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Attaining Human Aspects to Avoid Alienation in Architecture

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Abstract: Architectural practice during the last century was influenced by Western architectural theories. These theories were reflections of the contradictions of human beings' lives: the result was contradictions in architecture. The research aims to launch a view of the fundamentals of what we might call Muslim architectural theory, fundamentals that can control the future of architecture. Thus, it offers a set of principles coming from Muslim thought; these principles highlight humanitarian needs to be fulfilled by architecture. This paper makes the following assumptions: (1) Re-forming architecture requires re-forming the human. (2) The interaction between the social environment on one side and the built environment on the other side achieves human comfort. (3) Principles derived from Muslim thought set up general rules that can order architectural practice. Based on these theories, this paper has a goal of crystallizing a new theory that governs present-day architecture. Thus, the paper studies human needs in architecture. Besides, it has an implementation part to explain how architecture fulfills human needs. It further shows the extent to which the built environment can satisfy those needs. The research includes thirty needs traced from Muslim thought. Consequently, the research examined the presence of these needs in one traditional Arabian house.

Key words: Humanity in architecture, alienation in architecture, human aspects in architecture, architecture for humans.

1. Introduction

Architecture, the first human art, formed the beginning of its connection with man when man attempted to raise the first standing stone to worship God. Later, man had many stones put together in a circular shape to accomplish the spiritual connection. After that, man drew the first theories of architecture by using vertical stones covered by others. Thus, man established the first relationship between vertical and horizontal dimensions in architecture. Accordingly, he formed the three-dimensional architecture: physical, psychological, and spiritual.

The architecture of man followed random approaches until the Egyptian civilization emerged, and Phoenician and Mesopotamian civilizations came together. These civilizations formed the first philosophical dimension of the relationship between man and his surroundings, thus establishing a balanced architecture, consistent and harmonious with things, consistent with nature and the universe.

Later on, the Greeks came; they studied, learned, and adapted their civilization from the Egyptians, but they concentrated on the ideals and gods. Their inheritors, the Romans, began three-dimensional architecture; however, they concentrated on the physical dimension with new technologies for the sake of advancement. Therefore, the spiritual aspects disappeared, and the psychological dimension began to fade.

Side by side, with the emergence of different cultures, alienation in architecture arose; thus, humanity in architecture started to fade. Furthermore, in the era of modern industry man began to think that he was capable and able to control things; therefore, he neglected the spiritual dimension, denied revelation, neglected the feelings of his brother human, and so increased the absence of humanity in architecture.

In the modern scientific era, machines, devices, and

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entities dominated human life, reflecting the ideas of deification; hence, architecture became like other figures: it did not take into consideration the psychological and spiritual side of the human.

Le Corbusier was a clear example in this respect. In addition to other intellectual theories that prevailed in the twentieth century, his theories started as revolutions against the exaggeration produced by decoration. These theories were revolutions in reality: they started from attempts to reform evil, but went to an extreme, and finally turned into architectural models. Thus most architects imitated those models later on.

On the other hand, the human ability to form things overshadowed environmental interactions and movements in architecture; these movements were not yet clear as architectural theories. In the beginning, they were ideas associated with organic theory, including environmental, climatic, green, bio-climatic, smart, Gaia hypothesis, cosmic architecture, holism, etc. In these environmental trends, there have been attempts to restore psychological human dimensions to architecture. These trends called for a return to embrace nature and link it to morality, because man found that science separated from values and ethics will certainly lead to alienation and destruction. Therefore, this study will discuss in the following pages human needs; it will concentrate on the presence of human aspects in architecture.

2. Human Needs in Architecture

The period in which humanity emerged in architecture in Europe was the Renaissance. At that time, the movement of humanity in architecture in Western thought emerged. But in the first half of the twentieth century, human dimensions began to fade away. Later on, in the architecture of the second half of the twentieth century, human awakening returned to architecture: awakening to the environment, the emergence of behavior, and introducing new terminology in architecture. Consequently, new trends and movements in architecture emerged, such as behavioral architecture, human architecture, and social architecture. In other words, to have human architecture, man needs to achieve social, natural or physical, ethical, and aesthetic needs.

