ISLAMIC ARCHITECTURE FRAMEWORK: MENTIFACT, SOCIOFACT AND ARTIFACT

Farid Nazaruddin[a*], Aldrin Yusuf Firmansyah[a], Harida Samudro[a], Prima Kurniawaty[a]

[a]Universitas Islam Negeri Maulana Malik Ibrahim, Malang, Jawa Timur, Indonesia
*Corresponding Author: farid.nazaruddin@uin-malang.ac.id

ARTICLE INFO

ABSTRACT

This paper aims to fill existing gaps by presenting a comprehensive framework that encompasses various aspects of Islamic Architecture and its formation. Grounded in the paradigm that Islamic Architecture is a physical manifestation of culture rooted in Islamic values, this study structures the understanding of Islamic architecture through a cultural framework, incorporating mentifacts, sociofacts, and artifacts. Drawing from classical Islamic sources and contemporary writings, this qualitative study employs a deductive approach to thematic analysis, categorizing sources into three main categories: mentifact, sociofact, and artifact. The study highlights the suitability of this framework for assessing the philosophical foundation of Islamic Architecture, which is directly rooted in the teachings of the Quran and Hadith, and extends to its pragmatic dimension. Notably, as emphasized in the mentifact category, Islamic architecture highlights the idealism that architects, builders, and building owners should uphold. The sociofact category accentuates the strong emphasis on the social impact of Islamic Architecture. Simultaneously, in the artifact category, architectural design is expected to embody Islamic characteristics while respecting local contexts. This framework can also be applied to evaluate the priority and developmental stages of Islamic architecture. Furthermore, the study emphasizes that these foundational principles evolve to create architectural beauty imbued with a distinct character and a sense of identity rooted in Islamic values. Thus, this framework provides a comprehensive tool for understanding, evaluating, and advancing Islamic architecture from the philosophical to practical aspects.

Keywords:
Architecture; Cultural; Framework; Islamic; Philosophical; Pragmatic

1. INTRODUCTION

Numerous definitions have surfaced regarding the concept and application of Islamic architecture. A common misconception involves reducing it solely to its physical manifestations. Islamic architecture goes beyond mere stylistic differences [1], [2], [3], transcending geographical and cultural boundaries [4] and history [5]. It is not limited to the Arab world or exclusively crafted by Middle Eastern individuals.

Islamic architecture harmonizes with its context while staying true to the teachings of the Quran and Hadith [3], [6], [7], [8]. It adheres to the values prescribed by Islamic law [9], encompassing its origin, historical development, ethos, worldview, doctrines, legal framework, and practices [10]. It is crucial to differentiate between Islamic architecture and Arabic style architecture [11].

Concern arises when the theoretical framework of Islamic Architecture is misconstrued as synonymous with Muslim Architecture, influenced by functionalism ideologies. This misunderstanding results in a deviation from its foundational principles of comprehensiveness [3], [12]. It is essential to note the distinction that Muslim Architecture focuses on structures built by Muslims, while Islamic Architecture encompasses a broader and deeper scope [3], [13].

For instance, many Muslim architects adopt the principle of 'form follows function,' aligning with practical aspect, financial aspect, or other considerations that shape their designs. However, as Muslims, an additional dimension should come into play—the Islamic philosophical (*aqidah* and *akhlaq*) and behavioral perspective in Islamic Law (*fiqh*), termed "Form Follows *Fiqh*" [14], [15]. These Islamic values govern nearly every aspect of a Muslim's life, including the realm of architecture and construction [1], [2]. For Muslims, the study of architecture becomes a manifestation of their faith in Islam and a means to translate Islamic values into tangible architectural forms [16]. Consequently, Islamic architecture should serve as the foundational basis for designs crafted by Muslim architects [7].

The incorporation of these additional dimensions introduces substantial variations in the elements of Islamic architecture, making its systematic structure a notable challenge. Moreover, our current knowledge reveals a scarcity of a comprehensive general framework in this regard. This paper endeavours to fill this gap by aspiring to establish a foundational theoretical framework. It aims to offer a thorough understanding of Islamic Architecture, addressing the complexities arising from the diverse dimensions involved

FRAMEWORK: ARTIFACTS, SOCIOFACTS, MENTIFACTS

Rapoport asserts that architecture and the built environment result from a fusion of theory and culture shaped by the consistent application of a system of rules [17]. It is vital to note the distinction between culture and religion. Religion often acts as a cultural identity marker, blurring the lines between the two [18]. In the realm of Islamic architecture, scholars commonly agree that it is a manifestation of Islamic culture [5]. To fully comprehend this architectural output, one must consider all the dimensions contributing to its creation [17]. Consequently, Islamic architecture should not only be viewed as a product but also as a culture that actively shapes its form and essence.

Delving deeper into cultural exploration, this research adopts a socio-cultural framework that employs the science of culture, delineated into three dimensions: mentifacts, sociofacts, and artifacts [19]. These dimensions align with Leslie White's conceptualization, encompassing science and symbols (an abstract collocation of ideas and cognition), man or the social group formed to execute ideas or goals, and civilization as a tangible mechanism for the systematic and efficient utilization of energy [20]. The differentiation between artifacts, mentifacts, and sociofacts traces back to Julien Huxley. He defined sociofacts as manifestations of social knowledge and integral components of culture, while mentifacts were considered personal mental constructs [21]. Ultimately, this cultural evolution culminates in the physical manifestations of civilization (artifact), with architecture being a notable component [21], [22].

Because this journey also delves into the relationship between human beings as creations concerning Allah as the Creator and their interactions with fellow humans and all of the creations based on the Imam Ibn al-Kathir's *tafsir* (interpretation) on the Quran, particularly Surah Ali 'Imran (3: 110-112) [23]. We contend that this approach facilitates a nuanced examination of the cultural dimensions inherent in Islamic architecture, making it a fitting structure for the literature review.

2. METHODS

This qualitative study employed a deductive approach to thematic analysis, structuring a diverse range of literature, from classic to contemporary, using pre-existing categories (mentifacts, sociofacts, and artifacts). The deductive methodology utilized these established categories to create a robust framework for analysis, encompassing intellectual concepts (mentifacts), social realities (sociofacts), and physical manifestations (artifacts) influencing Islamic architecture.

By systematically applying these categories to the extensive literary corpus, the study ensured consistency and comparability across classical and contemporary sources. This approach facilitated the identification of recurring themes within each category, uncovering the interplay where mentifacts influenced sociofacts, ultimately resulting in specific architectural artifacts. This structured approach not only organized a vast amount of literature but also allowed for the identification of deeper connections and patterns that a purely inductive analysis might have overlooked

3. RESULT AND DISCUSSION
A. RESULT
A. 1. OVERVIEW OF THE PHILOSOPHICAL FOUNDATIONS (MENTIFACT) OF ISLAMIC ARCHITECTURE

At the core of Islam lies the belief that Allah is the one and only God, Muhammad is His last prophet, and He gives all creations the Quran and Hadith as guidance. This foundational belief evolves into a system comprising three fundamental principles of Islamic teachings. To be a devout Muslim, one must both study and adhere to these principles:

A. 1. 1. Understanding Islamic faith and beliefs (*Aqidah*).

It serves as the primary goal of this knowledge. It entails delving deeper into the understanding of Allah as the only God, His angels, His Holy Books, and His Prophets, and gaining insights into the concept of the Day of Judgment, as well as comprehending His divine decrees (*Qadha* and *Qadar*) [24]. As deep as a faith, some assert that this faith should be manifested deeply through the spiritual realm [14].

The Aqidah of Islamic Architecture (*al-Asasu Fī al-`Imāroti al-Islamiyyati*) concerns religiosity: *tawhid* (a belief that Allah is the only One God) and *Taqwa* (Pious) – *ad-dīniyyatu: at-tauhīdu* [25], *wa at-takwā* [26].

