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## TRADITIONAL HOUSING AS A REFLECTION OF SOCIAL AND CULTURAL SPECIFICITIES IN ALGERIAN SAHARAN CITIES

Djimaoui Natidja\*

**Abstract.** The city has long constituted a fundamental subject within scientific research across various disciplines, particularly within the humanities and social sciences, including anthropology. Each city is distinguished by its own identity and cultural and social specificities. Saharan cities, in particular, represent a unique model with their ancient architectural heritage, which reflects the cumulative experiences and cultures of peoples throughout history. The urban typology of traditional dwellings in these cities serves as a genuine mirror of the prevailing cultural and value system, which is manifested in the methods of design and construction. This study aims to explore the cultural and social specificities of traditional housing in Algerian Saharan cities by addressing the concept of the city in general and the Saharan city and its characteristics in particular. Furthermore, the article examines the types of traditional Saharan dwellings, their components, and the design criteria adopted in their construction, in addition to highlighting the multiple functions that this housing model fulfils. Ultimately, the article seeks to reveal the symbolic and social values embodied therein. The city has long been a subject of scientific inquiry across numerous disciplines, particularly within the humanities and social sciences. Each city possesses its own identity, distinctiveness, and characteristics, yet the urban and cultural specificities of the Saharan city are markedly different and highly distinguished from those of other cities. These specificities encompass a diverse array of attributes, such as the authenticity rooted in the identity of the city's inhabitants or the assimilation and hybridisation of external cultures.

**Keywords:** traditional housing, Saharan city, architectural heritage, cultural values, social anthropology

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## ТРАДИЦИОННОЕ ЖИЛИЩЕ КАК ОТРАЖЕНИЕ СОЦИАЛЬНЫХ И КУЛЬТУРНЫХ ОСОБЕННОСТЕЙ В АЛЖИРСКИХ САХАРСКИХ ГОРОДАХ

Джимауи Натиджа\*

**Абстракт.** Город давно является предметом научного исследования в различных дисциплинах, особенно в гуманитарных и социальных науках, включая антропологию. Каждый город отличается своей идентичностью и культурно-социальными особенностями. В частности, сахарские города представляют собой уникальную модель с их древним архитектурным наследием, которое отражает накопленный опыт и культуры народов на протяжении истории. Градостроительная типология традиционного жилья в этих городах является настоящим зеркалом господствующей культурной и ценностной системы, проявляющейся в методах проектирования и строительства. Цель данного исследования - выявить культурные и социальные особенности традиционного жилья в алжирских сахарских городах через рассмотрение понятия города в целом и характеристик сахарского города в частности. Кроме того, в статье рассматриваются типы традиционного сахарского жилья, его элементы и проектные критерии, использованные при строительстве, а также подчеркиваются многочисленные функции, которые выполняет эта модель жилья. В конечном итоге статья направлена на раскрытие символических и социальных ценностей, воплощённых в этих жилищах. Город долгое время оставался объектом научного интереса во многих дисциплинах, особенно в гуманитарных и социальных науках. Каждый город обладает своей индивидуальностью, уникальностью и чертами, однако урбанистические и культурные особенности сахарского города значительно отличаются и выделяются на фоне других. Эти особенности включают в себя широкий спектр характеристик - от подлинности, укоренённой в идентичности его жителей, до ассимиляции и гибридизации внешних культур.

**Ключевые слова:** традиционное жилище, сахарский город, архитектурное наследие, культурные ценности, социальная антропология

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## ƏLCƏZƏİR SƏHRA ŞƏHƏRLƏRİNDƏ SOSIAL VƏ MƏDƏNİ XÜSUSİYYƏTLƏRİN ƏKSİ KİMİ ƏNƏNƏVİ MƏNZİL TİPİ

**Cimaui Natica\***

**Abstrakt.** Şəhər uzun zamandır müxtəlif elmi sahələrdə, xüsusilə humanitar və sosial elmlər, o cümlədən antropologiya sahəsində əsas tədqiqat mövzusu olmuşdur. Hər bir şəhər öz kimliyi və sosial-mədəni xüsusiyyətləri ilə fərqlənir. Xüsusilə səhra şəhərləri qədim memarlıq irsi ilə seçilərək tarix boyu xalqların toplu təcrübə və mədəniyyətini əks etdirən unikal bir modeldir. Bu şəhərlərdəki ənənəvi mənzillərin urbanistik tipologiyası, dizayn və inşaat üsullarında öz əksini tapan dəyərlər sistemi və mədəniyyətin həqiqi aynasıdır. Bu tədqiqat Əlcəzair səhra şəhərlərindəki ənənəvi mənzil tipinin sosial və mədəni xüsusiyyətlərini araşdırmağı hədəfləyir. Bu çərçivədə şəhər anlayışı ümumi mənada, səhra şəhəri isə xüsusilə onun xarakterik cəhətləri baxımından təhlil olunur. Məqalədə eyni zamanda səhra bölgəsinə xas olan ənənəvi mənzil tipləri, onların tərkib hissələri və tikintidə tətbiq olunan dizayn meyarları incələnilir, bu mənzil modelinin yerinə yetirdiyi çoxşaxəli funksiyalar vurğulanır. Məqalənin əsas məqsədi, bu yaşayış formasında təcəssüm edən simvolik və sosial dəyərləri üzə çıxarmaqdır. Şəhər uzun müddətdir ki, bir çox elm sahələrinin, xüsusilə humanitar və sosial elmlərin tədqiqat obyektı olmuşdur. Hər bir şəhər özünəməxsus kimliyə, fərqliliyə və xüsusiyyətlərə malikdir, lakin səhra şəhərlərinin urbanistik və mədəni özəllikləri digər şəhərlərdən əhəmiyyətli dərəcədə fərqlənir və onları çox xüsusi edir. Bu xüsusiyyətlər şəhər əhalisinin kimliyindən qaynaqlanan orijinallıqdan tutmuş, xarici mədəniyyətlərin mənimsənilməsi və hibridləşməsi kimi müxtəlif sahələri əhatə edir.