Accordingly, "to achieve the overall comfort of man there should be an interaction between ethics, social, fundamentals on one hand, and the built environment on the other hand" [1]. Thus, such interaction should be a result of the endeavors of different participants, like planners "who should adopt space not only as a physical location but as an integrated community" [2]. Architects, also, have an important role to play in creating "the proper atmosphere for man by providing sources of calm and relaxation" [3]. In addition, it is important that governments should have authority on the project to ensure the social benefits [4].

On the other hand, intellectuals, researchers, and authors have divided the human needs into different layers. The first to divide them was the sociologist Abraham Maslow, who arranged the hierarchy of human needs in the shape of a pyramid. These needs include physiological needs, like the need for water, food, and shelter; then aesthetics and self-realization; then the need for security and law, and the need for love and belonging [5]. Maslow divided these needs into two parts: physiological needs, including food, shelter, and security, and psychological needs, including self-control, morality, and aesthetics [6].

Edward Hall defined personal boundaries as the distance that an individual should not exceed in his dealings with others. He divided these into four [7]:

- Intimate distance: Up to 15 centimeters, for family members, or close friends or children.
- Personal distance: Between 30 and 50 centimeters—the distance strangers should not exceed.
- Social distance: The social distance, ranging from 120 centimeters to 210 centimeters.
- Public distance: The minimum is 360 centimeters, applying to corridors in public buildings.

Robert Sommer [8] considered the distance of intimacy to be 46 centimeters or fewer, while personal

distance ranged from 45 to 120 centimeters, and general distance went up to 750 centimeters. This information about distances is important in the design of private and public spaces, and the architect should take it into consideration. Besides, Kevin Lynch [9] stressed that the most important characteristic that gives humanity to a city is the sense of containment.

Consequently, sociologists summed up human needs from architecture in eight categories: friendship, border, group, space, social status, communication, signs, and the need for security and safety [10]. This group of needs summarizes all needs to be considered when studying buildings and surroundings. Some scholars have insisted that the aim of architecture is to fulfill human needs—in other words: "The purpose of architecture is to make places where people feel human, more alive and more fulfilled" [11].

On the other hand, Ruth Cammock [12] believes that the design of public spaces, especially hospitals, must consider such needs, because such spaces lack calm and privacy.

Human aspects derive their importance from the need for more concern about human behavior in architecture and urban planning [13]. Furthermore, the urban image is not only visual: it includes all senses, and is influenced by non-experiential factors such as education, skills, and the social and cultural values of individuals and groups. So "if a street is classified as a place to sit, eat and talk, the urban mental map and behavior will be different from if it is categorized as a space to traverse only" [14].

3. Human Needs in Architectural Thought

This research examines a set of rules that make architecture more humanitarian. Architecture is not only buildings: it is also the lives that happen within these buildings, and beautiful and functional buildings should be built to house human lives [15]. Thus, these human aspects are derived from the Muslim thought [16]. Such rules are a set of humanitarian needs that architects must consider to attain humanity in architecture [17]. Some of these aspects include:

(1) To respect human scale in architecture.
(2) To achieve containment.
(3) To enable privacy.
(4) To highlight the humanitarian unity.
(5) To confirm a view of regional planning.
(6) To underline the importance of privacy rights.
(7) To avoid abandoned security and safety areas.
(8) To achieve calm and relaxation.
(9) To strengthen social ties.
(10) To encourage communication skills.
(11) To highlight friendly ties with nature.
(12) To reach efficiency and effectiveness.
(13) To assign affordable tasks.
(14) To consider orientation.
(15) To consider the safety of the details.
(16) To have the proper performance.
(17) To use different alternatives.
(18) To achieve a balanced economy.
(19) To achieve social solidarity and respect.
(20) To make friends.
(21) To respect the rights of neighbors.
(22) To promote a sense of belonging.
(23) To promote social status.
(24) To gain benefits.
(25) To achieve aesthetics.
(26) To use water.
(27) To achieve total comfort.
(28) To respect the borders.
(29) To highlight excellence.
(30) To understand psychological need for faith.

Accordingly, achieving these needs in architecture can produce human architecture, getting more involvement from people in their environment [18]. Here, it is important to mention that the more of these aspects are achieved, the closer architecture is to man.