Tawhid is the first part of the Islamic Architecture's philosophical foundation [25]. Within Islamic Architecture, *Tawhid* stands as the primary and foundational philosophical concept [27]. *Tawhid* is so fundamental that one cannot truly live as a Muslim without it. Consequently, Muslim architects, building owners, workers, and all those involved in the architectural process must uphold and respect this philosophy at all times [28]. Here, Islamic architecture is an expression of faith in the Greatness of Allah [2]. Beauty is a submission to the Greatness of Allah. Moreover, the act of constructing a building can be considered a form of worship, following the example of Prophet Ibrahim, who built the Kaaba as mentioned in the Quran (Surah Al-Baqarah, 2:125–128). Ibn Kathir's *tafsir* on these verses emphasizes that architecture, in this context, is established by the command of Allah, supported by His divine power throughout the process, and completed with prayers for blessings upon the surrounding environment [29].

Taqwa is the second part. A heart that is in a heightened state of awareness of Allah's knowledge and presence is said to be practicing *taqwa*. This knowledge serves as a catalyst for doing good things and abstaining from actions that are against the law. Here, architecture is a form of devotion to Allah [2]. The Quran (Surah Al-Tawba, 9:109) highlights this concept, and Ibn Kathir's *tafsir* interprets it as the foundational principle for constructing buildings in accordance with divine guidance [29].

A. 1. 2. The knowledge of spiritual actions that Muslims should engage in (*Akhlaq*)

It constitutes another essential aspect of Islamic teachings. This branch delves into the purification of the heart, mind, and soul, all of which ultimately lead to Allah as the central purpose of a Muslim's life [30], [30], [31], [31].

The *akhlaq* of Islamic Architecture is moderatism (*al-wasaṭiyyah wa al-i`tidāliyyah*) [25], [32], and humanism (*al-In¬sāni¬yyah*) [33], [34]. Moderatism (*al-Wasaṭiyah wa al-i`tidāliyyah*) forms the bedrock of Islamic thought. Islam, as a faith, is inherently moderate, and this moderation extends to its architecture [6]. This essence of moderation is epitomized by the direct connection and balance between Islamic and local characteristics [3] as well as the equilibrium between the materialistic and metaphysical dimensions. In Islam, the body and soul are inseparable [9]. Muslim Architects should put forth their best effort and give it their all, but at the same time, they should also submit to Allah's will and greatness [2].

Therefore, the philosophical foundation of moderatism in Islamic architecture revolves around the extraction, development, and teaching of architectural principles based on balance. This balance manifests in several ways. For instance, while architects have the independence to develop form, design, and artistic expression, their work must remain within the framework of piety and devotion to Allah Almighty. Similarly, there must be a balance between needs and wants, as well as between building construction and respect for nature and the environment.

The Quran (Surah Al-Hijr, 15:17–20) highlights this principle, which Ibn Kathir's *tafsir* interprets as the importance of maintaining proportion and balance in all aspects of life, akin to the precision of merchants' scales in the marketplace [29]. Another key emphasis in Ibn Kathir's commentary is distinguishing between necessities and desires—while humans can survive without excessive desires, the absence of basic necessities may lead to death.

The balance that should exist includes the balance between man and environment [35], form and content (*tawzī'u al-amākinu wa hālatu al-`aini*), physical aesthetics of architecture with spirituality values (*as-syaklu al-mādiyyatu wa as-syu`ūru ar-rūhaniyyatu*) [32], form and function (*as-syaklu wa al-waẓīfatu*), and architecture's compatibility with its biotic and abiotic surroundings (*tawāfuqu al-`umrōni ma`a aẓ-ẓurūfi al-bi`ati*) [26]. Further, it involves harmony and dialogue between the fundamental principles of Islam, which never change, and the realities of humanity, science, social politics, and technology, which are constantly changing (*ṣawābitu ad-īni wa mutaghoyyirotu al-wāqi`ati*) [4], [36], [37]. The balance must also occur between materiality and spirituality, and so on [2], [32].

Concerning humanism (*al-Insāniyyah*), the philosophical foundation of *al-In¬sāni¬yyah* is that architecture is made by and for the welfare of human beings. While as a social creature endowed with free will, passion, and emotions that can either guide him/her to the heights of creation or drag him/her to its depths, the human race shares the same origin, goal, and purpose. People have been divided into nations and tribes solely for the

purpose of learning from one another and working together on various levels of righteousness [35]. While the words 'aesthetic and beauty' in Islamic architecture represent a depiction of the beauty of heaven on earth [2], its main aspect is the humanistic need for beauty. An example of this is Muslim creation cannot compete with the beauty of nature or the beauty of Allah, the ultimate beauty.

A. 1. 3. The foundation of Muslim actions is encapsulated in religious jurisprudence (*Fiqh*)

Fiqh is a branch of Islamic teachings. *Fiqh* encompasses jurisprudence and the establishment of Islamic laws and order in the everyday lives of Muslims. In Islam, it is divided into two main branches: *Fiqh Ibadah*, which governs the rules and conduct of Muslim prayers, and *Fiqh Al-Muamalah*, which governs the broader aspects of daily life, including social, economic, and political ones, as well as legal matters and inheritance [38], [39].

The *Fiqh* of Islamic architecture has a normative base according to Quran and Hadith, *Maqodius syariah*, and *Fatwas* of Islamic Scholars in connection to architecture and buildings [8], [14], [26], [34], [38], [40]. Islamic architecture should implement Islamic values and laws [35]. Those include basic correspondence with salvation, safety (*maslahat*), and avoiding any harm (*mafsadat*) [1], [14]. *Fiqh* of Architecture is the integration of Islamic jurisprudence with architecture and building research [2], [27], [40]. It is a set of rules resulting from the movement of urbanism because of the friction occurred between individuals and their desire for architecture, and the resulting questions answered by Muslim jurists devised *fiqh* provisions through the science of *fiqh* [1].

While *Fiqh* of Architecture starts from architecture, it can develop until the wider variety of built environments become urban or even a city [8], [26]. The second part of *Fiqh* of Architecture is based on the accumulation of Muslims' urban and architectural experience and the problems presented to scholars. They cast out solutions too quickly, then general rules are created. These rules were respected by leaders, rulers, and the people, who considered them a legitimate law [1], [14], [40].

For a Muslim, incorporating those fundamental principles of Islamic teachings is essential in all aspects of life, and architecture is no exception. Consequently, the Islamic philosophical foundation (mentifact) in architecture should be drawn from *Aqidah*, *Akhlaq*, and *Fiqh*. The Islamic mentifact of architecture originating from *Aqidah* and *Akhlaq* pertains to the beliefs of the individuals associated with the basis in the architectural process. On the other hand, *Fiqh* directly relates to the pragmatic aspects of architecture itself.

A. 2. OVERVIEW OF THE ISLAMIC BEHAVIORAL FOUNDATION (SOCIOFACT) OF ISLAMIC ARCHITECTURE

In the context of Islamic architecture, some basic rules in Islamic law can be used as a behavioral foundation of architecture, such as the rule of no harm and no foul; *aḍ-ḍorōru* (لَاضَرَرَ وَلَا ضِرَازَ) [12], [41], [42], [43], [44], *habitude* that are established as a legal basis (اَلْعَادَةُ مُحَكَّمَةٌ) [14], [40], [44], hardship bringing ease (قاعدة المشقة تجلب التيسير), certainty that is not removed by doubt (يقين لا يزول بالشك), matters according to their objectives (الأمور بمقاصدها), and other Islamic basic ruling and provisions [44]. Here, we delve into the first two.

A. 2.1. *aḍ- ḍorōru* (لَاضَرَرَ وَلَا ضِرَازَ)

This principle of *aḍ-ḍorōru* is taken from the Hadith, which narrates that Hasan ibn Majah, narrated by Ibn Majah, al-Daarqutni, and others, as narrated by Malik in al-Muwatta from 'Amr ibn Yahya from his father, may Allah be pleased with him, said that 'there should be neither harming nor reciprocating harm' (لَاضَرَرَ وَلَا ضِرَازَ). Another narration was made by Ibn Majah and Aldarqotni, as narrated by other Musnad books, and as narrated by Malik in Muwatta: Amr ibn Yahya, from his father from the Prophet (PBUH), dropped Abu Saeed, and had ways to strengthen each other [Ibn Majah; cf. par. 2341], [Al-Daarqutni; no. 4; 228].