**Açar sözlər:** ənənəvi yaşayış, səhra şəhəri, memarlıq irsi, mədəni dəyərlər, sosial antropologiya.

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## 1.Introduction

Saharan cities are intrinsically linked to their ancient architectural heritage, which is considered the product of past cultures and people and which holds profound significance for these societies. The dwellings within these cities guide us towards the prevailing cultural and value systems, as demonstrated in the manner of their design and construction. The dwelling constitutes a space utilised by the individual to achieve adaptation, comfort, and stability, providing a refuge from harsh environmental conditions. Indeed, the process of adaptation liberates individual creativity in various domains, most notably in the architectural realm. Architectural characteristics vary according to the type and function of the city, particularly in Saharan cities, which are distinguished from all others.

From this perspective, the following question arises:

**What are the cultural and social specificities of traditional housing in the Saharan city?**

**First: Concepts of the Study**

### 1.The Concept of Housing (*l'habitat*)

Housing encompasses a set of complex considerations that integrate the dwelling (*l'habitation*) with the social practices of everyday life. It has a broad meaning within the framework of all material and human elements that contribute to the context of living. Geographically, it constitutes a system for the spatial distribution of residential locations and forms an important component in the organisation of the spatial distribution of housing forms, including villages, individual dwellings, and residential clusters. Thus, the term “housing” extends beyond the internal environment of the house in which the individual resides.

According to Abdelkader El-Kassir, it is “the structure to which the individual retreats, encompassing the necessities, facilities, equipment, tools, and means that the individual needs and desires” (El-Kader, 1993, p.11].

L. Chombart de Lauwe defines it as follows: “*It is the image of society projected onto the land, and the transformations it undergoes refer to the changes that occur in society and families*”.

### 2.The Concept of Dwelling (*l'habitation*)

In the Arabic language, the words *bayt* (house), *manzil* (home), and *maskan* (dwelling) are used, all of which carry the meaning of residing in a place.

The dwelling refers to the house, the home as a place of residence, with the plural being dwellings. To dwell in a house means to reside and settle within it; to cohabit implies sharing a house with someone, thus forming a collective: the inhabitants of the house [Tabbara, 1995, p.86].

The concept of the dwelling is more precise than that of housing, as it symbolises individuality, encompassing both the house and the family that

occupies it alongside adjacent dwellings. Chombart de Lauwe view it as a structure that accommodates an extended family group and includes more than one house. It represents a spatial unit corresponding to a social unit, and this structure is situated within the context of housing, which encompasses all human settlements of society within a defined framework.

From a physical perspective, Marion Segaud interprets it as a housing unit comprising apartments that accommodate individuals united by familial relations, who share its use and coexist within it. It is a part of material possessions and is characterised by the following features:

The location, architectural form, and individuals residing within it are fundamental aspects; the dwelling is not a mere physical structure but rather represents a familial model [Chombart de Lauwe, 1975, p.5]. The term “dwelling” is as ancient as humanity itself, as it fulfils a biological need for protection; hence, it has been characterised by certain constant features throughout the past. It serves as a source of protection against natural forces (cold, heat, rain) as well as human forces (wars, invasions) and as a source of comfort. It constitutes the place to which a person retreats after the fatigue of the day, where one withdraws from the outside world and finds reassurance and comfort. From the time that human beings inhabited caves and grottoes, such primitive shelters fulfilled these essential functions.

The dwelling is considered one of the primary elements that constitute space, referred to as the enclosed interior domain, being the first, most natural, and necessary place for every family. The neighbourhood, squares, and streets then follow this.

### **3. Concept of Traditional Dwelling**

The dwelling constitutes one of the primary forms of human settlement throughout all ages and across different societies, fulfilling numerous vital functions in various domains. Its creative and distinctive design is manifested through the utilisation of all surrounding resources, owing to the inhabitants' knowledge of and awareness of the environment, and their material employment of these resources to create a comfortable residence that meets all the conditions, ensuring comfort and stability.

### **4. Concept of the *Qasr***

The term *qasr* (plural: *qusour*) in the Atlas regions and throughout all Saharan areas refers to those residential clusters that sometimes occupy small areas and are fortified, or at the very least, situated on elevated ground. This is distinct from the meaning commonly associated with the term, namely, a spacious residence occupied by princes and notables [Al-Arabi, 1985, p.187]. The *qasr* society referred to in this study represents the local community residing in the southwestern region of the country, consisting of groups sharing common cultural values and simplicity. There are also *qasr* communities in the

southeastern regions, which differ to some extent from those in the southwestern regions. The society under examination is that of the historical Touat region, located in the Adrar Province, the majority of whose inhabitants are descended from the Maghreb. It comprises three ethnic groups: the Amazigh of the Tuareg (Berber), the Arab, and the Black African [Al-Arabi, 1985, p.140].

The descendants of these groups settled in the Touat region over successive periods and under various circumstances; through intermingling, the population elements merged and coalesced into a community homogeneous in customs and traditions. Furthermore, Islam contributed to forging a fraternal society. The *Qasr* society is characterised by a hierarchical structure, forming the basis of its social organisation. At the top of the hierarchy are the Sharifs, followed by the class of Murabitun and then the free Arabs. At the base of the hierarchy are the classes of slaves and Haratin, which share the same status. This stratification is determined by lineage, birth, and the individual's social standing [Shawqi, p.23].

This society is fundamentally grounded in the element of religion, which, as previously indicated, renders it cohesive by the teachings of Islam. Moreover, this society is, by origin, agrarian, as agriculture constitutes the primary economic resource for the majority of the inhabitants of the Touat *qusour*. Furthermore, various crafts and handicrafts are widely practised throughout the entire region, providing a livelihood for many families. These crafts afforded the *qasr* residents, both men and women, enjoyment, opportunities for social interaction, the exchange of news, and a means of productively occupying their time.

