

Ephemeral Architecture: The Fleeting Forms of West African Adobe Mosques

*And We are not
To be frustrated
From changing your Forms
And creating you (again)
In (Forms) that ye know not.*

Qur'an, Sura LVI: 60-61 (Yusuf Ali translation)

An Adobe Architect

Falké Barmou is a humble villager from the town of Yaama in Niger. As he lays out his vendor cloth, atop which he places inexpensive sundries for sale to locals and the very occasional tourist, one might not guess that this farmer and part-time vendor is also a master mason who received the 1984-86 Aga Khan Award for his design of Yaama's Friday Mosque just nearby. The status of this African adobe master mason is much like that of the architecture he produces. Both hover just beyond the reach of international taxonomies of architecture, and inhabit a liminal space between novelty and profundity.



Figure 1: The Friday Mosque of Yaama, Niger.

Barmou, who has been fashioning adobe structures for some forty years (Davey 1986, 87) has been discovered, forgotten, then rediscovered by generations of scholars. Finally in 1986, a nine-member jury from the Aga Khan Development Foundation bestowed on him the Award for Architecture, lauding the “vibrant expression of traditional earth-building techniques used in a creative manner” for his design and construction of the Yaama masjid (Loughram and Lawton 1987, 28). In that year, the Foundation had given out fewer citations than in their two previous award cycles, having noted a “crisis in creativity” facing modern Islamic architecture. In fact they openly expressed doubt in “the earlier assurance of the modern movement” to meet the architectural needs of Islamic cultures in the developing world. Thus the international jury chose to limit their selections to those works of architecture which stemmed what some jurors called the waning momentum of traditional architecture (Loughram and Lawton 1987, 28-37).

Yet the jury's obvious enthusiasm for using these “traditional techniques” in “creative” ways indicated their desire to see new directions within an indigenous context.

Indeed the 1986 awards ranged between Barmou's unique native mosque and other Islamic structures from Pakistan to Turkey that retained regional styles while also having "borrowed liberally" from the "vastly different techniques" of other Islamic and foreign sources, all while employing or evolving "new kind[s] of craftsmanship and...new kind[s] of creativity" (Loughram and Lawton 1987, 37). Barmou's masjid was in stellar company that year, alongside a renovation of the Dome of the Rock and the preservation efforts in Yugoslavia's Mostar Old Town.

Falké Barmou was not without some international associations of his own. He has been described by several journalists as having developed some of his ideas for the great mosque at Yaama while on Hajj in 1966 (Davey 1986, 87; Loughran and Lawton 1987, 37). Just which aspects of the Yaama masjid are imports from points between Barmou's native Niger and the Muslim Holy Land are uncertain. Was he inspired by the mosques of Hausaland (an area which stretches across southern Niger and northern Nigeria)? Which structures might he have seen in Chad or Sudan? Which route did he take through these countries? Which aspects or dynastic styles of the Cairo or Mecca masjids might have moved him to make adjustments to the mosque in Yaama? These could only be "adjustments," since he had already built the Yaama mosque some four years before his pilgrimage, with local adobe technology and presumably in a local adobe style that originated in the great Islamic edifices not to the east towards Mecca but to the west in Mali. And he has renovated his famous masjid regularly ever since its first construction and certainly, ever since his Hajj.

In 1962, the building had started out as a simple hypostyle adobe structure with a rectilinear plan and a single "projecting mihrab as the only secondary volume" (http://www.akdn.org/akaa_award3_awards.asp).¹ As Barmou revisited the structure in future years (1975 and 1978 respectively), he added a central dome and then a tower in each corner, the dome requiring that he remove one of his larger hypostyle columns (Davey 1986, 87). While he may have been inspired by his experiences of foreign architecture as a hajji, his subsequent addition and removal of elements to and from the Friday Mosque of Yaama reflected a native mode of transformational building throughout al-Sudan.²

The act of reconfiguring the mutable adobe structure, whether to meet the changing needs of the community or to satisfy symbolic or aesthetic expectations, is a vital feature of adobe architecture from southern Egypt to the Atlantic coast of Mauritania. One might suggest that since the structures are made of mud brick, renovating them is more so a necessity than an aesthetic act. Yet the very impermanence of adobe has created a taste in builders and residents for rapid and regular reconfigurations in the floor plans, functions and adornment of these structures. Such changes are neither financially viable nor expected by people living in permanent

¹ In mosques (*masjids*), the mihrab is the marked or decorated niche that marks the direction of Mecca towards which the devoted orient themselves as they congregate. In buildings built specifically to be mosques, this feature is usually the focal point of the structure, much as the apse of a church (in which stands the altar) is meant to function.

² Any use of the term "al-Sudan" in this essay refers to the Afro-Islamic culture area stretching east from Mauritania to the modern country of Sudan on the eastern extreme of this same culture-area. The region received the name "bilad al-Sudan" or "land of the blacks" from Arabs during the initial Islamic expansions into Africa in the 7th and 8th centuries (Visonà 2001, 78). Thus "al-Sudan" here denotes a culture-area, not a modern country in East Africa.

concrete or stone structures, nor are they possible for people living in temporary thatch or textile dwellings. Rather the plasticity of semi-fugacious adobe architecture is a quality unique to that material. If the stone masonry architecture of the Harratins and Berbers of the Maghreb (the western Sahara and northwest Africa) is indeed monumentally solid, and the huts and tents of the Congo tribes and Saharan nomads can be likened to some soluble liquid, then the adobe forms of the Sahel³ would seem relatively gelatinous, deceptively solid while keeping their shape but suddenly transforming or dissolving when pressed by the architect or a few rainy seasons.

The shape-shifting mosque of Falké Barmou provides an at once unstable and dynamic location for the exploration of an ideal common to two seemingly distinct traditions, African adobe and Islamic monumental architecture. For both traditions espouse a pious embrace of fleetingness, though each does this in its own way. To compare the two requires a brief survey of Islam's architectural career in Africa.

Islam and Africa

In the book *The Formation of Islamic Art*, seemingly a work of perpetual relevance in the study of early Islamic arts, Oleg Grabar greatly nuances our contemporary thinking on the topic of Islamic aniconism and architecture. So universally applicable are some of his analyses that Grabar is a key source on the study of Islamic architecture in this article, though he makes no mention of so-called Black Africa. It is against the backdrop of Middle Eastern and Western (particularly Islamic Spanish and related Moroccan) Islamic scholarship like Grabar's, Robert Hillenbrand's, John Hoag's and my former graduate school instructor Jerrilynn Dodds' that I first felt urged to investigate whether there were any important similarities between the canonical mosques, palaces, tombs and other monuments of Middle Eastern and Western Islam and those of Africa south of the Arabized countries along the Mediterranean coast. The differences were more than clear, for adobe is not the mode of building in Islamic Andalusia! Yet, nowhere are the contrasts between Middle Eastern/Western and Black African Islamic architecture more simultaneously pronounced and inherently related as in the adobe mosques (*masjids*) of Mali, Mauritania, Niger and Nigeria.

