Analysis of the Architectural Elements in Traditional Courtyard Houses in Irbid, Jordan

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ABSTRACT

The merchants of old Damascus spread the concept of the courtyard during their travels in the Belad Al-Sham area, where the courtyard was an essential typological element. In Jordan, specifically in Belad Al-Sham, traditional courtyard houses have characteristics that are suitable to the local region, which influence architectural elements. This study aims to discover similarities between the traditional courtyard houses in Jordan and in old Damascus (capital of Belad Al-Sham). Through a survey of the traditional courtyard houses in Jordan, two case studies were elicited through field observation after site visits and photographic documentation. The case studies were analyzed by using content analysis techniques that focus on two architectural styles of traditional courtyard houses in Jordan. Findings suggest similarities between the two styles regardless of their distance from the old city of Damascus. The courtyard is the core of traditional houses in Jordan and is considered to fulfill a deep-rooted need for open living spaces. However, few similarities between the two styles were found according to the difference between houses in the urban and the rural areas.

INTRODUCTION

Various unique examples of traditional architecture, mainly houses, exist in many parts of the Arab world. Despite cultural variations in each region, the design of the communal architectural language of houses responds to both social and religious needs [1]. Traditional city planning in old Damascus shows an organic pattern, and the city is planned in a way that treats circulation paths in terms of width, shape, length, direction and any change of direction [2]. Traditional residential architecture has certain features, such as the courtyard, mashrabiyah, windows that are elevated above eye level, a bent entrance, inward-looking designs, and guest rooms near the main entrances and away from the house’s core, among others. These features can be viewed as the best solutions that have evolved through the people over the centuries [4]. Jordan has many examples of the inner courtyard in several towns and villages. Early Ottoman architecture in Jordan is difficult to date precisely from the 18th century [5]. The courtyard is an architectural component that became convenient for cultural and social purposes, and for the local society. The best examples of courtyard houses in Jordan can be seen in the cities of Irbid, Salt, and Madaba [6]. Traditional courtyard houses in Jordan have not been studied extensively. To fill this gap, this study aims to identify the common architectural elements in traditional courtyard houses in Jordan in comparison with traditional courtyard houses in the old Damascus style. Traditional courtyard houses are analyzed from within the city of Irbid. Two houses built in the Ottoman era are selected, and they have different styles: the inward design, which solely looks into the courtyard, which can be seen in the Arar house, and inward and outward views, which can be seen in the Al-Nabulsi house. The analysis focuses on the most essential elements, namely, the courtyard and the other elements, such as the entrance, the mashrabiyya, the fountain, and the salsabil.

Methodology:

This study applies a qualitative method using case studies. The main tools for this study are observation, architectural documentation data, and visualizing materials [7]. This study uses the following approaches:

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i. Survey strategies to explore appropriate data that achieve the objectives of the study. The survey includes traditional courtyard houses in Jordan built between the 18th and the 19th centuries.

ii. Random selection was conducted to choose two traditional courtyard houses as case studies to be analyzed. The criteria for these choices were
- Traditional courtyard houses built in the Ottoman era
- Traditional courtyard houses built along the Jordanian borders and in Irbid

RESULTS AND DISCUSSIONS

(i) Entrance:

In old Damascus, the main entrance of traditional courtyard houses is called the majaz. The majaz usually opens out to the doorway and a courtyard, which is the main external feature at the ground floor level. The majaz is designed to open into a blank wall to obstruct views into the inside from the outside to preserve the privacy of the family (Fig. 1) [1, 8]. The reception room for male guests is located near the entrance doorway, which makes it directly accessible, so they did not have to pass through the house [9].

The Arar house has two entrances that lead directly to the courtyard and are not bent (Fig. 2). The Al-Nabulsi house has four entrances; the main entrance is through the staircase, and the other three entrances open directly into the qa`ah (guest rooms); these entrances serve as a double entrance for privacy (Fig. 3).

Fig. 1: The bent entrance in old Damascus style.

Fig. 2: Arar house plan.