### **5.The Concept of the Saharan City**

When Saharan cities are discussed, it is often presumed that the city and the desert are two contradictory entities; the concept of the city implies urbanisation, stability, and civilisation, whereas the notion of the desert suggests desolation, poverty, and emptiness [Bashir, 2018, p.44]. In this context, Pliez contends that the terms “city in the desert” and “Saharan city” (*la villesaharienne*) are synonymous [Kouzmine Yaël, 2007, p.17]. However, when these two terms are translated into Arabic, they have entirely different meanings: the first refers solely to location, whereas the second denotes the unique characteristics that distinguish these cities and link them intrinsically to the desert.

Thus, the term “Saharan cities” refers to the particularities that set these cities apart from others, establishing their connection to the desert. The Saharan city designates those urban settlements inhabited by a significant population density, united by common bonds typically characteristic of urban society, and situated within a geographical desert domain, that is, in a desert environment.

These cities have undergone transformations that have enabled them to keep pace with the aspirations of a civilised society [Mcherri& Boudin, 2015, pp.101-110].

## **Second: Characteristics of the Old Saharan City**

### **1.Natural characteristics**

The old city is located in the northern part of Laghouat, bordered to the north by northern oases, to the south by southern oases, to the west by the Al-Amoura district, and to the east by the M'zi Valley. Its area is estimated at 5.35 hectares, and it is situated on the Tiziguerarine Plateau. The city is characterised by a climate that is cold in winter and hot and dry in summer. The climate and the surrounding natural environment have had a significant impact on the planning of dwellings [Tahari, 2009, pp.11, 17]. As of 2007, the population of the old city was approximately 2,482 inhabitants (Directorate of Planning and Urban Development, Laghouat).

### **2.Urban characteristics**

The old city is regarded as the original nucleus for the establishment of Laghouat. It blends the traditional, ancient character with a European influence, resulting in a clear distinction between these two fabrics in terms of architectural style as well as their spatial arrangement within the urban domain.

#### **1.2.Traditional Ancient Character (*Qasr*)**

Historical sources do not indicate the precise origins of this *qasr*; however, it is likely that the Berber tribes, who settled in this area at an early stage, constructed buildings on its site to store their products and to serve as shelter when necessary. The *qasr* comprises several houses arranged sequentially and interlocked, characterised by their simplicity and devoid of all forms of luxury and ornamentation, thus responding to the requirements of the prevailing environment. The houses within the *qasr* typically consist of one or two storeys. Moreover, the *qasr* includes a central courtyard, which serves as the convergence point of the alleys and circulation, as well as the source of daylight. In addition, there are pathways and corridors oriented from north to south to prevent direct exposure of both the pathways and the house to sunlight.

The main streets serve as connectors to the principal units of the *qasr*, such as entrances, the *Rahbat al-Hujjaj* (Pilgrims' Square), and the market. Their width is generally sufficient to accommodate a single laden camel. Secondary routes function solely to facilitate movement from the main streets to the lanes or alleys and are therefore narrower than the former. The architectural façades overlook *Zuqaq al-Hujjaj* (Pilgrims' Alley) and are free from any decorative elements, with the exception of specific symbolic motifs above doors [Hamlaoui, 2006, p.88]. Some openings, windows, external doors leading into the house, and spouts for draining rainwater are present. The interior environment of the dwelling within the *qasr* consists of the following:

**Entrances:**

The entrances to the ground floor dwellings in the old *qasr* were originally axial and later transitioned to a bent configuration. This design allows the door to remain open throughout the day, thereby creating an air current between the entrance and the courtyard. The doors are constructed from palm trunks and are characterised by their low height, accommodating the passage of a loaded donkey. Furthermore, the entrances of houses that open onto streets or alleys are not positioned directly opposite one another, thereby preserving the privacy of the inhabitants, an attribute rooted in the principles of Islamic law, which advocates for individual freedom within society without compromising public order [Hamlaoui, 2006, p.89].

**The Vestibule (*Saqifa*):**

The entrance leads to the *saqifa* (vestibule), which in turn provides access to the centre of the house. Sometimes, this is limited to a low wall that obstructs direct view of the interior. The *saqifa* is one of the essential components of the house, maintaining its privacy and serving as a transitional zone between the external and internal environments of the dwelling [Hamlaoui, 2006, p.92].

**The Courtyard (*Central Space*):**

The courtyard provides a spacious and comfortable area for movement and activity among household members. It is the preferred place for women to perform some of their daily tasks and serves as a gathering space for the family and a play area for children. Typically, a courtyard is surrounded by a roof along its edge and an open central area. This feature is the principal characteristic of the Islamic dwelling [Hamlaoui, 2006, p.92].

**The porticoes**

The courtyard is surrounded on two or four sides by porticoes with wide openings, which help moderate the climate and reduce the intensity of sunlight. Scientific studies indicate that the greater the width of the openings admitting air and the narrower their exit, the more effective the ventilation of the building; conversely, the reverse reduces ventilation. Thus, in the old *qasr*, most openings, including those in the courtyard, porticoes, room doors, and main exit, allow for the efficient utilisation of air currents, thereby creating a calm environment. Additionally, porticoes serve an architectural function, as they support the passageways and ceiling of the upper floor.

**Rooms:**

The rooms are distributed around the central courtyard and are characterised by their simplicity, elongation, and narrowness. Roofing is typically accomplished via local materials, such as palm wood or juniper, with beams rarely exceeding two and a half metres in length. The rooms lack right angles and straight walls, a feature attributed to the irregularity of the house as a



whole. Openings are generally absent, except for the entrance door [Hamlaoui, 2006, p.90].

