

Traditional Building Forms & Techniques, Ijebu-Ode, Nigeria
With particular reference to Iwesi, a village on the outskirts of the town
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Volume I Number 18



Close-up of a wall section, graphically depicting Iwesi builtform in historical progression: to the left, cob construction typifies the earliest building tradition; in the middle, repair-work was effected in earth bricks, sand-cement- earth-bonded; to the right, is the latest repair job, featuring sand-cement blocks. Jump to [Images of Iwesi](#)

Literature abounds, worldwide, on the indigenous building practices of many cultures; this is particularly true of such cultures as have caught the eye of the western world. Various authors (such as Denyer, Gardi and more recently, Dmochowski) have done significant research on the indigenous architecture of the African continent. However, when compared with what is available vis-à-vis other developing cultures, there is still a relative paucity of information on traditional African architecture. Dmochowski's work more pointedly centred on a single nation (i.e. Nigeria), may be regarded, somewhat, as a bold step towards redressing this imbalance. Research work focusing on the builtform of ethnic sub-groups is, generally, still in its relative infancy. The present research effort is one such venture, spotlighting the Ijebu – a tribe of the Yoruba ethnic group in Nigeria – and examining the development of their indigenous domestic architecture.

The village of Iwesi, on the outskirts of Ijebu-Ode, is used as the case-study for this research. Village elders, serving as key informants, supplied historical details of not only cultural origins, but also of construction techniques, local terminology for forms, materials and techniques, and other useful information. The ethnological origins of the Ijebu are traced – to sociologically contextualize them. A critique of the local indigenous architecture (in terms of the forms, and the techniques and materials generating them) was the main thrust of the survey conducted.

It was discovered that the most popular building technique is cob construction, with floor-plans invariably rectilinear. A typical homestead is seen to either take the form of clustered living spaces centered on an impluvium, or be a loose aggregation of discrete units essentially unified by socio-cultural exchanges. The traditional kitchen, a major ancillary facility in a typical Yoruba home, is discovered to feature improvisations to increase its utilitarian value.

1.0 INTRODUCTION

The Yoruba town of Ijebu-Ode is situated to the south-east of Ibadan; it is one of the major towns of Ogun State (and indeed, of the old Western Region of Nigeria).

1.1 Climate

There is, generally, rain throughout the year, though most of it falls during the wet season – April to October. The town enjoys two rainfall maxima: one in June, and the other in round about September. (The occurrence of the double maxima is in tune with the overhead passage of the ITCZ). It lies on the boundary separating the 60-80 inch (150-200 cm) mean annual rainfall belt from the 40-60 inch (100-150 cm) belt; the mean annual rainfall is, therefore, about 50 inches (125 cm.). Daily ranges of temperature are usually very small (under 20 F), except during the Harmattan season, when they are slightly higher (25-30 F). Maximum diurnal temperature, generally, lies between 75 and 85 F, while the minimum is seldom below 55 F. Absolute humidity is consistently high, though there is usually a marked drop during the Harmattan i.e. from mid-November till early January. Relative humidity is also high. (The high rate of evapo-transpiration can be accounted for by the high sunshine value – usually more than 7 hours a day – coupled with the occurrence of rain throughout the year).

1.2 Geography

Ijebu-Ode is situated in the lowland rainforest belt. The original forests have been robbed of most of their iroko, obeche, mahogany, greenheart, etc trees, and the present-day vegetation is mostly secondary, dotted here and there with a few of the old forest giants. The trees are mostly hardwood deciduous, with a spattering of evergreens. Land in the immediate vicinity of the town, is generally low-lying – seldom exceeding 100 ft. (30 m) in height, above sea-level. Laterite is the predominant soil-type (as indeed it is all over the country), while the underlying rock is Eocene. The town lies in the basin of both the Ogun and Osun rivers, though no major river actually runs through or passes by it. However, there are quite a number of local streams such as the Iyemule and Okiyian streams.

2.0 ETHNOGRAPHIC HISTORY AND MOVEMENT

The Ijebu, as a sub-group of the Yoruba, have a common origin; it is commonly supposed that they all – those from Ijebu-Ode, Ijebu-Igbo, Ijebu-Remo, etc – as well as other Yoruba sub-tribes had their origin in Ile-Ife. However, another school of ethnological thought (which the Ijebu-Ode people identify with) says they originally came from Wadai in Sudan; they are only related to the Ifes by marriage, as the founding father of the tribe gave his daughter to the son of Oduduwa, the progenitor of the Yoruba race, during his stop-over at Ile-Ife, on his outward journey from his place of origin.

