# ASPECTS OF MUSLIM ARCHITECTURE IN THE DYULA REGION OF THE WESTERN SUDAN

PHYLLIS FERGUSON STEVENS

INSTITUTE OF AFRICAN STUDIES
UNIVERSITY OF GHANA
LEGON
JUNE 1968.

## Acknowledgements

This work on Muslim Architecture in the Dyula Region of the Western Sudan was accepted for the degree of Master of Arts in the Art Department at Northwestern University, Evanston, Illinois in June 1968. I acknowledge gratefully the assistance of Professor John Paden and Mr. Lynn Fischer, both of the Department of Political Science, Northwestern University for their help and advice on programming this material for factor analysis.

This study is complementary to the work both in press and in progress of Professor Ivor Wilks, on the growth of the Muslim Dyula communities and on their structure. I am greatly indebted to Professor Wilks for his advice and for the generous loan of unpublished field data and photographs.


The data used in this study were not collected systematically with an art-historical approach in mind. This has imposed certain limitations upon scope. In particular, it has seldom proved possible to give accurate over-all dimensions for the buildings studied. This, fortunately, does not affect the type of stylistic analysis attempted here. Limitations of space have prevented the development of the 'intensional' approach referred to in the concluding observations: I intend in the future to carry this inquiry further. This work is offered, basically in the hope that a quantitative approach to such data will prove not only illuminating, but suggestive of further lines of research.

PFS
Legon, 1968.

TABLE OF CONTENTS


| | | |
|---|---|---|
| i | THE DYULA: HISTORICAL AND ETHNOGRAPHIC BACKGROUND | p. 5 |
| ii | THE DYULA MOSQUES: UMAYYAD ANTECEDENTS | p. 6 |
| iii | CONGREGATIONAL MOSQUES OF THE SAHARA AND THE NIGER BEND | p.17 |
| iv | MOSQUES OF THE MIDDLE NIGER: JENNE | p.30 |
| v | THE FRIDAY MOSQUE IN THE DYULA TOWNS: DESCRIPTION | p.38 |
| vi | THE FRIDAY MOSQUE IN THE DYULA TOWNS: FACTOR ANALYSIS | p.50 |
| vii | THE FRIDAY MOSQUE IN THE DYULA TOWNS: HISTORICAL ANALYSIS | p.59 |
| viii | CONCLUDING OBSERVATIONS | p.77 |
| | FOOTNOTES | p.79 |
| | APPENDIX I: CATALOGUE OF MOSQUES STUDIED, WITH SOURCES OF DATA | p.82 |
| | APPENDIX II: BIBLIOGRAPHIES | p.84 |

## 1 THE DYULA: HISTORICAL AND ETHNOGRAPHIC BACKGROUND

That part of the Western Sudan within southern Mali, north-eastern Guinea, western Volta, northern Ivory Coast, northern Ghana and northern Togo, embodies a tradition of Islam different from that of the Central Sudan of Hausaland and Bornu. Towns within this western area have a long tradition of Islamic learning centring around a group of people called Dyula, the Malinke word for 'trader'. These people also refer to themselves, and are called by others, Wangara. Mahmūd Kāti, author of the sixteenth century Ta'rīkh al-fattāsh, stated that the term Wangara "serves to describe the merchants who trade from country to country."[1] The Dyula, or Wangara, of the Western Sudanese towns claim Malinke or Soninke origins. Their migrations from the towns of metropolitan Mali into more southerly locations began as early as the fourteenth or fifteenth centuries. It followed two primary routes, one in a south-easterly direction from the Upper Niger around Bamako, and the other in a southerly direction from the Middle Niger around Dia and Jenne. The impetus for the dispersion of the Dyula can be found in the highly profitable trade in gold which, extracted over a wide area between the Volta and Komoe Rivers, was sent north via Jenne to the Saharan caravan terminus of Timbuktu, and thence across the desert.[2] The Dyula founded market towns near the centres of extraction, and a series of caravanserai along the routes leading northwards. This study will be concerned mainly with the southern market towns and with the caravanserai.

Over time many of the Dyula settlers turned to agriculture, often

trading only during the dry season. Most Dyula still speak a dialect of Malinke, still use Malinke and Soninke 'clan' names, and most remain Muslim. As a minority element, settled in the midst of numerically dominant rural pagan populations, and in isolation from the larger Islamic centres such as Dia, Jenne and Timbuktu, some Dyula groups found the maintenance of Islamic values and beliefs in an essentially pagan milieu to be impracticable: backsliding and final apostasy occurred. Other groups retained contact with the wider world of Islam, and asserted their identity through tajdīd, the continuous reinvigoration of the Muslim content of their culture.[3] The flow into West Africa of books of Middle Eastern and North African authorship was one obvious means of contact.[4] Such works, however, could make no impact without the maintenance of a certain level of literacy within the Dyula communities. Thus, characteristic of those Dyula towns which have preserved intact their Muslim heritage over the centuries, is the presence of an educated elite, the ʿulamā, responsible through their studies and interpretations of Islamic texts for the preservation of local conformity to the basic precepts of Islam. The ʿulamā, and the literacy which they promote, constitute the key to the continued commitment over time of the Dyula to Islam. The success or failure in fostering literacy represents in a real sense the difference between those Dyula communities which maintain their distinct identity, and those which have lost it by assimilation to the numerically dominant autochthonous peoples.

As a result of their commercial orientation, the Dyula have been

primarily urban dwellers, although Dyula villages are found spaced out along the major trade routes. The countryside, apart from these villages, has remained pagan, except for some areas where intensive Islamisation occurred as a result of the nineteenth century militant jihād movements. Thus in the Buna subdivision of the Ivory Coast the Dyula comprise one-eighth of the total population and form almost the only Muslim element; in the Wa Local Authority Area in north-western Ghana the ratio of Muslims (largely Dyula) to non-Muslims is approximately one in thirteen. By contrast, as a result of jihādi movements, in the Kong area in Ferkessedougou division of the Ivory Coast, the Muslim/non-Muslim ratio is two to three. This, however, is exceptional.[5]

In the course of the seventeenth and eighteenth centuries Mossi and Bambara cavalry groups established themselves in the Voltaic Basin and, often with the cooperation of the Dyula, founded small-scale state-systems, for example, Kong and Bobo-Dioulasso by the Bambara Watara, and Wa and Buna by the Mamprussi and Dagomba.[6] In such systems authority was distributed componentially in the following manner: the cavalry groups assumed responsibility for security, the Dyula for commerce, while the autochthonous groups remained in ritual custody of the land. Despite political fragmentation, contact between Dyula communities in this broad Sudanic area was maintained not only by trade, but also through ties of kinship and marriage, and by the common acceptance of Islamic values.

The importance of Islam in this context cannot be overstated. It

is thus necessary to explore the background and the role of the ᶜulamā, the men of learning, somewhat more fully. Among the Dyula a member of this group has the title karamoko, literally meaning 'one who can read', from the Malinke kara, Arabic qara, 'to read, recite.' The appellation, however, is applied only to those who have pursued their studies to a certain advanced stage.[7] There is no complete uniformity as to which specific works are considered adequate for the education of the karamoko. However, the works most usually studied are the three following: Tafsīr al-Jalālayn, by al-Maḥallī (died 1459) and al-Suyūṭī (d. 1505), a commentary on the Qur'ān; Al-Shifā' fī taᶜrif huqūq al-Mustafā, by ᶜIyad b. Mūsā b. ᶜIyad al-Sabti (d. 1149), an exposition of the rules of proper conduct based upon a study of the life of the Prophet Muhammad; and the Muwaṭṭā of Imām Mālik b. Anas (d. 795), which is a full corpus of Muslim law dealing with such matters as marriage, divorce, inheritance, contracts and penal codes.[8]

Men do not embark on advanced studies until, at about the age of thirty years or more, they are considered to have demonstrated their piety and sense of social responsibility. The period of study may well last for many years, and seldom for less than five. Much depends on individual ability and opportunity. On completion of studies to the satisfaction of the teacher, the student is entitled to call himself karamoko, and to wear a special white turban.[9] A 'diploma' in the form of an isnād, or 'chain' for learning, is also issued: it lists

the works studied and names successive generations of teachers extending into the past. The value of an isnād is determined by the reputation for piety and scholarship of the individual teachers named on it. Thus equipped with turban and isnād, the karamoko may himself embark upon a teaching career, but will often ultimately seek a position as imām or leader of prayer, as qādī or judge, or as muftī or jurisconsult. He will always come to play an important part in the affirs of the local community. In this way, in Dyula society, position is largely determined by learning rather than by descent; status is achieved rather than ascribed. Nevertheless, certain Dyula families have developed a special commitment to learning, and so have come to produce long lines of karamokos, teaching and holding public office in the community.[10] The activity of the karamokos, of the ʿulamā, was centred, as will be seen, upon the institution of the Friday mosque, and it is the development of this institution in its architectural aspects which forms the major topic of this inquiry.

## ii THE DYULA MOSQUES: UMAYYAD ANTECEDENTS

Mosque building in the Dyula region of West Africa may be seen, so it will be argued, as a late manifestation of what is essentially the Umayyad tradition. The Umayyad *khalifat* originated with the recognition of Muʿāwiya as Khalīf in 661 A.D., and ended with the reign of Marwān II (744-750), after which power passed to the ʿAbbāsids. Although the Umayyad *khalifat* thus lasted for less than a century, during that time important architectural developments occurred, giving rise to what is referred to as the 'Umayyad Style.' This new tradition was worked out initially in the Umayyad capital, Damascus, and most crucially in the context of mosque building.

The Great Mosque of Damascus has been described as the first fully evolved congregational (or Friday) mosque in Islam.[11] Originally a pagan temple, and later a church dedicated to S. John the Baptist, the building was transformed into a mosque at the time of the Khalif Al-Walīd (705-15), and, according to the tenth century writer al-Muqaddasī, specifically in the year 708. Although features of the older church were incorporated into the mosque, the conception of the building was greatly changed. The south wall of the church became the *qibla* wall in the centre of which the *mihrab* was constructed, the niche indicating for the congregation the direction of Mecca and hence of prayer. The sanctuary was constructed as a flat-roofed pillared hall, divided longitudinally into three aisles by two rows of arches. This characteristic of transverse aisles, running parallel with the *qibla* wall rather than

with the main axis of the building as indicated by the direction of prayer, is a marked feature of the early Umayyad tradition. It was obviously a result of adopting one of the longitudinal walls of the basilican form as the qibla wall, and thus turning the axis of the Christian church by one right angle. The remainder of the enclosure was not roofed, but formed an open courtyard of ṣaḥn with cloisters along all but the sanctuary wall. The original mosque apparently possessed four minarets, one at each corner.[12] These, according to Creswell, were of no great height, and he regards them, following Ibn al-Faqīh (903), as pre-Islamic and pre-Christian towers dating from the period when the building had been a temple to Jupiter, but as subsequently incorporated into the mosque to form its minarets. Whether this is correct or not, these structures, the lower parts of which still survive at the south-west and south-east corners of the Great Mosque, were apparently of the square type characteristic of earlier Syrian mosques.[13] The ground-plan of the building which was evolved under the Khalif Al-Walīd is shown in Fig. 1.

The Umayyad Great Mosque of Damascus served as a model for numerous mosques constructed in the succeeding centuries throughout the Umayyad domains. One of the earliest of these was the Zaytuna mosque in Tunis in North Africa, built in 732 apparently by a Syrian architect and conforming very closely to the plan of the Great Mosque of Damascus then in only the twenty-fourth year of its existence.[14]

Most important of the early Umayyad mosques, because of the state of its preservation, is the Sidi ᶜUqba mosque in Qayrawan, to the south of Tunis. The earliest mosque in Qayrawan was built in 670 by the founder of the town, the Umayyad conqueror of North Africa Sidi ᶜUqba b. Nafiᶜ. Although the mosque remains known by his name, this early building was apparently completely destroyed in the course of local Berber revolts, and another mosque was constructed in 703. This in turn was radically remodelled at the time of the Khalif Hishām (724-43), under the direction of the Umayyad governor of Qayrawan, Bishr.[15] This mosque was subsequently enlarged at the time of the Aghlabī Amīr Ziyādat Allāh (816-37), and, because of restrictions on space, the symmetry of the original building was abandoned. However, the mihrab and parts of the qibla wall seem to be surviving fragments of Bishr's building, as does the main stage of the minaret - making the latter the oldest extant tower built as a minaret.[16] Study of these older fragments makes it clear that Bishr's building was, like the Zaytuna mosque in Tunis, closely modelled upon the Great Mosque of Damascus: a tentatively reconstructed ground-plan is shown in Fig. 2, which, although only a single north-west corner minaret was constructed at Qayrawan, illustrates the basic similarity of the two mosques.

The minaret of the Sidi ᶜUqba mosque is shown in Fig. 6. It is square, slightly tapering, and the original first stage is approximately 35 feet square and 63 feet high. The second stage, which may also be early, adds a further 24 feet in heighth. The

third stage is a nineteenth century addition. The minaret was constructed between 724 and 743, according to the eleventh century Arab writer al-Bakri. Creswell has shown that, architecturally, it is derivative from Syrian church towers.[17]

Umayyad influence in the Maghrib, the west, was greatly strengthened by the establishment there in 756 of the Umayyad Amīrate of Cordova in Spain, following the collapse of the khalifat in Damascus in 750. The first amīr was ᶜAbd al-Raḥmān (756-88), grandson of that Hishām, the tenth khalif of Damascus, during whose reign (724-43) the minaret of Qayrawan had been built. The amīrate and later khalifat of Cordova survived until 1031. It was a period a great architectural activity, but one in which the Umayyad tradition of Damascus was consciously maintained and developed in opposition to the newer ᶜAbbāsid tradition of Baghdad. The building of the Great Mosque of Cordova was commenced by the first amīr in 786, and was completed by his son and successor Hishām I (788-96). It will be seen from Fig. 3 that the mosque, before the major extensions, followed the typical Umayyad plan. Furthermore, the original minaret built under Hishām I appears to have been of the conventional Syrian square type.[18] The present minaret was built under the amīr ᶜAbd al-Raḥmān III in 945-6.

The Syrian style square tower minaret remained one of the more constant features of the Spanish and general Maghribi tradition; those, for example, of the Mosque of Ḥasan in Rabat (1195-8), of the

Qutubiyya in Marrakesh (1197), and of the Great Mosque of Seville (the Giralda, 1197), are all in the same basic idiom (see Figs. 7-9). Even as late as the early fourteenth century the minaret of the mosque of Al-Mansūra at Tlemcen was constructed on the same plan.[19] This will be of some importance for an understanding of the spread of the style across the Sahara into West Africa, which will be discussed in the next section. In Egypt, by contrast, in this same period the form of the minaret was undergoing radical change. Under Persian and Mesopotamian influences the Umayyad style minaret began to change its proportions, the upper stages being elaborately developed at the expense of the main tower. Thus the teaching mosque or madrasa of Sangar al-Gawlī in Cairo, built in 1303/4, shows the development of an upper circular stage, and octagonal second stage, on the square lower stage (Fig. 10). Half a century later these trends had become greatly accentuated, and in the madrasa of Sarghatmish in Cairo for example, built in 1356, the original square tower form has become no more than a squat base supporting a tall slender minaret in octagonal and circular stages (Fig. 11).[20] These late developments were to have no impact upon the mosque architecture of sub-Saharan West Africa, and will not concern us further.

The basic ground-plan of the Umayyad mosques, as exemplified in the prototypical Great Mosque of Damascus, and in Qayrawan and Cordova, was also a feature conservatively adhered to in Spain and the Maghrib. New mosques continued to be built in conformity with

it even though enlargement of the older mosques, because of restrictions on space, often led to unavoidable departures from it as at Qayrawan and Cordova.[21] Basically, then, the Umayyad congregational mosque consisted of a flat-roofed sanctuary, the roof supported on columns, pillars or arches which themselves defined aisles running parallel with the qibla wall. In the centre of the qibla wall was the mihrab recess. The remainder of the enclosure was unroofed, forming an open sahn. This tradition was still strongly represented in tenth century Egyptian mosque building. The famous Al-Azhar mosque in Cairo, for example, originally conformed to this pattern. It was built in 969. Following its emergence as an important teaching centre, however, it was partially reconstructed by the Fatimid khalif Al-Aziz (975-96), who created accommodation for students by constructing, at the expense of the sahn, small cells or riwaks, (Fig. 4). The resemblance of the Al-Azhar mosque to the mosque of Sidi ʿUqba in Qayrawan has been commented on by Richmond.[22] The slightly later mosque of Al-Ḥākim, also in Cairo, commenced in 991 and completed in 1012, has been described by Richmond as "almost the last of the great quadrangular congregational mosques". Again, as shown in Fig. 5, the necessity for the functional diversification of space led to a great reduction in the size of the sahn. It is also typical of the transitional aspects of this mosque that one of the minarets has a cylindrical upper stage and the other an octagonal, both on low square bases.[23] In the following century, the eleventh, quite new

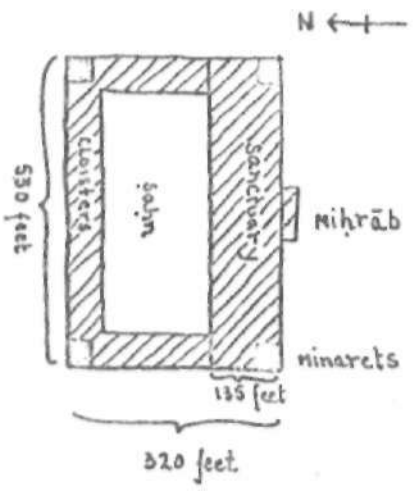



Fig. 1. Basic ground-plan, Great (Umayyad) Mosque, Damascus. After Richmond, 1926, p. 25; Kuhnel, 1966, p. 34.