Though early Islamic developments in the Near East and around the Mediterranean and those in modern West Africa may seem to have little in common, the dynamics at play in different Islamic societies, even at different times, can be surprisingly similar. While Islam has been on the African continent from its very inception as a religion, its tenure in al-Sudan has been characterized by a kind of historical irregularity that has caused it to remain a new phenomenon among some African groups.

With the obvious caveat that the Sahel is not the Levant, and that today's Djenne (Jenne) or Tomboktou (Timbuktu) are a millennium and a world away from the Baghdad and Damascus described by Grabar, Black Africa's slow and ongoing conversion to Islam renders some territories virtual 21st century frontiers where the same foundational processes are at play as in Arabia some 1300 years ago. Islam is still in an early phase in much of al-Sudan, from the edge of the defiantly indigenous Dogon territory (Visonà 2001, 130) to the Christian strongholds in Ghana and Nigeria. The delicate negotiation of an Islamic place and an Islamic role in a majority non-Islamic culture is still a

³ Arab traders called that area where the Sahara's 'sea' of sand eventually gives way to al-Sudan's northern scrubland, "the Coast" or "Sahel."

contemporary issue for West African societies in Burkina Faso, Sierra Leone, Benin and others (Visonà 2001, 106). The emergence of uniquely African Islam and uniquely Afro-Islamic art is a process still underway amongst urban, sub-urban, rural and nomadic groups. Syncretism abounds in both worship and art: for instance, the Zetaheal movement in Accra, Ghana, combines the two religions of Islam and Christianity;⁴ and the Muslim architects of Mali, Benin and Togo crenellate their mosques with the phallic crowns of ancestral altars (Elleh 1997, 252).

All these seeming heresies are the earmarks of a religion trying to situate itself in a new land, a player who has come to stay and does so by engaging in a myriad daily, monthly and yearly negotiations between individuals, groups and governments. And while Islam has been in North Africa since the 7th century and has played an important role in many West African cultures including the Malinke and Songhay empires, it is still just making inroads in many others. In some western territories of al-Sudan, Islam as a religious and cultural force has had an ‘on-again-off-again’ history in which it has been dispersed by environmental and political collapses only to coalesce centuries later as a distinct entity lead by kings and caliphs, scholars and generals, and resuming interactions with the local cultures (Blier in Morris 2004, 187-9).

Islam and Kings

In a photo from 1912, the Cameroonian king Njoya⁵ is depicted dressed like one of his allies from the Hausa (an Islamized people with linguistic connections to the ancient Egyptians and of which Falké Barmou is a member, who live far to the north in Niger and northern Nigeria). But King Njoya is sitting on a throne bearing numerous emblems of the Bamum royal religious cult (see Figure 2). The greeting takes place in front of Njoya’s then-newly renovated palace, whose pillars take the form of compact caryatids, each of them a totemic, deified ancestor.

With ceremonious indulgence, his guest, a Muslim Hausa armed with an impressive Hausa-Fulbe sword humbly bows to him. Historically, this has been a common attitude of Islam towards native traditions in Africa: the powerful religion, with constituents much sought after in trade and military allegiance, laying itself humbly before a population or potentate it might otherwise easily crush if it called in international reinforcements from Egypt, Morocco or Syria. In fact, Arabian and Indo-European Islam has a long history of such royal indulgences in which not only the staunchly aniconic attitude of the Muslim Arab culture but even the relatively ambivalent aniconism of the Qur’an and Hadith are blatantly suspended in favor of local custom.⁶

⁴ Christian ministers seem to object more to the union of the two faiths than Muslims in that Islam had always professed an embrace of Isa (Jesus) as a prophet of its own religion. Essentially, the Zetaheal followers are ‘Muslims for Jesus’ who profess Jesus’ preeminence above all other prophets.

⁵ I use 19th-20th century Cameroon here as an example of a country whose Islamic rule was temporary, a country south of the Sahel frontier, one of the furthest, most tentative outposts of Islam in al-Sudan.

⁶ In chapter 4 of *Formation*, Oleg Grabar makes the case that there is no direct doctrinal prohibition of images as practiced (and believed) by some Muslim practitioners today, and that the prohibition of images is more founded in Islamic tradition. I have noted the strongest impulse towards aniconism among Arab Islamic traditions and the strongest interest in image-making among Persian, Indian and African Muslims, especially during periods of princely patronage and prosperity.



Figure 2: King Njoya of Bamum in Cameroon receives a Hausa visitor (from Blier 1998, 167).

African kings have used Islam, sometimes sincerely, always shrewdly, to augment their own status, expand their influence and forge strategic alliances. Mansa Musa's Hajj in the 14th century flooded the Islamic world with so much gold (given as *zakat*, charity) that it almost collapsed the dar al-Islam's gold standard. This display of wealth on the road from the Mali Empire to Mamluk Egypt to Mecca secured a position for the Malian king in the hearts and minds of every Islamic city on the route (Boahen 1986, 29-31). Like modern hajji's Mansa Musa returned from Mecca with innumerable, invaluable business and social contacts. But he could not have imagined he would excite the European jealousies that would culminate in the enslavement of millions of West Africans only three centuries later (and the Scramble for Africa that followed Abolition).

Other African kings made Mansa Musa seem downright contrite even in his conspicuous display of generosity. For Mansa Musa's devotion to Islam was never in question. But leaders further south in Ghana, Benin and even as far south as Cameroon adopted the mantle of Islam as a flag of convenience. King Njoya, received *shahaddah* (the Declaration of Faith that makes one an official Muslim) several times between relapses to his indigenous religion, and donned various Islamic costumes for the reception of his Muslim guests from the north (Blier 1998, 166-7).

In the sometimes earnest but sometimes tentative relationship between Islamic culture and royal African traditions, there emerged a commensurate relationship between Islamic aniconism and often highly iconic indigenous cultures. The caryatids of Njoya's turn of the century palace or the sculpted facades of contemporary Hausa noble residences (see Figure 3) in many ways reflect those earlier prerogatives taken by Fertile Crescent rulers and nobles evident in, say, the painted figures at 9th century Jawsaq al-Khaqani in Samarra, Iraq, or the sculpted heads at 8th century Khirbat al-Mafjar. I would resist comparing the impulse behind Hausa sculpted facades and the ornamental reliefs at the Umayyad palace of Mshatta in Jordan however, since the Hausa reliefs are loaded with clan emblems and status symbols (including vehicles) interspersed with decorative elements whereas the Jordanian motifs are "exclusively ornamental, with no other value than that of enhancing the architecture" on which they are put (Grabar 1987, 154).