It was difficult to ascertain from the elders of the Ijebu village of Iwesi (about 2km from Ijebu-Ode), the motives that prompted their ancestors to migrate to their present location; whatever legends there might have been to account for the migration, have been lost in the

mists of time. The account that is given today is one of migration as a result of the discovery of "fairer lands", through hunting expeditions – which often took days, or even weeks.

The early settlers were, essentially, an agricultural and hunting people. They were skilled in the art of hunting, and brought home such game as cane rats, giant rats, a variety of duiker (*etu*), monkeys, bush-buck, large birds and occasionally, even elephants and leopards. The traps used in such expeditions were the ingenious invention of the hunters; dane-guns using locally-manufactured shot, were also used. The "bush-meat" thus provided, not only constituted most (or all) of their protein diet, but was exchanged (as an article of trade) for other necessities, or for cowries (*owo eyo*). Agricultural pursuits were mostly subsistence, yielding grains and roots – namely corn, yam, cassava and coco-yam. However, the palm-tree was tapped for its oil, both for domestic and trade purposes. (The palm fruit was collected into canoe-like wooden receptacles made from hollowed out logs, and well-trampled by foot, resulting in the separation of the oily pulp and the kernel. The pulp was then squeezed to extract the oil, and the "condemned" pulp later made into material for kindling fires, *oguso*).

Other economic pursuits of the early settlers included weaving, smithing (knives, axes, cutlasses and traps were made, using locally "smelted" metals from the Ibadan smelting district); brass-casting, pottery and terracotta modeling. The weaving industry specialized in making "pile cloth" (*itagbe*) for chiefs, *obas* and cult members. Dyeing was a closely-related industry.

Trading in those days was very important, inasmuch as it kept them in touch with other tribes, and supplemented many aspects of their daily life, as well as broadening their general outlook. The Ijebu traded in gun-powder (*ebu*), palm-oil, as well as other products already mentioned. Today, trade (commerce, generally) is the major pre-occupation of the Ijebu, and the most striking feature of it is that articles of trade are no longer locally-manufactured, and range from factory-produced textiles to motor vehicles.

Availability of water, always a major consideration in the founding of a settlement, was not overlooked in the early days. There were a number of streams, most of which, however, were intermittent. In the dry season, therefore, it was not uncommon (in fact, often it was expedient) to sink wells from which the settlers drew water for domestic purposes. Today, piped water flows in the town (though, occasionally, the flow could be described as intermittent too!).

In the days when the settlement first acquired the status of a town, a wall (*eredo*), some 20 ft. (6 m) in height, was built round to discourage potential aggressors. Beyond the wall, there was also a moat – about 25 ft. (7.5 m.) deep. The wall had major and minor gates giving access into the town, and there were four (or multiples of four) of these – a standing tradition in those days. It is doubtful whether there is anything to be seen of this wall, today.

Using the yardstick of numbers, the Ijebu are a people greatly inclined towards urbanisation. To a large extent, on an occupational basis, they could also be described as urban. (This is borne out by such towns as Ijebu-Ode, Ijebu-Igbo, Ijebu-Remo, etc, which today, have less than half their populations engaged in the primary industry, and each with a population of well over 200,000 people, as well as by the fact that, even in the early days, they tended to

settle in large numbers). This trend is, perhaps, influenced by the location of the Ijebu between the urban centres of Lagos and Ibadan.

3.0 DESCRIPTION OF THE SETTLEMENT

Over 70% of the developed part of the present-day town of Ijebu-Ode is given over to residential buildings. Mud-walled traditional buildings bravely stand shoulder-to-shoulder with modern sandcrete-block, storeyed ones. The transition, for the most part, has been very gradual, and is commonly status-motivated: a petty-trader who starts off by living in a 4-room earth house, feels he should move into a 6-room one made of laterite blocks held together with cement, in tune with a big boom in business, and a "promotion" to the status of "businessman".