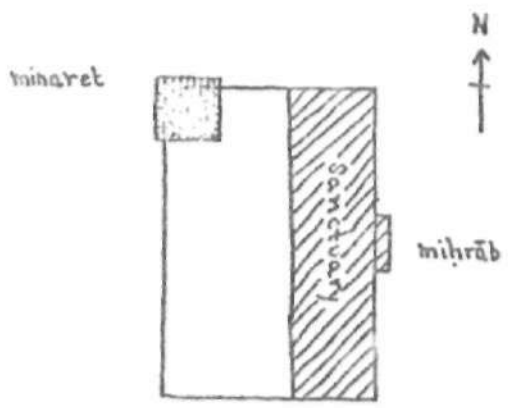



Fig. 2. Reconstructed ground-plan, Sidi ʿUqba Mosque, Qayrawan, as remodelled by Bishr.

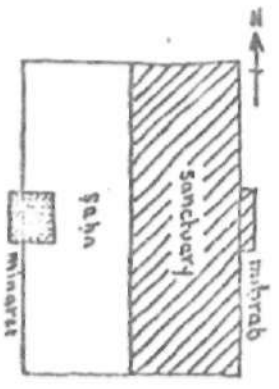



Fig. 3. Reconstructed ground-plan of the Great Mosque of Cordova, following Terrasse, 1958, p. 43.

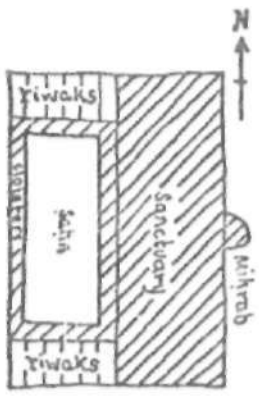



Fig. 4. Al-Azhar Mosque, Cario. After Richmond, 1926, p. 80.

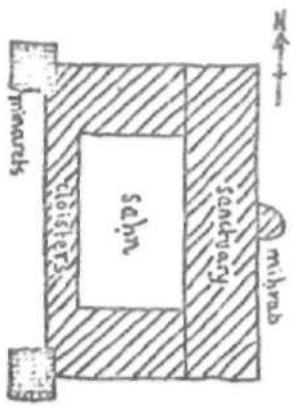



Fig 5. Al-Hākim Mosque, Cairo. After Richmond 1926, p. 84.

GROUND-PLANS, UMAYYAD STYLE, SHOWING PROGRESSIVE MODIFICATION OF THE ṢAḤN. (mosques not drawn to scale)



FIG. 6. Minaret of Sidi 'Uqba Mosque, Qayrawan. (After Richmond 1926, p. 42; Kuhnel, 1966, plate 2a)
724-745



FIG. 7. HASSAN TOWER, Rabat. (After Piquet, 1948, III, facing p. 76.)
1195-1198

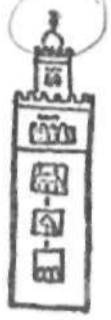


FIG. 8. Qutubiyya, Marrakash (After Piquet, 1948 III, p. 15.)
1194



FIG. 9. Giralda, Seville, (After Piquet, 1948, III, p89; Kuhnel, 1966, plate 54)
1137



FIG. 10. SANGAR al-Gawli, Cairo (After Creswell, May 1926, plate II, p. 256.)
1303/4



FIG. 11. Sarghatmish, Cairo. (After Creswell, May 1926, plate III, p. 259)
1356



FIG. 12. JINGEREBER, TIMBUKTU. (Photographs, WILKS, 1959.)
c. 1325



FIG. 13. SANKORE MOSQUE, TIMBUKTU. (PHOTOGRAPHS, WILKS, 1959.)
14th–15th centuries



FIG. 14. HAMALE MOSQUE, Ghana. (Photographs, WILKS 1964)
20th century

## MOSQUE TOWER STYLES

[not drawn to scale]

new styles of building begin to appear in Egyptian North Africa, // characterised by vaulted roofs, the consequent disappearance of the aisles, and the abandonment of the even approximately equal apportionment of the enclosure between sanctuary and ṣaḥn. Again, these late developments do not appear to have influenced mosque building in West Africa, and need not be considered further.

Two further features of Maghribi mosques, both constructional, and both, so it has been suggested, showing Mesopotamian influence, may be briefly mentioned. The first is the extensive use of brick rather than stone, in which Richmond sees a reflection of the mud-brick tradition of Mesopotamia; he believes the use of brick to have become particularly popular during the Aghlabī period in the ninth century, when for example the amīr Ziyādat Allāh (816-37) reconstructed the Qayrawan mosque and introduced various features of Mesopotamian provenance.[24] Also possibly derivative from Mesopotamian protypes is the presence of heavy buttressing on the enclosure walls of many Maghribi (and, as will be seen, West African) mosques.[25] Kuhnel sees the origin of this feature in the early garrison mosques - "for the fighters of the Faith who had penetrated into newly conquered lands" - such as Basr and Kufa in Mesopotamia, and indeed describes the Sidi ᶜUqba mosque in Qayrawan as 'garrison'.[26] Kuhnel p55 + plate 2

The presence of a dome over the miḥrab, or over the space directly in front of the miḥrab, as in the Qayrawan mosque, is another Umayyad feature strongly represented in North African and Spanish buildings. In the case of Qayrawan Richmond states that "the

method of effecting the transition from the square of the substructure to the circle of the dome is Persian."[27] It is achieved by the addition of semi-conical pendentives across the corner of the square. This method of converting the square to the circle through intermediate pentagonal or octagonal shapes is, as will be seen, one which is adopted by Western Sudanese architects in constructing the upper section of mihrab towers, which although not strictly domical in shape, nevertheless involve the transition from a square base to a rounded form at roof level. The dome in the North African mosque was supported by a complex of either single or double arches across each of the four corners. In Spain, as in the Cordovan example, the development of the structural use of multi-foil arches to support the dome occurred.[28] Since, however, the domical form in the Western Sudan rested always upon a square base, the problem of supporting arches is not of further concern here.

The Umayyad style of mosque architecture, then, as naturalized in North Africa and Spain, may be characterized in terms of the following features of relevance to the study of the Dyula buildings:

i) an enclosure wall serving basically to mark off a space for prayer;

ii) in some cases, the development of the enclosure wall originally for defensive purposes by its reinforcement with heavy exterior buttresses ('garrison mosques');

iii) the construction of a mihrab on the qibla wall as an indication of the direction of prayer (i.e. to Mecca),

at the same time giving an axis to the building;

iv) the construction of a flat roof over part of the enclosure, supported on columns or pillars running parallel to the qibla wall and therefore at right angles to the axis of the mosque. The enclosure was thus differentiated into sanctuary and ṣaḥn or open court.

v) the development of the minaret on a square-base plan. The position of the minaret, or minarets, was variable, occurring for example centrally on the outer wall of the ṣaḥn parallel to the qibla wall as in the Great Mosque of Cordova, the mosque of Al-Manṣūra at Tlemcen, or the mosque of Ḥasan at Rabat, or, as on the original plan of the mosque of Sidi ʿUqba at Qayrawan, in the north-west corner of the ṣaḥn;

vi) the extensive use of brick rather than stone as building material; and

vii) the development of a dome, above roof level, either over, or in the space in front of, the miḥrab.

It is the spread of this type of congregational or Friday mosque across the Sahara and into the Western Sudan which has now to be followed.

### iii CONGREGATIONAL MOSQUES OF THE SAHARA AND THE NIGER BEND

In this section I shall be concerned with the spread of congregational mosques, constructed in the Umayyad style, across the Sahara and into the region of the Bend of the Middle Niger. Such mosques appeared in the settlements associated with the trans-Saharan caravan trails (see above, p. 1), both in the caravanserai towns spaced out along the desert routes and in the great commercial entrepots of the Western Sudan located at the southern termini of these routes. One should not assume, however, that an orderly southwards progression of mosque building occurred: congregational or Friday mosques were probably being constructed in the Western Sudanese trading towns as early as, or before, those in the desert towns through which the caravans passed. Furthermore, the wealth and security found in such southerly centres as Jenne, in the Middle Niger Delta, appears to have made possible building enterprise on a scale unknown in the more northerly Saharan towns.

A number of studies of western Saharan mosques have been published. That by Schacht is concerned with the Central Sudan and Sahara, and is not of direct relevance to the present study.[29] Jacques-Meunie, whose work has been largely concerned with the architectural styles of Mauretania, has noted the general conformity of Sahilian mosques there with those in the Umayyad style. "These mosques," he observes, "consist of a large court, surrounded by a wall two or three metres high. The sanctuary (oratoire) was usually

situated on the east side of the court. It was broad but not deep, having only some two or three transverse naves." The sanctuary, he adds, "has the form of a long rectangle of which the greatest dimension is parallel to the qibla wall, and the naves, few in number, are also parallel to this wall."[30] An example of this type of mosque is that of Rachid (Fig. 15), some three hundred miles east of Nouakchott; it is probably not older than the seventeenth or eighteenth centuries.[31] Other comparable buildings have been studied by Mauny, for example, the mosque of Es-Souk (Fig. 16) which he regards as probably post-medieval, and that of Old Kidal (Fig. 17) which he suggests is medieval.[32] An early western Moroccan example of the style is that of the ruined (stone-built) mosque of Jebel Lakhdar, north of Marrakesh, which has been dated to between the eighth and twelfth centuries.[33] By and large, however, the harsh Saharan environment was not one which supported a flourishing architectural tradition, and for the late survival and indeed revival of the Umayyad style one must look further south, to the large congregational mosques of the Niger Bend and the Middle Niger, and particularly to those of Jenne and Timbuktu which will be of crucial concern here as representing the sub-Saharan tradition out of which, it will be suggested, the mosques of the Dyula region evolved.

Timbuktu has three principal mosques, the Great Mosque or Jingereber, the mosque of Sankore, and that of Sidi Yahya. The Great

Mosque is usually regarded as the most ancient, and its early history is always linked with the name of Abū Ishāq Ibrāhīm al-Sahīlī al-Tuwayjin, the only architect working in sub-Saharan Africa to be mentioned in Mayer's list of Islamic architects.[34] The received view is that al-Sahīlī was responsible for building Jingereber when in the service of the king of Mali al-Ḥājj Mūsā (reigned ca. 1312-37)[35]. Since the matter is obviously one of considerable importance, the evidence will be reviewed at some length.

The major source for the career of al-Sahīlī is the History of the Berbers of Ibn Khaldūn, written towards the end of the fourteenth century but drawing upon information provided by Abū ᶜAbdallāh al-Māmar, a Fatimid who had enjoyed in Mali the protection of its king, al-Ḥājj Mūsā. Ibn Khaldūn reports that al-Sahīlī was an Andalusian poet who the Malian ruler had met in Mecca and persuaded to return with him to Mali. Al-Māmar gave an account of the return journey:

> "Abū Ishāq al-Tuwayjin and I, we were part of the royal party and we were accorded the same rank as the wazīrs and the heads of countries. The king listened with pleasure to the short stories we told him and at each stage he gave us a gift of plates of food and sweetmeats. Twelve thousand young slaves dressed in tunics of brocade and silk from the Yemen carried his belongings ... We accompanied him as far as the capital of his kingdom, as he had decided to build an audience hall, solidly constructed and covered with plaster, such buildings being until then unknown in his country. Abū Ishāq al-Tuwayjin, a man of many skills, took responsibility for executing the wishes of the king, by building a square hall surmounted by a cupola. In this building he employed all the resources of his genius and, having covered it with

> plaster, and decorated it with arabesques in brilliant colours, he made of it an admirable monument. As architecture was unknown in this country, the Sultan was entranced, and gave al-Tuwayjin 12,000 mithqals of gold-dust as a mark of his satisfaction, together with the high favour of the prince, an eminent position in the court, and from time to time beautiful gifts."[36]

A second early source of information on al-Sahīlī is Ibn Baṭṭuṭa, who visited Mali in 1352/3. Ibn Baṭṭuṭa, reflecting on the generosity of al-Ḥājj Mūsā, reported that in the course of a single day he had given al-Sahīlī 4,000 mithqals.[37] He also noted that al-Sahīlī's grave was in Timbuktu, and described him as "the meritorious poet Abū Isḥāq al-Sahīlī of Gharnata (i.e. Granada), who is known in his own land as al-Tuwayjin."[38]

That al-Sahīlī did indeed settle in Timbuktu, and furthermore that he also constructed buildings there, is attested by al-Ḥasan b. Wazaz of Faz in Morocco (Leo Africanus), who visited the Western Sudan in both 1509 and 1513, and who reported of Timbuktu:

> "there is a most stately temple to be seen the walls whereof are made of stone and lime; and a princely palace also built by a most excellent workman of Granada".[39]

Although the sense of this passage is not entirely clear, the implication would seem to be that the Granadan, i.e. al-Sahīlī, was the builder in Timbuktu not only of the 'princely palace' but also of the 'stately temple'. This latter we may presume to have been the Great Mosque.

The matter receives further elucidation in the Ta'rīkh al-Sūdān of ᶜAbd al-Raḥmān al-Sa'di of Timbuktu and Jenne, a work

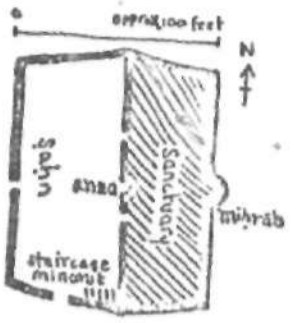



FIG. 15. Rachid Mosque, Mauretania. (After Jacques-Meunié, 1961, p. 50.)

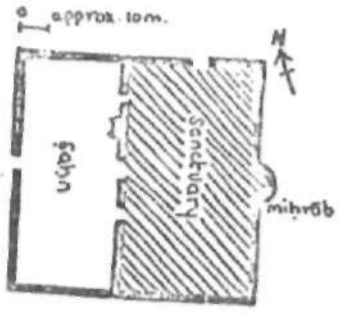



FIG 16. Es-Souk Mosque, Mali. (After Mauny, 1961, p. 972.)

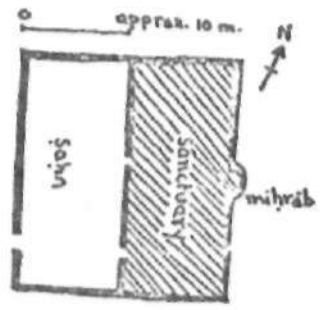



FIG. 17. Old Kidal Mosque, Mali (After Mauny, 1961, p. 974)




FIG. 18. Jingereber Mosque - 1828, Timbuktu. (after Caillié, 1830, II, plates 4,5, following p. xiv.)

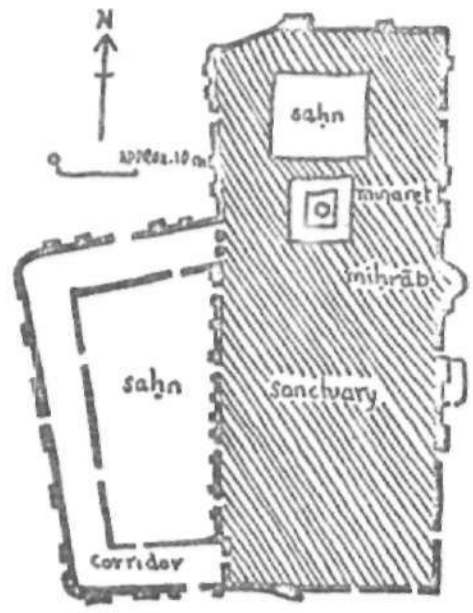



FIG. 20. The present Jingereber Mosque, Timbuktu. (After Mauny, 1952, p. 903.)

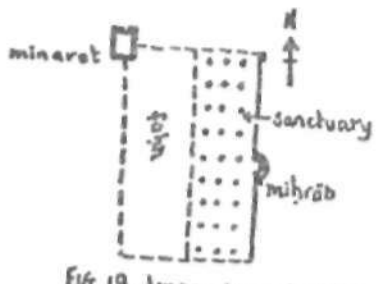



FIG. 19. Jingereber: tentative reconstruction of the original plan, (using Caillié's data).