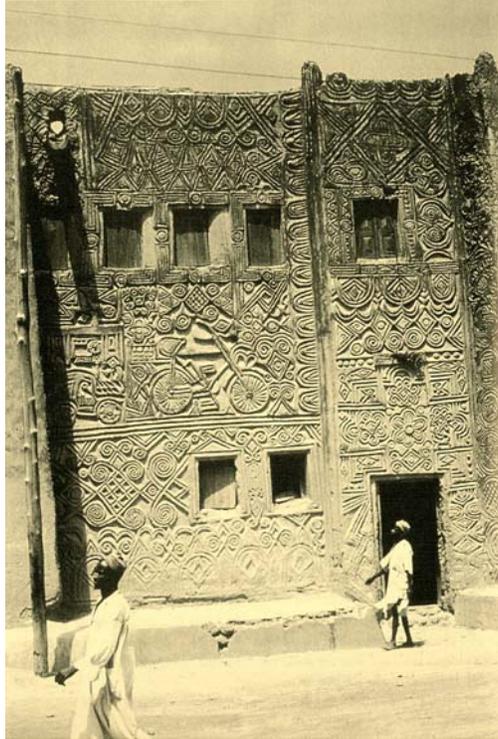


Figure 3: Hausa façade (*zaure*) in the town of Zaria, Nigeria (from Visonà 2001, 98).

Often derived from pre-Islamic traditions, the abstract, vegetal and figurative imagery on aristocratic edifices, from Baghdad to Bamako were commissioned and created by professed Muslims. Powerful political figures assigned Islamic context to local art and/or gave local meaning to Islamic arts. In cases like those of some Malian kingdoms and Niger nomads, the exchange, transition and resultant *mélange* came about with relative ease and reflected the proclivities of some personal, dynastic or emerging ethnic or national aesthetic. While in the case of the Bamum King Njoya, the eclectic appropriations from Islamic culture were capricious (he would later switch to a European-style palace and clothing), the arts of the Sahel to the north, an area that had been historically in more constant contact with the Islamic Maghreb, developed a full-fledged Islamic art.

The adobe mosques of al-Sudan are the very epitome of this hybrid coexistence. The Juma Masjid or Great Friday Mosque of Djenne in Mali is perhaps the most instantly recognizable example of Afro-Islamic cross-fertilization (see Figure 4). As an art that is at once functional and aesthetic, physical but potentially charged with spiritual significance, architecture is the monumental expression of Afro-Islamic *mélange*. My aim is to draw attention to the decidedly improvised and organic nature of this confluence (with the constituent cultural traits grounded in preexisting traditions on both sides) and to show that the improvisational attitude itself issues from a pious embrace of temporality, a value held in common by both al-Sudanic and Islamic culture.

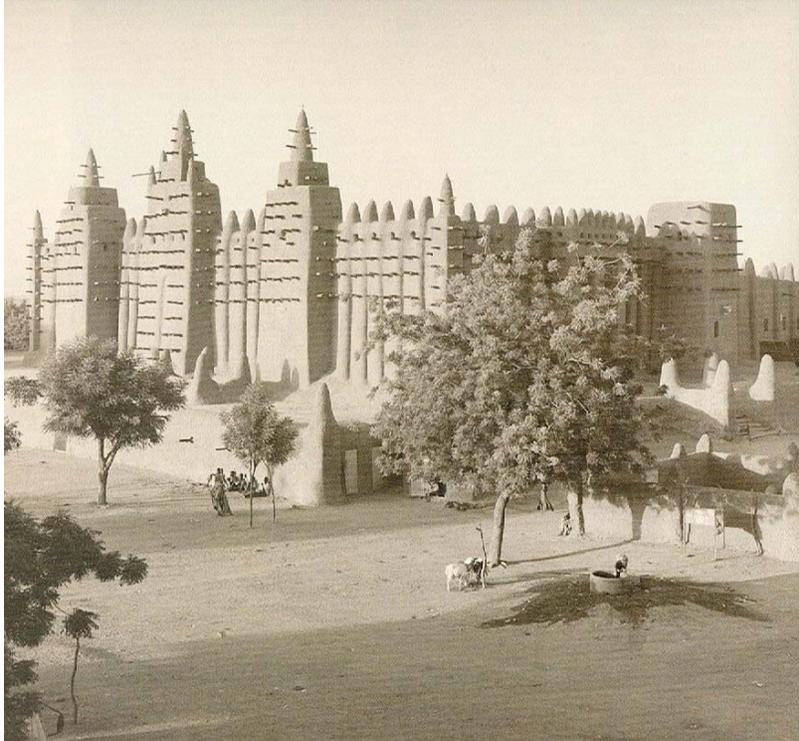


Figure 4: The Friday Mosque of Djenne (from Gates 1999, 108).

The Fleeting Masjid

From the Prophet Muhammad's constant reconfiguring of his own house to accommodate increasing crowds of the faithful to the yearly renovation of the K'aba in Mecca, Muslims evince a desire to renovate their structures though perhaps not for the same reasons indigenous West Africans might. A princely tradition from Abd al-Malik (7th century Umayyad builder of the Dome of the Rock) to Suleimans, the Magnificent and the II (16th–17th century sultans during the golden age of the Ottomans), up to the present, established the building and renovation of mosques as a worthy, necessary and sometimes conspicuous act of generosity. Mosques could be newly redecored by fine craftsmen or half-demolished and rebuilt. Many masjids throughout North Africa's and Spain's history were refurbished with recycled spolia from nearby temples and churches, their hypostyle plans sprawling, elaborating or towering with the addition of new qiblas, minbars, mihrabs, minarets, domes, arches or arcades.⁷

Driven by both an Islamic tradition that has repeatedly renovated mosques from al-Aqsa to Cordoba and an African tradition in ephemeral adobe, Djenne's celebrated Friday Mosque is annually renovated. It shares this renovating tradition with Falké Barmou's similarly named masjid in Yaama and famous mosques in Kano, Mopti, Timbuktu, Agadez and other parts of the Sahel. But in Africa, this constant renovation is just as much, or in fact more so, a pre-Islamic tradition employed for centuries in the maintenance and re-accession of dwellings, men's lodges, shrines and granaries. Tradition has always required that a house be extended with the growth of a family or the

⁷ Qibla: demarcated, usually platformed area surrounding the mihrab. Minbar: elevated platform flanking the qibla from which the imam delivers lectures/sermons. Minarets: towers built as identifying landmarks of the mosque and from which muezzins do the call to prayer.

family's herd of livestock; that the house entrance be altered by the interment of deceased elders within the structure; that the lodge's shape or decoration be in some way modified by the initiation of a new group of members; that an old structure be rebuilt or reconfigured to reflect the needs and cosmological beliefs of its new owners (Blier 1987, 1-24). The Voltaic people who spread out from Burkina Faso sometime in the 17th century seem to have brought a rich adobe tradition to much of western al-Sudan (Blier 1987, 4-5) where their building techniques were inflected by various other ethnicities such as the Fulani. The indigenous adobe traditions have been interacting for centuries.

