

ISLAMIC EXHORATION TO EARTHEN ARCHITECTURE A CASE STUDY IN OLD MOSUL RESIDANCE AREA

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ABSTRACT

There are numerous citations from the *Qur'an* and the *hadiths* that mentioned the wise utilization of natural resources. They all lead to the conviction that all elements, species, and ecosystems are part of the perfect universe created by GOD. Hence, respecting the law of nature is an obligation of every Muslim, who by definition has "submitted" himself, body and soul, to the Creator.

Depending on the main Islamic concept in the *Qur'an* "*And remember when He made you successors after the 'Aad and settled you in the land, [and] you take for yourselves palaces from its plains and carve from the mountains, homes.*" (Al-'A`raf, 7:74).

This paper tried to discuss the main principles of Islamic roles that deal with nature as a main resource to architecture and human as a wise consumer for these resources. It aims to increase awareness to the importance of the theme of Islamic earthen architecture by expounding the core of the conceptual basis for the same. It also presents some general principles and ideas around which a comprehensive theory on sustainability in Islamic architecture, in line with the requirements of the Islamic worldview while fully conforming to the dictates of different circumstances, environments and cultures, can be developed today.

To deal with such an issue, the paper will try to project the built environment and architecture of the old resident area of Mosul city within the "*Islamic building Fiqh*" to investigate how Islam deals with such an environment and its resources.

In this paper we intend to highlight the concept of traditional architecture and how it preserve the earth resources by using materials and building components and recycled component too. The three main opportunities for making use of existing materials are: reusing existing buildings, reusing building components, and using recycled materials. Examples of buildings that have been reused or that have incorporated reused or recycled materials are illustrated in

KEYWORDS: Earthen architecture, Islamic principles of building, Islamic regulations, Builtup Environment

1. INTRODUCTION

The ethical base of Islam which is derived from the imperatives laid down in the *Qur'an* and expressed in the practice of the Prophet comes under numerous headings. They can however be distilled into just three categories bearing in mind public good to be the ultimate objective. They are to do what is right, forbid what is wrong and act with moderation at all times: "Let there be a community among you who call to the good, and enjoin the right and forbid the wrong. They are the ones who have success." (Al 'Imrân, 3:104).

As Abed Al-Rahim refers, (Abed Al-Rahim, 2010, pp. 2-13) the *Qur'an* uses an environmental theme in exhorting humankind to be moderate, "it is He who produces gardens, both cultivated and wild, and palm trees and crops of diverse kinds and olives and pomegranates both similar and dissimilar. Eat of their fruits when they bear fruit and pay their dues on the day of their harvest, and do not be profligate. He does not love the profligate" (Al An'âm, 6:141).

The *Qur'an* refers to creation or the natural world as the signs (ayat) of Allah, the Creator. Ayat means symbols or proofs of the divine. As the *Qur'an* is proof of Allah so likewise is His creation. Islamic unique perception of man and his position on earth necessitated the formation of a compelling and comprehensive view of the natural environment as well (Nasr, 1991, p. 130). This is so because man totally depends on nature for his survival. Also, nature is a ground for man's realization of his spiritual purpose on earth. Simply put, man is an integral part of the total natural setting.

2. THE ISLAMIC BUILT LAWS

The built laws or principles as mentioned in *Fiqh* books illustrate the responsibilities of both individuals and authority in Islamic law (Hammad, 1997, pp. 54-60). Hakim defines *Fiqh* of building processes as: "the mechanism of interpreting and applying the value system of the shari'a (Islamic divine law) within the processes of building and urban development... its primary sources, the *Qur'an* and the *Sunna* (or traditions of the Prophet) are crucial for the transfer of the value system to design and urban form." (Hakim, 1986, pp., 10-17).

So, Islamic built laws were used to define the rights, responsibilities of people and how to respond to one's needs without conflicting other people's interests or environmental resources.

2.1 No-Harm principle in Islam

The *Qur'an* highlighted some principles and guidelines on human behaviour, which include (Al-Ibrabim, 2003, pp. 63-80);

Adl (Justice) - Mizan (Balance) - Wasat (Middleness) - Rahmah (Mercy) - Amanah (Trustworthiness and custodianship) - Taharah (Spiritual purity and Physical cleanliness) - Haq (Truthfulness and Rights) - Ilm Nafi' (usefulness of knowledge and science).

All above roles lead to no-harm principle which means that residents' initiated action, which is considered harmful to others, should be prevented when affected people ask so (Hakim, 1986, p., 10).

The above principal has defined the user's rights in terms of how to build, alter or extend his/ her property. They also provide a flexible framework to the property user/owner that enables him/ her to change his property without harming his neighbors and violating their rights, or harming the universe he /she belongs to. (Hakim, 1986, p. 17).

