

## Heritage and modern regionalism in Khartoum

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**ABSTRACT:** Conventional regional architecture has been described as a hybrid of universal forms and local architectural expressions. In Khartoum, Regionalism differs from this common type in that it is concerned not only with form synthesis, but forms and their conceptual basis. The relationship between the conceptual component of design and the forms they produce is the focus of attention of regionalists in Khartoum. They use contemporary forms to interpret concepts that derive from tradition, local culture and the socio-political context in addition to the environment.

The new regionalist trend, which can be referred to as conceptual regionalism, is represented in this paper by three examples from Khartoum. Each demonstrates a contemporary architectural representation of the cultural context of the people of Khartoum and the characteristics of their social environment.

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### INTRODUCTION

Khartoum, the Capital city of Sudan, was founded under colonial rule in the early twentieth century as a pre-planned modern city. Since its foundation, Western modernization was introduced in Khartoum by the British colonial administration and the Egyptian presence; as well as the other foreign communities residing in Sudan such as Greeks, Italians, Syrians and Armenians. Before independence all aspects of modern public life, including professions, education, public service etc. were largely shaped by foreign presence and the dominant European culture. Although this picture totally changed after independence, and everything was shifted to Sudanese hands a strong feeling of the influences of globalization persisted.

Despite the influences of westernization and later globalization, assimilation of modernity and foreign cultures has been the norm in Khartoum. It is remarkable to note that people are open to modernity, while Sudanese culture is strongly maintained and tradition is widely observed. The reason for this in my opinion is because Khartoum population is a mixture of different ethnic groups that come from all parts of Sudan, when they migrated to Khartoum they brought along their provincial cultures. Although Khartoum acts as a melting pot of the distinct cultures of the Sudan, each cultural group preserves the special characteristics of their own localities.

In Khartoum while public life is predominantly modern, private life on the other hand is a combination of modernity and traditionalism. People reconcile the contradictions between the local and the global and manage to express identity by maintaining balance between modernity and traditions. As a result there is no conflict between the two streams: indigenous and contemporary cultures coexist in a harmonious blend. These characteristics have surely had a great impact on architecture, and the rise of modern regionalism must not be seen in isolation.

Although the regionalists adhere to global architectural norms, it is observed that their work is rooted in cultural heritage. This paper argues that modern regionalism in Khartoum is the concluding statement of many years of regionalists' search for the forms that satisfy the demands of modern living standards, and at the same time respond to the needs generated by tradition.

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The influence of globalization on identity does not at present generate controversy as did during the first decade of the millennium. The reason is partly because globalization has become an accepted phenomenon so widely distributed throughout the globe. It has even been suggested that globalization is sometimes desirable on the assumption that it generates a process that takes place through a two-way mechanism which makes it possible for communities to contribute to world global culture. The reconciliation with globalization has recently paved the way for accepting regionalism as a transition between heritage and contemporariness. In a similar way Post-Modern appeared in the western countries which, as Charles Jenks describes it, is a double coded combination of modern and other language of expression such as traditional architecture. Regionalism, however, can be seen as a more advanced form of post-modernism, its role is not confined only to preserving heritage but also as a mediating agent that values the experiences of the past and transmitting them to the future generations.

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Theorists differentiate between 'regionalism' as a tradition that came mainly as a reaction against westernization and a more liberal regionalism that accepts globalization and modernity. The reaction against westernization after independence has lead in many developing countries to the emergence of the 'regionalist approach'. Traditional regionalist response would focus on expressing local identity through the revival of elements of traditional architecture. Non-conventional regionalism on the other hand seeks to introduce a new synthesis that is rooted in heritage and at the same time modern.

Apart from a few scattered works, architecture in Khartoum is far from being fully documented. This paper is an effort towards a documentation of an important part that is regional architecture. The study methodology relies on fieldwork examination of selected examples that represent the new regionalist approach in Khartoum. The aim of the analysis is to establish the extent as to which regionalists in Khartoum were able to satisfy the demands of modern living standards without compromising on the needs generated by traditions.