While princely prerogatives and native geomancy may seem to separate the historical motives behind architectural reconfiguring in the Islamic and non-Islamic worlds, the willingness to change and the acceptance of change's inevitability are a common value shared by indigenous West Africans and Muslims alike. This is one of the foundations of the marriage between the two cultures as seen in the Islamic architecture of al-Sudan. At funerals, Muslims say resignedly:

*Inna lillahi
wa inna illaihi raji'un*

*("To God we belong,
And unto Him we return")*

Qur'an, Sura II: 156

Ghanaians of all stripes echo this 'ashes-to-ashes' sentiment, placing the preeminence on nature rather than God:

*"One is born.
One dies.
The land increases."*

Traditional proverb

The seeming fatalism of these two sayings belies the vibrant attitudes of the people who espouse their wisdom. For their part many West African arts seem to glory in this ephemerality. Though there is a greater number of stone and ceramic objects than any other kind surviving from ancient West Africa because of the durability of those materials (Garlake 2002, 9)⁸ far greater numbers of wooden and fiber objects than stone or even ceramic ones are traditionally made in this region (Visonà 2001, 17-19). It has been a topic of some interest since the 19th century as to why the peoples of Africa south of the Sahara willingly choose biodegradable materials over more permanent ones out of which to make art. The reverence for organic materials is clear in many masking traditions even though there is conversely a mystical power attributed to blacksmiths and metal working of any kind. Yet, the ineffable, "four-dimensional" nature of dance and music performance (i.e., time being the fourth dimension of which process and performance are observable traces), two of West Africa's most cherished arts; and the persisting evidence that even ancient ceramics, such as the Nok heads, were hewn in a wood-carving technique (when the clay is "leather-hard" or should we say "wood-hard"?) reiterates the West African proclivity for wood, fiber and other bio-materials (Visonà 2001, 79). These materials pass away in time, but call for the participation of the viewer to select them from a living source, then activate, maintain or de-accession the changing

⁸ Peter Garlake speculates that the great majority of African objects have not survived from ancient times since they were probably made of ephemeral materials as they were in more recent times.

artwork (using prayers, unguents and rituals), completing and repeating the cycle of life. For example, many ethnicities of al-Sudan seal eggs and feathers into their adobe structures' foundations as procreative symbols (Blier 1987, 44, 56).

The engaged and symbolic cooperation with ephemeral forms in the West African arts is quite different to the adaptive agility with which some African Muslims in the same area have renovated or innovated local architectural forms. As agents of change, African Muslims have often unceremoniously co-opted pre-existing structures. In his book on modern African architecture, Udo Kulterman adds, somewhat disinterestedly, that “[t]he ceremonial function of Islam in the cities and suburbs takes place mostly in emergency buildings” (Kulterman 1969, 61). He emphasizes the speed at which mosques are erected or appropriated. Assigning new function to some courtyard, enclosure or adobe structure, local Muslim masons build in the technological mode and style that they know. In also upholding Islamic notions of the aniconic, primarily functional mosque, they thereby replicate both accustomed indigenous and Islamic attitudes towards the changeability of architectural form.

Aniconism by itself can be a powerful catalyst of change as structures with strong connections to geomancy and pre-Islamic religious symbolism are radically divested of their original iconographic meaning while their physical entity is retained relatively untouched. In fact, in the early phases of Islamic architecture still being experienced by some nations of al-Sudan, we can observe that the precedent for Muslims' wholesale adoption of local forms without much thought of altering any except the most obvious and indelibly “pagan” associations, and the erection of temporary forms⁹ is an uncanny replication of those first days of Islam in Arabia and the Levant where there was “no conception of the building as a physical or complete entity” representing the religion through iconography, monumentality, or the uniqueness of form (Grabar 87, 108). In these facile conversions, the union of indigenous adobe form and Islamic function has occurred with relative ease across al-Sudan.

Reduced to a new and pragmatic functionality though, these reassigned structures only evince deliberate Islamic values and aesthetics after decades or even centuries of habitual use and, perhaps, the occasional royal or community initiative. They start out as facile tools of worship, which must “be able to expand or contract” and “have a flexible and additive system of construction” (Grabar 1987, 109). But slowly they begin to evince the ideals that we might recognize as distinctively Islamic: a wall without windows marking the qibla, Arabic inscriptions above doors, a horseshoe arched window in the style of Islamic Morocco. When we consider Falké Barmou's construction of the Yaama masjid, we see such elements (see Figures 5 and 7) on a structure that is at once his ongoing life's work and a kind of finished product: a culmination of the Islamic adobe traditions in the southern Sahara.

The very devices, forms and embellishments employed by Barmou are part of an emergent Afro-Islamic vocabulary which he admittedly borrowed from pre-existing structures. So it can be inferred that after an initial period of acquisition, adaptation and acculturation, African adobe does in fact settle into a distinctly Islamic form. Even as indigenous architects and masons all across the Sahel savannah are still attempting to reconcile their new faith with their old adobe building forms, others are working within

⁹ Kulterman would add that mosques are “needed and put up in great numbers” out of the freshness and the quantity of conversions in this Islamic frontier experience (Kulterman 1969, 61).

already popular Islamic styles of adobe borrowed or inherited from earlier Muslim converts. The great Friday Mosque at Djenne in Mali is, of course, one of the quintessential examples of an already established, often replicated Afro-Islamic adobe tradition. Its trapezoidal towers, for example, are obvious precursors of Barmou's even as Barmou departs from many of its features. A brief survey of Djenne's great mosque reveals it as a classic of Sahelian Islamic architecture, from which other mosques descend (including the Niono Mosque¹⁰ in Mali that received the 1983 Aga Khan award, the cycle before Barmou's) and to which other mosques react in an ongoing discourse in ephemeral earth. In looking at the Malian Friday Mosque we also see the full cycle of vicissitudes that can affect adobe Islamic architecture in this part of Africa.