Fig. 3: Al-Nabulsi ground floor plan.
(ii) Courtyard:

The old Damascus style has a centered courtyard in the traditional courtyard houses. The courtyard is characterized by its internal open space around which all the habitable spaces are clustered (Fig. 4). An enclosed space opens to the sky and is surrounded by rooms that accommodate various activities. This courtyard is a private and isolated space [8, 10].

Jordan is considered a rural area, and the features of courtyards in houses here are a little different than those of urban houses in the old Damascus style. The courtyard areas are typically L-shaped or U-shaped. As in the Arar house, the courtyard is L-shaped with two sides surrounded by rooms, and the other two sides are surrounded by a high wall (Fig. 5). The courtyard of the Al-Nabulsi house is U-shaped and surrounded on three sides by the rooms; the fourth side is surrounded by a high wall (Fig. 6). The two courtyards have high trees and plants that provide ample shade. In this space, the family is relaxed and safe without being seen from the outside. The courtyard is the heart of the house and indicates a private way of living. The courtyard is used for cooking and washing, and is an area for playing children and miscellaneous gatherings. Some houses may have more than one courtyard depending on the size of the house and the wealth of the family.

![Fig. 4: The centered courtyard in old Damascus house.](image)

![Fig. 5: L-shaped courtyard in Arar House.](image)

![Fig. 6: U-Shaped courtyard in Al-Nabulsi house.](image)

(iii) Mashrabiyyah:

The mashrabiyyah is another important device in traditional courtyard houses. It is used to cover openings (windows) as well as to achieve privacy in a traditional courtyard house [1]. The mashrabiyyah is a wooden balcony or screen located on the outer façade of the house on the second floor and above. The mashrabiyyah is
mostly found in urban areas in old Damascus, but is rarely found in rural areas of Jordan. The mashrabiyyah is used infrequently due to the distance of courtyard houses from the center core of the capital of Belad al-Sham (Fig. 7) possibly because most houses in that area have only one floor (ground floor), which makes the mashrabiyyah unnecessary. Thus, the mashrabiyyah is rarely found in Jordan. In Al-Salt, Jordan, the Al-Nabulsi house had the only remnant of a mashrabiyyah (Fig. 8).

![Mashrabiyyah in old Damascus.](image1)

Fig. 7: Mashrabiyyah in old Damascus.

![Old Mashrabiyyah in Al-Salt city.](image2)

Fig. 8: Old Mashrabiyyah in Al-Salt city.

(iv) Fountain and Salsabil:

Other architectural elements that are found in old Damascus courtyard houses are the fountain (bahra) and salsabil (falls). The fountain is located at the center of the courtyard and can be circular, quadrilateral, hexagonal, or octagonal [10]. Having a fountain inside the courtyard created a cold air reservoir. The salsabil is a marble wall falls (Fig. 9). Many traditional courtyard houses currently use fountains as cooling systems. Fountains are also installed for aesthetic purposes. The Al-Nabulsi house has a pentagonal fountain under a lemon tree. Salasabil rarely exists in Jordanian houses.

![The Salsabil in old Damascus houses.](image3)

Fig. 9: The Salsabil in old Damascus houses.

Summary:

The case studies showed that the courtyard is the core of both traditional houses in old Damascus and in Jordan. The courtyard fulfills the deep-rooted need for an open living space in such houses. The bent entrance, the courtyard, and the mashrabiyya of traditional houses are designed in great detail, and all the architectural elements provide each family member with his or her own private space. Traditional courtyard houses in Jordan have certain advantages. Unlike traditional houses in old Damascus, courtyard houses in Jordan are spread out and not adjacent to each other, which enables them to have internal and external windows. This setup also
allows Jordanian houses a more flexible house design that utilizes only three sides, such as a U-shaped courtyard or a two-sided L-shaped courtyard. A comparison between the architectural elements and styles of traditional courtyard houses in old Damascus and Jordan indicates that Jordanian courtyard houses tend to be simple. Furthermore, the requirements for both areas are different; Jordanian inhabitants were engaged in either farming or tending cattle, whereas the inhabitants of old Damascus were involved in commerce and trading. Therefore, the traditional Jordanian courtyard houses reflect the understanding of Jordanians in relation the surrounding environment. The design of traditional Jordanian courtyard houses reflects the culture influence of the area, has its own culture identity.

REFERENCES