2.2 The Use of Resources in Islamic architecture

Central to the understanding of Islamic architecture, as both a concept and sensory reality, is the understanding of the Islamic concepts of man and the environment. This is so because it is man who perceives, creates and uses architecture. It is man who produces or destroys architecture. It is man who enjoys or suffers from architecture. Furthermore, architecture and natural environment are inseparable, at both the conceptual and practical planes (Matali. 2012 p. 35).

The environment holds enormous potential and diversified resources meant only for man, God's vicegerent on earth. They are to be seen as the facilities which facilitate each and every aspect of man's fleeting stay on earth. The environment is further to be seen by man as an "ally" or a "partner", so to speak, in the execution of his earthly mission (Matali. 2012 p. 38). After all, in order to create an architecture, man borrows diverse natural ingredients, such as space, water, clay, timber, stone and other minerals, placing the newly created or built elements back into the existing natural contexts. In other words, the built environment is in so many ways the natural environment that has been borrowed, utilized, manipulated and processed (Matali. 2012 p. 40).

Man himself constitutes a part of the universal natural setting. It goes without saying that some of the most prominent features of Islamic architecture must always be as follows: it is heavily loaded with the Islamic spirituality; it is economic and safe; it is users friendly; it is environment friendly; and, it is sustainable.

2.3 Building materials in Islamic architecture

Building materials and substances used in building processes are normally taken or "borrowed" from nature. The same materials heretofore belonged to the flawlessly executed universal web singing God's praises and celebrating His glory. Although they have been removed from their original contexts, the building materials from nature are still utilized for some other perfectly fitting goals related to man, thereby causing their intrinsic "holy pursuit" to remain unaffected or perturbed (Alqimaqche 2013, p. 35).

As a result of the Muslim's restricted and controlled intervention in nature, only did the original condition and context of natural building materials and substances change, which is nevertheless expected, needed and in full accordance with God's universal will and plan. The inherent functions of those building materials and substances remain the same (Omer, 2009, pp. 111-128).

Before they are used in buildings, building materials from nature worship God in unison with the rest of nature's components. It is thus only fair that they are used in those buildings where God is worshipped as well, so that their unremitting acts are still performed in peace and without interruption. It sounds strange but it would be an act of injustice towards nature if some of its ingredients were used for erecting buildings wherein the authority of God will be disrespected and His words contravened. Besides, such a deed would also denote that a contribution toward upsetting the fine equilibrium in nature has been made. When the Prophet declared that "*there is neither harming nor reciprocating of harm*", he had in mind not only human beings but also the natural world with all its components (Akbar, 1988, p. 72). And surely, it is a form and degree of harm when the spiritual paradigms of nature are perturbed, just as it is harmful to abuse the physical aspects on nature's kingdom. The mentioned words of the Prophet implied, furthermore, that our built environments must not be harmful, that is, that they do not generate any harm to either people or their natural surroundings. A built environment is to be an asset, not a liability, to all of its users (Alqimaqche 2013, p. 35).

Surely, it stands to reason that as man is very much capable of perturbing the physical laws of nature by his actions, so is he in a position to get in the way of the covert aspects of nature's existence, as much as God allows it. Therefore, while creating buildings, God's vicegerents wish not to contravene any of the universe's spiritual laws and patterns.

3. THE RESEARCH OBJECTIVES AND METHODOLOGY

The objectives of the research are to study how far Islamic values and earthen architecture have been applied to residence area in Mosul old city (MOC) in Iraq country. The research main question is lay under the investigation of ; how much Islamic architecture and earthen architecture principles are synchronized. These objectives are carried out through a pilot study in a selected area on the inner city, data is obtained with survey as a purposive sample, building sketches and photographs.

3.1 The Case Study: Mosul Old City

In the Mosul Old City in Iraq, urban tradition is greatly presented as demonstrated by the traditional alleys, houses doorways, the old Islamic public buildings. For testing the theoretical framework (Islamic roles and principles mentioned above), a part of the historic fabric of (MOC) has been selected, (Fig.1). The case study has been elected due to the variety of its building styles and their ages; purposes and types. It includes several houses, a number of public buildings like public baths, schools, and some significant religious building (mosques) (Directorate of Municipality of Mosul city).













Fig 1. Layout of Mosul old city (Directorate of Municipality of Mosul city)






3.2 Earthen architecture within Mosul Old City (MOC).




The form of Mosul urban fabric returns wholly to Arabic, and Islamic influences. It does not generally differ from any other Arabic-Islamic city. It is, however, considered the production of this great cultural tradition (table 1) with high appearance of earthen architecture.

Table 1. Indicates some of earthen architectural appearances corresponding to Islamic principles in old Mosul city.