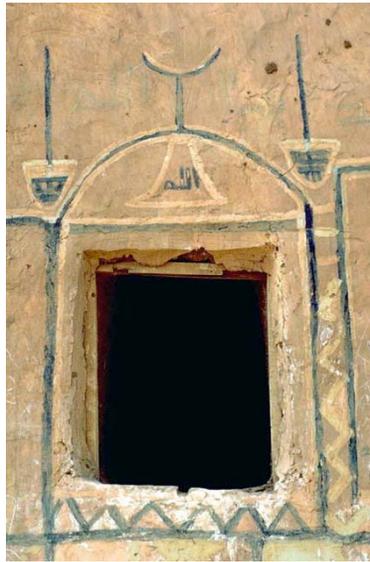


Figure 5: window of Yaama mosque surrounded by painted decorations and inscriptions, including angular (Kufic) script of "Allah" at top center.
(from http://archnet.org/library/images/thumbnails.jsp?location_id=1914)

The Friday Mosque of Djenne as a Prototype

The Friday Mosque of Djenne is perhaps the greatest and oldest of the Sudan's Islamic structures. It has provided inspiration and design solutions to countless Islamic architects and master masons before and after Falké Barmou, within Mali and in neighboring countries like Barmou's native Niger. As it stands today, the Friday Mosque is a perpetually renewed building standing in the footsteps of an original, which stood perhaps as early as 700 years ago. Its earliest version seems to have been a massive hypostyle edifice built in the 13th century. The city of Djenne, already then a millennium old, would have had a Muslim presence since the 9th century, a far cry from some West African cities that are only just reckoning with Islam. By some accounts, it was the Muslim King Koi Konboro who demolished his palace and built the great masjid on the royal site, converting a part of the mosque to his residence (Elleh 1997, 247). The mosque stood for centuries, sustained by regular renovations before it was abandoned under the order of the fundamentalist Peul king Sekou Amadou who saw in it vestiges of animist tradition and perhaps cultural contamination from the Moroccan invasion of 1590

¹⁰ <http://www.akdn.org/architecture/awards.asp?tri=1983>.

(Blier and Morris 2004, 188). Amadou's exact objections would be helpful here in figuring out just which elements of the mosque's design would be considered animist or idolatrous by puritanical Fulani (i.e., Peul) kings but no descriptions by Amadou seem to have survived. After Amadou's strict regime fell in the early 19th century the building remained abandoned for some years, infested by swallows, growing more and more dilapidated and leaving local Muslims who had returned to the beautiful mosque to pray only in its enclosed courtyard. The Friday Mosque was finally restored under French colonial auspices in 1893 and again in 1906-7 (Elleh 1996, 248-9).

By descriptions and illustrations made by Felix Dubois, a French journalist who visited Djenne in 1895, several features of the original mosque appear to have been retained in the French-era restorations. The buttressed walls were shorn up, refaced and possibly extended slightly to their present height of some forty feet. The towers located halfway along the lengths of the east and west walls were likewise renovated and at least two more towers were added. The distinctive *torons*, structural beams, which in al-Sudan adobe structures are allowed to protrude decoratively from the sides of the structure, were retained and perhaps some older, rotting ones were replaced. These *torons* bristle up the sides of adobe buildings, conspicuously marking the levels of a structure and thereby enhancing its monumentality. A blind wall marking the location of the Djenne mosque's *qibla* also seems to have survived from the original form (Elleh 1996, 248-9).

The earthen roof (plastered atop a latticework infrastructure) and the large pillars flanking the entrance are indigenous to western al-Sudan and would have most likely always been part of the structure. Such pillars at the Friday Mosque commemorate the lives of important *marabouts* (high religious teachers) in the same way that they would memorialize ancestors in some pre-Islamic homes and lodges. Thus the funerary pillars at Djenne's Friday Mosque are a carry-over from the traditional past, as built-in lineage markers conferring blessings on the architecture (Blier 1987, 31).

During the French renovation, several new features were assigned to the Friday Mosque. The special court for women was probably one of these 19th century additions, not a new separation of the genders but in fact an inclusion of female worshippers in post-Peul times. From 1886, the French had been in Mali as a colonial power and their residences and civic buildings there quickly copied the local forms in material and style, both out of necessity (only adobe materials were available) and a desire for their buildings not to be overly conspicuous. As they imitated the locals, they began to introduce elements of their own including arcades, attached pilasters and cornice structures. These elements can all be seen at the Friday Mosque.

However, some of these elements were already known through al-Sudan's contacts with (Mediterranean) North Africa, so it remains unclear just which are 'the French contributions to Malian architecture.' The presence of pointed arches, a tripartite facade and even the interior spiral staircase at the Friday Mosque were likewise already in existence at the Great Mosque of Timbuktu by the time of French occupation. Some of these elements are bound to have been suggested by the French authorities upon the refurbishment at the turn of the century, but just which has been in doubt for a whole century of study (Blier and Morris 2004, 197-8).

With this sort of Afro-Islamic architecture having emerged in Mali and Niger only in the last 1,000 years, but with ongoing renovations that constantly change their

“flexible and additive” shapes, it is difficult to ascertain just what about them is modern. Yet the very vicissitudes endured by the essentially indigenous construction of this building on its way to becoming a classic work of Islamic adobe (sometimes featured as the single-most representative of African adobe in books and on Islamic websites) makes Djenne’s Friday Mosque a collective pastiche of Afro-Islamic adobe’s past, present and future. Emerging from indigenous tradition, this class of structure persists through numerous adjustments to Islamic function, embodying the organic evolution of an Islamic adobe aesthetic.

Its earth construction, ceramic gutters and ostrich egg crenellations¹¹ may root it in pre-Islamic history, but its distinctive qiblation; its towers not used as granaries or gender symbols but as minarets; its small Moorish horseshoe arched windows on all but the blind qibla wall; its enclosed courtyard; and today, its electric megaphone for the calls to prayer, all make the Friday Mosque of Djenne uniquely Islamic. In its clear success as a beloved, functioning, millennium-old model, it is rightfully the archetype of the class. “The Djenne Mosque” says Suzanne Blier “came to signify a sort of official ethnic style for the region.” In her text to James Morris’ photographic monograph *Butabu*, she describes just how this mosque “also became a source for the design of other local mosques and residences” throughout western al-Sudan (Blier in Morris 2004, 198). But the Djenne mosque’s inevitability must also drive modern architects like Falké Barmou to define themselves in contrast to it.