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The climate in Khartoum and the desire to achieve high green standards are key factors that contribute to the design concept and influences form considerably. The main environmental aim of the architects in the examples presented in this paper is to achieve energy efficiency without compromise on comfort; therefore they adopted a dual policy which uses modern technology in combination with traditional natural cooling such as dense or cavity walls to reduce the reliance on energy consuming mechanical air conditioning.



**Fig. (1) north façade**

The earliest example is the **Kuwaiti Embassy** in Khartoum (1977) designed by Technical Studies Bureau (TEST) Khartoum (Fig.:1). To achieve its environmental goals the architects choose an inward planning option with a conventional courtyard (Fig.:2). The plan is a simple organization with a central



courtyard that is surrounded by rooms arranged on two floors. Rooms are reached directly from the courtyard at ground floor level, and from an access balcony at first floor. The courtyard, however, is not open to the sky as would have been expected, but covered with transparent synthetic roofing that is meant to allow sun light penetration and to keep out the dust that is common in Khartoum. However, roofing the courtyard no doubt restricts natural air circulation through the courtyard and the surrounding rooms, thus defeating the whole idea of using natural means of cooling.



**Fig. (2) courtyard view in embassy building**

The design is intriguing in that its form is inspired by local heritage; and in the same time it is a modern building with aluminium and glass facades behind screen walls. Façades are protected against direct sun radiation by an unroofed arcade surrounding the building on all sides. The object of screening is not only shading glass walls, but also allowing cool air movement coming across the surrounding green landscape to rise up against the glass walls pushing the accumulating hot air upwards to escape from the opened top and cooling glass surface (Fig.: 3,4).



Fig. (3) office glass walls behind screening arcades



Fig. (4) screen walls shading facades

Another example of modern regional architecture in Khartoum, which uses modern technology in combination with traditional methods of natural cooling, is **Salam Centre** (2007) (Fig.:5). Salam Centre is a specialized cardiac surgery unit located in Soba on the western bank of the Blue Nile 25

km south of Khartoum. It is designed by studio Tamassociati of Venice, Italy, and developed by Emergency, the Italian based international non-government organization.



**Fig. 5 Salam Centre, Khartoum, General view**

The architects identified their goals to combine modern technology with traditional methods of climate control in order to achieve a high level of thermal efficiency without relying much on sophisticated energy consuming systems. In-depth study of the climate conditions in Khartoum has lead to the use of a combined system of mechanical air-conditioning and natural cooling for maximum efficiency and economy. The design draws on the legacy of traditional environmental techniques including the use of a central green courtyard that acts as a thermal insulation of the interior spaces from the harsh climatic conditions. The design also incorporates the use of massive walls, shading screens, trees and planting to protect the building against excessive heat radiation (Fig.: 6).



**Fig. 6 Salam Centre, Khartoum. View of green courtyard**

Salam Centre, like most regionalist architecture in Khartoum, uses modern technology in combination with traditional natural cooling; however, it is a head of the others in maintaining a higher level of green standards. In order to reduce energy consumption, the designers incorporated a solar energy unit as an alternative clean energy option. The advantage of passive cooling here is that it plays a dual role; it reduces the need to rely on energy consuming mechanical cooling, and allows the efficient use of solar energy. A solar cooling system was used in combination with a simple mechanical air-filtering technique designed to filter the large quantities of dust which is common in Khartoum without having to rely on costly and complicated devices. The air is designed to pass through a series of tunnels designed to filter the air, while a water spray at the end of the tunnels further eliminate the finer dust and allow air to reach the conditioners at 9°C cooler than when it entered the system.

Another aspect of the regionalist characteristics in Khartoum is the influences of soci-cultural values on space arrangement. In this example, the architect's own house of Abdel Moneim Mustafa, space articulation is determined by the architect's desire to achieve a quality of space that satisfies certain social values such as privacy and social identity.