For a Muslim, it is impermissible to cause harm to another Muslim through words, actions, or reasoning without cause, regardless of any personal benefit, and this principle applies universally, particularly when someone holds a right [41], [42], [44]. It is not allowed to harm one's neighbor or even the ruler if it doesn't serve their well-being. Moreover, it is forbidden to place any obstacles, such as wood, stones, pits, and the like, in the paths of Muslims or in their markets that could cause harm, except when they serve a beneficial purpose. In the Hadith, it is emphasized that harming a fellow Muslim is akin to harming God [Hadith; Abu Dawood; 3635], Tirmidhi (1940). Some of the developments of *aḍ-ḍorōru* are [14], [44]:

a. **The principal of rejecting the damage takes precedence over attracting benefit, or rejecting the damage is prioritized over attracting expediency.** (دَرْأُ الْمَفَاسِدِ مُقَدَّمٌ عَلَى جَلْبِ الْمَصَالِحِ أَوْ دَرْأُ الْمَفَاسِدِ أَوْلَى مِنْ جَلْبِ الْمَنَافِعِ).
   This concept extends to Islamic architecture contexts, where it is impermissible for residents of lower or upper floors to exercise their property rights when it significantly disrupts their neighbors. Opening a window in a way that intrudes upon a neighbor's privacy or unveiling one's own private space is likewise prohibited. Establishing facilities like fruit presses, public kitchens, or animal slaughtering areas that emit

unpleasant odors or smoke, which cause harm to neighboring residents, is not allowed.

Additionally, it is discouraged to perform the call to prayer (*azan*) from the top of a tower, which would enable the caller to see into their neighbors' private spaces. While the call to prayer is a recommended practice (*sunnah*), infringing upon or disturbing the privacy of others is considered prohibited (haram).

b. The principal of rejecting any danger as best as one can (الضَّرَرُ يُدْفَعُ بِقَدْرِ الْإِمْكَانِ)

In accordance with this principle, every potential hazard should be proactively eliminated to the greatest extent possible. This perspective emphasizes the necessity of pre-emptively mitigating risks before they are materialized into actual dangers as the preservation of health is preferable to medical intervention. Within the framework of Architectural *Fiqh*, this concept finds two noteworthy applications: when a hazard is in its potential stage and when a danger has already materialized. Examples of its implementation include repairing cracked buildings, ensuring precise measurements and careful construction to pre-empt any potential hazards, maintaining building services to minimize faults or disturbances, and permanently sealing off any hazardous windows or doors.

c. The principle of Hazards should not be eliminated with other danger or hazards, and they should not be eliminated with the same level of danger or hazards (لَا اَلضَّرَرُ يُزَالُ بِالضَّرَرِ أَوْ الضَّرَرُ لَايُزَالُ بِمِثْلِهِ).

Examples illustrating the application of these principles include the prohibition of designing a vent in one's house wall to peer into a neighbour's privacy, and vice versa; the neighbour is not allowed to do so.

The principle of (if one must choose) choosing the one having lesser dangerous effect or hazards among dangerous choices. (الضَّرَرَيْنِ أَخَفُّ أَوْ الشَّرَّيْنِ أَهْوَنُ يُخْتَارُ)

Illustrations of these principles in practice include scenarios where using one's property may harm a neighbour, yet refraining from using it poses a danger to the owner. Additionally, situations may arise where a property owner intends to erect a fence around their land, but a neighbouring tree obstructs their efforts.

d. The principle of a specific hazard is dealt with to reject general hazards (الضَّرَرُ يُتَحَمَّلُ الْخَاصِ لِأَجْلِ دَفْعِ الضَّرَرِ الْعَامِ)

Examples illustrating the application of these principles include the necessity to disassemble walls that pose a risk of collapsing onto public roads. It is prohibited to open a garage or kitchen within a fabric-selling area due to the potential damage; the dirt from these areas could damage the fabrics. Roads should be widened when they become too narrow for the road users' safety. Slaughterhouses should be relocated away from residential areas and be placed on the outskirts of the city. Additionally, it is permissible to disassemble and relocate graves in cases where it serves a general benefit, such as for constructing fortifications.

A. 2.2 The principals of Habitude or *al-ādatu* (مُحَكَّمَةٌ اَلْعَادَةُ)

Etymologically, the Arabic term "*al-ādatu*" signifies a habitual and continuous practice that is accepted by common sense and is repeated continuously in a particular case in an area or a large part of that region [40]. Some of the development of *al-ādatu* are [14], [44]:

a. The principle of an act that becomes a habit of a society is an argument that should be practiced (إِسْتِعْمَالُ النَّاس حُجَّةٌ يَجِبُ الْعَمَلُ بِهَا).

An example demonstrating the application of these rules is a situation where someone has a customary habit of entering a friend's house, eating, and taking a shower without explicit permission; then, that person may do all three without needing to seek permission. Another example pertains to areas where it is customary to pick fallen fruit from gardens, parks, or housing without the owner's prior consent; in such cases, individuals can gather the fruit without seeking permission.

b. The principle of Habits that are widely known as a condition that has been bound (اَلْمَعْرُوْفُ عُرْفًا كَالْمَشْرُوْطِ شَرْطًا).

An example of applying these rules is a situation where Ahmad seeks Rasyid's assistance in a building or a house without a contract specifying a salary or nominal wage. If Rasyid usually works for a daily wage of 100, then Ahmad is obligated to pay Rasyid 100 per day. Another example is a situation when Ahmad occupies a house owned by Rasyid without his permission, especially when the house is typically rented out by Rasyid. In such a case, Ahmad is obligated to compensate Rasyid for a number of days based on the usual daily rental rate of Rasyid's house.

c. The principle of something that has been known in customs, then the law is like something that has been determined in the contract, or custom is an unwritten law, the contract is agreed-upon law (اَلتَّعْيِيْنُ بِالْعُرْفِ) (كَالتَّعْيِيْنِ بِالنَّصِّ).

An example of the application of these rules is a situation where Ahmad rents his house to Rasyid without specifying the occupancy criteria or the type of work Rasyid may conduct in the house. Then, Rasyid may use the house to the fullest extent. However, he should refrain from transforming the house into a workshop, a place for slaughtering animals, or a public kitchen without prior permission from Ahmad. Another scenario involves Rasyid renting a kiosk among a row of stalls selling food or clothing. In such cases, he is not allowed to convert the kiosk into a blacksmith workshop, public kitchen, animal slaughterhouse, or any other use that may cause harm or pose a danger to the surrounding kiosks.

Therefore, there are specific rules that deserve attention in the area of Islamic building and urban planning. As Hakim [8] outlines, the overarching principles of these Building Codes in the Islamic world, as outlined in the Quran and Hadith, mainly revolve around certain basic aspects. The example is preventing harm, which involves a recommendation to prioritize individual rights and ensure that one's actions do not encroach upon the rights of others. Other aspects revolve around a framework based on the principle of interdependence, which is crucial for generating building 'solutions' to the special requirements of the built form prevalent in Islamic cities.

Furthermore, another aspect revolves around the principle of *Aurat*, or the right to privacy, which encompasses an individual's entitlement to protection from various forms of disturbances, including those related to sound, visual intrusions, and other infringements on one's privacy. Within Muslim families, a noteworthy characteristic is the segregation between men and women.

Another noteworthy principle is based on the respect for others, such as a strong emphasis on respecting previous uses. This means that existing building features, such as window and door placements, should take precedence over future modifications. Furthermore, attention is directed towards building heights, emphasizing the right to construct taller buildings, provided that such constructions do not infringe upon the rights of others to access sunlight and fresh air.

Another critical aspect involves pre-emption rights, where, in property or ownership transactions, fairness in economic management is maintained by giving priority to offering the property to the neighbour who has not yet sold their plot. Lastly, the importance of avoiding permanent or temporary obstructions on major roads is highlighted. Each landowner is granted the right to access the road directly upon leaving their property, ensuring a smooth flow of movement.

We can evaluate that the ideas mentioned by Hakim fall under the two categories of Islamic behavioural foundations for architecture mentioned here. However, it is important to remember that the two are connected and should not be separated.

A. **3. OVERVIEW OF THE ISLAMIC PHYSICAL CIVILIZATION (ARTIFACT) OF ISLAMIC ARCHITECTURE**

Physical civilizations are created through architectural development and construction after the philosophical foundation has been established. The earliest known example of Islamic construction predates these archaeological establishments. These architectural establishments are mentioned in the Quran [45]. For instance, Surah Al-Hajj (Verse 26) mentions Allah's command to Prophet Ibrahim to build *Baitul 'Atiq* (*Ka'bah*). Ibn Kathir's *tafsir* interprets this as the construction of the first mosque on Earth, serving as the central point for the early development of Islamic civilization [29].