The Hybrid Masjid

Though the exact routes by which they came are often uncertain, the Western elements of Afro-Islamic adobe are often quite evident. Nnamdi Elleh’s separation of these ‘influences’ into European, Islamic and African¹² can be misleading in that it deemphasizes that Islam in Africa has usually been a vector for mostly Mediterranean European architectural forms long-deputized (much like pre-Islamic African adobe itself) into Islamic service. The Muslims brought more European morphologies than the Europeans did and did so earlier. In fact what might have been called “Islamic” upon its first appearance in Africa (e.g., domes, arches, pediments etc.) was actually “Islamized European.” Despite all the Western elements brought by Arabs to Africa, some elements only seem Western when in fact they are not. Falké Barmou’s dome on the Yaama mosque (a feature not seen at the much older Friday Mosque) is assumed to be an imitation of the North African and Arabian domes he saw on Hajj.¹³ The lack of interviews with this master-mason-cum-farmer-cum-vendor leaves us wondering. Yet

¹¹ The insertion of ostrich eggs into the conical crenellations is a definite vestige of indigenous procreative symbolism but is poorly explained by all of my sources.

¹² Nnamdi Elleh espouses a “Triple Heritage” from the earliest portions of his book *African Architecture* (from pg.8 onwards) as a means of discussing what he sees as discreet influences which Africa synthesizes. The triple heritage notion soon becomes strained as the reader considers that Islam first developed an architectural vocabulary in the eastern Mediterranean and had already spread to Africa before it was inflected by Central Asian or even Turkic style or form. Thus, in Africa, Islam would seem to me a decidedly Western entity, already encompassing two of Elleh’s three heritages.

¹³ For example, the Quairouan (Kairouan) Mosque in Tunisia is one of the world’s oldest, most revered domed masjids, but its dome is located above and behind a pediment façade (more like at the Great Mosque of Damascus and St. Peter’s Basilica for that matter), not in the middle of the roof like Barmou’s.

some scholars have suggested that the adobe ‘dome’ may not have a Mediterranean pedigree.

As with the Inuit snow igloos of Canada and Alaska, Hausaland¹⁴ domes may have a purely indigenous origin that calls into question the universal attribution of domes to Roman diffusion. Since the domes on many mosques in the Hausa-Fulbe regions of Niger imitate the shape, proportions and even the infrastructure of Fulani (and Tuareg) tents, some scholars have suggested that the transition of that temporary, nomadic ‘cupola,’ covered in blankets, to a permanent structure covered in earth would have been a natural one (Blier in Morris 2004, 208). Falké Barmou’s mosque illustrates this ‘tent dome’ infrastructure, made of bent wood covered in the standard lattice work used for roofs, then plastered in adobe (see Figure 6). In fact the domed structure can be seen on the granaries of many autochthonous groups of the Sahel, including perhaps most famously, the Dogon, who place a separately thatched roof atop it in the manner of a hat. Thus the Western dome may not have been introduced by Arabs, Harratins or Berbers, nor by the French and British powers during the “Scramble for Africa,” but may be instead homegrown.



Figure 6: Yaama dome interior with square base and hemispherical top; and latticework beneath adobe plaster (from <http://www.islamicity.com/Culture/Mosques/Africa/TMp192b.htm> and http://archnet.org/library/images/thumbnails.jsp?location_id=1914).

The Yaama Mosque In Historical Context

The Great Mosque of Yaama designed by Falké Barmou is a core sample of that modern generation of mutable mosques that draw their inspiration from the cultural synthesis exemplified by the Friday Mosque at Djenne and others (see Figure 4). Just as a whole community would have participated in the construction of the Djenne mosque, a community that insists on its preservation today (Blier in Morris 2004, 196), so did the entire town of Yaama in central Niger build Barmou’s masjid (Davey 1986, 87). As in al-Sudan adobe traditions from Burkina Faso to Chad: elders and scholars (imams and marabouts) consult with the architect; the architect devises an architectural plan with their recommendations in mind; men dig mud from trenches nearby and fashion the bricks; the

¹⁴ Hausaland is a name given to the contiguous ethnic territory spanning northern Nigeria and much of Niger where the powerful Hausa ethnicity reside, often with their allies the Fulani (Fulbe).

architect and his apprentices lay the foundation bricks in the desired shape of the floor plan; women bring water for the plastering; children do odd jobs assisting their elders, including carrying wood; and a mixed (often female) crew finishes the building in palm oil or other oils to waterproof it (Loughram and Lawton 1987, 28-37; Blier 1987, 14). The Great Mosque of Yaama is thus a communal project where several hundred people are invested in its maintenance as a product of their hands and a representation of both their faith and their regional community.

The modestly decorated hypostyle Yaama structure features a square tower in each corner of its enclosure (see Figure 7). These stepped minarets were lauded by the Aga Khan jury for their expressive asymmetry which only vaguely recalls the stepped minarets in neighboring masjids. The minaret on the southern corner of the windowless qibla wall seems the most monumental: four stories tall, bearing projecting, horizontal bands of modeled adobe, and topped by a small cylindrical room augmenting its graduated appearance (see Figure 7, *right*). The windows on the towers are usually arched whereas the windows along the walls are rectilinear.

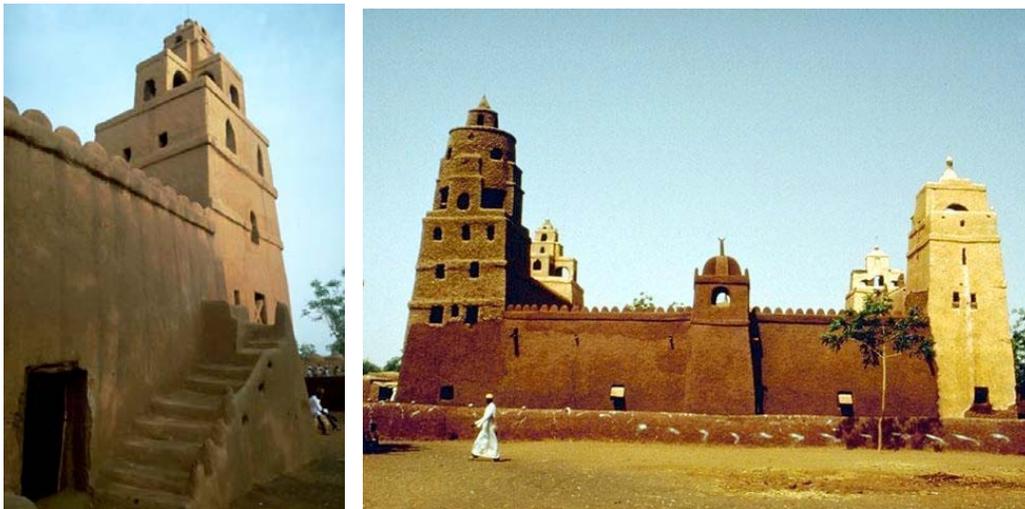


Figure 7: minarets of the Yaama Mosque, including along the windowless qibla wall (*right*) (from http://archnet.org/library/images/one-image.jsp?location_id=1914&image_id=13704).

