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*In Search of “Architectures without Architects”: Crossing West and North Africa in 1978*

*En busca de “arquitecturas sin arquitectos”: Una travesía por el norte y el oeste de África en 1978*

*Em busca de “arquitecturas sem arquitetos”: Travessia da África Ocidental e do Norte em 1978*

**Abstract | Resumen | Resumo**

In 1978, as a young architect with a keen interest in photography, I embarked on a journey of more than three months by car that took me from the Ivory Coast to Morocco. With the aim of rediscovering cultures and traditional architecture in the Sahel and North Africa, this experience raised important questions: how did entire peoples manage to live in harmony with nature before culture was technologized? What lessons can we learn from the way traditional settlements were formed over generations with minimal impact on ecosystems? What design concepts should architects employ to make buildings consume less energy and resources? In short, how can architecture become sustainable?

En 1978, siendo un joven arquitecto con un vivo interés por la fotografía, me embarqué en un viaje en coche de más de tres meses que me llevó desde Costa de Marfil hasta Marruecos. Con el objetivo de redescubrir la cultura y la arquitectura tradicional del Sahel y el norte de África, esta experiencia suscitó en mí importantes preguntas: ¿Cómo consiguieron pueblos enteros vivir en armonía con la naturaleza antes de la “tecnologización” de la cultura? ¿Qué lecciones podemos aprender sobre cómo se formaron durante generaciones asentamientos tradicionales con un impacto mínimo en el ecosistema? ¿Qué conceptos de diseño deberían emplear los arquitectos para hacer que los edificios consuman menos energía y recursos? En resumidas cuentas, ¿cómo puede volverse sostenible la arquitectura?

Em 1978, sendo um jovem arquiteto e tendo um grande interesse pela fotografia, embarquei numa viagem de carro de mais de três meses que me levou da Costa do Marfim a Marrocos. Com o objetivo de redescobrir culturas e a arquitetura tradicional no Sahel e no Norte de África, esta experiência levantou questões importantes: como é que povos inteiros conseguiram viver em harmonia com a natureza antes da cultura se tornar tecnológica? Que lições podemos aprender com a forma como as povoações tradicionais se formaram ao longo de gerações com um impacto mínimo nos ecossistemas? Que conceitos de design devem os arquitetos utilizar para que os edifícios consumam menos energia e recursos? Em suma, como pode a arquitetura tornar-se sustentável?

## My Interest in the Vernacular

When I was studying architecture in the seventies, the image of the visionary diva-architect was highly present in the profession as the way forward to success and glory. We, as students, were haunted by the works and writings of architects such as Le Corbusier, IM Pei, Arata Isozaki, and many others. But one day, while searching in the library (decades before the internet appeared), I found a book with a strange title: *Architecture Without Architects: A Short Introduction to Non-Pedigreed Architecture*.

This book is based on the New York exhibition of the same name (at MoMA in 1964-65), originally published in 1964. The author, Bernard Rudofsky, a Moravian-born American architect, designer, and social historian, demonstrates the artistic, functional, and cultural richness of “communal architecture produced not by specialists but by the spontaneous and continuing activity of a whole people with a common heritage, acting within a community experience” (Rudofsky 1964). It shines a light on what was then known as “primitive architecture” (today called “vernacular” or “traditional”), exploring both its functional value and its artistic richness, with a focus on tribal structures and ancient dwellings.

Rudofsky steps outside the narrowly defined discipline that has long governed our sense of architectural history and discusses the art of building as a universal phenomenon. The beauty of vernacular architecture has often been dismissed as accidental, and history, as written and taught in the West, has rarely been concerned with more than a few select cultures and regions – Europe, some areas of Egypt, or Anatolia.

## Creating ARCADE

The discovery of “primitive” architecture and other work by non-European or international architects such as Hassan Fathy (*Architecture for the Poor*) and others prompted me to found ARCADE (initially a French acronym for *Atelier de Recherche et de Communication sur l'Architecture Durable et l'Environnement*), a platform for documenting and researching these non-pedigreed architectures.

At that time, when the word “sustainability” was first used (and soon abused), the idea of founding ARCADE was to document, record, and learn more from the amazing conglomerate of forms and materials specific to each location or region and defining the way a whole people, over generations, crafted ways of harnessing the elements (i.e. climate and terrain, along with their social needs and limited means), thus creating a unique architecture without depleting natural resources, or at least having a minimal impact on the environment.



