



RESEARCH ARTICLE

Customary Traditional Architecture in the M'zab Valley

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ARTICLE INFO	ABSTRACT
Received: May 19, 2024 Accepted: Sep 10, 2024 Published: Oct 10, 2024	The architectural landscape of the M'zab Valley epitomizes a cohesive and homogeneous entity comprised of interconnected elements and components, showcasing equivalence and similarity across traditional dwellings and various facilities, such as mosques and housing. This manifestation genuinely reflects the unity of purpose and community within the region. Despite this unity, the M'zab Valley exhibits a remarkable diversity of forms and patterns, with each dwelling, space, and area representing a unique and harmonious unit, distinct from others. This diversity is not dictated by rigid templates of style or form but rather emerges as a conscious response to local needs and necessities. The traditional residential architecture in the M'zab Valley is imbued with a profound and authentic heritage rooted in centuries-old customary systems deeply influenced by the principles and values of the Ibadi doctrine, these systems encompass various aspects, including social practices, intellectual pursuits, religious traditions, cultural expressions, historical influences, environmental considerations, and economic factors.
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INTRODUCTION

The questions from communities to scholars in the field of urban planning and architecture arose from their desire to construct buildings that align with their values and social practices. The rulings of the jurists have evolved over time to form customary legal systems for the development of society, which all residents adhere to and are subject to without exception. The vision of legitimate politics regarding urban development and architecture represents a general governing framework that studies the fundamental principles (preservation of religion, life, intellect, lineage, and property), and it is not concerned with the specifics. It intersects with the jurisprudence of architecture at many points of contact. Due to the foundation of architectural jurisprudence being based on Sharia principles and cultural values specific to the Islamic nation, Islamic architectural jurisprudence has principles that the Sharia policy must respect, even if those in charge of the policy overlook these principles. Due to their reliance on authority to fulfill their desires, politics is based on the power of the state that seeks to implement them. While the systems and norms of architecture are based on the community that seeks to uphold and implement the rules and principles of architecture as seen by Islamic law, the Islamic approach gives due attention to the space in which a Muslim lives. It explains what should be relied upon as the jurisprudence of priorities: necessity, then need, then enhancement, as well as the application of the principle of bringing benefit and preventing harm in construction. Based on this, we built our issue that studies traditional architecture and its relationship and influence on the systems, customs, and social practices in the M'zab Valley region.

which is characterized by several features and characteristics, Like other Islamic desert palaces in Algeria, we attempt to study them and derive and understand their origins and analyze their effects and reflections on individuals and society, considering that the palaces are not just constructed and abstract building blocks, Rather, they are systems and norms that are followed and implemented, based on a gradual division of fields according to their categories and the social structure deeply rooted in Ibadi thought, which relies primarily on the principles and values of the pure Islamic religion, Environmental data.

1. The urban fabric in the palaces of M'zab valley

The Ibadis established a new civilized life in the M'zab Valley over three and a half centuries, from the 11th to the 14th century AD, during which five successive villages were built, lasting approximately three centuries, and still exist today, namely: The kaser of Tajnint "Al-Attauf", the kaser of At Benour "Benoura", the kaser of Taghardait "Ghardaïa", the kaser of At Izguen "Beni Yezeghen", the kaser of At Mlishet "Malika".

The ancient kosours in the M'zab Valley are characterized by their distinctive architectural style, marked by their homogeneous unity and precise planning, as each kaser was built on the highest peak of the mountain for purely defensive purposes, The mosque, topped with a pyramid-shaped minaret, is in the center, surrounded by houses interspersed with narrow, azzabawinding alleys, forming circular rings around the mosque. At the foot of the kaser, there is a marketplace for commercial transactions, every kaser is surrounded by a defensive wall interspersed with watchtowers designed and planned in this way for defensive fortification, to be safe from the flood of the valley and to preserve the little agricultural land (Allal, 2012, page 191).

The architecture in the M'zab Valley is characterized by several features, durability, beauty, functionality, simplicity, and economy of means. There are no constructed kosours, but there are regulations and customs that are followed and applied, a list based on the gradation in dividing the fields according to their types and according to the social structure imbued with Ibadi thought, which relies mainly on the principles and values of the true Islamic religion.

The kosours of the M'zab Valley are similar in terms of their layout and defined area, as well as the choice of their construction site. However, at the same time, they differ from each other in the way each kaser has utilized its natural location.

The founding team of the kaser (the circle of Azzaba) begins constructing the mosque after selecting a suitable location on the plateau, and then they proceed to draw the boundaries of the kaser with walls and towers, finally, the residents build their homes starting from around the mosque's vicinity, passing through the streets and their types up to the walls. Of course, the construction of the homes is based on purely customary urban principles that rely on four foundations, It is led by the teachings of Islam, followed by social activities, then the economic element and the factors of the environmental surroundings.

This is how other spaces take their place in the kosours, where the market generally occupies a location close to the wall, and its design varies according to the available space, its role remains economic for trade exchanges and social as a suitable space for meeting the population. As for the cemeteries and funeral prayer areas, they are located outside the kaser, and each cemetery belongs to a specific throne or clan exclusively.