4. Case Study: Casaroni House "Mit Rehan"

The researcher selected a traditional Arabian Muslim house to trace the presence of humanity in buildings: Casaroni House "Mit Rehan" in Cairo,

Egypt [19]. The building was designed by the well-known architect Hassan Fathi in 1980. Construction took place between 1980 and 1981 [20]. Limestone was the building material, with thick walls (Figs. 1 and 2). The architect introduced many domes and vaults. The house reflects the social life of the inhabitants of Cairo. Thus, this building has achieved harmonious and clear values, traditions, and customs.

Casaroni House accomplished balance by achieving harmony with neighboring buildings in terms of height, adhesion, materials, and colors. Thus, this harmony leads to totalitarianism in the architectural and urban fabric (Fig. 3).

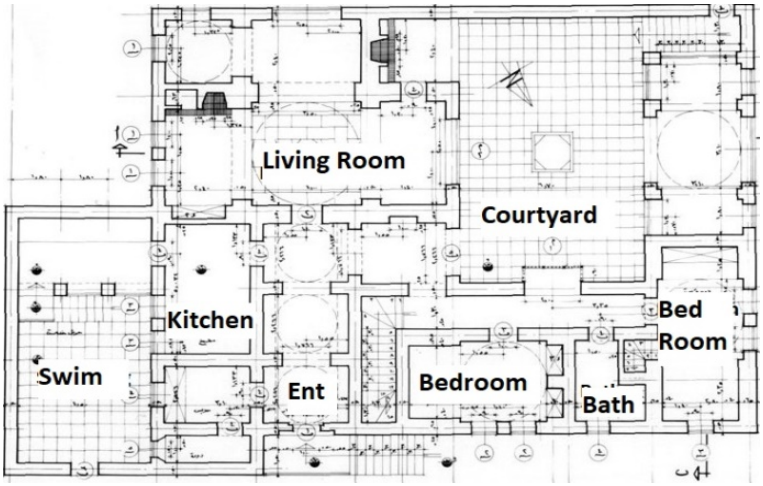

Fig. 1 Plan shows the different spaces and courtyard of Casaroni House "Mit Rehan". They show narrow spaces and thick walls to achieve durability and environmental comfort.

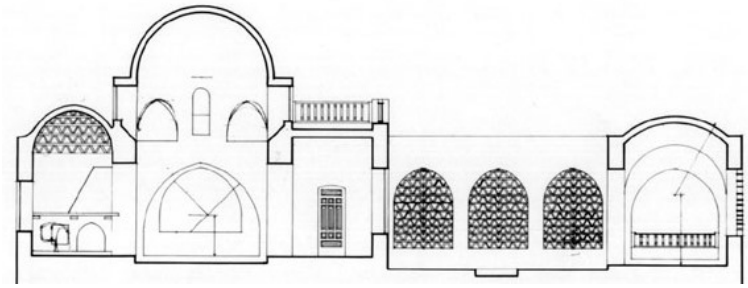

Fig. 2 Cross-section shows thick walls and different types of roofing to meet thermal solutions, in addition to the interesting internal spaces.

Fig. 3 The urban fabric of the area. This picture shows the harmony achieved with surroundings.

Fig. 4 Balconies overlooking the inner courtyard of the house, and panoramic view of the patio. Furthermore, these pictures show different local building materials.

Fig. 5 The upper patio of Casaroni House "Mit Rehan". This picture shows the balanced relationship with nature and the surroundings.

Fig. 6 Different sources of light and energy to achieve climatic comfort.