Figure 1: Cliff dwellings of the Dogon tribe, Sudan (Encyclopædia Britannica)

### In Search of Architectures Without Architects

In Rudofsky's book one image especially struck me, of the cliff dwellings of the Dogon tribe in Mali (Fig. 1). I decided I should discover Africa and its traditional architecture sooner rather than later. The opportunity came after I got my architecture diploma in Lebanon (a few months before the 1975 Civil War) and received a scholarship to pursue my studies in France. At that time, after the 1973 oil crisis (and strict rationing in Europe and the US) caused by the OPEC embargo led by King Faisal, it was clear that alternatives to oil should quickly be developed. This led me in 1975-76 to specialize in solar architecture at the Paris-Malaquais School of Architecture, and to acquire a knowledge of design making use of earth and the sun.

All this prompted me to accept a job as an architect in Abidjan, Ivory Coast, where I worked for two years until in 1978 I decided it was time to go on an "expedition" in my small blue Renault 4L (Fig. 2).

But crossing the Sahel toward Algeria and Morocco in a two-wheel-drive car involves traveling 3,000 km of extremely rough and sandy Saharan roads, so I added a roof rack for petrol cans and reinforced the car's subframe to protect the engine. Other tasks were to procure a Michelin map of West and North Africa (Fig. 3), as well as photographic gear (two Nikon Fs with lenses and filters) and enough film for the journey consisting mainly of Kodak Tri-X for b/w images and Kodachrome for color, as well as the means to preserve them from heat and humidity.



Figure 2: The Renault 4L with which the trip was made



Figure 3: The Michelin map of West and North Africa used for the crossing

### Crossing West and North Africa in 1978

The journey started in Abidjan, Ivory Coast on 12 March 1978 and lasted almost 3 months, covering more than 20,000 km with the Renault 4L (a tribute to an exceptional car!). Discovering the northern Ivory Coast and the region of Niofoin with its amazing *Senufo* villages, their mud dwellings, village squares, fetish priest huts, and granaries was a feast for the eyes (Figs. 4 to 8). Next was Mali, with stops in Mopti and Djenné, two famous Sahel cities. "Sahel" in Arabic means coast or shore, and for West Africa this shore is the Sahara desert. The Sahel was a historic trading area from which camel trains would carry the riches of Africa to the Islamic world. This trans-Saharan economy declined in the fifteenth century as seagoing routes were opened, but what remained was the extraordinary architecture and townscapes of Mali.

Djenné is one of the oldest known towns in sub-Saharan Africa and was a center for the propagation of Islam in the fifteenth and sixteenth centuries. Dating from 250 B.C., it also flourished as a nexus of the trans-Saharan gold trade and is often called the "twin city" of ancient Timbuktu. Like most West African towns, Djenné is characterized by building with earth. It is home to a typology of clay buildings that are mostly places of government or houses of chiefs and merchants, blending into the surroundings (Fig. 9).

Djenné prides itself on its Great Friday mosque, the world's largest mud-brick structure. Built around 1906, it is a magnificent example of Sudano-Sahelian architecture. In its *crépissage*, or plastering, Djenné residents work together every year to restore its mud render (Figs. 10 to 14).



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Figure 4: Sorghum granaries in Senoufo village, Ivory Coast

Figures 5 to 7: Dwellings in Senoufo village, Ivory Coast

Figure 8: Fetish priest hut in Senoufo village, Ivory Coast



Figure 9: City of Djenné, Mali

Figures 10 to 14: Great Friday Mosque, Djenné, Mali

Usually the structure of so-called Sudanese mosques revolves around a core of sunbaked bricks (pierced and reinforced with wooden struts, then rendered with mud paste), showing that from the most basic materials and in the harshest conditions, creative designers can develop highly expressive and visually enchanting architecture, striking in its sculptural forms. With each annual re-rendering,



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Figure 15 and 16: Different types of Sudanese mosque in Burkina Faso

Figure 17: Typical mosque in northern Ivory Coast

Figure 18: Circular-plan earthen mosque, Ivory Coast

these buildings demand and receive engagement from their users. Their maintenance is part of the rhythm of life, with ongoing community participation in their permanence (Figs. 15 to 17).