Furthermore, in Hadiths and the stories of the Prophet Muhammad, there are instances where he actively contributed to the construction of a mosque (Masjid) in new territories. One remarkable example is the construction of the first mosque in Medina after the Prophet Muhammad migrated from Mecca. In this particular case, he didn't even dismount from his camel upon arrival. Instead, a mosque was erected at the very spot where his camel first came to a halt. This mosque was marked as the first place of worship for the followers of the Prophet Muhammad in Medina [46].

This underscores the pivotal role of Masjids or Mosques as the starting point for the establishment of Islamic civilization. From an architectural perspective, a mosque does not only symbolize the presence of Islam within an area but also delineates its impact and significance in the broader civilization [47]. It is essential to recognize that the architectural value of a mosque goes beyond the physical structure; it truly reflects its Islamic influence when Muslims actively engage with it through prayers and social assistance [47].

A mosque stands out as a structure that distinctly embodies Islamic purpose in terms of its use, users, and architectural identity. However, the influence of Islamic values can be extended architecturally to other functions, ranging from educational institutions (*madrasahs*) to residential buildings. Indeed, evidence

suggests that the alignment of mentifacts and sociofacts in a mosque holds significance, and if misguided, the mosque may not be considered a 'genuine' Islamic architecture. This assertion is supported by the Quran, specifically Al-Tawbah (Verse 107-109). The verses highlight the existence of mosques falling into the category of Ḍirār, indicating harm or damage to society.

The passage explicitly conveys that individuals constructing a mosque without a sincere intention to worship Allah and support the community will face punishment from Allah. Conversely, those who build a mosque with the pure intention of pleasing Allah will be rewarded. The passage has been cited to justify the demolition of mosques believed to have been erected with malicious intent. This perspective highlights the significance of aligning mentifacts and sociofacts in the creation of Islamic architecture, emphasizing the paramount importance of pure intentions in constructing places of worship.

Hence, to construct the artifact of Islamic architecture, it is imperative to commence with the right Islamic mentifact and sociofact. This developmental framework can be applied to the examination and analysis of historical Islamic architecture, as well as the creation of contemporary Islamic architecture according to its context.

The contextual aspect of time plays a crucial role in discussing the developmental framework in the artifact category. Despite distinctions between contemporary and Islamic heritage architecture [48], [49], the latter is widely acknowledged to possess unique qualities [7], [50]. Islamic heritage architecture, exemplified by structures like the great mosques of Cordoba, Edirne, and Shah Jahan, employed local geometry, materials, and building methods to convey the order, harmony, and unity of Islamic architecture uniquely. Similarly, the Islamic architecture of the past significantly differs from its contemporary counterpart. For instance, the heritage of Islamic architecture in Indonesia contrasts with present-day Islamic architecture in the country, primarily due to disparities in socio-political conditions and varying technological capabilities in its development.

The contextual aspect of geographical location in Islamic architecture is also of utmost importance, illustrated by the distinct characteristics expected in Islamic architecture in, for example, Indonesia compared to those in Arabia. Recognizing the evolving contextual influences over time is crucial for understanding and appreciating the diverse expressions of Islamic architecture across different eras and regions [48]. These disparities are significant enough to make it inappropriate to equate them directly.

This concept of contextual considerations aligns with the wisdom of Islamic jurisprudence, specifically the notion of 'Urf (العرف). In Islam, 'Urf refers to customary practices and norms acknowledged by a specific community. It holds a substantial role in Islamic legal (fiqh) and ethical frameworks (akhlaq), subject to specific conditions and limitations. 'Urf is valued for its adherence to Islamic principles and its non-contradiction with explicit local rulings. This recognition emphasizes the significance of accommodating regional variations and cultural nuances within the broader framework of Islamic architectural practices [50], [51].

The concept of 'Urf, mentioned in the Quran and Hadith, serves as the basis for acknowledging local wisdom and traditions (adat) as acceptable ones and even a source of Islamic Law within a particular context. The Quranic verse, "Be gracious, enjoin what is right, and turn away from those who act ignorantly" [Quran; Surah Al-A'raf; Verse 199], underscores the importance of positive customs and behaviours.

The Hadith further underscores the concept of 'Urf by emphasizing that what Muslims collectively regard as good is considered good in the sight of God.

مَا رَآهُ الْمُسْلِمُونَ حسنًا فهو عندَ اللّٰهِ حسنٌ

[Hadith; Ahmad; 3600]. This foundational concept extends to Islamic architecture, where respect for local wisdom is a key principle [52]. It signifies that Islamic architecture recognizes the significance of diverse locales with varying climates and socio-cultural atmospheres. The example is the acculturation of pre-Islamic culture in Javanese Islamic architecture [53], [54].

The question of how to regenerate Islamic architecture today arises —whether to replicate Islamic heritage architecture or distil its essence for contemporary application. The key lies in adhering to the principles of mentifact and sociofact. By doing so, one can strike a balance between preserving the heritage's spirit and adapting it to today's context.

A common approach observed among Muslim architects is a disregard for the past, resulting in Western-oriented Muslim architecture that ignores the Islamic spirit and undermines traditional culture. This path is deemed inappropriate for the development of Islamic architecture as it fails to incorporate the essential characteristics necessary to be recognized as Islamic. Preserving the distinctive Islamic identity, rooted in both tradition and culture, is paramount for the meaningful creation of Islamic architecture.

In this regard, within the category of artifacts, several indicators of Islamic principles stand as benchmarks for contemporary Islamic architecture. One significant principle involves creating Islamic characteristics and refraining from imitating the architectural characteristics of other religions, as emphasized in the Hadith of the

Prophet, which says:

<div dir="rtl">من تشبه بقوم فهو منهم</div>

'Whoever imitates any people is one of them' [Hadith; Abu Dawood: 4031; Ahmad; 5114].

In this context, "any people" pertains to those who follow a particular religious belief. This principle emphasizes the importance of maintaining distinctive Islamic architectural elements and avoiding the replication of features associated with other religious traditions.

Observed in this study are two practical paradigms in the creation of buildings with Islamic architectural character. The first involves incorporating Islamic features based on geometrical patterns and arabesque elements [55], which depart from the aesthetic expression of faith [4], [56], while the second revolves around utilizing Islamic symbols drawn from contextual elements and the Quran [53], [57], [58], [59], [60], [61], [62].

The first practical paradigm of Islamic architecture, often found in Islamic heritage architecture, continues to be widely utilized today. This approach, as elucidated by Al-Faruqi [55], encompasses the detailed elements of Islamic architecture rooted in core characteristics that are consistent and relevant across various forms of Islamic arts. These also include the aesthetic treatment of space, incorporating diverse relationships between buildings [55], [63]. This enduring paradigm emphasizes a timeless connection to Islamic principles, maintaining a cohesive and harmonious expression in architectural design. Notable practices are [55]:

1. Abstraction - Special methods and techniques are developed and used to emphasize and fulfill the aesthetic goals of Islam [4], [32], [55], [64], [65].
2. Unit/Module - Islamic architecture is often a fusion of courtyard units, with each open unit acting as a central point surrounded by additional rooms. These units are further divided into independent segments, serving various purposes [66], [67], [68].
3. Successive Combination - Space modules are combined at various levels to form larger configurations. Individual rooms, serving as basic modular elements, are assembled to fulfil broader functional purposes. These additive segments harmoniously complement each other, creating a cohesive identity akin to pieces in a grand mosaic [68], [69].
4. Repetition - A fundamental aspect of creating ornamentation in Islamic art is equally crucial in Islamic architecture [70]. Units, forming successive combinations of open or enclosed spaces, are replicated in diverse forms within additive spaces. This repetitive pattern extends to internal units of structures, parks, and combinations of buildings within architectural complexes, fostering symmetrical harmony and unity among elements and enhancing the quality of arabesque additive space [67].
5. Dynamism - Understanding Islamic architecture requires exploring its spatial units deeply. It does not follow a linear development leading to a single aesthetic climax, making a comprehensive understanding elusive from a distance [67].
6. Complexity - It is integral to understand Islamic architecture, with its layers, repetitive patterns, and dynamic experiences contributing to an overall sense of complexity [71].