Figure 1: The architecture in the city of Ghardaïa

2. Customary systems

The Kosours of M'zab are considered a distinctive natural region that has maintained its culture, achievements, and way of life, which is attributed to the cohesion of its community and its well-organized structure thanks to its elders and institutional systems. Based on religious and civilizational foundations, they established customary bodies (trustees) that oversee the management of the customary urban and architectural aspects.

The careful planning and optimal distribution of all necessary kaser facilities, such as mosques, residences, roads, and alleys (Al-Fourastai, 1997, p. 170), created a kind of balance in life within the Kosours; it meets all the spiritual and material needs of the residents. This meticulous planning confirms that there are customary laws and rules governing the urban space of the M'zab valley. These are laws that remain in effect despite the signs of change factors that have begun to emerge in the local architectural system. These urban rules and laws are some that are as old as the region itself, such as those agreed upon in the councils of "Ami Said" and "Abde Rahman al-Kourthi", including some that are newly developed through the efforts of jurists and experts who have experience and knowledge in the field of local development. These laws pertain to the planning of the kaser, the rules for building houses, and the techniques for dividing floodwaters. It is in the form of recommendations that are not limited by time and place, and they are merely solutions designed to adapt modern architectural elements within the architectural context of the M'Zab Valley plain.

The custom has three meanings concerning the built environment, as the habit of the people of a certain town, and the second meaning of custom has more influence than the previous one. It is the acknowledgment of the law for what is commonly accepted in social life among people in general and between neighbors in particular, to define properties and rights. As for the third meaning of custom, it refers to building patterns. It is the most influential of the three types on the built environment; when people behave similarly in construction, it is said that there is a building convention or a certain style (Nouh, 1994, p. 22).

The custom in the M'zab Valley is applied through three bodies:

- Flood guardians: Their tasks involve intervention at the level of the valley sector, which includes:
- Monitoring residences and palm groves.
- Management and distribution of water during flood times.
- The role of the religious leaders (Azaba): their religious organization and guidance in mosques (religious, social, legal, economic, and defensive) where the community is subject to the laws of the Azzaba.
- Neighborhood trustees: Their role at the neighborhood level includes:
- Ensuring the cleanliness of neighborhoods.
- Resolving disputes among community members.

2.1 The customary urban principles of the Kosours of the M'zab valley

2.1.1 The principle of solidarity

This is achieved through planning to ensure integration and harmony between the different parts of the urban fabric, to a degree that meets the needs and provides services for various populations while integrating land uses in a reciprocal relationship that achieves the following:

- A. Environmental sustainability:** Urban expansion planning is considered the first mechanism used to control and manage the climate, and the principle of solidarity has achieved an environment compatible with the climatic conditions of the desert environment, The dense formation reduces the intensity of heat during the day, as well as the impact of winds, and creates a thick network of shadows that allows for movement along the paths during most parts of the day, especially in hot seasons.
- B. Social sustainability:** Solidarity contributes to creating interaction and social cohesion, helps maintain and strengthen social relationships, and preserves values and identity, thereby achieving social justice, the system also allows for the formation of human spaces and provides safety for the sustainable community.
- C. Economic sustainability:** The principle of solidarity contributes to the economy and the preservation of the land used for construction, by estimating the actual space needed for various functions, In addition to integrating uses, functions, and activities with accessibility for all populations, it also contributes to changing the ways, such as:
 - **Reviving the land:** This mandates the process of revival and reconstruction as a fundamental condition for owning the land, which increases its intensive use and prevents encroachment, ensuring it is employed for beneficial purposes.
 - **Purpose and economy:** This principle focuses on simplicity and avoiding extravagance, as well as the prudent use of services to cover basic needs such as living without wastefulness. It is one of the most important sustainability criteria.

As for aesthetic values, they were within the limits of utility, usage, and durability, governed by the principle of austerity, lack of ornamentation, and uniformity in the heights of dwellings, which suits the capacities and capabilities of the community.

2.1.2 The principle of harm

It involves the effort to eliminate existing harm and prevent its occurrence, and it is used as an administrative means for urban management. Any urban behavior is measured by the degree of harm it causes to the residents, as a principle of environmental and ecological compatibility.

This is achieved by creating a balanced urban settlement that ensures environmental balance, social and economic justice, and integration with the surrounding environment, while fostering cultural and social belonging and facilitating social interactions, it provides the possibility of pedestrian movement and achieves a connection to the place through:

- Utilizing natural energy for cooling and ventilation, inspired by ancient experiences to determine mechanisms and strategies for addressing the local climate through the design of shading networks Street and square networks and the application of sustainability principles and standards.
- Defining the ecological dimension so that urban development goals align with the desert environment, the possibility of linking and coordinating the social, economic, and environmental dimensions, as well as the functional aspects of various public facilities, with the efficiency of energy use and resource consumption has been realized.