The parapets running between the towers are decorated with simple semicircular crenellations instead of the common conical forms seen in neighboring Mali, where Voltaic peoples have a pre-Islamic ancestral cult whose altars bear that shape. This is not to say that the Yaama mosque has a purer Islamic form any more free from pagan elements. Indeed the conical crenellations at the Friday Mosque in Mali may bear only the convenient shape of those pre-Islamic altars while retaining absolutely none of their meaning. It was the 1982 version of the Yaama mosque that was honored by the Aga Khan Development Foundation in 1986 but the masjid has since received several renovations including an additional crenellated design above its mihrab, of which no clear image has become available.¹⁵

¹⁵ The fact that James Morris purposefully omitted photographing the Friday Mosque of Yaama because it was “looking run down” (Morris 2004, 6) alerts us to the choices writers, editors, and in this case, photographers, make in presenting the adobe architecture of Africa to the reader. Indeed, I was unable to find images of an adobe structures in ill-repair even though numerous texts mentioned that the

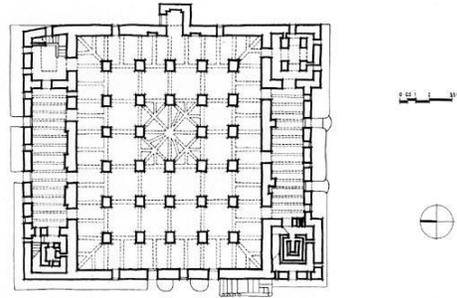


Figure 8: the central dome of the Yaama Mosque (compare to floor plan, *right*, and dome interior in Figure 6). (from http://archnet.org/library/images/one-image.jsp?location_id=1914&image_id=13704).

The fascinating Hausa dome of the structure is located more or less at the center of the building's hypostyle interior (see Figure 8). In the forest of massive pillars, lit obliquely by windows and doors (see Figure 9), open bent-wood arches sprout much like branches from slightly tapering tree-trunks. Above them is the dome resolving from a circular opening in a square base (i.e., without pendentives) into a hemisphere whose bentwood infrastructure can be seen plainly (Figure 6). The wood, then stick and reed, then earth construction of the dome may seem vulgar (or "vernacular") to Barmou's Moroccan, Algerian and Tunisian neighbors, but it provides a biomorphic continuity to the grotto-like, earthen textures of the interior, expression of an ancient, revered aesthetic.

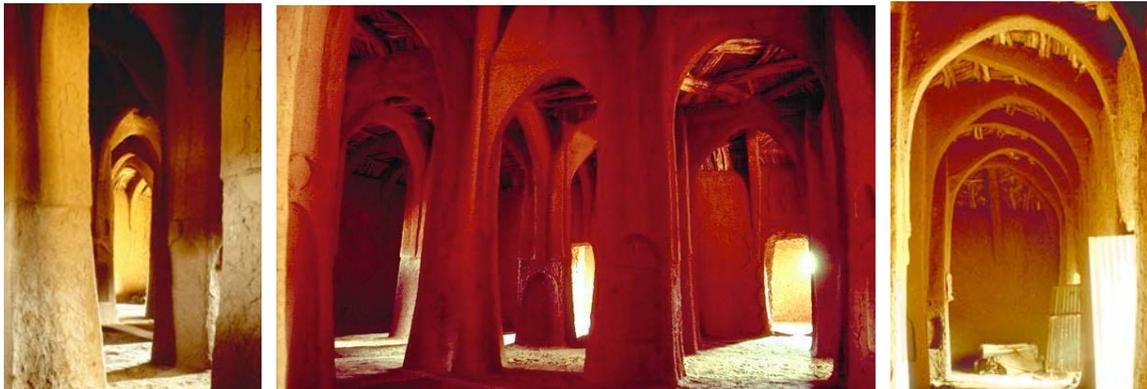


Figure 9: Hypostyle pillars and bent-wood and plastered arches of Yaama Mosque (from http://archnet.org/library/images/one-image.jsp?location_id=1914&image_id=13704).

My first impression of Sahelian and Sudanese adobe was that it bore an uncanny resemblance to the organic, yet geometric productions of savanna insects. Indeed, the Batammaliba of Togo, not too far to the south of Barmou's town, often choose building sites that are favored by ant and termite mounds (Blier 1986, 24). The natural wisdom of the insects (which seem to choose spots with enough light and less prone to flooding) is sought by the builders and seems to have passed on to al-Sudan's master masons. Like in a termite mound, the mud bricks from which these structures are built take all day to

dissolution of the structure is perfectly natural after the death of the owner or after some pronouncement from a king, emir or governor causes it to be abandoned. Thus, while the texts speak of the intentional, aesthetic impermanence of African adobe, the authors/photographers do not seem to likewise embrace this notion or see it fit to show the structures in their various states of dissolution.

warm to the unbearably hot temperatures outside, thereby retaining a cool interior for daytime prayers. And just as the accumulated heat of the day threatens to make evening *salat* an unbearable ordeal, the faithful need only open a few windows to flood the large, darkened structure with cool evening air. Of course, Barmou's dome also aids with air circulation. In the sometimes-chilly semi-desert mornings, the delayed effect of the adobe has kept the building fairly warm and comfortable for morning prayers.

Thus, adobe is used as an insulating memory-material, retaining the coolness of the night halfway through the day, and retaining the warmth of the day well into the night. With an interior temperature that is always some nine to twelve hours behind the actual temperature outside, the building is a haven for the faithful.

Perhaps the most striking, and perhaps most award winning, aspect of the Friday Mosque of Yaama is its utter lack of resemblance to the famed Friday Mosque of Djenne latent in its pedigree. The parapets are far lower, the towers far higher in relation to the rest of the building, and the distinctive studding of torons, almost ubiquitous in this region of Africa, are nowhere to be seen, hidden inside bands of molding. While the Aga Khan committee made no mention of the Friday Mosque of Yaama's stark contrast to the Friday Mosque of Djenne, its praise of Barmou's 'creativity,' 'innovation' and 'experimentation' (http://www.akdn.org/akaa_award3_awards.asp and http://www.akdn.org/architecture/pdf/0550_Nig.pdf) politely praise the architect's almost complete departure from the Djenne design tradition. In his combination of Hausa dome technology (an indigenous feature not extant in most adobe mosques) with various pan-Saharan adobe styles evidently witnessed on Hajj, Barmou has entered into his own dialogue with international Islamic architectural traditions and has produced something unique. Praised by the Aga Khan Development Foundation, the Yaama Mosque may represent a new prototype emerging before our eyes, either one to be emulated or one to inspire equal or competing originalities.