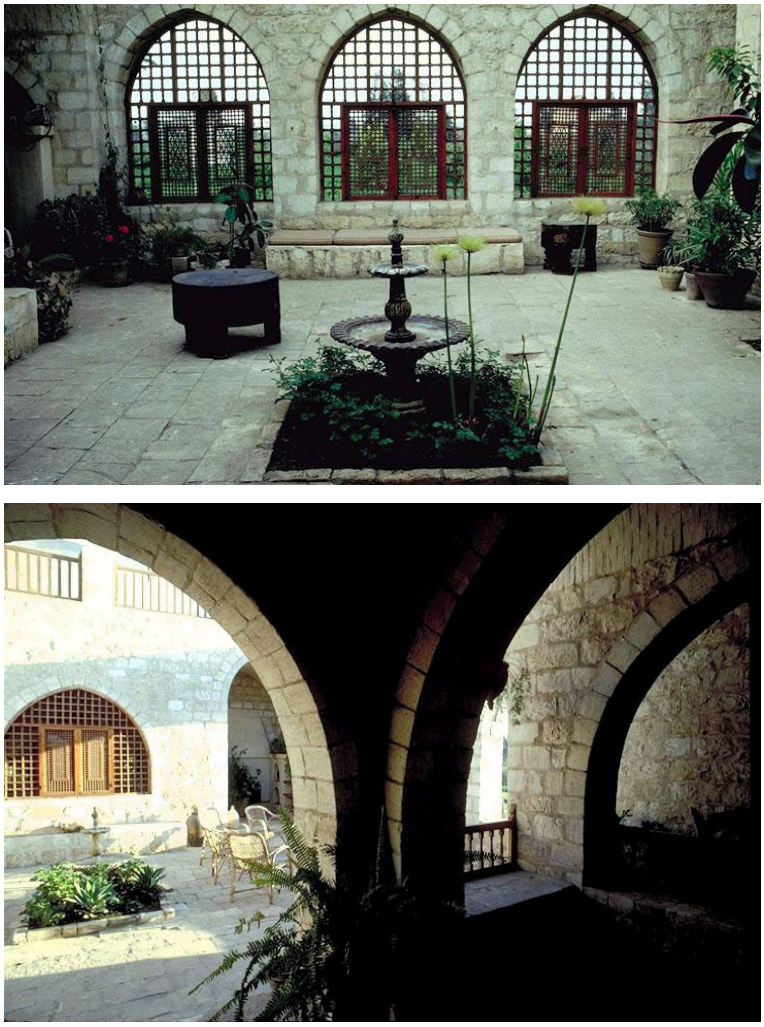

Fig. 7 Privacy achieved through the openings to the inside patio.

Casaroni House "Mit Rehan" achieved simplicity and affordability, and it attained proper and sufficient functions. Furthermore, the builders used natural building materials, such as stones, brick, and wood (Fig. 4).

The house includes different activities scattered around the inner courtyard. The ground floor includes semi-public spaces like a hall to receive male guests, services, bedrooms, kitchen, and warehouses. The architect added the first floor to get more space; it consists of bedrooms and some balconies.

The second floor has sleeping and living spaces, and balconies overlooking the inner courtyard of the house. However, the house is not affordable for the majority of Egyptians, despite using local materials.

This house has achieved another human dimension, the friendly relations with other element, through exploiting different sources of light and energy to achieve climatic comfort. Thus, it takes advantage of the sun, the shadows, and the air entering the yard (Figs. 5 and 6).

The house achieved other architectural solutions for men, including privacy and the remarkable atmosphere of communication. It, also enables the strengthening of social ties, and preserves the rights of neighbors by building close walls to develop a sense of containment.

Casaroni House "Mit Rehan" has achieved privacy through creating different spaces to house different activities, in addition to introducing the patio to ensure visual privacy (Fig. 7).

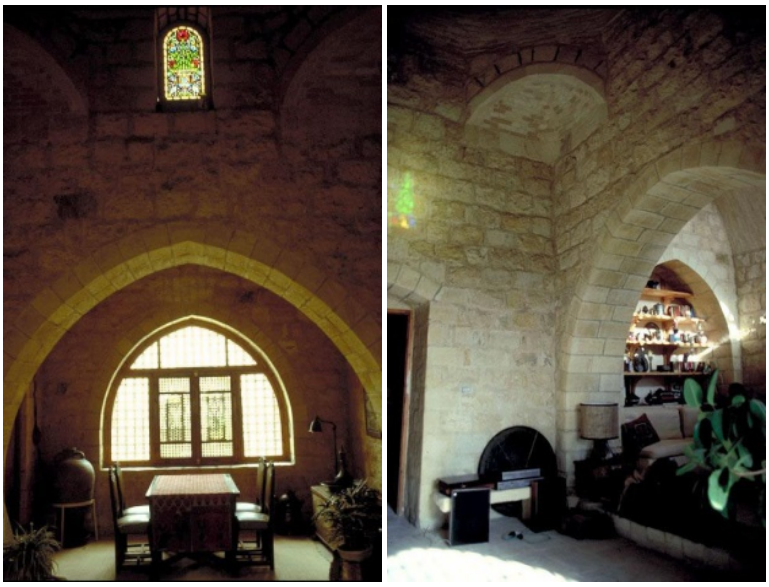

Fig. 8 Achieving friendship with nature by utilizing different sources of energy for climatic comfort and to provide suitable light to encourage communication.