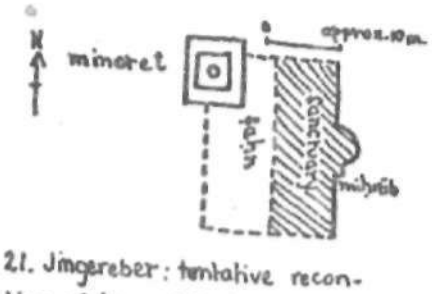



FIG. 21. Jingereber: tentative reconstruction of the original plan, (using Mauny's data).

completed in the early 1650s. Al-Sa'di reports that upon his return from Mecca al-Ḥājj Mīsā ordered the building of a mosque in Gao so that he might make the Friday prayer there; that in like manner he had ordered mosques to be built in all those towns through which he passed on Fridays; that he had built in Timbuktu a palace called Maᶜdūgū (where in the mid-seventeenth century the meat-market stood); and that he had also ordered the construction of the minaret of the Great Mosque.[40] An earlier Timbuktu writer, Maḥmūd Kāti, whose Ta'rīkh al-fattāsh was substantially compiled in the early sixteenth century, also states that the Timbuktu Great Mosque - and not only its minaret - was built by Mūsā at the time of his pilgrimage.[41]

Although it is quite common Islamic practice to place inscriptions on mosques, these rarely record the name of the architect but rather that of the patron, usually the ruler or official initiating the work.[42] This appears to have been the case with the Great Mosque in Timbuktu. Barth, who visited it in 1853, reported a 'somewhat illegible' inscription over the principal gate which apparently recorded the construction of the mosque under Mūsā king of Mali.[43] There is now no trace of this inscription.

There seems, then, strong evidence that the Great Mosque of Timbuktu was built, or rebuilt, at the time of al-Ḥājj Mūsā's return from Mecca in the middle of the third decade of the fourteenth century, and that the architect was indeed an Andalusian from Granada. Thus it becomes important to trace briefly the evolving

architectural climate in Spain. While Andalusian towns had been the major centres of building activities during the Umayyad period, the seizure of power by the Almoravids in the eleventh century introduced an era of relative austerity. In the twelfth century, however, under the Berber Almohad dynasty, a rich new style emerged both in Andalusia and in Morocco and culminated, perhaps, in the Alhambra in Granada. Mosques built in this period still followed the essential ground-plan of the earlier Umayyad structures, having an open ṣaḥn, a minaret often centrally placed on the outer ṣaḥn wall opposite the miḥrab, and a flat-roofed sanctuary with aisles running parallel with, or sometimes at right angles to, the qibla wall. The most notable innovation was in the system of supports for the sanctuary roof, which came to include brick pillars, engaged half columns, and variously pointed arches.[44] Ribbed and honeycomb vaulting were introduced to support the miḥrab dome, which was topped by a lantern, and the development of the highly decorated portal gave a new emphasis to the façade. It was also at this time that, both in Spain and the Maghrib, functional diversification of the mosques occurred: some developed as madrasas, teaching institutions, others as zawiyas organized by Sufi mystics, while others became essentially mausoleums centred upon the grave of some holy man. Such developments had begun in Egypt almost five hundred years earlier.[45]

The Granada of Abū Isḥāq al-Sahīlī's time was, then, one where a strong architectural tradition still flourished. It is in this context that al-Sahīlī's buildings for the Malian king should be considered.

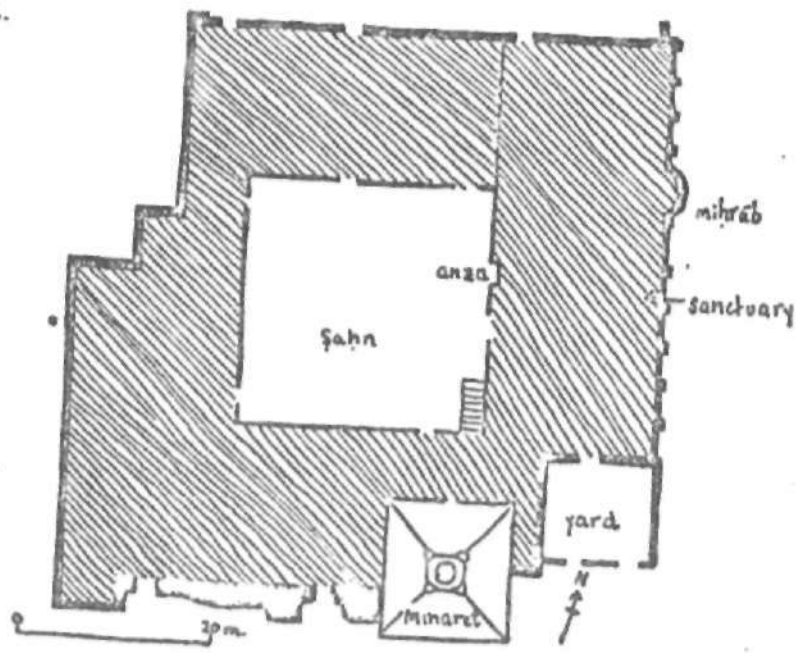
Unfortunately, although the Great Mosque of Timbuktu may in one sense be regarded as having survived from the early fourteenth century, it is by no means easy to determine which of its present features may be regarded as in any way original. There is clear evidence that Jingereber has undergone a succession of major reconstructions, and these are to be related to the numerous attacks which the town suffered in the course of its history: the attack by Mossi cavalry forces sometime in the fourteenth century, when the town was sacked and burned; the particularly devastating occupation by the forces of Sonni ᶜAli, the Songhai ruler, in or about 1470; and the entry of Moroccan troops into the town under Pasha Maḥmūd b. ᶜAlī b. Zergūn in 1591, to give only three examples.[46] As a result of the dislocation caused by such attacks, public buildings were usually the first to fall into a state of disrepair. Al-Sahīlī's palace, the Maᶜdūgū, had already by the mid-seventeenth century given way to a meat market, as already noted (p. 22 above). Certainly in late 1569 and early 1570, under the direction of the qāḍī Al-ᶜAqib, much of Jingereber including the minaret was pulled down and rebuilt, while the enclosure area was extended to incorporate the western cemetery.[47] Other major repairs are reported for 1678, when one side of the mosque collapsed; for 1709; and for 1736.[48] What is unknown is the extent to which rebuilding involved innovation, - or whether the rebuilt structures were modelled closely on those destroyed. In view of the close stylistic similarities between, for example, the three major Timbuktu mosques, the latter view would seem the more acceptable one.

Nineteenth century accounts of the Timbuktu mosques are given

by Caillié, who visited the town in 1828, and by Barth, who was there in 1853[49]. Although Barth concurred in Caillié's view that the western part of the Jingereber building was the oldest, I would tend to agree with Mauny that the present qibla wall, including the Mihrab - the most important part of the mosque - should be regarded as the oldest surviving structure.[50] If Barth's statement that the early Jingereber had "three naves" is accepted,[51] and Caillie's ground-plan used together with Mauny's, then a tentative reconstruction of the original fourteenth century ground-plan may be attempted (see Figs. 18-21). One notes that the reconstructed plan shows a typical Umayyad style mosque with sanctuary and sahn, and minaret at the north-west corner of the latter as for example in the original mosque of Sidi ᶜUqba in Qayrawan (see Fig. 2). As will be seen later, the north-west positioning of the minaret is a feature that emerges very strongly in the more southerly mosques of the Dyula towns.

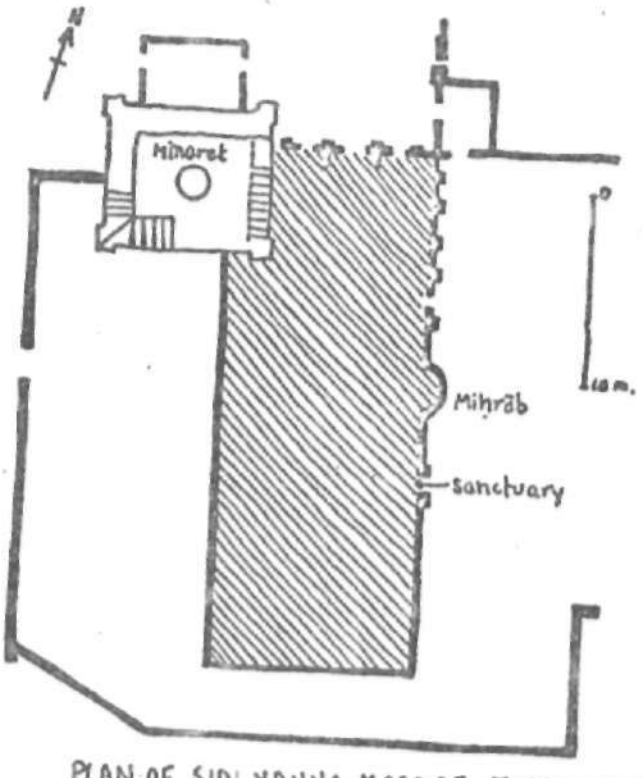
The Great Mosque of Timbuktu, with its accretions of the sixteenth to eighteenth centuries, now assumes the form of an elongated sanctuary containing a small sahn at the south of which is the minaret (see Fig. 20). The sanctuary roof is supported by eight rows of twenty-five pillars, disposed parallel to the qibla wall. A larger sahn adjoins the sanctuary to the west; in it are a number of unmarked tombs. The whole structure is in mud-brick; the sanctuary ceiling is timbered with a mud overlay. The mihrab tower is pyramidal, and characterised by protruding timbers which serve as scaffolding to facilitate the annual

FIG. 22.




PLAN OF SANKORE MOSQUE - TIMBUKTU (after Mauny, 1952, p. 806)

FIG. 23.




PLAN OF SIDI YAḤYA MOSQUE - TIMBUKTU (after Mauny, 1952 p. 908)

repairs of this most important component of the mosque. The minaret is built on a square base plan, and tapers; it is capped by a small dome (see Fig. 12). Allowing for the limitations imposed on the architect by the use of unbaked mud-brick, the Jingereber minaret seems clearly derivative from North African Umayyad style structures; specifically, a relationship with the slightly tapering minaret of the Sidi ᶜUqba mosque in Qayrawan might seem indicated (Fig. 6). The enclosure walls of the Timbuktu Great Mosque are crenelated, and on some faces heavy buttressing is present, again reminiscent of the Sidi ᶜUqba mosque (see below). According to Mauny, the interior of the qibla wall on either side of the mihrab has geometrical decorative work in the plaster, while the remaining walls of the sanctuary bear many texts in Arabic of a religious nature.[52]

The Sankore mosque in Timbuktu is smaller than, and not as old as, Jingereber. It is believed to have been built in the fourteenth or fifteenth centuries, under the patronage of a wealthy woman. In the late 1570s or early 1580s the qāḍī Al-ᶜAqib is reported, on his return from the pilgrimage, to have demolished the earlier building and to have constructed another which followed exactly the measurements of the Kaba at Mecca.[53] The Tajkirat al-Nisian reports the collapse of the minaret in 1678, and other reconstructions in 1709/10 and 1732.[54] Caillié found the mosque in a good state of repair in 1828 but Barth, in 1853, reported that the building had been allowed to fall into a state of disrepair since the forces of Shehu Ahmadu Lobbo of the Dina of Massina had entered the town in

the late 1820s. With the construction of the French fort in Timbuktu in 1897, and the consequent destruction of buildings between the fort and the mosque, the sand dunes have been allowed to encroach upon the area, and the east face of Sankore is now severely threatened. The ground plan is shown in Fig. 22.[55]

The third major mosque in Timbuktu, that of Sidi Yaḥya, was constructed ca. 1440, and was named after an imām of the town.[56] As with both Jingereber and Sankore, the qāḍī Al-ᶜAqib initiated major repairs in 1577/8.[57] As is apparent from the ground plan (Fig. 23), the minaret again has a north-west corner position, as it was suggested it did in the original Jingereber building. In 1939 the original domed and square-based minaret was drastically reconstructed, and the new structure bears little resemblance to the earlier one.[58]

All three Timbuktu mosques show strong stylistic affinities with their North African counterparts built in the Umayyad style. Their resemblance to, for example, the Sidi ᶜUqba mosque in Qayrawan is observable not only in specific features such as the minaret, but also in the total impression made by the buildings (see Figs. 24-26). The 'impressionistic' nature of this judgement is provided with a basis in fact in that the architectural role of Abū Isḥāq al-Sahīlī – who must have been familiar with the range of Maghribi building styles – has been established in the Timbuktu context.



FIG. 24. SIDI ʿUQBA MOSQUE, QAYRAWAN, DETAIL OF MINARET, 8th CENTURY, AND ENCLOSURE WALL. (AFTER HOAG, 1963, plate 83.)

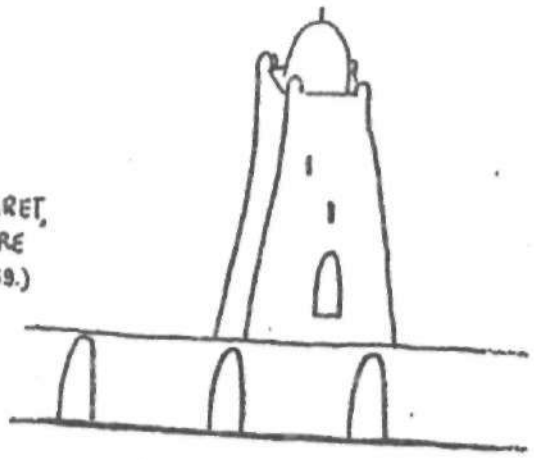


FIG. 25. JINGEREBER, TIMBUKTU, DETAIL OF MINARET, 14th CENTURY, AND ENCLOSURE WALL. (PHOTOGRAPHS, WILKS, 1959.)

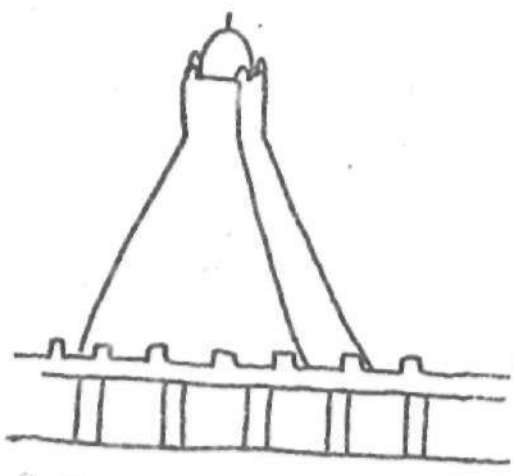


FIG. 26. SANKORE MOSQUE, TIMBUKTU, DETAIL OF MINARET, 14th or 15th CENTURY, AND ENCLOSURE WALL. (PHOTOGRAPHS, WILKS 1959.)

§ MINARETS AND SECTIONS OF THE ENCLOSURE WALLS: QAYRAWAN AND TIMBUKTU

iv MOSQUES OF THE MIDDLE NIGER: JENNE

As briefly noted above (p.22), in the sixteenth century scholarly opinion in the Timbuktu region was that the Great Mosque of Timbuktu was only one of a series of mosques built during the reign of al-Ḥājj Mūsā of Mali. Maḥmūd Kāti reported the tradition that the king made it his custom to order the building of Friday mosques in all those towns in his dominions through which he passed on Fridays in the course of his pilgrimage.[59] Of mosques originating in this way, other than Jingereber, Maḥmūd Kāti mentions that of Goundam (about 60 miles south-west of Timbuktu), of Doukourei (between Timbuktu and Goundam), of Dire (about 25 miles south-east of Goundam), of Bako (unidentified), and of Wanko (apparently west or south-west of Jenne).[60] It will be noted that the Great Mosque of Jenne does not figure in this list, and it seems clear that the Timbuktu scholars regarded this as a considerably older foundation. Thus ᶜAbd al-Raḥmān al-Sa'di, who was himself a functionary of the Jenne mosque in the early part of the seventeenth century, wrote of the town:

> "The inhabitants did not convert to Islam until towards the end of the sixth century of the hijra (600 A.H. = 1203/4 A.D.). The Sultan Kunburu first adopted Islam and the people of the town followed his example. When Kunburu had decided to enter into the bosom of Islam, he ordered all the ᶜulamā who were then in the region of the town to assemble; their number exceeded four thousand two hundred. He rejected paganism in their presence, and enjoined them to pray to God to grant three things to Jenne: first, that he who, chased from his own country by penury and misery and coming to live in this town, should find in exchange by the grace of God abundance and wealth, so that he would forget his homeland; secondly, that the town should become settled by

> strangers the best of those of their nationality; and thirdly, that God should deprive all those who visit here to trade their goods, of their patience, so that, bored with staying in this place, they will sell their cheap wares at low prices, thus benefiting the inhabitants. At the end of these three prayers the first chapter of the Qur'ān was read, and so these prayers were granted, as anyone can clearly see today.
>
> Having converted to Islam in this way, the Sultan demolished his palace, and replaced it with a mosque dedicated to the worship of God the highest; it is the present Great Mosque. He built another palace for his court, and this palace adjoins the mosque on the east side."[61]

In the Ta'rīkh al-fattāsh Mahmūd Kāti gives no indication of the source for the date of Sultan Kunburu's conversion and for the construction of the Great Mosque. Mauny summarily rejects the date as too early, and suggests without advancing reasons that the building of the Great Mosque must be placed in the fourteenth century, a little time after that of the Great Mosque of Timbuktu.[62] One can only observe that the whole question of the dating of the spread of Islam in the Western Sudan is still an open one, that there were certainly Muslim communities there before the eleventh century, and that there seem no clear grounds for the rejection of Mahmūd Kāti's date.[63] In particular, there seems no good reason for assuming the Great Mosque of Jenne to be later in date than that of Timbuktu. The Jenne mosque, as will be seen, conforms to the basic style of the Umayyad buildings; only if one was prepared to argue that this style was first introduced into West Africa by al-Sahīlī would it follow that the Jenne mosque post-dates Jingereber. In view of the sustained commercial contact between North Africa and the Western Sudan from at least the ninth century onwards, however, such an argument would clearly be spurious. It must be constantly borne in mind that the

existence of Timbuktu as a commercial centre was largely determined by its association with Jenne. The latter was the great emporium for the gold produced throughout its southern hinterland; the former was only the port at which this gold, despatched thence from Jenne by Niger waterway, was reloaded on to the camel caravans. Furthermore, as the author of the Tajkirat al-Nisian make clear, Timbuktu was always highly exposed to raids from the desert nomads, whereas Jenne was protected from attack by its position in the interior delta of the Niger. It seems not unreasonable to suppose that Islamic culture, manifest in architecture and otherwise, took root in Jenne at a date earlier than in Timbuktu.