For the most part, the pattern of settlement is haphazard. A central location of the *Awujale's* (the traditional ruler's or *oba's*) palace is, however, apparent. This has not been brought about by deliberate planning, but rather, by the fact that in the olden days, it was customary for the *oba's* subjects to build their houses roughly round his palace on all sides, such that, with time, it became the centre of the settlement. In the village of Iwesi, however, the house of the village head (*baale*) is situated right on the outskirts of the settlement. Perhaps this is not so surprising, when one considers that the settlement is very small, and that the *baale* is more or less a figurehead, having no administrative powers, whatsoever, vested in him. In fact, the village is directly under the administration of the *Awujale*, and is noted solely for its seasoned drummers whose duty it is to play at the *Awujale's* palace during festivals.

In the olden days, it was also customary for a market – the chief one – to be situated in front of (or as near as possible to) the palace. The equivalent of this central market in Ijebu-Ode is the Odo-Egbo Market which is near the *Awujale's* palace. Other markets of note are Ita Osun and Ita Ale, a night market. (The word *ita*, in the Ijebu dialect, means "market"). Most markets in the town are held on a 5-day rotational system e.g. Ita Osun.

As has been mentioned before, in the original, spontaneous settlement, there was no differentiation into residential, service, etc, zones. However, that is not to say that such functions do not exist. (In fact, with the establishment of a local Planning Authority in the '70s, physical development has become more monitored and censored.) There are various industrial concerns scattered all over the town and its environs, such as a quarrying industry (a partnership between the Nigerian government and Switzerland) at Oke-Eri, a bottle-top manufacturing industry (Crown Industries Ltd.), a private rubber-processing venture producing tyres, mattresses and pillows (Odutola Tyres & Retreads/ Tola Foam), and the Wadai Shoe Factory, to mention some.

The "service industry" consists of a General Post Office, fire and electricity services, chemists and supermarkets. On the social side are schools – both primary and secondary – hospitals and clinics, churches and mosques, a cinema, a public library and Town Hall. The administrative sector is made up of several ministries (e.g. that of Agriculture and Natural Resources), a High Court (and several lesser ones), at least one Police Station, a Tax Office, a Licensing Office, a Town Planning Authority and Local Government affairs office.

4.0. TRADITIONAL BUILTFORM

As far as building in Yorubaland is concerned, the word "traditional" has come to mean not only the indigenous, but also the prevalent type of builtform, using to a greater or lesser extent, local materials and techniques.

4.1. *Materials Used and Source*

Generally in Yorubaland, laterite is a great favourite for various forms of construction (even up till today when it is difficult to refer to present building styles as traditional).

In the early days of the settlement, the laterite was used in its "raw", unmoulded form, as opposed to the present-day trend of making it first into bricks. An area of land was set apart as a "borrow-pit", and the laterite was dug up by communal effort. This was normally done during the rainy season, when there would be plenty of water available for the treading (and general conditioning) process, which would follow the digging. The laterite was then well-moistened with water and trodden under dozens of unshod feet. This treatment was repeated about thrice (in the course of about a fortnight), till the laterite was soft and fine in texture. It was then finally heaped up on the site (called *atebo*), and covered with large plantain/ banana leaves, to prevent it hardening quickly.

Another major accessory of the traditional builtform was the palm-tree. Palm fronds were used together with broad *gbodogi* (*sarcophrynium*) leaves, for cladding purposes, and the stem was cut up and used as trusses and purlins on the roof framework. Today, the fibre roof has been replaced by one of corrugated metal sheets – or even asbestos-cement. The joists were usually from the coconut palm (which had been fired for extra strength), or of the branches of other trees – chosen for their hardiness and termite-resistance. The oil-palm, coconut and other trees, were readily available in the forests.

4.2. *Construction Techniques*

Initially, there were no particular members of the society occupied in the building trade as a way to earn a living (as there are, now); every man, worth his mettle, was supposed to build his own house (though, invariably, his neighbours rallied round and lent him a helping hand). With the first settlers, the prevalent building form was the "wattle-and-daub" type: palm stems were fixed in the ground (in a double row) at intervals of about 6-12 ins. (15-30 cm), and perpendicular ones were tied to each row with creepers, forming the outline of the building on the ground, and the space between the double rows (about 30 cm wide) was filled with ready-prepared laterite. The palm stems acted as reinforcement. The building was then roofed with palm fronds on a skeleton of trusses, joists, etc.