The second practical paradigm of Islamic architecture involves the incorporation of representations of Islamic symbols [72]. This approach extends beyond the six primary characteristics, preserving Islamic features in a broader sense. Notably, this paradigm is prevalent in many traditional Islamic buildings in Asia. The examples are shown in Figure 1 and 2, where a significant number of structures are not necessarily built by Muslims or individuals deeply educated in Islam. This highlights the transcendent and inclusive nature of Islamic architecture, where symbolic representations play a key role in expressing Islamic identity and values.
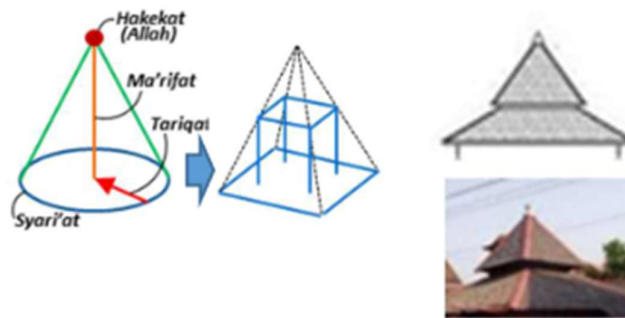

Figure 1. The Symbolic representation of Islamic Theosophy in traditional Islamic Architecture in Java, Indonesia [58].

Figure 2. The symbolic representation of pumpkin in traditional Islamic Architecture in Masjid Agung Banten, Indonesia [Source: 55]. Pumpkin in the Javanese traditional language is '*waluh*', which is almost the same as '*Wallah*', an Arabic word that means; 'for Allah'.

Furthermore, in the contemporary era, architects may use the Islamization technique to combine traditional Islamic and contemporary knowledge [50]. Meanwhile, builders have the opportunity to explore and adapt the possibilities offered by the machine age, much like craftsmen of the past explored the intricacies of geometrical and arabesque patterns [73]. The choice of approach is flexible and should be guided by local conditions, opting for the method that is more readily accepted and provides a greater value for both the society and Islam as a religion. This adaptability ensures that Islamic architecture remains relevant, responsive, and meaningful in diverse contexts.

B. DISCUSSION

This study can be seen as an answer to the previous note conducted by Ul-huq and Haque [12] on Islamic architecture, which concerns how one sees and does Islamic architecture. It is also a continuation of the previous argument on the theory of Islamic architecture [74] and an effort to synthesize Islamic values for architecture [4], [49], [50], [73], which ask what Islam wants from architecture.

Based on the results of this study, Islamic architecture can be understood through three interconnected dimensions: Mentifact, Sociofact, and Artifact. The Mentifact category encompasses the convictions, principles, and notions that guide the creation of Islamic structures. Sociofacts describe the influenced and influencing social and cultural conditions, including the needs of the local population, such as the neighbouring community. The term Artifact refers to the actual structures themselves, encompassing their components, symbolism, and ornamentation.

This framework allows for a multifaceted analysis of Islamic architecture at various levels. It reveals that architecture does not solely reflect the values of artifacts; rather, it embodies mentifact and sociofact concepts that align with the principles and values of Islam as a religion. In line with previous viewpoints, Islamic architecture is more than just a mere creation [1], [2], [3]. Therefore, this paper serves as a valuable addition to the existing discourses on Islamic architecture.

Furthermore, these dimensions operate as a developmental stage framework for architecture, emphasizing the organization of mentifact first, followed by sociofact, and artifact. This framework also establishes a priority for Islamic architecture, where the utmost importance is placed on mentifact, followed by sociofact, and artifact. Consequently, even if a structure exhibits Islamic characteristics or is labeled as an Islamic building, it is not considered truly Islamic if the mentifact and sociofact are not aligned with the correct path of Islam.

Islamic architecture is fundamentally grounded in mentifact and sociofact, where artifacts serve as the vehicles for expressing mentifact. Influencing how people perceive and interact with Islamic structures, sociofacts, and artifacts also exerts an impact on mentifact. The Islamization of modern contemporary architecture is applicable, but it reveals layers of abstract concepts due to the mental basis of mentifact. These added perspectives that present a challenge to the synthesis of Islamic heritage architecture in the Islamization and modernization process of Islamic heritage architecture, as previously discussed by Hamourche [50] and Erzen [4].

Structuring Islamic architecture using the three proposed dimensions enhances its applicability, yet it introduces challenges when evaluating existing architecture labeled as Islamic, which further emphasizes the opinions of previous researchers [7]. This primarily happens because it emphasizes abstract elements such as intentions and *akhlaq* based on Islam in the philosophical aspects, which can be difficult to fully assess due to their inherently subjective nature. Additionally, a thorough understanding of the wealth of *fiqh* studies is essential, and this knowledge, although recorded in ancient and modern Islamic references, demands a comprehensive and extensive familiarity with the subject matter. Nevertheless, these dimensions provide

additional avenues for analysis, building upon the work of previous researchers [49], [73] and offer a comprehensive framework for understanding and assessing the various elements that contribute to the Islamic character of architectural structures.

This study challenges previous research on needs and wants in Islamic buildings [75] by highlighting the complexity of these variables. The mentifact-sociofact paradigm demonstrates that assessing needs and wants as factors in the development of Islamic buildings requires a nuanced analysis that delves into multiple layers, including the study of morals, *fiqh*, and intentions. This complexity is especially evident when examining the community building the Islamic structures, emphasizing the necessity of in-depth questioning and understanding.

Hence, according to the artifact paradigm in this study, it is not accurate to assert that arabesque-geometric patterns and the Islamic symbolic approach to architectural elements in Islamic architecture are merely based on 'want' and are, therefore, redundant. Geometric patterns, including arabesque designs, often symbolize the divine unity and order of the universe. They are purposefully utilized to evoke awe and wonder in the audience to enhance religiousness and interest in the glory of Islam. The Islamic belief in the unity of God and the beauty of creation is directly mirrored in the intentional use of geometric patterns, revealing a deeper purpose beyond mere desire or preference. Moreover, the symbolic approach serves as a means to impart knowledge about the Islamic religion to the observers in a more engaging manner. Additionally, it functions as a foundation for expressing hopes and prayers to God for the building, adding a deeper layer of meaning and spiritual significance to the architectural elements.

The significance of community in Islamic architecture is another illustration. Mosques, for instance, are gathering places where people gather to pray, learn, and socialize, in addition to being places of worship. Mosques are built with large open spaces that can hold sizable crowds of people, reflecting their social function.

This study provides an answer to the previous question posed by Grabar [72], indicating that the role of artifacts in Islamic architecture is not necessarily more important than the role of its underlying dimensions. While the physical dimension of Islamic architecture is evident, as argued by Jasmi and Mitias [72], this study goes a step further by highlighting the developmental aspect. It reveals a red line that connects God, religion, and architectural formations, rooted in comprehensive classical references that are rare, if not absent, in other religions or other paradigms. This emphasizes the unique and intricate relationship between Islamic architecture and its spiritual, cultural, and religious foundations.

This study also concurs with previous studies [56] and adds proof of references, which underscores the significance of respecting locality and avoiding the Arabization of Islamic buildings in non-Arab contexts. While this approach is commendable, Islamic architecture also advocates for the respect of the relationship between an artifact and a sociofact. It is evident in how it has been adapted to various environments and cultures. For instance, mosques in hot climates are designed differently from those in cold climates, reflecting the changing needs of communities based on climate variations. In hotter climates, mosques often feature spacious courtyards that provide shaded areas for people to gather and interact. This adaptation highlights the responsiveness of Islamic architecture to the socio-cultural and climatic contexts of diverse regions.

Therefore, Islamic architecture should not be perceived solely as an artifact; rather, it should be deeply rooted in its sociofact that, in turn, is based on its mentifact. When structures labelled as Islamic architecture deviate from alignment with either the sociofact or the mentifact, they cannot be genuinely considered Islamic; their classification would be limited to their physical form alone. This emphasizes the holistic nature of Islamic architecture, where the spiritual, cultural, and societal dimensions are integral to its authentic representation.