In the seventeenth century Jenne could be described as "one of the great markets of the Muslim world.... Everyone finds great profit in taking himself there to do business."[64] Whatever the earlier history of the town, its rapid economic growth in the fourteenth and fifteenth century seems proven. It was linked with the more intensive exploitation of the goldfields far to its south, between the Volta and the Komoe rivers. The collection of gold over the whole of this region was monopolized by the Dyula, and Jenne developed as the controlling market for this enterprise.[65] There is, then, a strong assumption that for any generalized study of mosques in the Dyula region, that of the Great Mosque of Jenne is of crucial importance, and that it is this mosque, rather than those of Timbuktu, which should be regarded as possibly the sub-Saharan prototype for the Friday mosques in the Dyula towns.

As already noted, in the early seventeenth century al-Sa'di

regarded the Great Mosque of Jenne as the building erected ca. 1200 at the time of the conversion of Sultan Kunburu. Unlike the case of the Timbuktu mosques there is no suggestion in the Western Sudanese chronicles that the Jenne mosque underwent a series of major reconstructions: a matter to be associated not only with the easily defended site of the town[66], but also with the abundant supplies of water and mud there, which made the maintenance of the fabric of the building a much simpler affair than in the more northerly semi-desert location of Timbuktu.[67]

The first European to visit Jenne and to describe its mosque was Caillié, who was there in 1828; he reported it as "dominated by two enormous but not very high towers." Within a few years - though not necessarily in 1830 as is usually said - the Great Mosque was abandoned on the orders of Shehu Aḥmadu Lobbo of Massina, and a new mosque was built on a nearby site. The fullest account of this event is that recorded by Dubois in the late nineteenth century from the testimony of a marabout of Segu.[68] Shehu Aḥmadu, it was said, had attended school in Jenne as a youth, although he himself was not from the town but belonged to the sedentary Fulani society of the Massina countryside. Impoverished, and from a background the austerity of which contrasted greatly with the luxury of the cosmopolitan townspeople, Aḥmadu was disturbed to find adjoining the Great Mosque an area of brothels, bars and dance-halls. He was even more horrified to find that at night the revellers had no hesitation in wandering into the mosque. Thus, twenty or thirty years later, as victorious amīr al-mu'minīn or commander of the faithful of the

Dina of Massina, Shehu Ahmadu ordered the destruction of the Great Mosque and the construction of a simpler and undefiled building nearby. Fortunately the walls of a mosque cannot easily be torn down; half a century later the ruins of the Great Mosque were still sufficiently complete for Dubois not only to draw a ground plan but also to draw elevations of the building.[69] These are reproduced in Figs. 27, 30 and 32.

The Great Mosque was a square building, the enclosure walls measuring 183 feet each way, and being 39 feet high. The enclosed area was divided into a flat-roofed sanctuary about 85 feet deep, and a somewhat smaller open ṣaḥn about 65 feet deep. The enclosure wall was double, forming a closed gallery about 5 feet wide which ran around the whole of the mosque and which was lighted by small windows pierced through the outer wall on the north and south faces. The sanctuary was divided into nine transverse aisles, i.e. running parallel with the qibla wall, by the columns which supported the roof. The minaret stood in the centre of the western wall of the sanctuary, and extended through the ninth, eighth and seventh aisles. Drawing on the memory of old men, Dubois showed both minaret and miḥrab tower as slightly tapering but truncated structures terminating at little above roof level - a matter in which he has the support of Caillié (see above, p. 33). It is some test of the accuracy of Dubois' evidence, that the most unusual feature which he reports, namely the closed galleries, are referred to in the sixteenth century: the Ta'rīkh al-fattāsh reports that on the occasion of Askia Isḥāq's

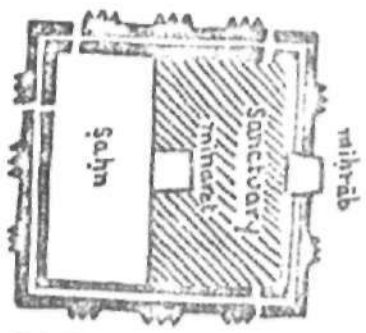



FIG. 27. GREAT MOSQUE OF JENNE, BEFORE RECONSTRUCTION. (After DUBOIS, 1897, p. 182)

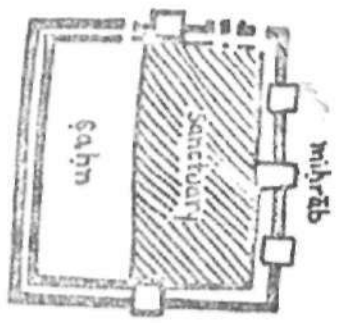



FIG. 28. GREAT MOSQUE OF JENNE, AFTER RECONSTRUCTION. (After photos WILKS 1959.)

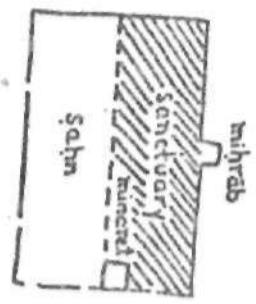



FIG. 29. SHEHU AHMADU'S MOSQUE AT JENNE. (After DUBOIS, 1897, pp. 184-185.)

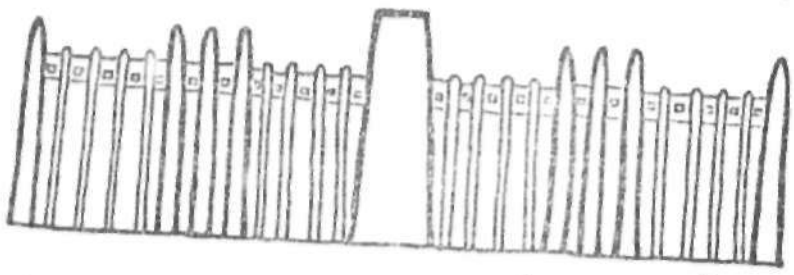


FIG. 30. East face, GREAT MOSQUE OF JENNE, before 1909 reconstruction. (After drawings and photographs by DUBOIS, 1897, pp. 179-184.)

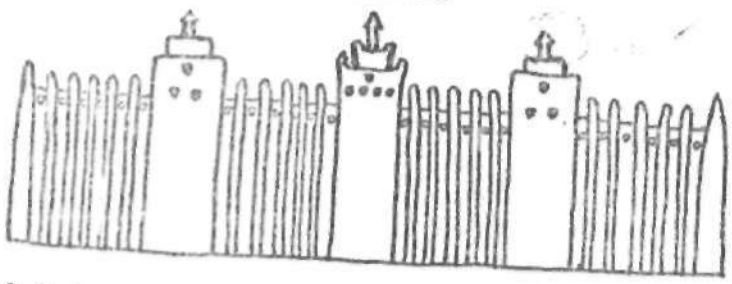


FIG. 31. East face, GREAT MOSQUE OF JENNE, after reconstruction of 1909. (After photos, WILKS 1959)

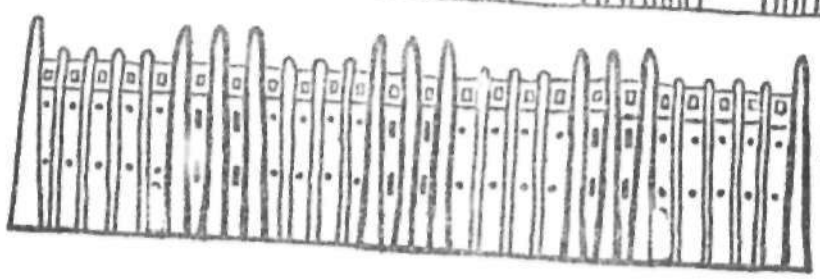


FIG. 32. North face, GREAT MOSQUE OF JENNE, before 1909 reconstruction. (After drawings and photographs by DUBOIS, 1897, pp. 178-184)

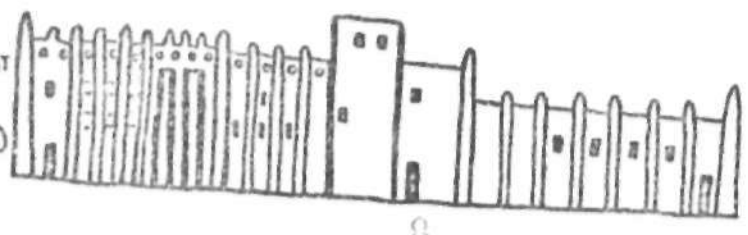


FIG. 33. North face GREAT MOSQUE OF JENNE, after reconstruction of 1909. (After photos, WILKS 1959)



THE GREAT MOSQUE OF JENNE

0 feet 40
approx. Scale for elevations

address to the assembled 'umma in or about 1540, all the galleries and aisles of the mosque were filled with people.[70]

Shehu Ahmadu's mosque at Jenne followed the same basic plan, with open sahn and flat-roofed sanctuary, as the older Great Mosque (see Fig. 29). The minaret and mihrab towers were similarly square, truncated and low. The enclosure wall, however, was not buttressed, and the whole building looks undistinguished and austere besides its predecessor.[71] At the beginning of this century the Fulani mosque was in a state of disrepair, and the ᶜulamā of Jenne decided to rebuild the old Great Mosque. On the site of the former a school or madrasa was put up though, to appease the Fulani element in the town, every Friday the muezzin of the Great Mosque walks over to the school and makes the call to prayer from there.[72]

The Great Mosque was reconstructed in 1909, with the active participation of the local French administration. It follows closely the plan of the older building, having a flat-roofed sanctuary of ten transverse aisles, and an open sahn, see Fig. 28. The only radical change occurred on the west wall, which had apparently been totally destroyed by Shehu Ahmadu who utilized the brick in the construction of his new mosque[73]; otherwise the outer walls probably follow much the same course as those of the original building. Apparently under French influence, however, liberties were taken with the treatment of the exterior enclosure walls. Each cluster of three buttresses on the original mosque was converted into a

solid tower, so that for example on the east face the mihrab tower now appears flanked by two others (see Figs. 30-33). A massive portal was also created on the north wall, and decorative devices were added to the tops of the towers which most writers have described as phallic[74] but which Dubois, who regarded the new building as a caricature of the old, suggested make it look like "a baroque temple dedicated to the god Suppository."[75]

Bearing in mind the crucial role of Jenne as the main emporium of the Dyula traders, in the next section I shall attempt to give a general description of those mosques founded by the Dyula in the numerous settlements which they established along the trade routes leading to the gold-bearing regions in the south.

## V THE FRIDAY MOSQUE IN THE DYULA TOWNS: DESCRIPTION

Marty found that the Dyula distinguish three types of mosques.[76] The seritongo, used by individuals or small groups of Muslims for their daily prayers, is frequently no more than an area of ground marked off by stones or by empty bottles half sunk into the ground. The misijidi, or missiri, or buru is used by Muslims from several households, or from a 'quarter', for their daily prayers or for the Friday prayers if they have no access to a Friday mosque. It may consist of no more than an unroofed enclosure with walls a few feet high, or it may consist of a roofed building little different in appearance from the smaller Friday mosques. The jamiu, or juma, or missiri-jamiu is a roofed building used for the Friday prayers and serves the requirements of the whole 'umma, that is, of the community of the faithful regardless of rank, wealth, descent, domicile, ethnic identity or sufi affiliation. For this reason, although most usually called in English 'the Friday mosque', it is also known as the 'congregational mosque' or, in French, 'mosquée-cathédrale'.

Not all Dyula communities have Friday mosques: that is, there is some correlation between the numerical size of the Muslim community and the existence of a Friday mosque. It was observed by one Dyula group that a community of about fifty adult males was necessary for the support of a Friday mosque.[77] This seems to agree broadly with such statistical data as exists. Thus of forty-seven Muslim Dyula communities in the cercle of Bonduku (Ivory Coast) around 1920, only eleven possessed Friday mosques, namely, the nine largest, the eleventh, and the eighteenth. The data is summarized below:

| Town or village | Muslim population | Pagan popul. | Friday mosque | Other mosques[78] |
|---|---|---|---|---|
| *DONDUKU | 2,078 | 568 | 1 | 2 |
| BANDAKAGNI-SOKOURA | 706 | - | 1 | 1 |
| BONDO-DYOULAS | 526 | - | 1 | 1 |
| SANGUIEUIUI | 504 | - | 1 | 1 |
| *SOROBANGO | 445 | 687 | 1 | 1 |
| *YOROBADI | 350 | - | 1 | 1 |
| AVOUAHIKORO | 250 | - | 1 | 1 |
| KOKOYADOUGOU | 230 | - | 1 | 1 |
| TALAHINI-TOMOURA | 209 | - | 1 | 1 |
| POUGOUBE | 189 | - | - | - |
| BANDAKAGNI-TOMOURA | 177 | - | 1 | 1 |
| KAMELE | 164 | 100 | - | - |
| PALA | 100 | 85 | - | - |
| BANGBO | 81 | - | - | - |
| SYE-KOYO | 78 | - | - | - |
| KOUADIOKOTO | 80 | 50 | - | - |
| KAPAIN | 73 | 105 | - | - |
| TALAHINI-SOKOURA | 64 | - | 1 | 1 |

(None of the smaller villages has a mosque. Places starred are included in the mosque sample examined in the next section)

The above data suggest that it is only when a village has a total Muslim population of approaching two hundred that it obtains a Friday mosque; the case of Talahini-Sokoura is clearly unusual.[79] This figure is broadly compatible with the one given earlier (p.38).

An 'umma or community capable of maintaining a Friday mosque will usually at the same time support an ᶜulamā, however small: that is, a cadre of learned Muslims responsible for guiding the 'umma, including a 'Friday' imām or imam al-jamaᶜa who will lead the faithful in prayer and a number of karamokos who instruct the community in the Sunna or Way of the Prophet, (see above, pp. 4-5).

The establishing of a Friday mosque is subject to a form of control; that is, a license to build has to be obtained from a

Friday imām elsewhere. Certainly this regulatory mechanism appears to have been in operation among the eastern Dyula in the nineteenth century, when a wave of mosque building occurred. Thus, for example, the mosque of Leo in Volta was built ca. 1875 by Adama Yeyi, who obtained authorization from al-Ḥājj Mahmūd Karantaw of Wahabu, one of the lesser known West African jihad leaders.[80] The mosques of Nakora, Walwale and Walembele appear all to have been licensed from Wa, in north-western Ghana.[81] The Friday mosque of Wa, in turn, was built in the 1880s with authority from Kong, in the Ivory Coast, and indeed by an architect from there.[82] An earlier Friday mosque in Wa had likewise been built with authority from Kong, obtained by Sa$^{c}$īd b. $^{c}$Abd al-Qādir Tarawiri of Wa (later the ninth imām there) from Imām $^{c}$Abbās b. Muḥammad al-Muṣṭafā Saghanughu of Kong.[83]

In the Dyula towns and villages the Friday mosque usually stands out from all other buildings both by its different architectural style and by its scale: as Figs. 34-8 show, this particularly impressed Binger who, in 1887-9, became the first European to travel extensively throughout the Dyula region. Most importantly, the mosque is also distinguished functionally from the mass of village buildings. Unlike them, it is a centre of essentially communal activity: it is frequently the first, and sometimes the only, public building in the community. Basically, the mosque was the place where the whole 'umma met together once a week for the Friday prayer and for the khutba, the sermon. It was also a centre of educational activities for both young and old alike; for the beginner commencing the study of the Qur'ān and for



FIG.31. VIEW OF SALAGA (GHANA), WITH MOSQUE. (after Binger, 1892, II, p 89.)