Falké Barmou, of course is no mere stitch in some pan-Sudanic cultural brocade. His mosque is not simply an emergent property of his random combination of structures he saw in his travels. Apparently some parts of his life's work come only from him (or perhaps "through" him as poet Khalil Gibran describes the passage of children). James Morris reports that when he asked Barmou about his inspiration for the Yaama masjid, the now-retired architect (whose protégés are called to work all over Niger) replied that the idea and the skills necessary to build the great mosque had come "one night in a dream from God" (Morris 2004, 7). Likewise, when interviewed by Aramco World journalists at the Aga Khan award ceremony in Marrakech, Morocco in 1986, "a modest Barmou showed his big farmer's hands" to the reporter and declared "I just work with these, and my heart" (Loughran and Lawton 1986, 37).

The Future in Ephemeral Adobe

In his 1969 book *New Directions in African Architecture*, a book written not long after the independence of a great many West African nations, Udo Kulterman suggested that African architecture needed/needs a "newly activated African tradition" involving the marriage of a somewhat unconscious native tradition to the "latest technical and construction methods from abroad" (Kulterman 1969, 12). But would these latest foreign building methods, somehow grafted unto "unconscious" traditional styles, work in the blinding West African glare or would such edifices stand up against the sandblasting

Sahara? Would an investment in a brick and/or concrete buildings not represent thrice (or more) the expense of a mud building in the production of a structure that would only last a few years longer than mud, whittled by the Sahara's winds (or choked by the Congo's vines)?

Had the choice of adobe not spoken an African wisdom centuries ago which is still current today: that since all structures are impermanent in the harsh Sahara, Sahel (and rainforest) then a building might as well be made of mud as of mortar. For any building would need to be regularly refurbished when un-protected by temperate climates, so ought it not be of a material that is easily replenished: a "sustainable" material? Since a building will require constant maintenance, its infrastructure might as well make provision for its repair, like at Djenne, Timbuktu, Agadez and so many Sahelian towns with their toron-studded walls (see Figures 10*a* and *b*), though curiously and defiantly of Barmou, not at Yaama. Since a mud roof staves off heat, why introduce one of galvanized iron that would require the additional expense and maintenance of electric air-conditioners (which, in turn, choke the streets with their exhaust)? And this is how the wily adobe structure, perpetually ready for the scaffold, persists to this day as the material and construction method most suited to the local ecology (and economy) of the Sahel. It goes without saying that environmental concerns are more central issues today than when newly independent African nations first flirted with Western industrial notions of poured concrete, steel and glass.



Figure 10: *a*, Djinguereber Mosque in Timbuktu, Mali; *b*, Agadez Mosque in Niger. (from <http://www.phenomenica.com/2008/10/sankore-mosque-timbuktu.html>; and http://en.wikipedia.org/wiki/File:1997_277-9A_Agadez_mosque.jpg).

His vernacularian reference to "unconscious" traditions notwithstanding, Kulterman was ideologically well situated in calling for an African architecture that embodies "the spirit of the past...accommodated to the needs of the present," modern function grounded in tradition (Kulterman 69, 22). In many ways, this is what the Aga Khan award also seeks to celebrate, and found in Barmou's mosque (and Mali's Niono mosque as well). In the same decade as Kulterman, Bernard Rudofsky's acclaimed work, *Architecture without Architects* repeatedly praised Africa's adobe architecture for its ecological genius. Both authors cautioned against the 'importation of clichés' as could be seen occurring wholesale across Africa: nations freshly independent with imported architects from the "metropolises" they had recently thrown off, now on the new government's payroll. This misguided "post-colonial" recourse to the old colonial power for architectural ideas was an irony replicated throughout the Caribbean, Latin America,

South and Southeast Asia. Some governments and local businesses now look to the new powers of the global north, such as China, as yet more novel metropolises from which they might glean yet fresher (cheaper?) modernities, rather than taking stock of their own environment and what special needs, functions and ideas it might engender (see <http://www.architecturecaribbean.com/article-details.php?id=3>).

It is precisely because the Friday Mosque of Yaama seems to address the disappointment in imported modernisms that the Aga Khan jury commended Falké Barmou's inspired, savvy willingness to "experiment...and to achieve results that induce a new awareness of...possibilities" in the indigenous mode. Upon the gelatinous aesthetic of the Sahel's wet clay, Barmou, among the latest in a millennium-old line of Afro-Islamic adobe masons, has embossed the distinct wisdom of an increasingly indigenous Islam.

Epilogue: July 2010

As I recover from bronchitis that I contracted at a recent Caribbean studies conference in Barbados, I am considering the role that architecture played in my current ailment. As I ran from conference session to conference session, I moved between the balmy June heat of the Lesser Antilles to the refrigerated coolness of the conference rooms. Often I was sweating as I ran from a session that ended late to one that was just beginning only to have the perspiration practically freeze on me as I sat down for another informative group of presentations. On occasion, I myself had to present papers under these same mercurial temperature conditions, stressing my ear, nose, throat and vocal chords with lungs full of cold air that had just come from the heat outside. As I sat shivering in some of the conference sessions, my eyes sometimes scanned the walls for windows, vents and the effective use of natural lighting. But everything was lit by fluorescent bulbs, the only vents were ones that belched freezing air, and the windows were shut tight as to not let that precious Freon-cooled atmosphere escape. "There must be a better way," I thought, already getting a little itch in my throat...and remembering Falké Barmou and a cool desert architecture that Star Wars director George Lucas adopted to the dry planet of Tatooine (which he filmed in the Maghreb).

"Where are the openwork transoms of the old West Indian houses?" I thought. "Or the jalousies that used to bounce reflected light off the ground outside up into the ceiling inside?" But I was not just reminiscing about the West Indian past. I also wondered "Why has no one invested in a whole-house fan for each of these conference rooms so that an open pair of windows would send a constant breeze shooting through the room? No one has thought of using these high ceilings to circulate hot air out of the building? Shouldn't all this equipment be powered by a solar array outside, or at least a cute little wind turbine, maybe disguised as one of the picaresque old plantation windmills that Bajans take their wedding pictures in today? We have so much sun and breeze here!"

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