Fig. 9 The square courtyard and different levels for different interesting spaces.

Fig. 10 Main entrance of the house.

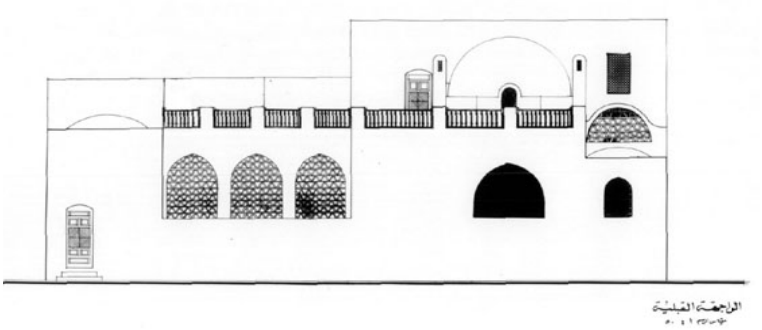

Fig. 11 Elevations show traditional architectural elements such as wooden windows“Mashrabiyya”. These features fulfill the aesthetic aspect.

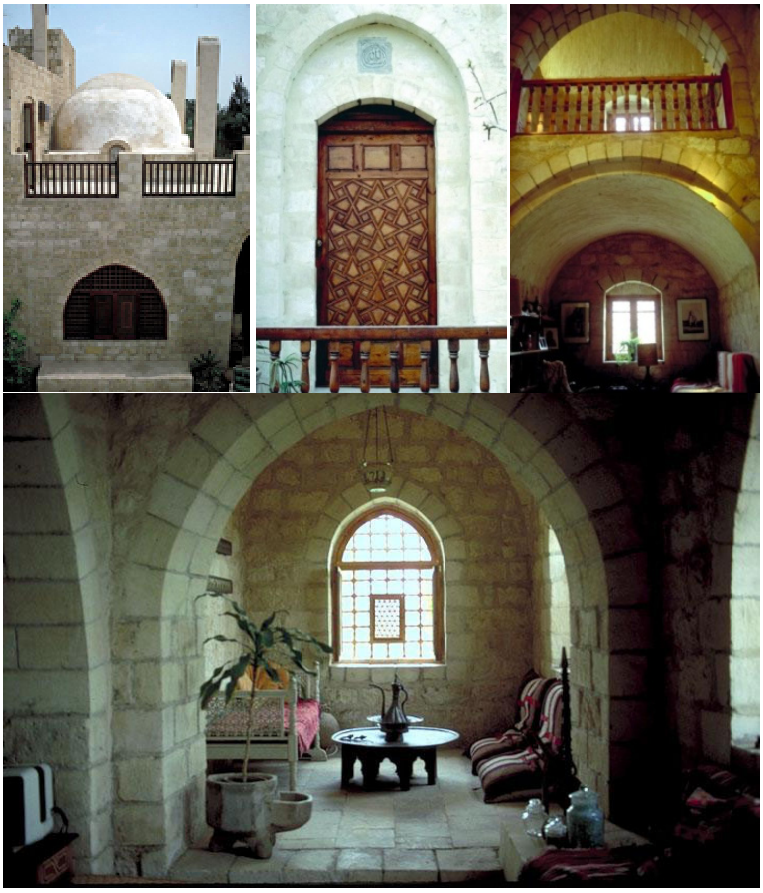

Fig. 12 The achievement of aesthetic aspect.

Casaroni House “Mit Rehan” has achieved proper spaces to create a suitable atmosphere for communication. Enough lighting provides the right atmosphere to see, which encourages dialogue (Fig. 8). Furthermore, the house provides this lighting through internal appearances, as well as through manipulating the types of lighting using wooden windows “Mashrabiyya”, and balconies overlooking the yard (Fig. 9).