FIG. 35. A VIEW OF LOKHOGNILE (IVORY COAST)
(After BINGER, 1892, I, p. 279.)

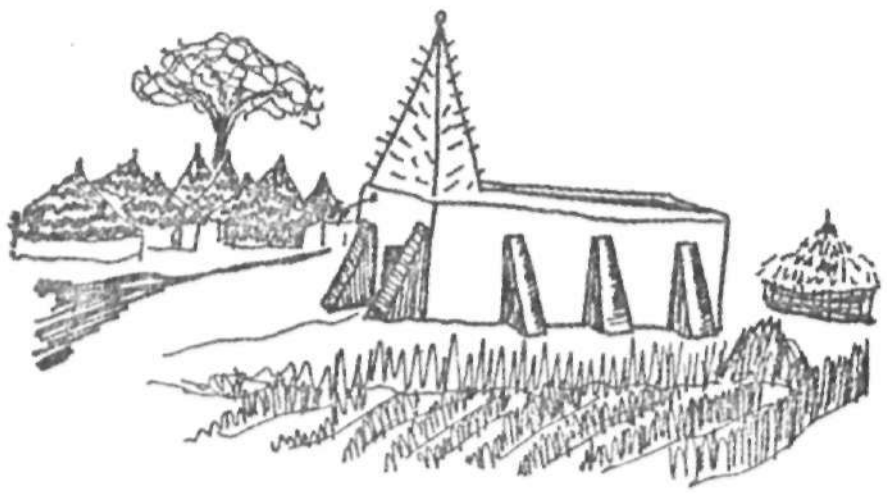


FIG. 36. A SECOND VIEW OF SALAGA, WITH A SMALL MOSQUE.
(After BINGER, 1892 II, p. 93)



FIG. 37. A MOSQUE IN BOUGANIENA, (UPPER VOLTA)
(After BINGER, 1892, I, p. 443.)

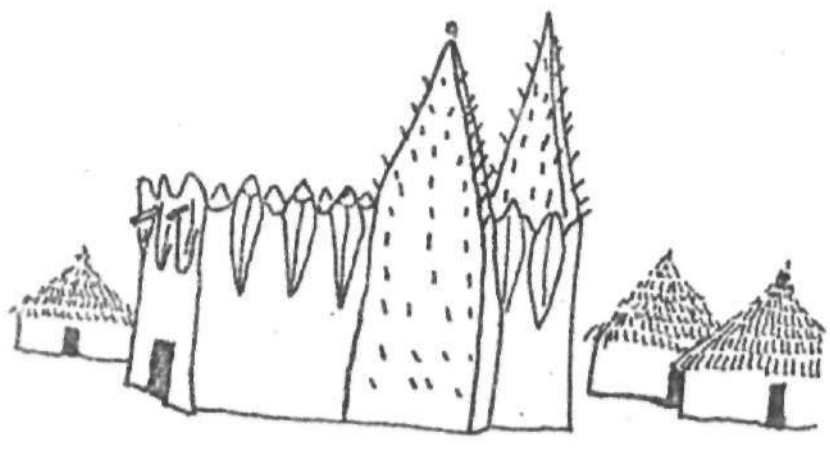


FIG. 38. A MOSQUE IN LOKHOGNILÉ, (IVORY COAST).
(After BINGER, I, p. 277.)

the elderly student working upon law and the commentaries. The Friday imām himself was necessarily a man of education, and in the smaller communities would combine his duties as imām with those of teaching; larger centres would attract other karamokos who might establish a number of schools. The mosque also becomes the centre of juridical activities where, under the direction of the imām the learned element in the community meet to establish ijma, the consensus of opinion, on rightful procedures. Finally, the mosque fostered the growth of a small 'bureaucracy', consisting of the imām himself, the muezzin who calls the faithful to prayer, a mosque treasurer, a mosque caretaker, a khatib or preacher, and perhaps others. The size of the bureaucracy will be determined by the prosperity of the community in question; in large towns it may comprise many functionaries of one sort or another. The functions of the ʿulamā, and of the mosque functionaries - at the head of each of which is the Friday imām - cut across existing socio-cultural and linguistic boundaries, to establish and maintain a new set of values, including Mālīki legal precepts, and to introduce a new language, Arabic, with attendant literacy.

The physical presence of the mosque may thus be seen as an outward acknowledgement of the revolutionary changes that occur in a society when it becomes Islamized. In the Dyula region the mosque is never built in the 'vernacular' idiom of round or square thatched buildings, but in a 'transcendental' one which symbolizes the identification with the wider community of Islam.

Having given some account of the different types of mosques, of the prerequisites for establishing a Friday mosque, of the communal functions of the mosque and its impact upon society in linguistic, legal, religious and cultural - including architectural - fields, I shall now examine the various architectural features which characterize the Dyula style of mosque building.

In the Dyula region the Friday mosques show seemingly great similarity in style. They are all flat-roofed buildings constructed from sun-burnt mud-brick laid in regular courses. Usually a finishing lay of mud plaster is applied for functional as well as aesthetic reasons. The enclosure wall is often (though not always) entirely roofed over, the absence of a ṣaḥn thus revealing a departure from the basic Umayyad style. There may be a number of reasons for this divergence. Often, because of the nature of the Islamization process, the mosque had to be built centrally in a pre-existing town, where shortage of space made the construction of a relatively non-functional ṣaḥn a luxery that could be ill-afforded; by contrast, many North African towns such as Qayrawan itself were from inception Muslim, and the town could be planned to allow maximum space for the mosque. Furthermore, in the Western Sudan the mosque has to afford protection not only from the sun but also from the heavy seasonal rains; an open but enclosed space might easily constitute a threat to the whole building by reason of lack of drainage for the accummulated rain-water - a problem also faced in Turkey where the ṣaḥn, if it exists at all, is usually greatly reduced in size.[84]

Those mosques in the Dyula region which do retain the ṣaḥn follow closely the Umayyad model. The minaret (Dyula mūrari or jokõ:o) is then most commonly found on the south-west corner of the west sanctuary wall. By contrast, in mosques without a ṣaḥn the minaret most commonly occupies a north-west corner position. Again, in those mosques which retain the ṣaḥn the minaret is usually built on a rectangular base and is flat-topped, sometimes in stages, whereas in those mosques without a ṣaḥn there is a strong tendency for the minaret to be treated in the same way as the pyramidal miḥrab tower and often they can be distinguished neither by style nor size, but only by position. In a few cases a tower minaret is replaced by an external staircase-minaret which allows the muezzin direct access to the roof from ground-level.

The sanctuaries of the Dyula mosques are usually parallelepipeds, swelling at their base. Size is not linked with style: thus the similar mosques of Sansanne-Mango (Togo) and Bobo-Dioulasso (Volta) have sanctuaries respectively approximately 20 feet and 110 feet long from east to west. The enclosure walls, which are usually from twenty to twenty-five feet high, are sometimes unstrengthened by either buttresses or pilasters, but may have crenelations along the parapet wall. Some mosques have pilasters on the enclosure wall, but most of the mosques studied (see Appendix I) have heavy buttressing. Such buttresses are frequently connected by horizontal

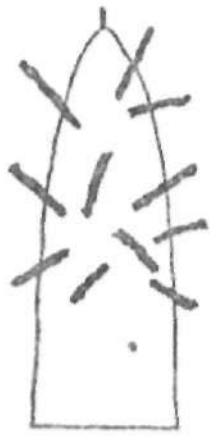
pieces of timber which serve both as a permanent scaffolding for use when the mosque is re-plastered and as consolidating bars for structural reinforcement. The flat roof is supported by heavy columns which sometimes cover more than half of the total area of the floor of the sanctuary. The mihrab is usually no more than a shallow recess in the qibla wall. It is usually surmounted by a tower which is occasionally flat-topped but more commonly pyramidal. Analysis of these pyramidal mihrab or minaret towers is in fact complex. Essentially they appear to have a square base tower rising approximately to roof height, surmounted by a tapering domical structure. Semi-conical shaped pendentives are imposed on the square lower form of the tower at the corners to effect the transition from square to conical form, as has been described earlier (p. 15) for the mihrab of the Qayrawan mosque. The mud-brick idion, however, often obscures the complex character of these structures, and leaves the observer with only the impression of the tapering or pyramidal aspect. The minbar, Dyula mumari, is found to the side of the interior mihrab recess. It is usually no more than a low mud platform; sometimes it is a wooden dais which is carried into the mosque only for the Friday prayer.[85] Nevertheless, the minbar is one of the distinguishing features of the Friday mosque, since from it the imām or khatib delivers the weekly sermon to the assembled ʿumma.

Sometimes an open area around the mosque is encircled by a low continuous wall, or by symmetrically spaced low conical pillars;

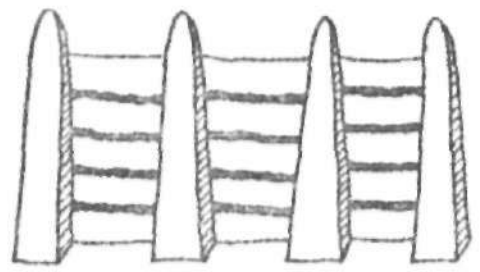
often it is the graveyard for imāms and other notables which is thus delineated. Doors into the sanctuary appear to be randomly distributed on all walls except the qibla. Decorative work is rare except above doorways, where either crenelations are placed with or without punched triangulations, or a heavy portal is built almost invariably with similar triangulations. On a few mosques examined a continuous band of punched triangulations runs around the mosque, either on or just below the parapet wall. Rain-water from the roof is drained off through holes made in the parapet wall, and thrown clear of the enclosure wall by wooden or pottery rain-spouts.

Some of these features typical of the Dyula mosques are shown in Fig. 39. In the next section they will be listed systematically, and each mosque characterized in terms of them.

FIG. 39: ILLUSTRATION OF SELECT VARIABLES



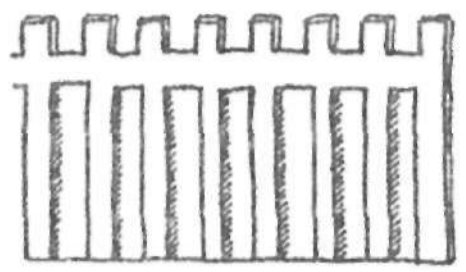
VARIABLES 15 AND 20: PYRAMIDAL MIḤRĀB, AND PROTRUDING TIMBERING.



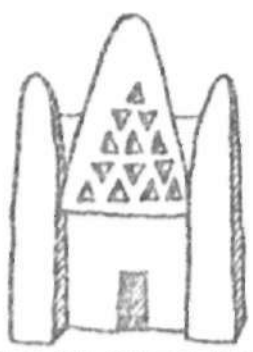
VARIABLES 19 AND 22: HORIZONTAL TIMBERING, AND REGULARLY-SPACED BUTTRESSING.



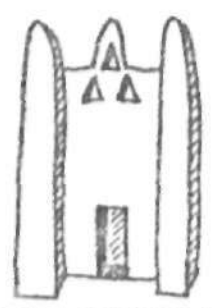
VARIABLE 13: RECTANGULAR MINARET IN TWO STAGES



VARIABLES 23 AND 24: REGULARLY SPACED PILASTERS, AND CRENELATIONS ON WALLS.



VARIBLE 25: HEAVY PORTALS OVER DOORS, WITH PUNCHED TRIANGULATIONS.



VARIABLE 26: CRENELATIONS OVER DOORS, WITH PUNCHED TRIANGULATIONS.

## vi THE FRIDAY MOSQUE IN THE DYULA TOWNS: FACTOR ANALYSIS

An attempt will now be made to present a systematic analysis of the stylistic features of fifty mosques from the six states, Ghana, Guinea, Ivory Coast, Mali, Togo and Volta. The most northerly of these are the Jingereber and Sankore mosques in Timbuktu in Mali, the most westerly that of Kankan in Guinea, the most southerly Menji and Namasa in Ghana, and the most easterly Samsanne Mango in Togo. No complete enumeration of mosques in this large region exists; one might hazard the guess that the sample of fifty is in the order of 5% to 10% of the total number. The sample is not random, but has been determined by the amount of data available, which is the richest for Ghana, from where perhaps 50% of all mosques have been included. The analysis offered, however, does not presuppose randomness in the sample. The fifty mosques are listed in Appendix I, together with the sources of data for each.

The character of each of the fifty mosques will be described with reference to twenty-eight variable features (which may be regarded as systematizing the account of the characteristics of mosques in the Dyula region offered in the previous section). An analytic list of these variables follows; for the factor analysis which will be offered it is not necessary that all variables are independent ones, nor that all have equal weight. The first column gives a numerical indication of the relationship of the variables to each other; the second gives a description of the variable; and the third a number, between 1 and 28, to each.

SAḤN

1.0 Saḥn present? ..... 1

MINARET

2.1 Tower minaret present? ..... 2
2.2 External staircase minaret present? ..... 3

POSITION OF MINARET

3.1 Minaret at S.W. corner of sanctuary ..... 4
3.2 Minaret at centre of W. wall of sanctuary ..... 5
3.3 Minaret at N.W. corner of sanctuary ..... 6
3.4 Minaret at S.W. corner of saḥn ..... 7
3.5 Minaret in centre of W. wall of saḥn ..... 8
3.6 Minaret at N.W. corner of saḥn ..... 9
3.7 Minaret in other position ..... 10

STYLE OF MINARET

4.1 Pyramidal minaret ..... 11
4.2 Rectangular flat-topped minaret ..... 12
4.3 Rectangular minaret in two or more stages ..... 13

MIḤRAB TOWER

5.1 Miḥrab without tower, not extending above roof level ..... 14
5.2 Pyramidal miḥrab ..... 15
5.3 Rectangular flat-topped miḥrab ..... 16

TIMBERING

6.1 Visible timbers used in construction ..... 17
6.11 Horizontal and protruding timbers present ..... 18
6.12 Horizontal timbering only ..... 19
6.13 Protruding timbering only ..... 20

ENCLOSURE WALLS

7.1 Regularly-spaced buttresses and pilasters ..... 21
7.2 Regularly-spaced buttresses only ..... 22
7.3 Regularly-spaced pilasters only ..... 23
7.4 Crenelations on walls ..... 24

Exterior DECORATIVE WORK

8.1 Heavy portals over door, with punched triangulations ..... 25
8.2 Crenelations over doors, with punched triangulations ..... 26
8.3 Crenelations over doors, no punched triangulations ..... 27
8.4 Punched triangulations on, or parallel with, parapet wall ..... 28

Information about each of the fifty mosques is tabulated below:

1 indicates the negative value of the variable, 2 the positive value.

| MOSQUE | VARIABLES 1.....28 |
|---|---|
| 1 BANGMON | 11111111111112111111111121211 |
| 2 BANDA NKWANTA | 12111211112111212221112111121 |
| 3 BOBO-DIOULASSO | 12111211112111212221112111111 |
| 4 BOLE I | 12111211112111212221112111121 |
| 5 BOLE II | 12111211112111212221112111211 |
| 6 BOROMO | 21221111111111121211211121111 |
| 7 BUNA I | 12111211112111212112211121121 |
| 8 BUNA II | 12111211112111212112211121121 |
| 9 DAR AL-SALAM | 12111211112111212221112111111 |
| 10 DIEBUGU | 12121111111211211111211112111 |
| 11 FIELMON | 11111111111111112111111221112 |
| 12 GINDABO | 11111111111111211111112112111 |
| 13 GUROPISE | 11111111111111212221112112111 |
| 14 HAMALE | 12121111111211121111112211112 |
| 15 OLD JENNE | 22112111111211112111121121112 |
| 16 KAWARA | 12111211112111212112121111121 |
| 17 KONG | 12111211112111212221112111111 |
| 18 LARABANGA I | 12111211112111212221112112111 |
| 19 LARABANGA IV | 12111211112111212112121112111 |
| 20 MALUNE | 12111211112111212211121111121 |
| 21 MENJI | 12121111111211212211121111121 |
| 22 NAKORA | 12111211112111212211121111121 |
| 23 NAMASA | 12111211111212111111111111111 |
| 24 NANDAW | 11111111111111211111121111111 |
| 25 NANDOM | 11211111111111221111111121112 |
| 26 NASA | 11111111111111211111121111111 |
| 27 JINGEREBER | 22111111121121212112211211111 |
| 28 SANKORE | 22121111111121212112211212111 |
| 29 TUNA | 12111211112111212211121121111 |
| 30 WA DONDOLI | 12211211112111212112121121111 |
| 31 WA II | 12111211112111212211121111121 |
| 32 WAHABU | 22121111111211212112111211111 |
| 33 WALENDELE | 11211211111111212112121121111 |
| 34 WALWALE | 12111211112111212112121211121 |
| 35 WECHIAU | 12111211112111212221112121211 |
| 36 GWOLU | 11111111111111212112111111111 |
| 37 SEGU I | 22112111111211212112211211111 |
| 38 KANKAN | 12121111111211212112121221111 |
| 39 SANSANNE MANGO | 11111111111111212221112111121 |
| 40 BAMOKO | 12111211111211212112112211121 |
| 41 MANDARA | 12111211112111212221112111111 |
| 42 WA I | 12111211112111212221112112111 |
| 43 BONDUKU | 12111211112111212221112111111 |
| 44 YOROBADI | 11111111111111212112121211121 |
| 45 LOKOSSO | 12111211112111212211121121111 |
| 46 SALAGA | 11111111111111212112121211111 |
| 47 SEGU II | 22121111111211212112111111111 |
| 48 SOROBANGO | 12111211112111212221112111111 |
| 49 LEO | 11111111111111212112111121212 |
| 50 GUEYTEGUELA | 12111211111211211111111121121 |

The information tabulated above was key punched, and the subsequent operations computerized, for factor analysis. A matrix of variables was constructed, and eighteen factors with positive Eigenvalues were tabulated: 5.889; 3.412; 3.347; 2.176; 1.835; 1.626; 1.273; 1.217; 1.005; .899; .526; .372; .333; .231; .183; .154; .092 and .001. For the ten higher values a factor matrix was constructed without rotation, and for the eight higher values with rotation. Factor scores were listed for each mosque both without, and with, rotation, for the eight factors with highest Eigenvalues. For each factor the list of mosques was then re-ordered, manually, following individual ratings. The sixteen lists so obtained were examined for significance in the light of the aims of the present inquiry. Unpredictably, the eight scorings with factor rotation proved to be of no practical value: apparently factor analysis theory has as yet devised no decision-procedure for determining whether rotation or non-rotation is required in a specific investigation, and the test must be empirical. Predictably, by contrast, for the non-rotated factor scores the list of mosques for factor 1 - with by far the highest Eigenvalue rating of 5.889 - proved highly significant, and it is this analysis which I shall now examine in detail.