### ***Kitchen:***

The kitchen is a small room that is usually rectangular in shape and faces the courtyard. It is typically equipped with a hearth located in one corner for cooking, and the placement of this hearth is carefully considered to minimise harm and maintain good neighborly relations. The kitchen is often situated on the upper floor as an independent space [Hamlaoui, 2006, p.90].

### ***Sanitary Annexes:***

The toilets are located in isolated areas away from the living quarters and are concealed from view. In terms of their form, most face onto the street.

### ***The Roof:***

The central courtyard is situated on the ground floor and is generally not open to the exterior, except for a single opening onto a horizontal window. Owing to the limited number of rooms and the small covered area on the upper floor, ample open space is available for use throughout the year. This space is of considerable importance and is used for dual purposes: during the day in winter, it serves as a service area, whereas at night in summer, it provides an ideal space for family gatherings, socialising, and sleeping [Hamlaoui, 2006, p.95]. During the day, it is mainly used for drying and storing foodstuffs for the winter. The roof is accessed via a staircase, which is always tucked into a corner and occupies a tiny area, with steps ranging from 20--25 cm in height and numbering between eight and ten. Sometimes, two staircases are found in a house: one connected directly to the vestibule to avoid passing through the central courtyard reserved for guests and the other intended for family use.

## **Third: Forms of Traditional Dwelling**

The forms of dwellings in the city of Algerian Saharan vary according to regional and subcultural differences. Agricultural areas differ from urban areas, as climatic, economic, and other factors influence the diverse patterns of residential spaces used to accommodate the lifestyles of individuals in numerous respects, such as the availability of locally sourced, protective building materials used in dwellings. All these factors have contributed to the diversity of the environments in which dwellings are designed, taking into account the interactions with the surrounding environment. Among the most prominent architectural forms of dwellings known in the region, some of which still exist are of the following types:

### **1.The *Khashsha* Dwelling (The Vestibule House)**

#### **a.Building Material and Morphological Characteristics of the House:**

Ibn Khaldun described the method of constructing the earliest primitive architecture and its building materials as typically involving stone and clay: "Although the architecture begins primitively, it is robustly constructed with

stone owing to the availability of the material, skilled builders, and tools (tools for striking, digging, cutting, rulers, and levels). However, with an increase in population and consequently an increase in demand for dwellings, building materials have become depleted and unavailable. The necessary number of skilled builders also diminishes, and owing to the difficulty of working with stone, builders resort to alternative materials such as brick and clay instead of stone, as these substitutes are easier to work with and more expedient in meeting shelter needs, despite the primitive nature of the construction and its rapid deterioration if not properly maintained.”

The significance and accuracy of this observation become evident to anyone who examines the materials used in the construction of dwellings and their evolution in the Saharan *qusour*. This is precisely what was discovered through archaeological research into old dwellings in the *qasr* of “Tamentit.” The principal building material was clay, supplemented by locally available stone, clayey mud, calcareous soil (such as *Hadab* and *Tafza*), and salts transported from the sebkha (salt flats). The process of preparing the mud bricks (*leban*) involved digging a pit in which these materials were mixed, with the addition of straw and animal dung, until a malleable consistency was achieved. This mixture was then left to undergo chemical reactions for one week or more. Afterwards, it was kneaded again with water and removed from the pit to be shaped into cuboidal bricks. These bricks acquired a specific form when the clay was pressed by hand from both sides: broad and flat at the base with two edges and narrower at the top with one edge. Locally, this type of mud brick is referred to as “*toubel-yedein*” (“hand-moulded brick”). This traditional building material constituted one of the fundamental construction components of *qasr* dwellings in the past. Following independence, its use was confined primarily to the enclosures of orchards and associated structures, such as livestock pens and stables. During this period, modern bricks began to replace it, as attested by an informant: “Previously, the mould was only available to the French” (Interviewees). This affirms that the method of preparing this type of brick was not utilised except during or shortly after the colonial period.

In addition, a key material for completing the *Qasr* house was wood derived from palm trunks, which was used for constructing the roof. These did not necessarily need to be straight but had to meet the requisite length, which generally did not exceed one to two and a half metres, corresponding to the width of the rooms, which themselves resembled corridors. These beams were arranged across parallel walls at a relative distance of 3–3.5 metres and reinforced with palm fronds known as “*karnaf*,” which also imparted an aesthetically pleasing decorative finish to the roof. Above this layer, a layer of “*faddam*” was placed, consisting of a circular quilt that encircles the palm fronds and holds them together. This material might be substituted with wheat

stalks (*baroumi*), a highly valued livestock feed after wheat. The function of these stalks is to prevent water seepage through the roof. The entire assembly was then covered with liquid clay.

### **b.Internal Distribution of the Dwelling**

The study of the dwelling's layout involves analysing the relationships between family life and the framework imposed by society; thus, the examination of the dwelling from this perspective entails observing the image of society inscribed upon the land. What, then, is the layout of this type of *qasr* dwelling that has resulted in the internal spatial distribution and the nature of its familial structure?

The layout is generally limited to rectangular corridors, except for the open courtyard. These corridors are typically narrow and perpendicular, with a right-angled bend leading to the first vestibule (*saqifa*) and then directly to the main entrance, which connects to the second vestibule. This, in turn, leads to the courtyard (*sahn*). One of these spaces is designated for children's sleeping quarters, and the other space is designated for the couple; in some cases, the couple may sleep in the storage room (*al-masriyya*) if the household does not have two vestibules.

Surrounding the courtyard, there are usually one or two rooms, depending on the family's financial capacity, but not more. The first room is referred to as "taqmi", and the second is referred to as "*masriyya*." The latter is used for storing the family's material possessions. At the same time, the "*taqmi*" serves as a place for daily use furnishings, such as the clay water jar (*qullah* or *zeer*) for cooling water and the milk skin locally known as "*taghouya*." In winter, one corner of this space is designated for cooking.