Example	Earthen architecture appearance	Related Issue	<i>Related Qur'anic verses or prophetic hadiths</i>
	<p>The compact urban grain with organic fabric and space hierarchy</p>	<p>The wise Use of space Resources</p>	<p><i>"That home of the Hereafter We assign to those who do not desire exaltedness upon the earth or corruption". Al-Qaşaş(28:83)</i></p>
	<p>The efficient use of local materials (stone , gypsum, clay, local marble and wood)</p>	<p>The use of earthen material Resources for building construction structure, finishes, and ornamentation</p>	<p><i>"It is He who created for you all of that which is on the earth. ...". Al-Baqarah (2:29)</i></p>
			
			
			

Example	Earthen architecture appearance	Related Issue	<i>Related Qur'anic verses or prophetic hadiths</i>
	<p>The use of pottery, voids and holes in roof and walls structure to reduce additional weight of construction materials, also to provide environmental heat insulation.</p>	<p>skillfulness to avoid exaggeration in natural resources consumption</p>	<p><i>"Indeed, the wasteful are brothers of the devils, and ever has Satan been to his Lord ungrateful. Al-'Isrā' (17:27)</i></p>
			
			
			
			

Example	Earthen architecture appearance	Related Issue	<i>Related Qur'anic verses or prophetic hadiths</i>
			
			<p><i>" And those who, when they spend, do so not excessively or sparingly but are ever, between that moderate it.." Al-Furqān (25:67)</i></p>
	<p>The use of old building materials (recycled) to reconstruct buildings</p>	<p>Recycling materials without waste</p>	<p><i>" It is He who grew the gardens, trellised and bowered, and palm trees and land sown with corn and many other seeds, and olives and pomegranates, alike and yet unlike. So eat of their fruit when they are in fruit, and give on the day of harvesting His due, and do not be extravagant, for God does not love those who are prodigal. "</i></p>
			
			<p><i>Al-An'aam (6:141)</i></p>

Example	Earthen architecture appearance	Related Issue	<i>Related Qur'anic verses or prophetic hadiths</i>
			
	<p>The inner well for water, and inner green trees for the use of natural ventilation and reducing temperature of courtyard during summer</p>	<p>The optimum use of natural Resources</p>	<p><i>"And We send down from the sky rain charted with blessing, and We produce therewith gardens and Grain for harvests" Qaaf (50:7)</i></p>
			<p><i>"It is He who sends down rain from the sky; from it is drink and from it is foliage in which you pasture " An-Nahl (16:10)</i></p>

The study indicates manifestation of architectural legacy which have been obtained during survey, such appearances dealt with the concept of earthen architecture spontaneously, due to the (conscious) involvement of designer and architect within Islamic principles and roles.

The survey also indicates that the use of these concepts were at macro and micro levels of the architecture, and the urban design of the built environment, and Muslim architect dealt with such environment with various degrees of awareness, to establish safety and humanity, within wise and various use of natural resource.

It was also clear that the Muslim Society were able to deal with the above aspects with a clear view of that Muslim and mankind as a whole have been directed (through Islamic perspective) to keep the environment in proper order rather than to damage it.

4. CONCLUSIONS

Sustainable development can be regarded as a new paradigm of development that pays attention to environmental conservation, in addition to economic growth. The concept of sustainable development is also an extension of the theory of environmental ethics, although it can probably stand independently as an ethical system.

The Islamic world has enriched human history with its scientific, artistic and ethical achievements, and contributed both within and outside of Islamic borders to the advent of the modern era. The field of Islamic Architecture is a key example of this rich legacy. This can be witnessed in the timeless and unprecedented buildings throughout Islamic civilization, among them.

The unity of Islamic architecture is related of course not only to the unity of cosmos and beyond that realm to the unity of the divine principle itself, but also to the unity of life of the individual and the community which the divine law makes possible. By refusing to distinguish between the sacred and profane, by integrating religion into all facets of life and life itself into the rhythm of rites and patterns of values determined by religion, Islam creates a wholeness, which is reflected in its architecture and urban spaces.

It was clear from the survey held in Mosul city which represents one of the cities established by Muslim architects and designers that there is a great awareness to issues of earthen architecture with their all dimensions; economically, sociologically and sustainably. That awareness is reflected in both macro and micro levels so that we can find this wise usage of resources in the space and fabric, in the material and construction, in the single building and its inner and constructed elements, and even in its ornamentations and of course in the whole urban grains.

These dimensions were also reflected sharply in the optimum collaboration between man and his environment, which is one of the most obligations in Islamic faith. It is also clear that by depending on Islamic principles (No- Harm, Mezan, Ilm Nafi'....etc.) architects created built environment with a high responsibility to the natural and local resources, without refuting the richness (saying diversity and variety) of such environment, and by using these local resources they also could save to the environment its health and strength.

Given the way Islam looks at development, we can also seek Islamic solutions to global issues which threaten environment, so that we can keep our universe clean and healthy with enough resources to the future generations.

The outcome of such inspection would help the professional architect's to develop better understand of the traditional Islamic elements thus he/ she would be able implement it successfully in the present and future architectural design of buildings in the Islamic world.

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