Investigation of the content of Factor 1 will follow the presentation of the list of mosques ordered in accordance with their scores. In this list, which is given below, it will be observed that the Great Mosque of Jenne ('Old Jenne') has the lowest rating - reflecting its position, as tentatively argued above on other than stylistic grounds, as the sub-Saharan prototype of the congregational mosques in the Dyula region (see p. 32 above).

MOSQUES IN THE DYULA REGION: ORDERED UNROTATED FACTOR SCORES FOR FACTOR I WITH EIGENVALUE 5.889

| SCORE | MOSQUES | NUMBER |
|---|---|---|
| .465 | Bobo-Dioulasso; Bonduku; Dar al-Salam; Kong; Mandara; Sorobango | 3; 43; 9; 17; 41; 48 |
| .453 | Larabanga I; Lokosso; Tuna; Wa I | 18;45;29;42 |
| .449 | Banda Nkwanta; Bole I; Maluwe; Nakora; Wa II | 2; 4; 20; 22; 31 |
| .376 | Bole II | 5 |
| .349 | Wechiau | 35 |
| .287 | Wa Dondoli | 30 |
| .266 | Larabanga IV | 19 |
| .262 | Kawara | 16 |
| .235 | Walwale | 34 |
| .097 | Guropise | 13 |
| .093 | Sansanne Mango | 39 |
| .066 | Menji | 21 |
| .045 | Buna I; Buna II | 7; 8 |
| -.001 | Walembele | 33 |
| -.078 | Salaga | 46 |
| -.111 | Nandaw; Nasa | 24; 26 |
| -.121 | Yorobadi | 44 |
| -.140 | Bamako | 40 |
| -.144 | Kankan | 38 |
| -.164 | Guenteguela | 50 |
| -.232 | Diebugu | 10 |
| -.244 | Namasa | 23 |
| -.245 | Gindabo | 12 |
| -.253 | Gwolu | 36 |
| -.341 | Segu II | 47 |
| -.367 | Wahabu | 32 |
| -.402 | Leo | 49 |
| -.442 | Boromo | 6 |
| -.512 | Segu I | 37 |
| -.524 | Bangwon | 1 |
| -.585 | Timbuktu Jingereber | 27 |
| -.628 | Timbuktu Sankore | 28 |
| -.633 | Nandom | 25 |
| -.815 | Bielmon | 11 |
| -.842 | Hamale | 14 |
| -1.039 | Old Jenne | 15 |

Before proceeding to the analysis of these scored data, some explanation of the nature of Factor 1 must be given. Factor 1 is a mathematical construct out of all twenty-eight variables, and can only be defined mathematically. It can, however, be otherwise described,

and the following table which is based upon the unrotated factor matrix shows those of the twenty-eight variables which have positive values vis-a-vis Factor 1, ranked according to the mathematical weight assigned to them:

| Variable | Weight |
|---|---|
| 22. Regularly-spaced buttresses only ..... | .811 |
| 11. Pyramidal minaret ..... | .804 |
| 18. Horizontal and protruding timbers ..... | .753 |
| 6. Minaret at north-west corner of sanctuary ..... | .744 |
| 17. Visible timbers used in construction ..... | .565 |
| 15. Pyramidal mihrab ..... | .549 |
| 2. Tower minaret present ..... | .286 |
| 27. Crenelations over doors, no punched triangulations ..... | .258 |
| 25. Heavy portals over doors, with punched triangulations ... | .215 |

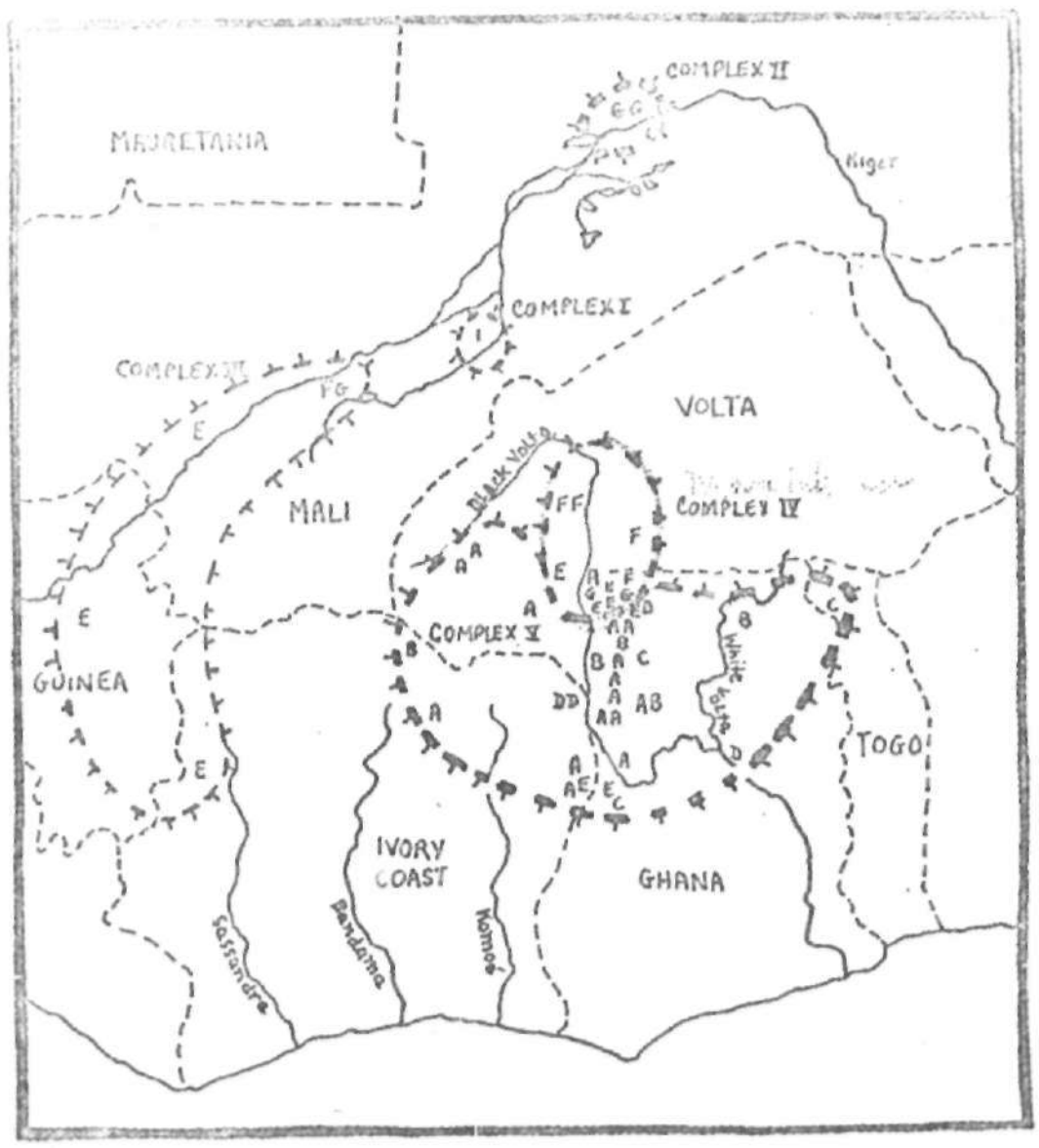
Inspection of this table shows that Variable 2 is linked with both Variables 6 and 11, and Variable 17 with Variable 18. Variables 2 and 17 may therefore be discounted. Variables 25 and 27 will be seen to be negatively linked, and therefore indicate two sub-factors within Factor 1. Empirically, then, Factor 1 may be seen to award the highest positive scores to mosques with pyramidal minarets located in the north-west corner of the sanctuary; with pyramidal mihrab towers; with heavily buttressed walls; and with both horizontal and protruding timbering; two sub-styles being distinguished by the treatment of the space over the doors. Conversely, the lowest scores will be awarded to mosques with characteristics the most highly opposed to the above, as shown in the second table below which lists the highest negative values for Factor 1:

| Variable | Weight |
|---|---|
| 24. Crenelations on walls ..... | -.666 |
| 16. Rectangular flat-topped mihrab ..... | -.593 |
| 28. Punched triangulations on, or parallel with, parapet ..... | -.591 |
| 1. Sahn present ..... | -.557 |
| 12 Rectangular flat-topped minaret ..... | -.524 |

It will be seen from the table on p. 54 that the fifty mosques constituting the sample are distributed over a total of thirty-six scores. A geographical factor will now be introduced in such a way as to show whether any correlation exists between factor scores and the distribution of mosques in space. For this purpose the thirty-six scores will be reduced by 75%, so that, as shown below, each mosque may be assigned to one of nine letter-coded groups, A to I.

| Grouped scores (from p. 54) | | Group code | Mosques |
|---|---|---|---|
| .500 | .350 | A | Bobo-Dioulasso; Bondukn; Dar al-Salam; Kong; Mandara; Sorobango; Larabanga I; Lokosso; Tuna; Wa I; Banda Nkwanta; Bole I; Maluwe; Nakora; Wa II; Bole II |
| .350 | .200 | B | Wechiau; Wa Dokloli; Larabanga IV; Kawara; Walwale |
| .200 | .050 | C | Guropise; Sansanne Mango; Menji |
| .050 | -.100 | D | Buna I; Buna II; Walembele; Salaga |
| -.100 | -.250 | E | Nandaw; Nasa; Yorobadi; Bamako; Kankan; Guenteguela; Diebugu; Namasa; Gindabo. |
| -.250 | -.450 | F | Gwolu; Segu II; Wahabu; Leo; Boromo |
| -.450 | -.650 | G | Segu I; Bangwon; Timbuktu Jingereber; Timbuktu Sankore; Nandon |
| -.650 | -.900 | H | Fielmon; Hamale |
| -.900 | -1.050 | I | Jenne |

All fifty mosques are now plotted, by their group code-letters, on a base map, see p. 57. Inspection shows immediately the existence of a strong correlation between the grouped factor analysis scores, and geographical distribution. On the basis of this five mosque complexes have been indicated - though two of these, Jenne and Timbuktu, might at this stage more accurately be described as complex nuclei.[86] The delimitation of these complexes is very tentative; in particular, a much larger sample of mosques from the




MAP SHOWING CORRELATION BETWEEN GROUPED FACTOR ANALYSIS SCORES AND GEOGRAPHIC DISTRIBUTION

region of the Middle and Upper Nigers is required. Provisionally, however, we may distinguish:

COMPLEX I: mosques of the Middle Niger (represented only by Jenne in the sample);

COMPLEX II: mosques of the Niger Bend (represented only by two Timbuktu mosques in the sample, but probably extending into the Sahara to include, for example, that of Agades[87]);

COMPLEX III: mosques of the Upper Niger, extending from the vicinity of Segu in the east almost to Futa Jallon in the west, and southwards into the western Ivory Coast;

COMPLEX IV: mosques of the Upper Black Volta; and

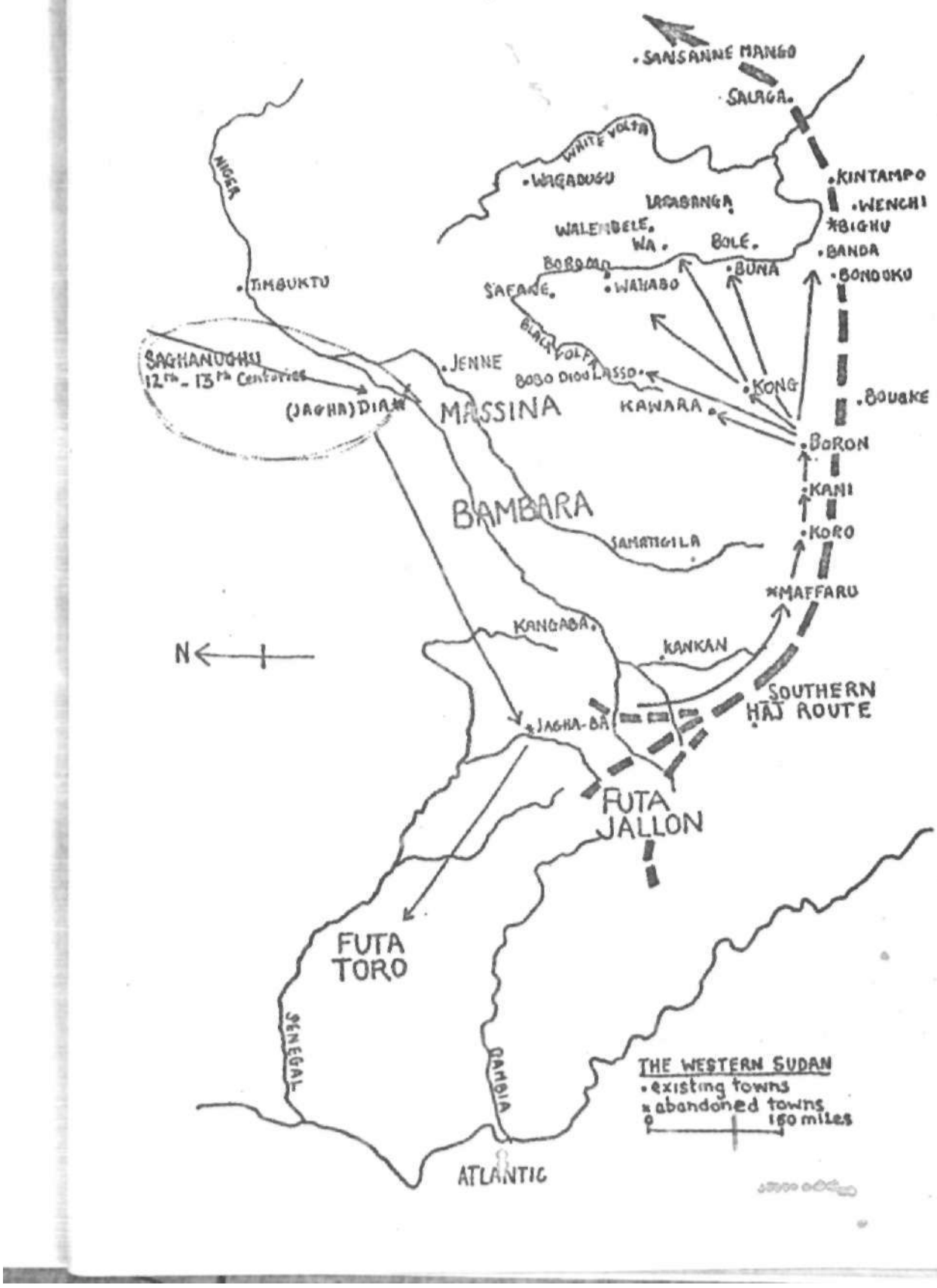
COMPLEX V: mosques of (roughly) the Middle Volta Basin and the Upper Komoé.

It should be stressed, that once one moves outside this broad area, quite different styles of mosques are encountered. Those of Hausaland to the east may have some remote stylistic affinities with those considered here,[88] but even this much cannot be said for the circular grass-roofed mosques of Futa Jallon to the west.