Within this space (*taqmi*), there is an entrance leading directly to the livestock pen, where animals belonging to the family are kept. This pen also contains a covered vestibule that serves as shelter for the animals during the winter. The courtyard constitutes the central space in the house, facilitating horizontal movement within the dwelling, as well as vertical circulation via the staircase leading to the roof. The roof is devoid of any room or functional space, except for the latrine (*al-hufra*), which is typically located on the roof. It generally consists of a hole, or two holes, in one of the four corners of the roof, usually on the side designated for livestock. A bent or circular wall encloses it at a 90° angle to ensure privacy for the user. The structure is built up to the roof level for hygienic purposes. Each agricultural season, the pit is opened from the external side of the house or in the livestock area, depending on its location, and its contents are removed and transported back to the orchards for use as fertiliser.

This type of house lacks specialised rooms such as a kitchen and bathroom; in former times, *qasr* inhabitants would bathe in the orchards or the livestock

enclosure. The house is also devoid of doors, except for the main entrance, whose door is securely constructed from palm wood. The gate confining the livestock in their enclosure is made from interlaced sticks resembling a lattice, known as “*al-muhsar*,” as it restrains the animals.

## **2.The *Qaws*Dwelling: An Architectural Style and a New Interior Space**

It is difficult to determine the precise period when this type of dwelling emerged; it may have coincided with the advent of Islam in the region. However, this issue is avoided here for two reasons. First, the present inquiry is not historical, and the primary concern is not the arch (*qaws*) itself but rather the impact of this technique on transforming the internal space of the traditional *qasr* dwelling. The period following independence is selected here, as it was during this era that a new technique appeared, involving the use of wooden boards and long iron pieces, which replaced the function of the arch and led to the expansion of rooms and the designation of specific functions within them. Second, even after Arab-Islamic migrations into the region in the seventh century CE and until the period following independence, this type of dwelling predominated, and examples of it with all its features can still be observed today.

This type of dwelling does not differ from the *khashsha* house in terms of building materials or preparation methods; thus, it is considered an extension of the former in its second manifestation, resulting from the introduction of two new spaces: the storage room (an extension of the *masriyya*) and a room above the roof called “*al-ghurfa*” (with an open ‘ghayn’ in the local dialect), as well as the bathroom. According to an architectural researcher from the University of Oran, Department of Architecture, with whom an interview was conducted, the term “*qaws*,” used to refer to the ground-floor room in the house, derives from the arch (*qaws*) within it, which connects the wooden shelves on either side. This arch was initially employed to link short wooden columns, and after independence, with the introduction of new materials, long wooden boards and iron columns replaced the traditional arches. The iron columns and wooden boards were used as supports for the palm wood beams, which were laid across them in an opposing manner. These new techniques also altered the shape of the house itself; the formerly curved and rounded walls became straight, imparting a square form to *qasr* residential architecture as a result of the emergence, albeit limited, of rectangular bricks. Despite the appearance of these two new spaces, there was no functional change in the internal areas. Even when the *masriyya* was positioned immediately after the main entrance, it was not designated for guests. Another informant explained that, when asked about the guest room in a society where the duty of hospitality is as important as the duty of honour, he replied: “In the past, when a guest came, he would go to the guest house or the main house, and each family would

take turns hosting him for dinner" [Adrar, 2022]. That is, when a guest visited anyone in the *qasr*, he would stay in the house allocated for guests, and all the families in the *qasr* would provide meals for him according to a schedule. Another stated, "Hospitality comes from the heart; in the past, when a guest arrived, he would kindle the fire for the lady of the house, and she would prepare the broth" [Adrar, 2022]. This means that the guest would sit near the hearth and that there was no room specifically set aside for guests; his entrance into the central area of the house did not cause any concern, nor was he excluded from the private space. As long as he had already entered the *qasr*, he could enter the house since entry into the *qasr* itself was already subject to strict regulations. This does not mean that all guests entered freely; they were usually close relatives or friends.

### **The Internal Distribution and Ownership of Dwelling:**

There is no need here to repeat the previous points, as the internal distribution does not differ significantly from that of the *Khashsha* dwelling. However, just as this house was influenced by new techniques and the discoveries of modern civilisation, such as the introduction of electricity, it is undeniable that these innovations also affected its inhabitants, thereby introducing them to new relationships with their environment.

With the addition of these two rooms, the courtyard remained the vital centre of the *qasr* house, an indispensable element in almost every dwelling. It is also the site from which the staircase leads to the roof, itself another essential space, with its activities varying according to the season and climatic fluctuations. The roof serves as a place for sleeping during summer nights, for drying foodstuffs, and for heating in winter. The heights of its walls vary according to the proximity of neighbours; a wall may be taller between unrelated neighbours and shorter between those closely related. In general, custom dictates that the roof wall should be at least the height of a standing man to ensure privacy, particularly since the bathroom in *Qasr* houses is typically located on the roof. Nonetheless, all the roof walls are generally low. Paradoxically, during our repeated field visits to the *qasr* of Tamentit, we observed that the majority of house roofs were uncovered, if not all of them; we were thus able to take photographs from above and could easily see the presence of satellite dishes and antennas above the roof level without the need to climb the walls.

Returning to the courtyard, one finds in one of its corners a traditional oven, locally called "Anwar," adjacent to an area designated for preparing *malla* bread, which is baked under hot ashes. This space is often located beneath the staircase. The courtyard serves a functional role in the house, notably in distributing light to the surrounding rooms.

This house was extremely primitive and straightforward, lacking windows except for openings at the tops of the walls, which are blocked with a piece of

cloth in winter and, when opened, allow smoke to escape. It is devoid of furniture and aesthetic ornamentation, apart from daily use items such as cooking utensils mostly made of clay, which occupy space in the courtyard, a *rahā* (millstone) for grinding grain, a *mihraz* for crushing dried dates, and a stone for breaking animal fodder. All of these items are located in the first vestibule immediately after the main entrance.