After Djenné came Bandiagara, where the cliff villages of the Dogon people resembled from above a complex geometric puzzle. Dogon religion is the expression of a farming society in a harsh environment. Agrarian rites aim to influence the climate and protect harvests; others seek the benevolence of ancestors. The ultimate aim of such rites is the Dogon people's survival. The Hogon (the spiritual leader and rainmaker who embodies the earth as provider of life) and the priests and village elders share ritual responsibilities as the intermediaries between the "invisible" and the "world of the living".

Architecture, social organization, and religion cannot be dissociated, and village dwellings and sanctuaries form a whole. Religious practice is fourfold: the *Lebe* cult to guarantee fertility, the *Wagem* cult for addressing ancestors, the *Binou* cult to maintain harmony between humanity and the supernatural, and finally the "society of masks" for public rites to facilitate the passage of souls to the afterworld. The social structure of Dogon villages is based on lineages living in compounds adjoining the residence of the patriarch.

Combinations of square, rectangular, and circular interlinked granaries, pathways, living quarters, and *toguna* meeting places for local dignitaries make the village a single living entity. This was a once-in-a-lifetime opportunity to discover these villages and their amazing architecture, notably the *toguna*, a shelter open on four sides with wooden beams held up by stone pillars or wooden posts and a roof of millet thatch. The ceiling is too low to stand under. Women have no access as the space is reserved for men from the same extended family, for discussing village affairs and resting. It may also serve as an observation post in cliff villages (Figs. 18 to 20). The variety of materials in the dwellings and granaries of Burkina Faso and Niger is moreover quite something (Figs. 21 to 24).



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Figure 19: Dogon village with baobab tree, Bandiagara, Mali



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Figure 20: Dogon village, Bandiagara, Mali

After these Nigerien settlements, reaching Algeria across the Sahara, through a sea of sand dunes and rocky plateaus in a car loaded with jerry cans and equipment, was the toughest stage of the trip. Yet crossing the world's largest hot desert, with an amazing sense of emptiness, silence, and light as well as horrendous sandstorms, was worth the hardship (Fig. 25).

The first stop after Tamanrasset and In Salah was Ghardaïa, capital of the M'zab valley, a "desert within the desert" and a unique Saharan city in architectural and urban terms, also famous for its mosque that supposedly inspired Le Corbusier's design for Ronchamp (Figs. 26 to 27).

Figure 21 and 22: Different types of thatched architecture in Burkina Faso

Figure 23: Granaries, Burkina Faso

Figure 24: Dwelling with courtyard in Niger

After short stops in Alger and Oran, Morocco was my final destination. After three imperial cities (Fez, Meknes, Rabat) and a rest in Casablanca, the plan was to visit Marrakech and its medina – a densely packed, walled medieval city with its souks and the famous twelfth-century Koutoubia mosque and some magnificent interiors (Figs. 28 and 29).



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Figure 25: Saharan sand dunes

Marrakech is the gateway to southern Morocco, the Draa (lush green) valley, and fortified villages such as Tafraout, Ouarzazate, and the red-earth city of Ait Benhaddou (Figs. 30 to 33). Southern Morocco is rich in mud architecture, with imposing *ksour* built with the materials of their environment – examples of sustainable construction integrated in their surroundings, providing shelter from a harsh climate (Figs. 34 to 37). Adobe and wood building techniques for walls and floors have yielded some incredible structures (Figs. 38 to 41).

Today such a journey would be unthinkable, given the Sahel’s political instability and insecurity.

### Participation in the Centre Beaubourg Exhibition on Earthen Architecture

This expedition generated some 1800 images (Tri-X b/w negatives and Kodachrome slides).

Figure 26: Mzab-Gardaia, Algeria

Figure 27: Mzab-Gardaia, Algeria. Interior of the mosque which was visited by Le Corbusier





Figure 28: Koutoubia mosque, Marrakech, Morocco



Figure 29: Interior of an imperial palace in Marrakech

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It was instrumental in my participation in the exhibition “On Architecture in Raw Earth” (*Des architectures de terre ou l’avenir d’une tradition millénaire*) in 1981-82 at the CCI Gallery of the Pompidou Center. This occupied a whole floor and was designed by Jean Dethier, a Belgian architect who is still advocating building with earth as an abundant, free, and environmentally friendly material.