Complexes I and II have been discussed in Sections iii and iv of this study. Complex IV appears to be no older than the mid-nineteenth century, and reflects the influence on the area of the jihad leaders al-Ḥājj Maḥmūd Karantaw and his father Muḥammad, who were from the vicinity of Jenne; a study of this movement and of its architectural implications is being conducted independently, and Complex IV will not therefore be considered further here.[89] Complexes III and V, on the other hand, will be examined in detail, and the hypothesis formulated that Complex III is intermediate between Complexes I and V.

vii THE FRIDAY MOSQUE IN THE DYULA TOWNS: HISTORICAL ANALYSIS

In the spread of mosques in the regions under consideration, the role of the Saghanughu ᶜulamā appears to have been a crucial one. The first mention of the Saghanughu in a West African context is that of Ibn Baṭṭuṭa, who in 1352 visited the easterly Malian town of Zāghāri which may be presumed to be Dia, north of Jenne. He noted that it was inhabited by black traders called Wangara, i.e. Dyula, but that among them lived a number of white men belonging to the Ibadi sect and called Ṣaghanughu.[90] One hundred and fifty years later a Muhammad Saghanughu established for himself a reputation as jurisconsult in the town of Jenne.[91] Thus it would seem that in the fourteenth and fifteenth centuries the Saghanughu were well-established, as scholars and marabouts, in the Jenne region. For reasons that are not clear, however, somewhere around 1500 many of the scholars of the region, and especially of Dia, migrated westwards under the leadership of one al-Ḥājj Sālim Sūwari, and established in metropolitan Mali a new town, Jagha-Ba, 'big Dia'.[92] Among the migrants were Saghanughu, who spread out in the region establishing mosques and schools wherever they went, as did associated groups of ᶜulamā such as the Fufana. The Saghanughu became for a time particularly associated with the now vanished town of Nafarru, and the Fufana with Kankan (see map, p. 60). In 1600/1 an al-Ḥājj ᶜUthmān Saghanughu of Nafarru is reported to have made the pilgrimage to Mecca.[93]


SANSANNE MANGO
SALAGA
WHITE VOLTA
NIGER
WAGADUGU
LAGABANGA
KINTAMPO
WENCHI
BIGHU
WALEMBELE
WA
BOLE
BANDA
BONDUKU
BOBO DIOULASSO
TIMBUKTU
SAFANE
WAHABO
BUNA
BLACK VOLTA
SAGHANUGHU
12th - 13th Centuries
(JAGHA) DIAM
JENNE
MASSINA
KONG
KAWARA
BOUAKE
BORON
KANI
BAMBARA
KORO
SAMATIGILA
MAFFARU
KANGABA
KANKAN
N
SOUTHERN HAJ ROUTE
JAGHA-BA
FUTA JALLON
FUTA TORO
SENEGAL
GAMBIA
ATLANTIC
THE WESTERN SUDAN
existing towns
abandoned towns
0 160 miles

This movement of scholars from the Jenne region into the valley of the Upper Niger provides a most likely context for the erection there of mosques of Complex III, stylistic closely related, as has been seen, to the old Great Mosque of Jenne. Only work in the field, and particularly in the libraries of the Dyula ʿulamā, will confirm or refute this hypothesis. By contrast, the role of the Saghanughu in the development of mosque building further east, in the area of Complex V, may be regarded as established. The pilgrim route from Futa Jallon, Futa Toro and the Upper Niger which followed the line of the Niger to Jenne and Timbuktu had to pass through a large expanse of territory controlled by the pagan Bambara. Because of this a longer and more southerly route appears to have developed, which passed through a series of Dyula towns including the ancient commercial centres of Boron and Bighu before linking in Gonja with the Hausaland cola-caravan routes. Not only was this route safer, but it was also more remunerative for the pilgrims: they were able to trade and teach in the course of their journey. Indeed, learned pilgrims were particularly welcomed for, because of their isolated positions in the midst of pagan autochthonous populations (above, p. 2), the southern Dyula communities found difficulties in maintaining contact with the mainstream of Islam. Backsliding and apostasy were not uncommon, and groups like the Sanu Dyula of Bobo-Dioulasso, the Tarawiri Dyula of Jerapa near Wa, and the Bighu Dyula of Toundiane near Bonduku are known to have reverted to paganism. It was in this context that, in the later eighteenth century, the Saghanughu ʿulamā established communities in one town after another, opening schools,

building new mosques, and gradually renewing and reinvigorating the Muslim content of Dyula culture. The movement of Saghanughu ᶜulamā from Mafarru to Boron (where Muḥammad al-Muṣṭafā Saghanughu, died 1776/7, was imām), and thence to Kong (where ᶜAbbās, son of Muḥammad al-Muṣṭafā, became imām) and to Bobo-Dioulasso (where Saᶜīd and Ibrāhīm, also sons of Muḥammad al-Muṣṭafā, became successive imāms), has been established in some detail.[94]

It is against this background that the mosques of Complex V must be studied. In the remainder of this study I shall present both architectural and historical data for a select sample of those twenty-nine mosques which, of the original sample of fifty, fell within Complex V.

FRIDAY MOSQUE, KONG: SAMPLE NO.17

DATA SHEET/1

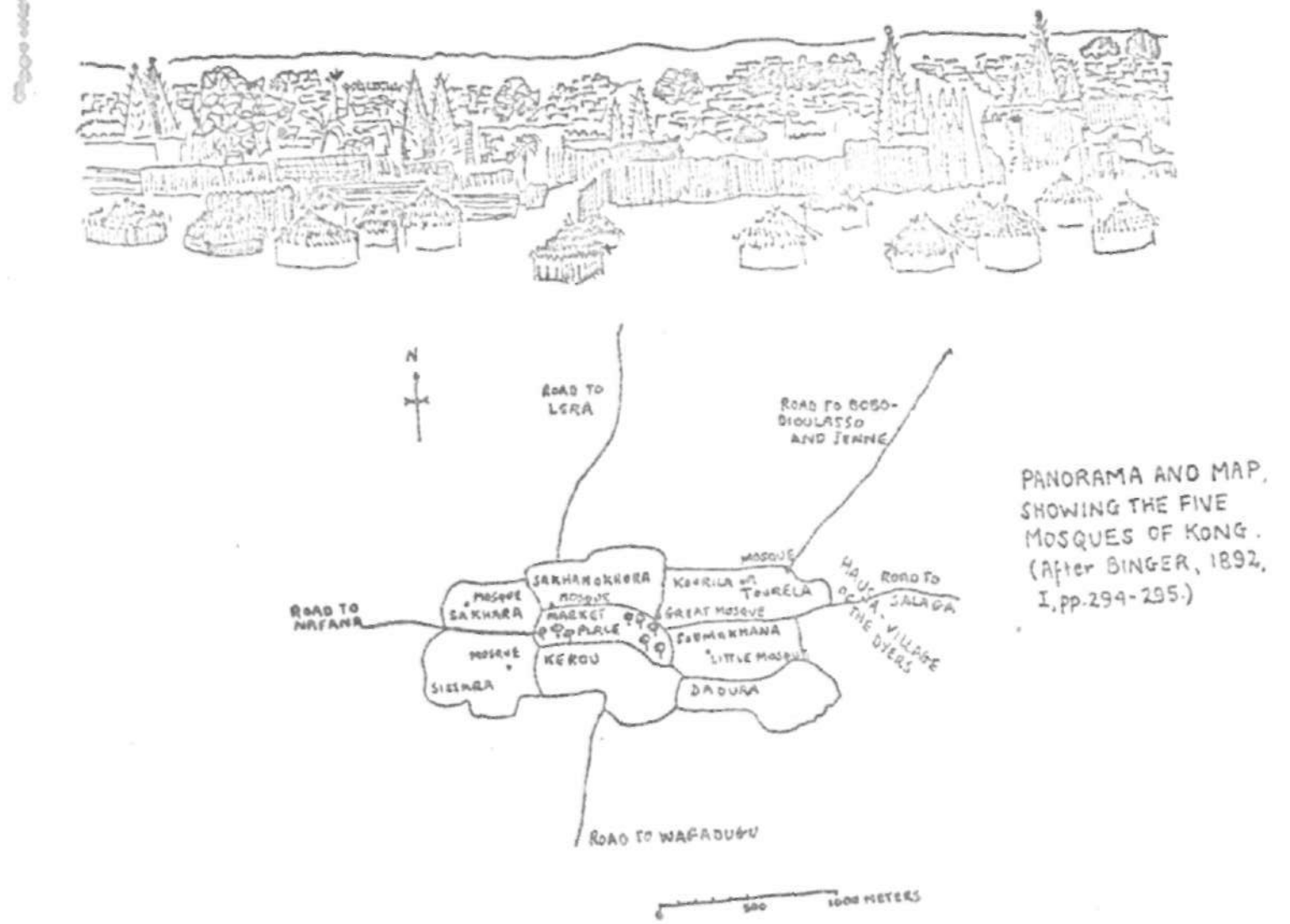
1. The earliest mosque in Kong to which there is reference was apparently built by the Dyula Kunatay there (Wilks, field-notes, 8 May 1966). There is no evidence of its style.

2. In the late eighteenth century ᶜAbbās b. Muḥammad al-Muṣṭafā Saghanughu settled in the town at the invitation of the Watara rulers. A dispute occurred between the Saghanughu and the Kunatay about the mosque, the former claiming that it was not correctly constructed. The dispute was referred to the ᶜulamā of Massina - perhaps of Jenne or Dia - who gave a fatwā or legal ruling in favour of the Saghanughu. The old Kunatay mosque was demolished and a new one constructed (Wilks, field-notes, 8 May 1966). The new mosque was built in 1200 A.H., 1785/6 A.D. (al-Ḥājj Muḥammad Saghanughu, Al-jawahīr, IASAR/246 tr., p. 8). ᶜAbbās, who became first imām of the new Friday mosque, died in 1215 A.H., 1801 A.D. (obituary notice recorded by Wilks from a work in the library of the Mufti of Bobo-Dioulasso).

3. The mosque of ᶜAbbās is presumably that marked on Binger's plan as the Great Mosque, and shown as on the edge of the Saghanughu ('Sakhanokho') quarter. It is probably the second mosque from the right shown in his panorama of the town. It may also be the same mosque as that photographed by Monnier in 1892.

4. In 1895 Kong placed itself under the protection of the Almamy Samori. Two years later, because the people of Kong had opened negotiations with the French, Samori pillaged the town as a punitive measure. Many of the Muslims, including the imām, Abū Bakr Saghanughu, were massacred in the mosque. The mosque itself was partly destroyed. The similarity of the present mosque to that photographed by Monnier suggests that the old building was later reconstructed and enlarged. On the other hand some Kong maintain that the old building was completely abandoned, and a new one erected on a nearby site (Wilks, field-notes, 22 June 1966).

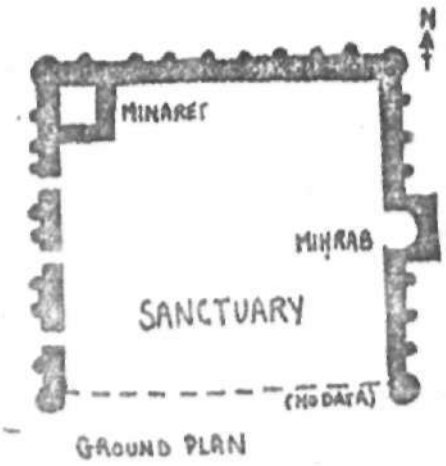
5. The present mosque is drawn from photographs by Wilks, 1959. It will be seen to follow very closely the style of the older mosques shown by Binger, most of which have now vanished.



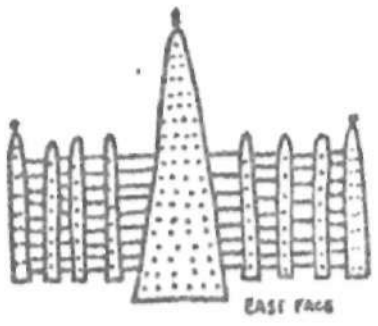

PANORAMA AND MAP, SHOWING THE FIVE MOSQUES OF KONG. (After BINGER, 1892, I, pp. 294-295.)

IDAY MOSQUE, KONG: SAMPLE NO.17.

TA SHEET/3




GROUND PLAN

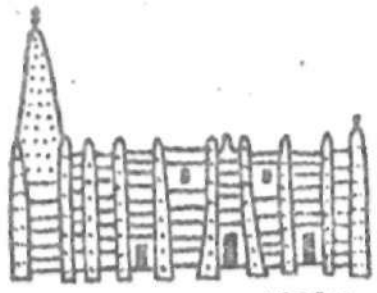


EAST FACE

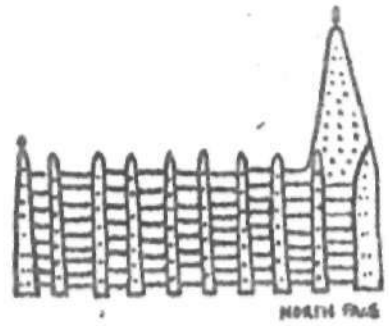


WEST FACE

(After MONTHER, 1884, facing p. 204.)



WEST FACE



NORTH FACE

(After Photographs, WILKS, 1969.)

FRIDAY MOSQUE, WA: SAMPLE NO.42

DATA SHEET/1

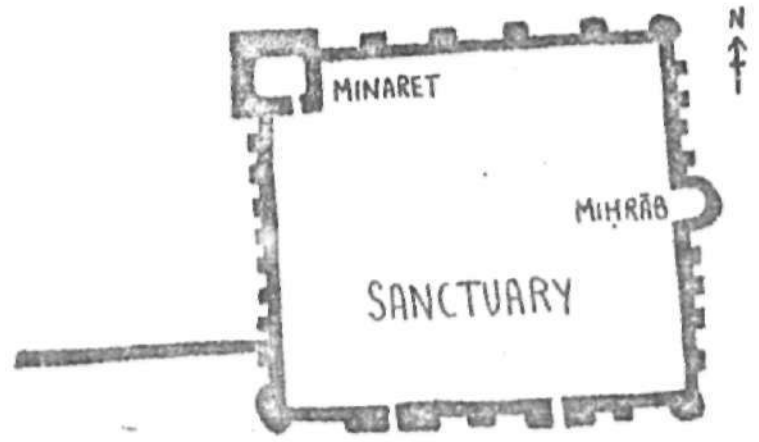
1. According to the Dukhūl al-Islām, written by al-Ḥājj Muḥammad Saghanughu, the first Friday mosque in Wa was built in 1216 A.H., 1801/2, with authorization from Kong (Arabic MS in possession of Ivor Wilks). A son of the Wa imām ᶜAbd al-Qādir, named Saᶜīd, was a student in Kong under its imām ᶜAbbās b. Muḥammad al-Muṣṭafā. Since imām ᶜAbbās of Kong died in 1801, it seems possibly that his pupil returned to Wa at that time, with authority to build a Friday mosque (Wilks, 1966, passim). Saᶜīd later became imām of Wa.

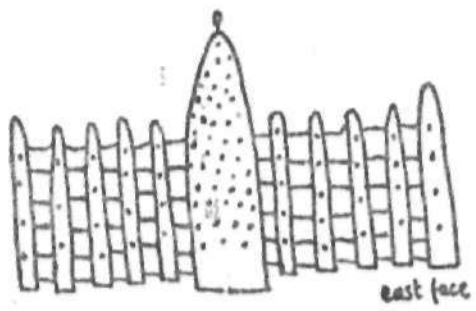
2. The mosque of 1801/2 was apparently either destroyed or allowed to fall into disrepair. In the 1880s a new license to build a Friday mosque was obtained from Kong by three Wa students there, Karamoko ᶜUthmān of Tagarayiri, al-Ḥājj Yaḥya of Dzudzeidayiri, and al-Ḥājj Ibrāhīm of Limamyiri. They returned with a builder from Kong named Numaba, who received, among other things, a gift of seven slaves for his services. (Wilks, field-notes, 3 August 1964).

3. The building of ca. 1885 was photographed by Delafosse in 1902 (Delafosse, 1908, p. 173), and by Kitson (1916, facing p. 381). The elevations on Data Sheet/2 are drawn from these photographs. The mosque was about 100 feet long, 70 feet broad, and the enclosure walls were about 30 feet high (Dougah, 1966, pp. 48-9). In 1954 the building was in a state of extreme disrepair, and most of it was either pulled down or incorporated into a newer structure which bore little resemblance to the old. This in turn fell down about 1964, and a new mosque has now been constructed which is modelled on the Great Mosque of Madina in the Hijaz, and therefore represents a complete departure from the Western Sudanese style.

FRIDAY MOSQUE, WA: SAMPLE NO.42

DATA SHEET/2







(Photographs KITSON 1910, facing p.381; DELAFOSSE, 1908, P.178.)