This type of dwelling is characterised by a traditional rural house that is minimally furnished, devoid of decorative and artistic beauty, and functionally and architecturally similar to rural dwellings, especially in villages in hot regions such as Iran and Upper Egypt. With respect to cleanliness, the inhabitants paid little attention, as livestock and poultry would share the indoor spaces with the *qasr* residents without causing any discomfort.

A defining feature of this type of dwelling is the extreme proximity and contiguity, as they comprise residential and familial units bound by kinship; more precisely, they constitute clusters of familial nuclei and physical residential units that form the *qasr*. This arrangement reflects a particular historical period, spanning from the time when the Saharan inhabitant ceased dwelling in caves to the mid-1960s, with the introduction of modern building materials such as zinc and iron columns, which greatly influenced both the size of the house and the distribution of its rooms.

In general, the design of the *qasr* house has the same characteristics as African architecture does. Barth [as cited in Mohamed, 1988] described the design of *qasr* dwellings as being based on a single entrance, where the guest encounters the reception room and, in the same direction, finds a staircase leading to the roof, followed by the women's rooms, a corridor, and an internal courtyard. Thus, all the houses share similar architectural features, faithfully reflecting the nature of Saharan construction, which is based on semicircular arches.

### **3.The Dwelling of Duality: Modern and Traditional**

#### **Building Material and Morphology of the House:**

An understanding of building materials within the scope of residential studies is essential for their completion. "It is through significant investments, which are evident on the façade engineering expression, colours, and building materials all aimed at enhancing the house, symbolising its inhabitants, imparting its distinctive character, and differentiating it socially." Despite the continued use of clay as the primary building material, the method of preparation has changed entirely from the earlier approach. Mineral salts, straw, and animal dung have disappeared, replaced by modern materials such as lime for surface plastering and cement for the flooring of the house, or at least in certain functionally important rooms, such as the guest room, kitchen, and bedroom.

The introduction of cuboidal bricks had the most significant effect on the form and size of the house. The traditional cuboidal brick, once prevalent, has been permanently supplanted by a new, rectangular, and thicker brick manufactured from malleable (kneaded) clay. The clay is placed in a wooden or metal mould, levelled and compressed, and then the mould is removed, producing the brick, which is left to dry in the sun for several days before being used in construction. The building process does not differ significantly from that of a traditional house: after digging the foundation for each wall, bricks are laid regularly, covered with kneaded clay and then more bricks, and so on, until the walls reach their desired height. The roof is then covered with various materials, although some affluent families reinforce their house walls with iron columns (*pillés*) at the corners of the house.

Once the walls have dried, the rooms are covered with iron columns and zinc sheets, while the porticoes (*saqayifs*) lead to the rooms being roofed with palm wood, depending on the financial means of the family and the preferences of the household. In some houses, wooden materials are used for all ceilings. This type of dwelling also reflects the size of the family and mirrors the social disparities among the inhabitants.

Another characteristic of this dwelling is that its construction and furnishing are not based on "*twīza*," the collective participation of all members of the clan or tribe in the building process, but rather through the hiring of a specialist builder and his assistant or a group of labourers. In some cases, all members of a single family, numbering five or more, may participate in the construction, thus reaffirming their collective solidarity. Women are generally excluded from the building process, as is customary; their presence among the builders is considered a potential source of discord, necessitating their exclusion to prevent any ensuing complications.

The exterior and aesthetic finishes are determined by the aesthetic taste, culture, and financial level of the inhabitants. Families differ in their choice of complementary building materials: well-off families coat their walls with white clay and lime, whereas wealthy families emerging as new social groups begin to use blue paint for the *qasr* and cover the floors with cement instead of earth. This type of dwelling has thus come to express social and economic disparities among families, family groups, and individuals alike.

According to the collective imagination of the *qasr* inhabitants, this dwelling type also came to represent a source of pride. The emergence of such dwellings was not only a result of improved material circumstances for their owners but also of migration; interaction and contact with outsiders influenced them, as reflected in their adoption of newer, more attractive architectural forms. However, these dwellings are no longer as harmonious or similar to one another as those of the first type.

## 2. Internal Structure and Its Social Functions

The internal configuration of the dwelling varies from one house to another, with differences in the size and arrangement of rooms according to the number of family members. Nevertheless, the function of each room remains unchanged, and regardless of variations in their shape or size, their roles are defined by their location.

Immediately after the main entrance, the vestibule (*saqifa*) connects to a corridor bent at a 90° angle to obscure the view of the interior. Within the *saqifa*, there is a door leading to the guest room as well as a staircase that provides direct access to the roof. The bent corridor leads to the covered courtyard, which is equipped with an opening for light. A group of rooms surround this square-shaped courtyard, each accessible through doors, and a rectangular room used for cooking. The house may have two main entrances: one leading to the vestibule and the guest room and the other reserved for the residents, particularly the women, in the presence of strangers; it also serves as an entrance for animals and should be kept inside.

The roof is characterised by high walls that prevent neighbours from seeing inside, unlike the roofs of traditional *qasr* houses. It is painted with lime and contains a bathroom. The secondary entrance separates the different spaces (reception room, roof, and bathroom) via a door, and the functional specialisation of each space is evident (cooking, reception, storage, and daily activities). The dwelling is often preceded by a livestock pen, locally known as "*al-jarda*," which contains the traditional kitchen (*taqmi*), where wood is used for cooking. There may also be stability for animals, which are isolated in a particular section and securely closed by a door. The staircase leading to the roof provides access to two rooms: one for storing foodstuffs and another for traditional bridal utensils gifted to the bride by her mother and brothers on the wedding day.