The next type of building form did away with the palm stem reinforcement, and using the laterite just like that, was popular till early in the 1970s, when a number of innovations were made. In this building system, a man decided to build a house of 4-6 rooms (each not usually bigger than 10ft or 3m square), and when he had set about it, some of his neighbours came round to help. He could either map out the four corners of his house by four wooden posts - which were later integrated into the building – or do without them. In either case, a shallow foundation (about 1ft or 30 cm) was then dug. The laterite was then brought from the *atebo* by the volunteer workers (a form of communal labour termed *ebese*) who would give it a "re-tread" on the building site. Several of the workers would then take up positions as "bricklayers" (*onimonde*), while the others formed a chain (or several chains) engaged in throwing the laterite from one to another, till it eventually reached the "bricklayers" – a

procedure called *ju si mi, ki nju si o* (which, literally, means "throw it to me, and I'll throw it to you"). The foundation was laid, and left to dry for about 3-4 days, after which the walls of the house were built up gradually, stopping after every 1ft 6in-2ft (45-60 cm), to allow the laterite to dry for a few days. There were two texture alternatives to the finish of the wall. In the case of a fairly smooth finish, the *onimonde* (bricklayer), after each building session, attempted to smoothen the wall surface by scraping with a wooden "knife". The second alternative – the more popular one – was to leave the wall slightly pitted and rough as it was; this was particularly useful in the manufacture of *oguso* – fire kindling – since the wall surface was used as a kind of mould against which the pulp from the palm fruit was stuck, to allow it to dry. The walls were about 1ft (30 cm) thick, and in the course of building, roughly trapezoidal doorways and window-openings were left. (In the days before the innovation of window shutters, these openings were made very small – 1ft-1ft 6in (30-45 cm) square – so as not to permit burglars, and high (about 5ft/ 1.5m from the ground) to discourage peeping, and so that they would be protected from rain by the overhanging eaves).

The roofing system was fairly complex, and there were quite a number of variations. The basic construction was a system of coconut tree (or other tree branch) joists with palm stem trusses and purlins (as has already been mentioned). One way of putting on the roof was to leave the sides open; this invariably generated a gable roof. The hipped roof was the other very popular roof-type. In either case (before the innovation of nails) the joists were passed through holes made for them at the top of the walls, and all the component parts were tied together with strong creepers. Mats of woven grass fibres were tied to the joists from the inside of the building, constituting the ceiling (in some houses, this was dispensed with), and the framework of the roof was covered with a very thick layer of palm fronds, over a fairly thick one of *gbodogi* leaves. The thickness of the leaves served to keep out rain. The top layer of fronds was firmly secured to the wooden framework beneath, by binding with creepers. The whole roofing process is termed *yele*.

The building thus provided, served only as the actual living quarters i.e. it was a collection of sleeping / living rooms (the latter popularly referred to as "parlour"), with perhaps a workroom for the man of the house, if his occupation was such as could be safely carried on in the house e.g. as in the case of a *baba l'awo* (a traditional medicine-man, or diviner). The kitchen (*akata*) was quite detached from the house, being a separate building entirely.

This kitchen too, was built of laterite, but was on a much smaller scale than the main house. It had large, low windows – to let out smoke and let in plenty of air. It was roofed in the same way as the house, but without the mat ceiling, so that the rafters were visible and readily accessible for hiding away odds and ends. The kitchen also served as the granary, there being no need for large, separate storage structures, since farm produce was strictly for domestic consumption, rather than for trade. A shelf of tree branches fitted to the mud wall was festooned with corn-cobs which had been left in their shucks to dry first, the outer coat being used to string them up. The corn was fired from time to time to preserve it from insect pests. Conveniences such as a pit latrine and a bathroom were also separate from the house, and were nothing more than a palm stem or bamboo screen with, occasionally, one or two fronds thrown across the top.

The walls of the house were coated with a concoction called *eboto* – cow dung mixed with charcoal and special dark-green leaves (*ejinrin*) to form a fairly thick paste, which gave the walls a dark, glossy finish; it was also waterproof. Doorways were covered with mats or fitted with heavy doors of hewn logs which were carried bodily, and put in place at night-time, or whenever it was necessary.

Compound walls, though a common feature in the past, have completely (or nearly completely) disappeared. They were either of laterite (in which case they were a continuation of the actual walls of the buildings within the compound) or of bamboo poles/ palm stems interwoven with creepers and vines. The walls enclosed the main house, the kitchen, toilet, bathroom and perhaps a shack for livestock. Today, where there is any fencing, it invariably delineates the domestic property of an individual – not necessarily a lineage grouping.

