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## **Sustainable Application of Interior Spaces in Traditional Houses of the United Arab Emirates**

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### **Abstract**

The traditional buildings in the Gulf area are intriguing due to the details applied and specific methods of construction. Why do the entrances have varying angles before leading to the court? How do the Barageel (airshafts and wind towers) work? And why do the Majlis (guest's room) have a specific treatment and are located so close to the entrance? What is the purpose of using multiple decorated openings in living rooms or bedrooms?. The architecture of these buildings has been designed and built to cater to people specifically within a culture and its environment; the details of this society are reflected in the features of buildings. This paper aims to explore the main aspects of the architectural shape of traditional buildings in the Gulf area and particularly in the United Arab Emirates.

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*Keywords: sustainable environment; social factors; decorative patterns; Regionalism; Aesthetical factors.*

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### **1. Introduction**

There are a growing number of researchers, from various disciplines, whose objective is to develop methods to achieve a sustainable environment. Since the 1960's, researchers from many fields have had a longstanding interest in different aspects of traditional buildings; however, there is an absence of systematic study of the relationship between traditional buildings and sustainability. This paper deals specifically with the following five areas:

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- To shed light on some features, which are determined by various factors, including social, religious, cultural and economical aspects, which reflect authentic native architecture and its relationship with a sustainable environment;
- The importance of traditional buildings in communicating its authenticity and identity, focusing on the different components of traditional buildings as a medium of shaping the physical environment, how they are interpreted, combined or associated to each other and how they shape the behavior of the user;
- The relationship between traditional buildings, particularly homes and dwellings, and sustainability. Topics explored in the section include: how people perceive and use their home, how different architectural features reflect the social status, and the type of domestic space;
- Through the description and analysis of architectural features, it will be highlighted that the traditional buildings, particularly in the United Arab Emirates (U.A.E.), communicate the residents' personal attributes as well as cultural identity such as social status, ethnicity, and family values.
- The relationship between traditional buildings and sustainability is interpreted differently, according to the social status, the time, and culture. The findings provide a conceptual framework for understanding the cultural definition of traditional buildings and sustainability.

## **2. Changes of the Socio-Physical Environments in the U.A.E.**

Since 1970, there have been many drastic changes in the U.A.E.; the sudden increase in urban population has resulted in a fracturing tradition. The social, economic, and spatial transformation of towns in the Emirates has been emphasized due to the pressure and process of modernization and urbanization, whose expansion could be described as phenomenal. Development of contemporary institutions for education, health and leisure coupled with the increase in automotive transport has led to the transformation of towns into cities. These changes have inevitably impacted the values, and specifically, the aesthetics of the urban environment. The introduction of the grid street pattern has changed the visual image and quality of the urban areas. What was once a pedestrian-oriented urban pattern has now become a strictly geometric and vehicle-oriented one. Parallel to socio-economic changes in the Emirates society, new technologies have been developed or imported mainly in the form of new techniques, building materials and the methods of construction management. New structural and environmental control possibilities have been increased with the introduction of reinforced concrete, steel and air conditioning [1].

The question posed is what are the characteristics of the environment that might allow us to establish a link between national identity and built form? For some people, regional characteristics of building form are of questionable value.

### *2.1. Impact on the Traditional Built Environment in the U.A.E.*

In the U.A.E., the traditional built environment is the by product of the interaction between constant factors such as culture (religion, belief, customs and rites), the surroundings (climate, material of construction, soil and topography) and knowledge gained. Contemporary architects can learn from the traditional built environment; the understanding of this traditional built environment (through its buildings) will inevitably lead to a sustainable environment due to an understanding of this traditional environment depends on the understanding of the spatial and temporal organizations and its relationship between human beings with respect to their physical environment.

According to some anthropologists and environmental psychologists, behaviour is shaped by the physical environment (buildings), which is shaped by humans. Therefore, the changes of the built environment in the U.A.E. may be seen as dramatic because these transformations will lead to irreversible cultural and social loss. Today, many traditional buildings are threatened for speculative considerations; they are physically degraded, damaged or destroyed by the impact of modernization and urban development.

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