This type of dwelling exhibits minimal decorative features, even in its simplest forms, such as ornamentation of the main entrance (*décoration*). Although arches and *rahba* (open spaces) are often adorned with horizontal wooden panels (*al-boudra*), similar to those used in prestigious schools and mosque buildings, ground-floor rooms have become more important and are equipped with large doors that open and close according to seasonal and climatic changes.

Owing to the use of modern building materials, especially roofs, the presence of straight columns has notably influenced the shape of the house, which is now rectangular or square and connected to an enclosing pen or a main street, in contrast to the traditional alley. Iron and wooden doors and windows now open onto the street or the interior and are equipped with coverings; these are now positioned midway along the wall rather than at the top of the rooms as



before. The inner hall has become covered and fitted with a ventilation opening, while the rooms are now illuminated with electric lamps instead of natural light.

These dwellings are no longer interlinked and contiguous, nor are they accessed via narrow alleys, as some are now located within an area known as "*al-ihāta*." The "*ihāta*" dwelling belongs to the type of modern-traditional housing that began to spread following the phenomenon of settlement outside the walls (the *qasbas*). This term is used here to denote its location within a square or rectangular enclosure, which has replaced the cul-de-sac (*darb*) found in the *qasr*, a narrow alley leading to closely clustered houses.

The *ihāta* is a prominent architectural feature that appeared after the exodus from the *qasr*. It is an area surrounded by walls on all four sides, containing the houses of family members, uncles, brothers, and sons bound by kinship ties. It is collectively owned by all members of the family, even though each maintains his separate dwelling. It typically contains a stable space for livestock and poultry, a space for storing animal feed, and a garage for vehicles. Depending on its size, it may also include a small garden, locally called "*al-jarda*." The remaining vacant area is reserved for the construction of houses for sons when they reach adulthood and marry. The *ihāta* may be established either by demarcating its boundaries with stones recognised by the community or as a former oasis that has now dried up. The *qasr* man is especially keen to acquire and preserve a plot of land for his sons to build their houses, often prioritising this over other aspects of livelihood, sometimes forgoing personal comforts to purchase land for them.

This behaviour can be explained only by the ongoing spatial rivalry between *qasr* families, the vestiges of which persist to this day. Wealth continues to be measured by land ownership and size, not for economic or utilitarian investment but rather as symbolic investment and social competition following the construction of the sons' houses upon it. The *ihāta* may have one or two entrances, depending on its size and functions: the main entrance is for all family members. In contrast, secondary entrances are designated for livestock and the disposal of their waste.

The enclosure wall of the *ihāta* is constructed from mud brick and clay, even if the family dwellings within them are built from cement, owing to their larger size. The *ihāta* now represents a semiprivate space, with ownership restricted to members of a single family. It serves as an alternative to the nonthrough alley (*al-mamar al-ghayr nafid*) that previously prevailed in the *qasr*, which constituted a semipublic space for the resident families of that alley, locally referred to as "*isqlu*," and typically led to three or more homes united by kinship ties.

This *ihāta* (the enclosing wall around the houses) thus fulfils several important architectural and social functions: it protects the houses from various natural elements, preserves their privacy and contents, and divides the internal space to facilitate its use for multiple purposes. The wall thereby plays both an architectural role and a social role. The vacant area within is used for gatherings of women and men during winter for warmth and, in summer, for sons to sleep at night. It also serves as a playground for children under their mothers' supervision, as well as a venue for various daily and occasional activities such as weaving, breaking dates (*daq*), feeding livestock, and grinding. It complements the family's internal courtyards and rooftops and provides an intimate space where family members can spend their leisure time together, thereby strengthening bonds of affection and kinship [Hamlaoui, 2006, p.120].

#### **4.The Tent**

The tent holds deep symbolic significance for Saharan societies, which are imbued with sanctity and sociocultural meanings derived from collective perceptions. It has long attracted the attention of numerous researchers, whether in sociology, who have examined various aspects, such as the social system and the social structure of its inhabitants, or in anthropology, who have explored the symbolism of the tent and the meanings associated with its colours and various forms.

The tent is the dwelling of desert inhabitants, the *rabayi*, and is most often made from the hides of animals reared by nomads, regardless of their tribal affiliation. The book "Al-Suruf fi Tarikh Sahra' Wadi Souf" states, "As for the mixed peoples from the late Banu Hilal and Banu Sulaym, their dwellings were tents made of hair, wool, or skin" [Al-Awamer, 2007, p.35].

At present, there is a revival of the tent, albeit with a different function adapted to contemporary societal changes. It is now erected for weddings, funerals, and various social gatherings.

#### **5.The Housh**

The word *housh* (plural: *ahwash*) refers to the act of gathering or enclosing something or placing it at the centre; thus, any house with an empty central space is called a *housh*, and *al-mahasha* denotes household furniture [Al-Aziz, 2013, p.74]. The inhabitants of the Algerian Sahara use the same term to refer to the dwelling, whereas in other regions, the *housh* signifies the centre of the house. In contrast, the terms *dar* and *bayt* in the region are used to denote a single room, unlike in other areas where they refer to the entire dwelling.

The Saharan dwelling is characterised by the simplicity of its design and the use of local building materials, which are employed on the basis of their availability in the local environment, whether derived from palm trees such as

trunks and fronds or extracted from the earth, such as gypsum, sand, stone, and pebbles of various sizes.

The Saharan dwelling typically features a uniform color and relies on a single type of stone in its construction. Historically, most Saharan dwellings were built with stone and gypsum. The colour of the dwelling reveals the type of stone used; for example, if the dwelling is white, it is generally built from ordinary stones and finished with gypsum or *al-lous* and gypsum, resulting in a blend of grey and yellow hues. In contrast, *sallaja* stone and gypsum have only recently been adopted by the inhabitants of Saharan cities.