As remarked earlier, building techniques have undergone several changes, one such being a change from the use of palm fronds to corrugated (metal or asbestos) sheets for roofing. This has been accompanied by a lowering of the window level, and the introduction of shutters for the now wider windows. Proper doors are also now in use. Perhaps the most significant thing about the "modern" traditional builtform, is the fact that the laterite is now made into bricks before use. These bricks are of two main sizes (approximately 30 x 23 x 13 cm, and 30 x 12 x 13 cm), and are not of a high standard of workmanship. In the building process, the bricks are held together with sand-cement mortar, and plastered over with the same mixture. There has also been the introduction of fascia boards in the roof structure. Even today, paint render is still optional – more a reflection of economic realities than aesthetic indifference. Generally, the outhouses have steadily maintained their positions outside the main house (though, here too, there has been a touch of modernity as, by and large, palm fronds have been replaced by corrugated metal sheets). A few buildings however, with their owners bent on making a statement of being socially "savvy" (based on the main town having progressively encroached on Iwesi with the attendant concessions to progress that must be made), feature conveniences as tenuously-attached appendages of the back regions. Also, increasingly, the kitchen, as a separate building, has been replaced in its cooking function by borrowing space within the exaggerated central corridor of most homes, for the activity.

A main doorway, in which a gate of flat lengths of wood is used in conjunction with a proper door, is fairly common. The pieces of wood forming this gate could be beautifully carved, and are nailed down, side by side, on two perpendicular pieces running top and bottom.

4.3 Space Functions

The rooms were usually bedroom-and-parlour combinations, and could also serve as a store for food items such as yam and cassava, or as a workshop. In the case where the bedroom was also the workshop, it was larger than normal, and could be partitioned into two – either with cloth or mats. Where a courtyard was not fully developed, the un-built part served as a playground for children, and housed livestock which were left to roam about during the day. The courtyards were also used for entertaining during festivities. (In the village of Iwesi, in the early days, this was the only available festival ground, since the status of the village was such that it did not require a large arena for elaborate festivities).

5.0 FUNCTIONAL ADEQUACY

In many ways, the materials employed in the traditional builtform, were very adequate for the purposes to which they were put.

The use of laterite in building was a good economic measure, since it was readily available and cost nothing. When dry (after having been thoroughly prepared), it presents a very hard surface to the atmosphere, which is able to stand the test of intense insolation and heavy downpour (provided it is aided by a generous roof overhang). The thatch for the roof was also readily available, and is very good as a thermal interceptor i.e. it prevents the full impact of the sun's radiation from being transmitted to the interior of the building. When laid very thick and on an incline, it also prevents rain-water from getting into the house. Using such materials as laterite and thatch, a building can be easily and cheaply maintained to give the shelter and comfort it has been designed to give.

A sheet-pan roof, for as long as it remains new and shiny, performs the same functions as a thatch one, though at a much higher cost. (The shiny surface reflects most of the heat incident on it – as compared with the storing and filtering technique of thatch). When rusty, however, it tends to transmit most of this heat to the interior of the building, thus building up an oven-like atmosphere, which is doubtless, very uncomfortable. As far as durability is concerned, the corrugated metal sheet has an edge over the thatch roof which has to be changed relatively frequently (usually, not longer than about 5 years).

6.0 CONCLUSION

Taking the whole traditional structure into account, one sees that the traditional builtform was a direct response to the traditional way of life of the Ijebu. Their simple, unsophisticated ways were reflected in their simple uncomplicated buildings; their spontaneous reliance on nature for survival could also be seen in their turning to her for the materials to build their dwelling. The earth houses with their palm frond roofs blended perfectly into the landscape of the original virgin land. The organic nature of the configuration of the traditional houseform lent itself readily to their social structure; in the event of a significant increase in family size, additional sleeping accommodation could be contrived without too great an upheaval to the building. (The expedient for occasional increases was the provision of sleeping-mats, which could be spread almost anywhere).

The traditional builtform, in any culture, should be the starting point in the quest for a socio-culturally appropriate, popular building culture. This is particularly true of developing economies. Modern architects in such regions of the world, would do well to study and improve upon it, bearing in mind the fact that it has stood the test of several hundreds of years of innovations and has, to a large extent, persisted - in spite of them.

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