**Fig. (7) main facade**

Throughout many years, Mustafa has focused, as his work clearly demonstrates, on space articulation and achieving a greater integration of the building into the site. While engaging in developing a grand spatial organization, Mustafa seemed to have given less attention to facades and has even been content with repeating more or less the same earlier facades. However, this is not the case in this latest house which shows a departure from repeating old façade cliché towards authenticity. (Fig.: 7)



**Fig. (8) general view of an earlier house**

Besides this new approach to façade design, this recent work also shows increasing integration between the building and the site. In many earlier houses the ground floor was left partly open to allow extended spaces to flow freely across the site (Fig.:8).

The open space under the building in the present house, however, acts like the loggia in the Muslim house with an open front and a screened back for privacy and ventilation (Fig.:9). The interplay of indoor-outdoor spaces that rises within the ground floor level echoes the traditional courtyard house in the traditional architecture seen in many parts of world.



**Fig (9) View of the loggia**

The loggia occupies an intermediate location that acts as a transition between the private space in the inner patio that lies immediately behind it, and the semi-private spaces in the front garden. The patio is the heart of the house and the core of circulation; it leads to the inner private spaces in the backyard and it contains a staircase going up to the two flats on the first floor. (Fig.:10).



**Fig. (10) view of the patio**

Right from the moment of entering through the main gate, space begins to evolve gradually across the garden passage, up the steps to the podium leading to the loggia (Fig: 11). The loggia links the outdoor spaces in the patio at the back of the house and the front garden on the other side with the indoor spaces (Fig: 12). This dramatic articulation integrates the building within the site, creates a continuous change of visual experience and reduces the usual monotonous impact of the grided column pattern.





**Fig. (11) view of the garden passage**



**Fig (12) View of the loggia**

As this example clearly shows, modern architecture is not always synonymous with universal forms. This house can be considered an endeavor to introduce modern regionalism in which synthesis of past experience and modern expressions are well integrated. Interpretation of past experience is manifested in the gradual transition between outdoor and indoor spaces which resembles pre-modern historical precedents in the separation of private and semi-private domains and in the use of traditional vocabulary such as patios and loggias.

## **CONCLUSIONS**

Conventional regional architecture has been described as a hybrid of universal forms and local architectural expressions. In Khartoum, regionalism differs from this common type in that it is concerned not only with form synthesis, but forms and their conceptual basis. The relationship between the conceptual component of design and the forms they produce is the focus of attention of regionalists in Khartoum. They use contemporary forms to interpret a concept that derives from tradition, local culture and the socio-political context in addition to the environment.

This new regionalist approach in Khartoum has been illustrated by the three examples presented in this paper. The analysis has indicated the main features that illustrate the new regionalist approach, the essence of which can be summarized as follows: The grouping of buildings around internal green open space in both the Kuwaiti embassy and the Salam Centre reflect the common out-door space arrangement in Khartoum, which represent a cultural legacy more than merely architectural treatment.

In Salam Centre, the characteristic of the spatial arrangement reflects a combination of universal standards and local tradition. Space layout satisfies both the universal hospital requirements in the medical areas and the social needs in a Sudanese context in certain public areas. This is observed in the shaded public waiting adjacent to the main gate outside of the clinic compound, the guest house situated within the compound and the praying room located in the clinic's gardens. I can think of space arrangement in the public areas in Salam Centre as based on a conceptual thought in which the political context is probably linked. They are guided by the desire to achieve cultural interaction, and to produce spaces that are capable of generating global and local exchange.

Mustafa's house is an inclusive statement of this new regionalist interpretation of modern architecture, which can be conceived as a resulting from the use of local culture as a conceptual basis for modern architectural forms. I can say that Mustafa is one of the pioneers of the conceptual regionalist approach in Khartoum. His work can be conceived as a contemporary architectural representation of the cultural context of the people of Khartoum and the characteristics of their social environment.

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