The interrelation between mentifact, sociofact, and artefact within the context of Islamic Architecture, as derived from prior theories, is visually represented in Figure 4.
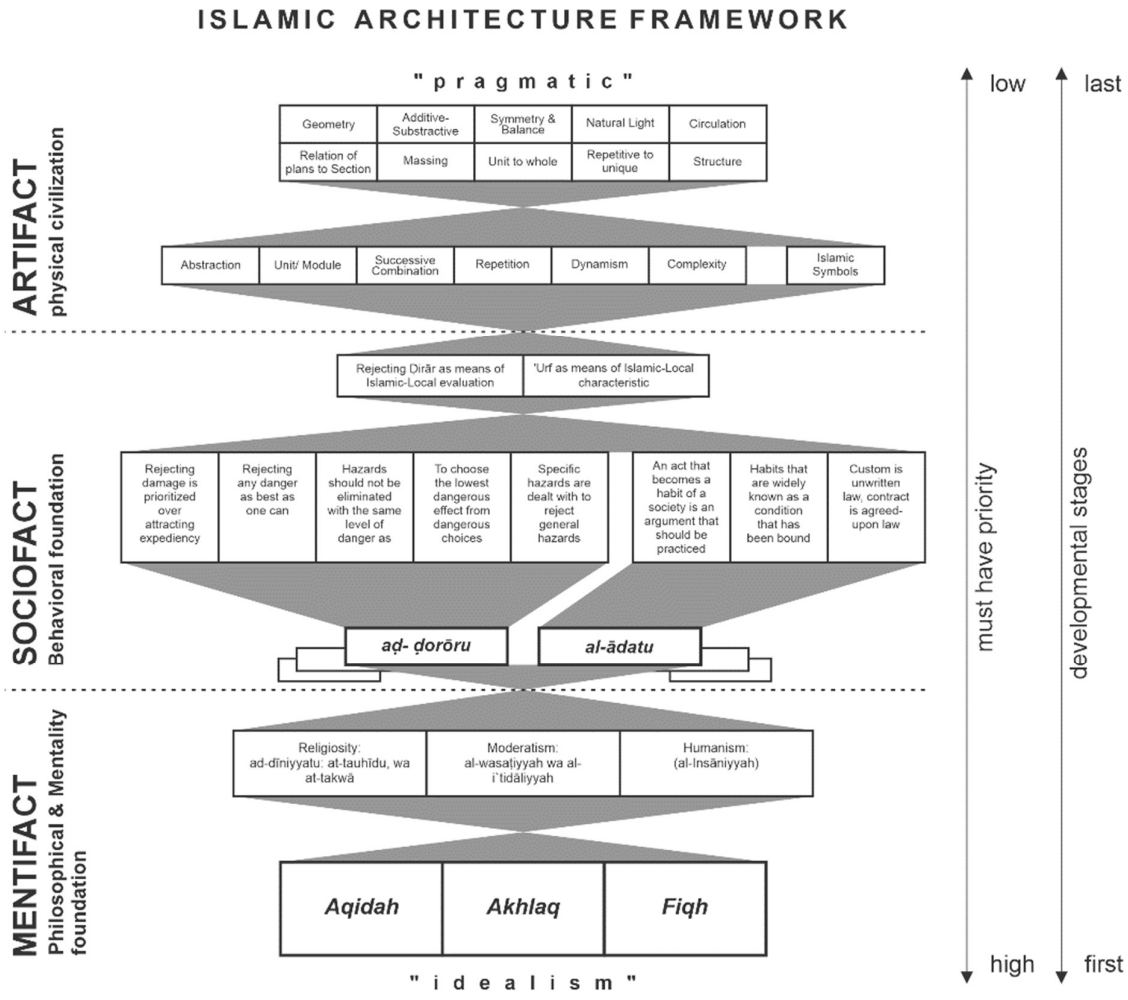
ISLAMIC ARCHITECTURE FRAMEWORK

Figure 4. Islamic architecture framework: Mentifact, Sociofact, and Artifact.

4. CONCLUSION

This study yields two major results. Firstly, the Islamic architecture framework consisting of Mentifact, Sociofact, and Artifact is pivotal for comprehending Islamic architecture. Each of these concepts plays a crucial role in shaping the design and construction of Islamic buildings. By understanding the interplay between these three concepts, a deeper appreciation for the beauty and complexity of Islamic architecture can be attained. This framework emphasizes the necessity of a robust philosophical foundation for Islamic architecture, obtained from the Quran, Hadith, *Maqasid al-Shariah*, and the *Fatwas* of Islamic Scholars related to architecture and construction. Without this foundation, the authenticity of architecture being truly 'Islamic' becomes questionable, reducing it to a mere architectural style. While the philosophical basis is primarily rooted in the connection to Allah the Creator, it must also have a social foundation, making the relationships among individuals just as pivotal as the relationship between human beings and Allah.

Secondly, the framework should not be viewed in isolation; instead, it should be employed as a cohesive tool. This is especially pertinent for architects aspiring to create Islamic architecture that is both meaningful and impactful. The application of this framework is not confined solely to classical or Middle Eastern architecture; it is equally suitable for use in contemporary Islamic architecture worldwide. It provides a versatile and comprehensive approach that can guide architects in ensuring that their designs align with the principles of Mentifact, Sociofact, and Artifact, fostering a holistic and authentic representation of Islamic architecture across diverse cultural and geographical contexts.

In light of these findings, the following recommendations are put forth:

1. There is a pressing need to deepen our study regarding *Aqidah, Akhlaq*, and *Fiqh* to advance the application of Islamic Architecture in contemporary times. This involves creating new architectural artifacts that reflect

the distinctive qualities of Islamic culture amidst the prevailing dominance of modern non-Islamic cultural influences.

2. It is essential to incorporate the social impact of architecture as a fundamental consideration in the architectural design process. This should extend to academia and architectural education, where the significance of the social effect needs to be emphasized in the learning process.

3. It is crucial to recognize the limitations of this study. While the framework offers a comprehensive exploration of the dimensions of Islamic architecture, it is important to recognize that explaining the entirety of the vast Islamic literature and its discussions in a single journal article is not feasible due to the inherent constraints of such articles. Additionally, there are challenges in interpreting classical sources for practical application in architecture, rendering the detailed framework that is still incomplete. Moreover, practical issues may arise when applying the framework in real-world scenarios.

4. It is hoped that future researchers will contribute to enriching this framework by conducting detailed analyses of other classical sources that are not covered in this study and exploring examples in contemporary practical applications. Continued research and application will contribute to the refinement and enhancement of the framework for a more nuanced understanding and effective implementation of Islamic architecture principles.

REFERENCES

[1] K. Azab, "Islamic Concepts of Building and Architecture," *Majallat al-Majmaʿ al-ʿIlmi al-Masri*, vol. 90, no. 90, pp. 21–61, May 2015, doi: 10.21608/jfnile.2015.88419.

[2] A. Petruccioli and K. K. Pirani, *Understanding Islamic Architecture*, 0 ed. Routledge, 2013. doi: 10.4324/9781315028767.

[3] A. A. Yassin and Dr. N. Utaberta, "Architecture in The Islamic Civilization: Muslim Building or Islamic Architecture," *Journal of Islamic Architecture*, vol. 2, no. 2, Dec. 2012, doi: 10.18860/jia.v2i2.2202.

[4] J. N. Erzen, "Islamic Aesthetics: An Alternative Way to Knowledge," *The Journal of Aesthetics and Art Criticism*, vol. 65, no. 1, pp. 69–75, 2007.

[5] N. Rabbat, "What is Islamic architecture anyway?," *Journal of Art Historiography*, vol. 6, no. 1, 2012.

[6] S. Omer, "Al-Wasatiyyah and Some of its Implications for Islamic Built Environment," *Pertanika Journal of Social Sciences & Humanities*, vol. 23, no. 4, 2015.

[7] R. Hillenbrand, "Studying Islamic Architecture: Challenges and Perspectives," *Architectural History*, vol. 46, p. 1, 2003, doi: 10.2307/1568797.

[8] B. S. Hakim, *Arabic-Islamic cities: building and planning principles*. London: New York : KPI, 1986.