2.1.3 Flexibility and compatibility with variables

The principle of continuity has been taken into account in the kosours, meaning that land and resources are used in such a way that they leave future generations with a flexible space for movement, change, and development, At the level of expansion, there was always an opportunity for children and grandchildren for both vertical and horizontal growth. As for the oasis, there was always flexibility in achieving environmental and economic balance according to a sustainable system.

2.1.4 Principles of planning road networks and spaces

Several principles governed the planning of road networks and spaces, such as freedom of movement and preventing harm, with the estimation that they should be spacious and not constricted, There is a forward-looking perspective that accommodates the changes that may occur, and its most important features include the spatial gradient produced by many factors, and the provision of shaded streets, The importance of identifying the locations of squares designated for activities and their distribution patterns within the fabric, To distribute land uses and define the sizes and locations of these spaces as a basis for controlling the local climate, in addition to their social and recreational functions.

2.1.5 Principles of mosque and public facility design

The mosque is considered the central nucleus of the kosours, as each courtyard contains a mosque, which carries functional and symbolic interactive implications with the surrounding fabric, It is considered a sacred place for life and a center of political and administrative power, as well as a cultural monument, with the necessity of providing the mosque with distinctive vertical and horizontal space within a framework that does not confine it to being an isolated and singular monument, With the necessity of adopting the principle of simplicity and clarity, and also by giving care and attention to public facilities and various activities, which have become an important element in urban development today, their distribution should be according to a functional hierarchy such that this latter is characterized by:

- Consolidation of functions to provide and aggregate services, in order to economize on space, as this facilitates access to them and delivering services to residents over a reasonable area.
- Centralization in distribution to achieve cohesion.

2.1.6 Principles of housing design

A house designed according to sustainability standards is one that emerges from its environment, aligns with it, utilizes its potentials, and preserves its resources for future generations.

The principles on which the housing plan was based were interconnected, Starting from the groundwork and design process to the selection of building materials and suitable construction systems, leading to architectural details and environmental solutions compatible with the nature of the hot, dry climate (Diwan for the Protection and Development of the M'zab Valley, 2004, p. 03), The design of the housing was holistic, stemming from the needs of the community rather than personal requirements, balancing resources and consumption even after the building's lifespan ended, The materials used in construction were being utilized because they are convertible and reusable, in addition to the following:

- **The center of the house:** The center of the house is not an element of the dwelling that can be dispensed with, but rather it is part of the overall space that directs some areas inward and makes this space a natural and social environment indoors, Achieving beneficial social environmental goals.
- **Spatial organization:** The aspect of sustainability is manifested in the economics of space, where the same space is used for multiple functions.
- **Environmental processing:** Enabling the dwelling to achieve heating, ventilation, and cooling according to self-sufficiency solutions, in addition to the efficiency of the urban space, by using it for multiple functions at different times, the economic dimension is not measured by direct value but by the social return achieved.

2.1.7 Climatic principles

We extracted a set of climatic principles from the kosours, which can measure how responsive urban planning is to current expansions, to make it more responsive to climatic requirements using effective and inexpensive means, including:

- The public voids and building blocks show us the necessity of rotating the mass on the building and reducing the ratio of public voids for thermal reduction and shading of the streets, In other words, using compact construction with high density.
- The courtyards and the building mass and the relationship between them encourage the development of the interior, due to their environmental and climatic benefits through the regulation of heat, ventilation, and shading.
- The external openings and facade area contribute to reducing thermal gain from the external facades, minimizing noise, providing protection from winds, and achieving social privacy.
- Using the height-to-width ratio for streets and spaces to obtain the maximum possible shade, while re-evaluating the non-ventilated pathways (the alley).

CONCLUSION

The kosours of the M'zab Valley are characterized by their unique architectural style, responding to several factors (climatic, geographical, religious, ...), This was evident through the sites of the kosours and the methodology of their planning, extending to public facilities and private traditional residences, where all are characterized by simplicity in size, unity in appearance, harmony, and coherence.

The Mouzabite community planned its kaser and facilities to meet the requirements of its faith and environment, with a collective mindset to fulfill its needs. Its architecture is characterized by participation and harmony between its forms and contents.

The spatial and spatial distribution of the kaser is governed by five pairs that embody the social dimensions of the Mouzabite community, which are: the internal and external, the public and private, the religious and secular, the living and the dead, the male and female.

The architecture of the M'zab Valley represents a unit and a homogeneous block of elements and components, such that we see equality and similarity between all the houses and even among the various establishments and facilities, from the dwelling to the mosque, in a way that truly expresses the unity of purpose and the unity of the community, However, in this unity, there is great richness in the diversity of forms and landscapes, such that each dwelling, each space, and each area represents a harmonious unit that is not repeated in another construction or place, It is not subject to rigid molds in style or form, but rather it was a conscious response to needs and necessities.

These systems are considered the foundations of the sustainability of ancient kosours and their oases, as they are laws based on religious and social foundations, It operates on the principle of equality and not harming the natural environment, whether it is a human, plant, or animal. Therefore, it was necessary to restore the significance of this local customs.

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