These images have also helped showcase vernacular African architecture in many solo exhibitions in various countries (Lebanon, Canada, Saudi Arabia, Qatar), the latest in November 2022 in Marrakech, Morocco at the Badii Palace with the title “On The Road, Crossing Africa circa 1978”.



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Figure 30: Ourika Valley, southern Morocco

Figure 31: Moroccan village

Figure 32: Kasbah Ait Benhaddou, southern Morocco



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Figure 33: Tafraoute village, southern Morocco



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Figures 34 to 37: Earthen *ksour* villages in southern Morocco

Figures 38 to 40: Rammed-earth wall being built

Figure 41: Ceiling made of reeds

### Researching Living Traditional Architecture in the MENA Region

After my experience in Africa, discovering and recording an outstanding heritage and friendly people, I returned in the eighties to Lebanon, my home country, where I documented its architecture and lectured in schools of architecture about researching the past for a better future. But the war, though sporadic, led me to emigrate to Canada, where I worked for years as an architect. Then one day, on reading *Shelter in Saudi Arabia* by Kaizer Talib, about traditional patterns of shelter in that country, I was struck by images of Old Jeddah and the variety and richness of its vernacular architecture.

The economic recession in Canada, mainly in Quebec, where I was living, prompted me to leave for Jeddah in 1993, where I got a job as senior designer. Over 25 years of work in the Gulf and the Middle East, I documented the amazing traditional architecture of Saudi Arabia and also other Gulf States, Yemen, Iran, Lebanon, Syria, and Iraq.

## Living on a Changing Planet

Today, aside from the insecurity and political instability in the Sahel, the world has changed. According to many geologists, it seems we have entered the Anthropocene epoch, defined by the impact of human activity on our climate and environment. Modernization and westernization of global culture and digital interconnectivity have impaired our experience of local uniqueness. Today the world is viewed and interpreted through the prism of Google, touchscreens, and big data. This fascination with electronic technology is not offering authentic solutions to regional problems, and hence the pressing need to rediscover the authenticity and particularity of place – what Christian Norberg-Schulz called *genius loci*.

Rediscovering cultures and traditional architecture in the Sahel and North Africa was an amazing experience for a young photographer and architect, raising important questions: how did entire peoples manage to live in harmony with nature before culture was technologized? What lessons can we learn from the way traditional settlements were formed over generations with minimal impact on ecosystems? What design concepts should architects employ to make buildings consume less energy and resources? What may be the role of technology in making architecture more environmentally responsible? In short, how can architecture become sustainable? Despite differences in definitions, perspectives, and priorities, sustainability remains a critical challenge for all. But in a few years this concept has evolved from a truly ecofriendly approach into a series of expensive high-tech responses.

While conventional patterns of industrial and economic activity are no longer viable, alternative models have yet to be fully developed. A society that once sustained itself with agriculture and basic industrial processes has become a consumer (and a dependent) society. As such we cannot design and build as our ancestors did. All this explains today's crisis and the need for a new design methodology and evaluative process able to address our needs now and in the future.

The best impact we can have on the world is the least impact. Vernacular knowledge is a precious resource that may help define principles for sustainable design and architecture today.

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## Biography | Biografía | Biografia

### Samir Nicolas Saddi

Samir is an architect, photographer and founder of ARCADE (Arab Research Centre for Architecture and Design of the Environment). As an architect he has decades of international experience, designing projects in many countries and winning international competitions. Since 2004 he has been managing the design and construction of iconic museums and cultural projects in the Middle East with other notable architects: the Qatar Museum of Islamic Art with IM Pei, the Louvre Abu Dhabi with Jean Nouvel, or the Grand Egyptian Museum with Atelier Bruckner, inter alia. His architectural studies use the "ethnographic" tool of photography to record the disappearing vernacular architecture of Africa and the Middle East. Samir is today seeking collaboration in order to create an architectural museum coupled with a research center to showcase and revive the wealth of sustainable solutions embedded in the urban and architectural heritage of the MENA region and to disseminate vernacular knowledge.