All these locally sourced materials, which vary in nature, color, and size, have contributed to the construction of traditional dwellings in Algerian Saharan cities. These dwellings fulfil multiple functions, including protection from natural conditions, and provide a sense of privacy, stability, and psychological comfort within the home [Al-Aziz, 2013, p.77].

#### **Fourth: Social and Cultural Characteristics of Saharan Cities**

##### **1.Cohesion and Kinship Relations**

Social relations in traditional Saharan society are characterised by strong cohesion, as individuals or groups are closely connected despite their spatial distribution. For example, a single tribe may be divided into kinship units, and kinship structures combine both consanguineal and affinal ties. The original geographical locations of these groups further shape their social organisation, with each group occupying a specific area, thereby reflecting a network of reciprocal bonds and obligations. The spatial clustering of dwellings mirrors the principle of kinship. Moreover, the separation or distance between residences indicates spatial and social distancing among members of the kin group within the residential area. The entire region, with all its components, is planned as although it was a single dwelling for purposes of protection [Bashir, 2018, p.25].

##### **2.Sense of belonging**

A sense of belonging is among the defining characteristics of traditional Saharan society. Ralph Linton underscores the importance of this active sentiment in shaping tribal-based traditional society: *“The tribe in its simplest form is a group of lineages or clans occupying contiguous land, possessing a sense of unity and belonging, arising from numerous cultural similarities, friendly relations, and shared interests. They may have an official tribal organisation that varies in its details”*. This unity is not static but rather comprises strong feelings that serve as a barrier against any sudden changes, thus constituting a network of social relations.

##### **3.Privacy**

Privacy is one of the attributes of traditional Saharan society, as reflected in the multiplicity of entrances designed to ensure privacy, protection, and

separation between the guest reception room and the courtyard where various household activities take place through a space known as the house courtyard. In addition, the privacy of neighbours is respected by ensuring that no two doors directly face one another on the same street, by raising the level of external window sills, and by using elevated roofs to facilitate living and sleeping outdoors at night, as well as by constructing high walls around the houses [Bashir, 2018, p.25].

#### **4.Adherence to Religion**

Adherence to religion has significantly influenced Saharan architecture in the following ways:

- Central dominance of the mosque in the overall urban plan of the city.
- The construction of minarets without balconies so as not to overlook the roofs of neighboring houses.

#### **5.Neighborly and friendship relations**

Neighbourly relations play a crucial role in the construction of traditional Saharan society, fostering the physical proximity of dwellings, spatial compactness, and the prominence of kinship relations on the basis of trust and lineage. Both spatial neighbourhoods and personal neighbourhoods of a social nature exist, characterised by various forms of social activity shared among neighbours. These activities are accompanied by social relations that are consistent with the nature and type of ties prevalent among neighbours, and this engenders a homogeneity that allows for the formation of social relations marked by a strong sense of self-awareness.

Friendships represent a type of social bond that arises among individuals and groups who share similar thoughts, inclinations, attitudes, and individual interests. These friendships connect groups through shared residence, and these relationships tend to endure and span different age groups. Those involved consider friendship an integral part of their identity, participating collectively in celebrations, sorrows, and difficulties. The relationship extends between spouses, resulting in a network of social relationships.

#### **6.Prevalence of custom**

Members of this society can resolve conflicts and disputes by referring to established customs and inherited traditions, relying on amicable solutions through consultation with elders and community leaders. The absence of centralised authority and the reliance on individual initiatives rather than waiting for central authority are characteristic of their approach to addressing their problems [Bashir, 2018, p.25].

#### **7.Prevalence of Values**

Every society possesses a system of values that elicits a particular response aimed at achieving cohesion among individuals. It indeed may achieve homogeneity, as values serve as both a locus for behaviour and a means of

organising and regulating it. Adherence to values is a primary means of ensuring social order, with religion being especially significant in this respect. Religion plays a crucial role in traditional society, extending its influence to social, ethical, and economic life. Members of this society are distinguished by their profound faith in their destiny and divine decree and by their complete submission and application of these beliefs in daily life [Bashir, 2018, p.25].

### **8. Conclusion**

In conclusion, it may be inferred that the traditional dwelling in the Algerian Saharan city is not merely a physical space for habitation but rather a symbolic and cultural edifice that reflects a profound sociocultural system. The architecture of this dwelling in terms of its form, functions, and spatial distribution originates from a system of deeply rooted values and beliefs. It is closely tied to the climatic, geographical, and spiritual specificities of Saharan society. The dwelling thus serves not only as a shelter but also as a structure preserving identity, expressing social cohesion, familial solidarity, and religious and cultural distinctiveness.

Under no circumstances can the civilisational manifestations reflected in this architectural style be overlooked, as they represent an accumulation of inherited cultural traditions expressing the wisdom of ancestors in interacting with the natural and social environment. The architectural heritage of traditional dwellings in Saharan cities remains a mirror of identity, a vessel for collective memory, and a rich source for sociological and anthropological study and analysis.

On the basis of the above discussion and analysis, it is evident that traditional housing in Saharan cities is not merely an architectural structure but rather represents an integrated cultural system reflecting the values and identities of society. Given this significance, several recommendations may be made to preserve this heritage and revitalise it in contemporary contexts:

1. Field surveys were conducted to document traditional dwellings in various Algerian Saharan cities before they disappeared during the advance of modern urbanisation.
2. Encourage architectural restoration projects that preserve authenticity while integrating specific standards of modern comfort in a manner that respects the cultural values of local populations.
3. The study of traditional dwellings should be incorporated into university curricula in anthropology, architecture, and urban planning as living examples of the interaction between culture and the environment.
4. By adopting principles of natural ventilation, thermal insulation, and harmony with the environment, traditional architectural heritage can be used in the design of new housing.

5. Comparative studies of traditional housing patterns in different Arab and African Saharan regions are needed to uncover standard features and local specificities.

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