[9] M. F. Mahmoud and M. I. Elbelkasy, "Islamic architecture: between moulding and flexibility," presented at the ISLAMIC HERITAGE ARCHITECTURE AND ART 2016, Valencia, Spain, May 2016, pp. 49–59. doi: 10.2495/IHA160051.

[10] M. Z. M. Taib and M. T. Rasdi, "Islamic Architecture Evolution: Perception and Behaviour," *Procedia - Social and Behavioral Sciences*, vol. 49, pp. 293–303, 2012, doi: 10.1016/j.sbspro.2012.07.027.

[11] S. Omer, "The Significance of Building Pursuits in Islam," *Journal of Islamic Architecture*, vol. 2, no. 3, Feb. 2014, doi: 10.18860/jia.v2i3.2464.

[12] M. Ul Huq and A. Haque, "Does Islamic Architecture Reflect Islam (Faith)?," in *UIA 2017 Seoul World Architects Congress*, 2017, pp. 34–41.

[13] F. Nasrollahi, "Transcendent Soul of the Muslim Architect and Spiritual Impact of the Islamic Architecture: Islamic Architecture and mundus imaginalis," *JISC*, vol. 3, no. 2, 2015, doi: 10.15640/jisc.v3n2a10.

[14] Y. Yulianto, "Hakikat, Epistimologi Islam, dan Strategi Istinbath Al Ahkam Fikih Arsitektur," *SJIM*, vol. 4, no. 2, pp. 151–169, Dec. 2019, doi: 10.22515/shahih.v4i2.1867.

[15] M. Bin Hamu, "l-Dārar ʿalā al-Masākin min khātir fiqh ʿimārati al-madāʾin al-islāmiyya," *HKP*, vol. 10, no. 38, pp. 64–72, Dec. 2017, doi: 10.12816/0047296.

[16] A. B. H. Ahmad, W. K. Mujani, and R. Othman, "Architecture according to the Perspective of the Qurʾan: An Evaluation," *IJARBSS*, vol. 7, no. 8, p. Pages 478-484, Sep. 2017, doi: 10.6007/IJARBSS/v7-i8/3254.

[17] A. Rapoport, "Theory, Culture and Housing," *Housing, Theory and Society*, vol. 17, no. 4, pp. 145–165, Nov. 2000, doi: 10.1080/140360900300108573.

[18] J. Beyers, "Religion and culture: Revisiting a close relative," *HTS Teologiese Studies / Theological Studies*, vol. 73, no. 1, p. 9 pages, Feb. 2017, doi: 10.4102/hts.v73i1.3864.

[19] D. Bidney, *Theoretical Anthropology*. New York, NY: Columbia University Press, 1967.

[20] L. A. White, *The Science of Culture, a Study of Man and Civilization*. Creative Media Partners, LLC, 2018.

[21] J. S. Huxley, "Guest Editorial: Evolution, Cultural and Biological," *Yearbook of Anthropology*, pp. 2–25, Jan. 1955, doi: 10.1086/yearanth.0.3031134.

[22] U. D'Ambrosio, "Mathematical Modelling as a Strategy for Building-Up Systems of Knowledge in Different Cultural Environments," in *Mathematical Modelling in Education Research and Practice*, G. A. Stillman, W. Blum, and M. Salett Biembengut, Eds., in International Perspectives on the Teaching and Learning of Mathematical Modelling. , Cham: Springer International Publishing, 2015, pp. 35–44. doi: 10.1007/978-3-319-18272-8_2.

[23] K. A. Jasmi, "Dakwah Merupakan Kerja Utama Umat Islam: Surah Ali 'Imran (3: 104-112)," *Program Budaya al-Quran Mingguan Siri 71 di Kolej Tun Fatimah*, Universiti Teknologi Malaysia, 2021.

[24] M. F. Gulen, *The Essentials of the Islamic Faith*. New Jersey USA: The Light Inc., 2005.

[25] A. Bahnasi, *Funūn al-ʿimārati al-islāmiyyati wa khaṣāʾiṣuhā fī manāhij at-taʿlīm*. Riyadh: The Islamic Educational, Scientific and Cultural Organization, 2003.

[26] Y. Waziri, *Al-ʿUmran wa al-Binyan fī Manẓūr al-Islām*. Kuwait: Rawafid, 2008.

[27] O. Spahic, "God as the Only Creator: Some Implications for Conceptualising Islamic Architecture," *KEMANUSIAAN*, vol. 22, no. 1, 2015.

[28] S. Omer, "Tawhid and Its Implications for Islamic Architecture," *Journal of Architecture, Planning and Construction Management*, vol. 1, no. 2, 2011.

[29] I. A. A.-F. I. ibn Kathir al-Dimashqi, *Tafsir Ibn Kathir*, 2nd ed., vol. 1–10. Riyadh: Maktaba Dar-us-Salam, 2003.

[30] E. Moosa, "Muslim Ethics?," in *The Blackwell Companion to Religious Ethics*, W. Schweiker, Ed., Oxford, UK: Blackwell Publishing Ltd, 2007, pp. 237–243. doi: 10.1002/9780470997031.ch26.

[31] A. Siddiqui, "Ethics in Islam: key concepts and contemporary challenges," *Journal of Moral Education*, vol. 26, no. 4, pp. 423–431, Dec. 1997, doi: 10.1080/0305724970260403.

[32] H. M. I. Al-Awawda, "Falsafatu al-Wasaṭiyyati al-Islāmiyyati wa at-Tajrīdi fī al-ʿImāroti al-Islāmiyyati Ḥālatan Dirāsiyyatan (al-Waḥdāt al-Zukhrafiyyati al-Islāmiyyati)," Postgraduate Thesis, An-Najah National University, Nablus Palestine, 2009.

[33] A. S. Salman Almaamouri, "Humanization of Arabic Islamic Architecture," *Iraqi Journal of Architecture and Planning*, vol. 7, no. 1, 2018.

[34] Z. A. S. Gelani, "Muslim Housing as Built Environment for Promoting Muslim Societal Behaviour," *ARCHITECTURE AND BEHAVIOUR*, vol. 11, pp. 59–66, 1995.

[35] S. Omer, "The Concepts of God, Man, and The Environment in Islam: Implications For Islamic Architecture," *Journal of Islamic Architecture*, vol. 2, no. 1, Aug. 2012, doi: 10.18860/jia.v2i1.1778.

[36] A. al-R. H. Majdi Muhammad, *Asasu Taṣmīmi al-Maskani Fī al-ʿImāroti al-islāmiyyati, Riyad: as-Syirkah as-Suʿudiyah lit Tawzi*. Mecca, Kingdom of Saudi Arabia, 1989.

[37] R. R. Fanjan and H. S. Alboadam, "The Role of the Bonding Strategy in the Identity of Islamic Architecture," *IJDNE*, vol. 18, no. 2, pp. 269–278, Apr. 2023, doi: 10.18280/ijdne.180204.

[38] I. A. K. Nyazee, *Outlines Of Islamic Jurisprudence*. Advanced Legal Studies Institute, 2016.

[39] B. S. Hakim, "The Generative Nature of Islamic Rules For The Built Environment," *International Journal of Architectural Research*, vol. 4, no. 1, 2010.

[40] Z. Al-Murabit, *At-Takhtit wa al-Bunyan fī al-Fiqh al-Islāmī.pdf*. Cairo: Dar al-Salam li-l-Nashr wa-l-Tawziʿ, 2019.

[41] R. I. S. Ahmeed and A. K. A. Sumiran, "Rule: (No harm, no Foul), an applied study inthe book (Al-Najm Al-Wahaj fi Sharh Al-Minhaj)by Imam Al-Damiri (T: 808AH)," *RJIS*, vol. 2, no. 2, Dec. 2022, doi: 10.37940/RJIS.2022.2.2.9.

[42] F. I. Hazaa and M. N. Hummadi, "No harm Or Foul At Imam Al-Ruwaiani(D:502AH) – An insight through his Book (Bahr al-Madhahib)," *RJIS*, vol. 1, no. 2, 2022, doi: 10.37940/RJIS.2022.1.2.11.

[43] bin H. M. Ash-Shihri and Awad, "Rule 'No infliction of harm or reciprocal damage' in the topic of calamities in Maliki Jurisprudence," *Journal of the Faculty of Sharia and Law in Assiut*, vol. 32, no. 4, pp. 1428–1464, 2020.

