. (2002). Information technology outsourcing revisited: success factors and risks. PhD thesis. Dept. of Information Systems. University of Melbourne.
Encyclopaedias	(Karlof 2002)
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Document on the web	(Arch & Letourneau 2002) (Greenpeace n.d.)
	Arch, A. and Letourneau, C. (2002). Auxiliary Benefits of Accessible Web Design. in W3C Web Accessibility initiative. viewed 26 February 2004. from http://www.w3.org/WAI/bcase/benefits.html. Greenpeace, (n.d.). The future is GE free. viewed 28 September 2005. from http://www.greenpeace.org.au/ge/farming/canola. html

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You can refer to the verses of the Qur'an by the number of surah and verse, according to the following example. e.g. (Q. 2:19).

Transliteration System

Authors are expected to adhere to the convention of transliterating Arabic words and phrases in italic roman script in accordance with the Journal transliteration scheme. Authors are responsible for the accuracy and consistency of their transliteration.

Avoid writing words in Arabic script. If it is necessary, you can transliterate the word in the text and write it in Arabic script in the footnote. As for the verses of the Qur'an, only the main verse that is essential for the purpose of the article can be written in Arabic script.

Transliteration of Arabic words that do not have standard spellings in English should be done according to the following system.

ء	ʾ	ذ	dh	ظ	ẓ / Ẓ	ن	n
ب	b	ر	r	ع	ʿ	و	w
ت	t	ز	z	غ	gh	ه	h
ث	th	س	s	ف	f	ى	y
ج	j	ش	sh	ق	q	ة	h (without iḍāfah)
ح	ḥ / Ḥ	ص	ṣ / Ṣ	ك	k	ة	t (with iḍāfah)
خ	kh	ض	ḍ / Ḍ	ل	l		
د	d	ط	ṭ / Ṭ	م	m		

ـَ	a	ـِي	ī / Ī
ـِ	i	ـُو	ū / Ū
ـُ	u	ـَو	aw
ـَا / ـَى / آ	ā / Ā	ـَى	ay

- Transliterated words should be italicized (except for names). They should not be capitalized except at the beginning of sentences, in titles, and for names.

- Note that some foreign words have been naturalized in English and have standard spelling. These words are not transliterated and italicized. e.g. Allah, Qur'an (Koran), Muhammad, imam, Islam, shariah, hadith, hajj, Shia (Shi'a), Shiite (Shi'ite), Sunni, qibla, Ramadan.
- In transliteration of phrases, iʿrāb is not considered. If necessary, iʿrāb can be marked for the Qur'an and poetry e.g. ẓulumāt thalāth not ẓulumātin thalāthin.
- **Al- :**

Al- is always written in lower case, unless it appears at the beginning of a sentence. In the table below, you can see examples of transliteration of al- in different situations.

القبلة	al-qiblah	من الشمس	min al-shams	والبيت	wa al-bayt
الشمس	al-shams	عن البيت	ʿan al-bayt	للبيت	lil-bayt
على الجدار	ʿalā al-jidār	فى البيت	fī al-bayt	بالبيت	bil-bayt
الى البيت	ilā al-bayt	لا البيت	lā al-bayt	كالبيت	kal-bayt

- **Ibn, bint, abū, abī, abā, umm:**

Ibn and bint should not be capitalized, unless they appear at the beginning of a name or sentence. Bin and 'b.' should not be used. Abū, abī, abā, umm is always written separately and without hyphen. See some examples in the table below.

	Correct transliteration	**Incorrect transliteration**
الخليل بن احمد	al-Khalīl ibn Aḥmad	al-Khalīl Bin Aḥmad, al-Khalīl b. Aḥmad
ام البنين	Umm al-Banīn	Ummul-Banīn, UmmulBanīn
ابوالقاسم	Abū al-qāsim	Abul-qāsim, Abulqāsim

- It is optional to write an abbreviation after the names of the holy people to show respect and prayer for them. If authors want to add the abbreviation, only the following two abbreviations will be acceptable.
  - (PBUH): peace be upon him
  - (PBUTH): peace be upon them
- The names of those who spell their names in a particular way are not transliterated. For example, Seyyed Hossein Nasr.

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