Casaroni House “Mit Rehan” shows the idea of strengthening social relations and protects the rights of neighbors by keeping enough distances between the house and neighboring buildings (Fig. 10); this distance calls for better relations between neighbors. It leads to reducing causes of the harm caused by neighbor to neighbor. The design protects neighbors from penetrating their privacy, which prevents disputes between neighbors. It also limits abuse of neighboring

residents. This leads to stronger friendly relations and helps good neighborliness; finally, it calls for respect between people.

On the aesthetic side, Casaroni House "Mit Rehan" has many aesthetic achievements, without exceeding moderate spending. The house introduced grilled panoramic views of the patio, indoor plants, decorative floors, different decorations, and wooden coverage. Collectively, these are a source of pleasure and happiness (Figs. 11 and 12).

On the spiritual side, the building reverses the principles of totalitarian Islamic thought. This is expressed in the following: firstly, the adoption of a square shaped courtyard, linked with the shape of the Ka'bah "the most sacred building for Muslims"; secondly, using water and trees to confirm life; and thirdly, copying the holiness of the mosque through the design of different levels for different spaces.

5. Human Needs in Casaroni House

To summarize the human needs satisfied by the design of Casaroni "Mit Rehan" House, the study presents in Table 1. It includes the human needs presented by Islamic thought. On the left side of the chart, human needs are listed; the right side indicates the presence or absence of that need in the house:

Table 1 Presence of human aspects in Casaroni"Mit Rehan" House.

	Human Aspect	Presence of human aspects	
		Present	Absent
1	To respect human scale	■	
2	To achieve containment.	■	
3	To perform Privacy.	■	
4	To highlight the humanitarian unity.	■	
5	To confirm a view of regional planning.	■	
6	To underline the importance of privacy.	■	
7	To avoid abandoned security and safety areas.	■	
8	To achieve calm and relaxation.	■	
9	To strengthen social ties.		■
10	To encourage communication skills.	■	
11	To highlight friendly ties with nature.	■	
12	To reach efficiency and effectiveness.	■	
13	To assign affordable tasks.		■
14	To consider orientation.	■	
15	To consider the safety.	■	
16	To have the proper performance of roles.	■	
17	To use different alternatives.		■
18	To achieve a balanced economy.	■	
19	To achieve social solidarity and respect.	■	
20	To make friends.		■
21	To Respect the rights of neighbors.	■	
22	To promote a sense of belonging.		■
23	To promote social status.	■	
24	To gain benefit.	■	
25	To achieve aesthetics.	■	
26	To use water.	■	
27	To achieve total comfort.	■	
28	To respect the borders.	■	
29	To highlight excellence.	■	
30	To understand Psychological need for faith.	■	

The research derived the presence or absence of specific human needs fulfillment in Casaroni House by studying, investigating, and tracing different spaces, materials, and architectural elements of the house.

6. Conclusions

As confirmed by the theorists of architecture in the late twentieth century, architecture must address values and ethics. The researcher believes that architecture cannot be separated from humanity. Such a separation means illness, brutality, noise, and clamor, because it is a direct reflection of people's lives. Therefore, ugly architecture reproduces the expatriate human era, signifying provocative and blunt sensations, deviant thinking, bad behavior, and aggression in man.

This research examined the presence of human aspects derived from Muslim thought in one modern Arabian house built in the traditional style: Casaroni "Mit Rehan" House, designed by architect Hassan Fathi. Consequently, the research found that most of the human aspects presented in Islamic thought were present in that house.

The importance of this study lies in the fact that there is a real need to recall humanity to architecture. In other words, we need to restore the humanity in architecture to produce humanitarian architecture: otherwise, architecture will bring alienation to the environment and to humanity.

7. Recommendations

The researcher makes the following recommendations:

- The architectural field needs studies to understand the wisdom that makes up architectural forms.
- The educational architectural field in the Arab-Muslim world needs further study based on their cultural and traditional fundamentals.
- The architectural field needs to reread architecture historically and intellectually to check the humanitarian presence or absence in architecture.
- Research should be conducted on human architecture, studying the application of human dimensions in buildings, taking into consideration the specificity of different regions and countries.

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