[44] A. bin Ibrahim Ahmad Fakher, "Neighborhood Rulings in Light of Jurisprudential Rules," *Koleyat al-Shari'a wa al-Qānūn bi-Asyūṭ*, pp. 985–1051, 2023.

[45] Y. H. Wazeri, "Architecture in the Islamic Vision," *Journal of Islamic Architecture*, vol. 6, no. 1, pp. 1–6, Jun. 2020, doi: 10.18860/jia.v6i1.7867.

[46] D. A. Belabes, "Is the Waqf a Part of the Third Sector?," *The Journal of Awqaf*, vol. 33, pp. 12–35, 2017.

[47] N. M. Nawawi, P. S. Jahn Kassim, and S. Hamat, "A Historiography of the Mosque: Reconciling a Renaissance of Spirituality in the Material Forms of Islamic Architecture," *adv sci lett*, vol. 22, no. 9, pp. 2164–2169, Sep. 2016, doi: 10.1166/asl.2016.7558.

[48] E. Abowardah, "Contemporary Islamic Architecture towards preserving Islamic heritage," *Proceedings of the ARCHDESIGN 14*, 2015, doi: 10.13140/RG.2.1.1928.7208.

[49] H. Alqub and R. Mellin, "Reviving Islamic Values in Contemporary Arab Architecture," *Journal of Islamic Architecture*, vol. 6, no. 1, pp. 48–57, Jun. 2020, doi: 10.18860/jia.v6i1.7848.

[50] M. B.- Hamouche, "Islamization of Contemporary Architecture: Shifting the Paradigm of Islamic Architecture," *Journal of Islamic Architecture*, vol. 1, no. 2, Mar. 2012, doi: 10.18860/jia.v1i2.1720.

[51] H. A. Ghani, "'Urf -o-Ādah (Custom and Usage) as a Source of Islamic law," *AIJCR*, 2011.

[52] B. S. Hakim, "The" Urf" and its role in diversifying the architecture of traditional Islamic cities.," *Journal of Architectural and Planning Research*, pp. 108–127, 1994.

[53] N. C. Idham, "Javanese Islamic Architecture: Adoption and Adaptation of Javanese and Hindu-Buddhist Cultures in Indonesia," *Journal of Architecture and Urbanism*, vol. 45, no. 1, pp. 9–18, Feb. 2021, doi: 10.3846/jau.2021.13709.

[54] H. S. Lee-Niinioja, *The Continuity of Pre-Islamic Motifs in Javanese Mosque Ornamentation, Indonesia*. Archaeopress Publishing Ltd, 2022. doi: 10.2307/j.ctv2b07tsb.

[55] I. R. Al-Faruqi and L. I. Al Faruqi, *Cultural atlas of Islam*. New York : London: Macmillan ; Collier Macmillan, 1986.

[56] L. I. N. Fina, "Southeast Asian Islamic Art and Architecture: Re-Examining The Claim of the Unity and Universality of Islamic Art," *SKIJIC*, vol. 1, no. 2, p. 171, Nov. 2018, doi: 10.14421/skijic.v1i2.1364.

[57] R. A. Huzaifa, M. S. Barliana, and R. Mardiana, "Cultural Expression of Local Architecture for Developing Educational Campus Design:," in *Proceedings of the 6th UPI International Conference on TVET 2020 (TVET 2020)*, Bandung, Indonesia: Atlantis Press, 2021. doi: 10.2991/assehr.k.210203.089.

[58] F. Fauzi, M. Munir, and R. Mustansyir, "Symbolism in the aesthetics architectural of Plosokuning mosque Yogyakarta," *RSD*, vol. 9, no. 11, p. e41491110058, Nov. 2020, doi: 10.33448/rsd-v9i11.10058.

[59] U. Fikriyati, "Architectural Interpretations of Qur'anic and Hadith Influences in Traditional Indonesian Mosques During the Walisanga Era," *Jurnal Studi Ilmu-Ilmu al-Qur'an dan Hadis,* Vol. 24, No. 2, pp. 253-284, 2023. DOI: https://doi.org/10.14421/qh.v24i2.4657

[60] B. Budiono, M. Rachmawati, E. Darjosanjoto, and M. Faqih, "Islamic Expression of Wali Mosque Interior and Architecture in Indonesia," in *Proceedings of the Proceedings of the 1st Conference of Visual Art, Design, and Social Humanities by Faculty of Art and Design, CONVASH 2019, 2 November 2019, Surakarta, Central Java, Indonesia*, Surakarta, Indonesia: EAI, 2020. doi: 10.4108/eai.2-11-2019.2294889.

[61] T. Hidjaz, N. Soewarno, and D. Fitriany, "The Symbolic Meaning of Mosque Architecture as Adaptation to the Residential Environment, in the Social, Economic and Cultural Contexts in Lombok," *IJAAA*, vol. 5, no. 3, p. 64, 2019, doi: 10.11648/j.ijaaa.20190503.11.

[62] A. S. Ekomadyo, "Architectural Representation of Islamic Modernism in Indonesia," *Nakhara: Journal of Environmental Design and Planning*, vol. 7, pp. 113–126, 2011.

[63] N. AlSayyad, "SPACE IN AN ISLAMIC CITY: SOME URBAN DESIGN PATTERNS," *Journal of Architectural and Planning Research*, Vol. 4, No. 2, pp. 108-119, June 1987.

[64] H. Ahmed, "Utilizing Islamic Geometric Abstraction Aesthetics in Creating Designs for Mosque Architectural Decoration," *International Design Journal*, vol. 12, no. 5, pp. 291–302, Sep. 2022, doi: 10.21608/idj.2022.261006.

[65] M. H. Asfour, J. Alameri, and H. B. Ismail, "Abstraction Philosophy and Semantics in Islamic Art," *Advanced Research & Studies Journal*, vol. 11, no. 6, 2021.

[66] K. Kaptan, "Early Islamic Architecture and Structural Configurations," *International Journal of Architecture and Urban Development*, vol. 3, no. 2, pp. 5-12, 2013.

[67] M. Foroozani, "Principles of Aesthetics in Islamic Architecture," *Periodica Polytechnica Architecture*, vol. 35, no. 3–4, pp. 189–199, 1991.

[68] K. F. Khalil and J. Wahid, "The Proportional Relations Systems of Islamic Architecture," *International Journal of Scientific and Research Publications*, vol. 3, no. 1, pp. 1-12, 2013.

[69] H. Nikzadeh and B. Sinaei, "Investigating the influence of Islamic architectural features on human values," *Sociology of Culture and Art*, vol. 5, no. 3, pp. 21–33, 2023. Doi: 10.22034/scart.2023.62810.

[70] P. J. Lu and P. J. Steinhardt, "Decagonal and Quasi-Crystalline Tilings in Medieval Islamic Architecture," *Science*, vol. 315, no. 5815, pp. 1106–1110, Feb. 2007, doi: 10.1126/science.1135491.

[71] N. Dadkhah, H. Safaeipour, and G. Memarian, "Traditional Complex Modularity in Islamic and Persian Architecture: Interpretations in Muqarnas and Patkâné Crafts, Focusing on their Prefabricated Essence," *ACSA Fall Conference*, 2012.

[72] A. Al-Jasmi and M. H. Mitias, "Does an Islamic Architecture Exist?," *Revista Portuguesa de Filosofia*, Vol. 60, No. 1, pp. 197–214, 2004.

[73] S. Omer, "Islamic Architecture and The Prospect of Its Revival Today," *Journal of Islamic Thought and Civilization*, vol. 1, no. 2, 2011.

[74] M. Nari Ghomi and Technical and Vocational University of Qom, "Theory of Islamic Architecture vs. Islamic Theory of Architecture: A Critical Appraisal of the Contemporary Theoretical and Practical Approaches from the Islamic Perspective," *CIAUJ*, vol. 3, no. 2, pp. 17–31, Jan. 2018, doi: 10.29252/ciauj.3.2.17.

[75] I. A. Wirakusumah, "Needs and Wants in Mosque Architecture: A Study of Traditional and Modern Mosques in West Java-Indonesia," *Linguistics and Culture Review*, vol. 5, pp. 381–395, 2021, doi: 10.37028/lingcure.v5nS3.1535