FRIDAY MOSQUE, DAR AL-SALAM: SAMPLE NO.9

DATA SHEET/1

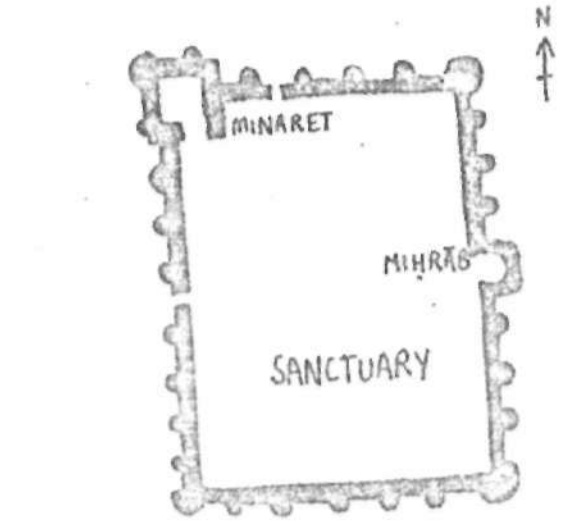
1. Dar al-Salam was founded about the middle of the nineteenth century by Mahmūd Saghanughu, who relinquished the imāmate of Bobo-Dioulasso in order to settle there. Mahmūd was the son of Ibrāhīm, also imām of Bobo-Dioulasso, and the son of Muhammad al-Muṣṭafā Saghanughu, died 1776/7, of Boron. (Wilks, field-notes, May, 1966).

2. The first mosque established by Mahmūd was not a Friday mosque. It is represented by an undistinguished modern building which still, however, retains its functional importance, and all classes for advanced students, for example, are inaugurated with prayers at the Saghanughu mosque. The Friday mosque was only established later, possibly ca. 1865; its construction was authorized from Bobo-Dioulasso.

3. The drawings of the Friday mosque are from photographs by Wilks, 1966. Comparison with the photograph in Clozel, 1912, facing p. 284, shows that little change has occurred in the building in the intervening five or six decades.

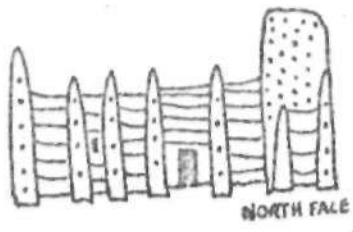
PRIDAY MOSQUE, DAR AL-SALAM: SAMPLE NO.9

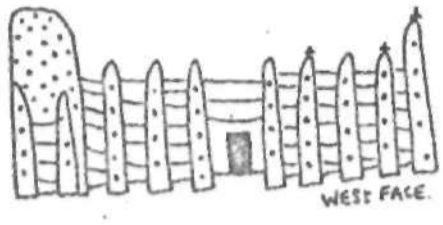
DATA SHEET #2

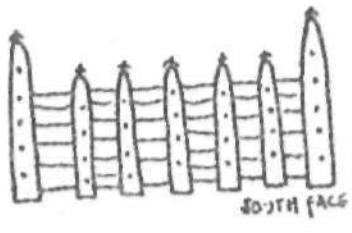









(After WILKS, PHOTOGRAPHS, 1966)

FRIDAY MOSQUE, WECHIAU: SAMPLE NO.35

DATA SHEET/1

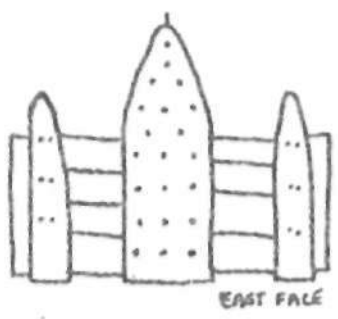
1. Wechiau, which is near Wa, has both Muslim and pagan components. Islam is said to have been brought to Wechiau by ᶜUmar Baro, who was from Kong. He established a school in Wechiau. Among his early pupils was Yaᶜmūsa from Larabanga, who, marrying one of his teacher's daughters, chose to remain in Wechiau and founded there his own quarter. The Muslims of Wechiau thus regard themselves as of both Kong and Larabanga origins (Wilks, field-notes, 11 April 1962).

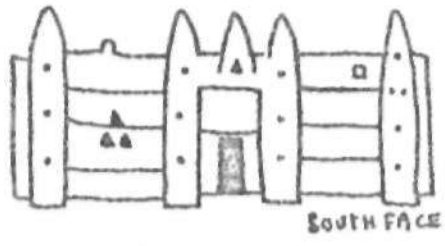
2. The son of ᶜUmar Baro, Fali, built the Friday Mosque, and became the first Friday imām. There have been ten Friday imāms in succession to Fali, and the present one has held office for a long time. Without further genealogical information it is difficult to establish even an approximate time for the imāmate of Fali, but a date more recent than the middle of the nineteenth century would seem unlikely, and an eighteenth century date quite possible.

FRIDAY MOSQUE, VEGHIAU: SAMPLE NO.35

DATA SHEET/2




(After photos, WILKS, 1950)

FRIDAY MOSQUE, BOBO-DIOULASSO: SAMPLE NO.3

DATA SHEET/1

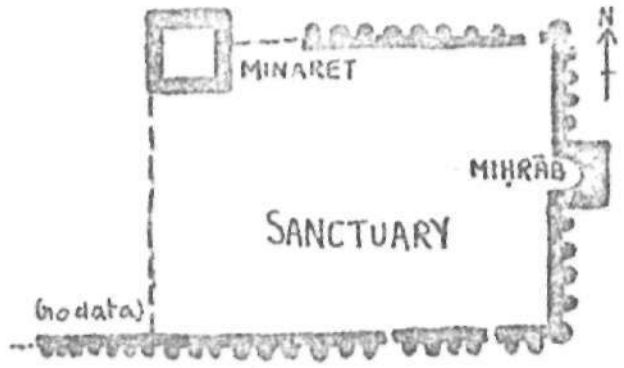
1. Bobo-Dioulasso was an early Dyula settlement established on the trade route between Kong and Jenne. Among the Dyula extensive apostasy had occurred by the eighteenth century, and many of the Dyula Sanu had become members of the masked Do cult. At the end of the eighteenth century the Watara rulers of Bobo-Dioulasso invited the Saghanughu of Boron and Kong to establish a settlement in the town; two sons of Muhammad al-Mustafā Saghanughu, namely Sa$^{c}$īd and Ibrāhīm, moved there. They established the first mosque there that is remembered. $^{c}$Umar Tal studied in Bobo-Dioulasso under Ibrāhīm Saghanughu probably when on his way to Mecca and therefore ca. 1820. He is said to have assisted in the construction of the mihrab tower of the mosque, which is accordingly carefully preserved. This mosque, which survives, is not however the Friday mosque.

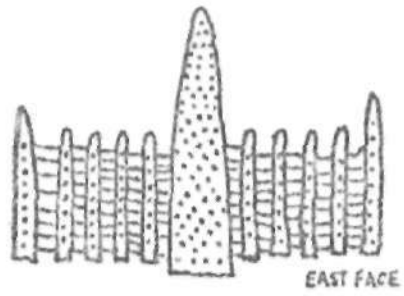
2. The Saghanughu effected the reconversion of the apostasized Dyula Sanu of Bobo-Dioulasso. One of the early converts was Chitere Sanu, who was renamed Muhammad. He had a son, $^{c}$Abd al-Qādir. The Sanu wanted to give the son to the Do cult, but the Saghanughu refused to allow this since he was a Muslim and instead sent him to school in Dia in Massina. Better known as Karamoko Sakidi, it was this person who built the present Friday mosque in Bobo-Dioulasso. There seems no clear agreement on the date when this building was commenced: the limits would seem to be ca. 1850 on the one hand, and 1885 on the other. The Saghanughu relinquished to the Sanu the imāmate of the town, but retain their prominent position.

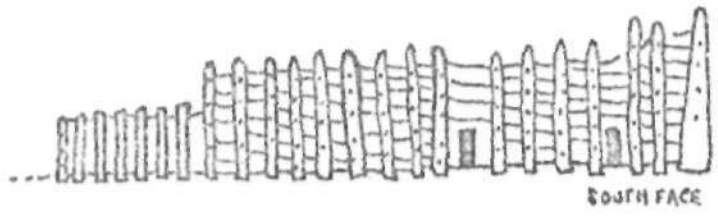
(Wilks, field-notes, May 1966).

FRIDAY MOSQUE, DOBO-DIOULASSO: SAMPLE NO.3

DATA SHEET/2




(After Willis, photos, 1959-1966.)

FRIDAY MOSQUE, LARABANGA: SAMPLE NO.18

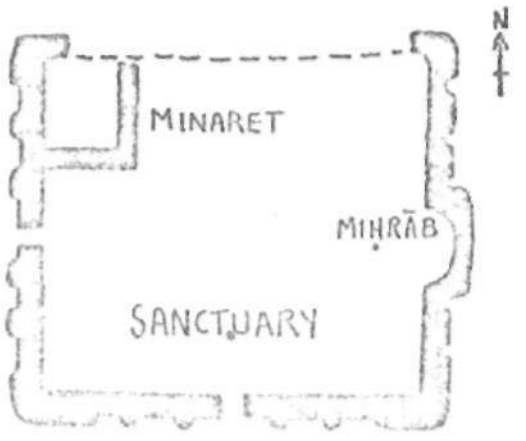
DATA SHEET/1

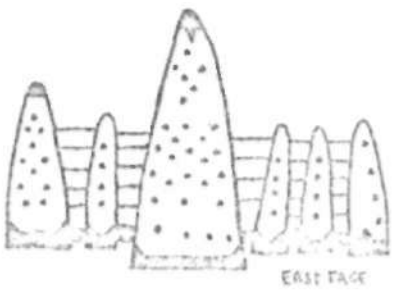
1. Larabanga is an ancient trading post established by the Dyula Kamara. It became a locally important centre of the diffusion of Islam due to the settlement there of an Arab - hence the name Larabanga, 'the village of the Arab'. The Larabanga Kamara now regard the Arab as their common ancestor; the give his name as Ibrāhīm, and say that he was descended from Ayyub al-Anṣārī of Madina, one of the minor Companions of the Prophet Muḥammad. They maintain genealogies written in Arabic which show their links with Ayyub. In both written and orally-transmitted texts, Ibrāhīm al-Anṣārī is firmly associated with the reign of the Gonja king Jakpa (1622/3 - 1666/7); he is said to have entered the service of Jakpa at the time of his 'jihad' against the pagans, as a reward being given land at Larabanga on which to settle. (Wilks, field-notes, 1962-66).

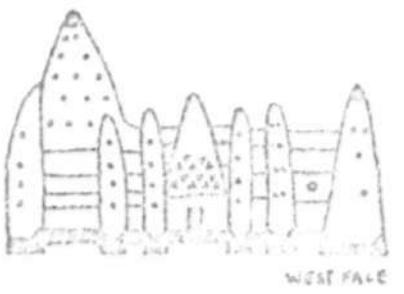
2. The Larabanga refer to the Friday mosque as being the mosque of Ibrāhīm al-Anṣārī. It may well be that the mosque was founded in the seventeenth century, but it would seem unlikely that the particular idiom of the present mosque had developed by that early date. From the appearance of the present mosque one might suggest that it was reconstructed perhaps in the nineteenth century, either directly or indirectly under Saghanughu influence.

FRIDAY MOSQUE, LARABANGA: SAMPLE NO.18

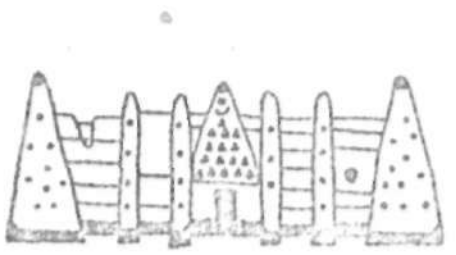
DATA SHEET/2





EAST FACE


WEST FACE

NORTH FACE UNRECORDED


SOUTH FACE

(After WILKS, PHOTOS 1958-1964.)

This sample of six mosques may be regarded, for the present purposes, as a random one: that is, the six were selected from the total population of twenty-nine simply because data was available on them. The data shows clearly the very close links that exist between these mosques of Complex V: with the exception of Larabanga, all the mosques have an historical inter-relatedness that is obviously expressed in their architectural similarities. The point is summarized below:

| MOSQUE | | FACTOR SCORE | HISTORICAL DATA |
|---|---|---|---|
| 17 | KONG | .465 | Saghanughu settlers from Boron, late 18th century |
| 3 | BOBO-DIOULASSO | .465 | Saghanughu settlers from Boron and Kong, late 18th-early 19th century |
| 9 | DAR AL-SALAM | .465 | Saghanughu settlers from Bobo-Dioulasso, mid-19th century |
| 42 | WA | .453 | Authorization obtained by Wa students from the Saghanughu in Kong, end of 18th and late 19th centuries |
| 18 | LARABANGA I | .453 | No reported link with the Saghanughu |
| 42 | WECHIAU | .349 | Built by Boro from Kong, late 19th or earlier 20th century. |

Bearing in mind the coherence of this data, which matches stylistic comparison by factor analysis with historical material obtained in the field, one might feel confident in predicting that further field-studies in Larabanga would reveal the presence of a link, whether direct or indirect, between the Komata of Larabanga and the Saghanughu of Kong.

viii CONCLUDING OBSERVATIONS

In this study, Aspects of Muslim Architecture in the Dyula Region of the Western Sudan, I have attempted to trace the antecedents of the style of mosque building that dominates the area, and to chart its spread both in time and space using, among other techniques, factor analysis. Further work on a larger sample than the fifty buildings analysed here now needs to be done, utilizing more systematic data. I believe, however, that the main hypotheses advanced here will prove fruitful as providing guides within which further research can proceed.

In conclusion, I should like to suggest that, in addition to the 'extensional' study of the spread of mosques over time and space, as one aspect of the Islamization process, it is also possible to investigate 'intensional' aspects of the same phenomenon. Once Islam becomes entrenched within a community, other architectural changes may occur. The local chief may associate himself ideologically with Islam by having built a palace, in the architectural idiom of the mosque, and contrasting sharply with his earlier compound which may have been distinguished from the mass of village buildings not in style but only in size - having additional units to house his more numerous wives and children. The palace, by contrast, takes on the quality (like the mosque) of a public building, and not only enhances the status of the chief but also is a token of his changing role vis-a-vis

his subjects. Other individuals within the community, such as the imām or the heads of quarters in a larger settlement, may follow this trend, often initially imposing on the front of their existing houses mosque-like door portals. In time such changes will effect other levels of society, and ultimately in some cases all buildings will come to assume a 'Western Sudanese' appearance (as, for example, at Larabanga).

The degree to which Islamic architectural forms appear in contexts other than places of worship may thus constitute a very real index of the degree of adherence to Islam of the community in general. Sometimes even pagan shrines may become 'Islamized', when a small mosque-like edifice is erected over them. It is interesting to note, in this context, that the French colonial authorities constructed their early administrative posts frequently in the Sudanese Muslim idiom, thus asserting some sort of identification with the pre-existing supra-tribal element in society. Later markets, post-offices and other public buildings and utilities were treated in the same way. The reductio ad absurdum of the process is to be seen in the railroad station of Bobo-Dioulasso, which is an enormous replica of a mosque on which even the protruding 'timbers' are neatly reproduced in cement.

FOOTNOTES

1 Kati, ed. of 1913, p. 65.
2 Mauny, 1961, pp. 299-306; Wilks, 1961, pp. 1-13; Wilks, 1962, pp. 337-341.
3 Arabic tajdid, 'renewal, revival'.
4. Stevens, 1967, passim.
5. Wilks, 1969, p. 3.
6. Bernus, 1960, passim; Wilks, 1966, passim.
7. Marty, 1922, bk. 3, ch. 3.
8. Wilks, 1969, section 2 passim.
9. Marty, 1922, pp. 262-4. special white turban of karamoko
10. See Wilks, 1969, pp. 12-15, for further analysis of this problem.
11. Richmond, 1926, p. 29.
12. Ibid, pp. 25-30; Kuhnel, 1966, p. 35.
13. Creswell, 1926, I, p. 137.
14. Kuhnel, 1966, p. 35.
15. Richmond, 1926, p. 62.
16. Ibid, p. 62.
17. Creswell, 1926, I and II, passim.
18. Richmond, 1926, p. 66 et seq; Kuhnel, 1966, p. 35; Terrasse, 1958, p. 42 et seq.
19. Creswell, 1926, I, pp. 139-40.
20. Ibid, II, passim.
21. Terrasse, 1958, p. 43.
22. Richmond, 1926, pp. 79-80.
23. Ibid, p. 84.
24. Ibid, p. 64.
25. Ibid, p. 64.
26. Kuhnel, 1966, p. 33 and Plate 2a.
27. Richmond, 1926, p. 64.
28. Ibid, p. 71.
29. Mauny, 1952, passim; Mauny, 1961, pp. 472-6; Jacques-Meunie, 1961, passim; Schacht, 1954, passim.
30. Jacques-Meunie, 1961, pp. 116-7.
31. Ibid, pp. 46-51.
32. Mauny, 1961, pp. 472-4.
33. Jacques-Meunie, p. 195 and Plate 79 b.
34. Mayer, 1956, p. 73.
35. See, e.g. Bovill, 1958, p. 90; Davidson, 1965, p. 60.
36. Ibn Khaldun, ed. Slane, 1927, II, pp. 112-4.
37. Ibn Baṭṭuṭa, ed. Gibb, 1929, p. 329.
38. Ibid, p. 333.
39. Leo Africanus, Hakluyt ed., 1896, I, p. 134. The reference to 'stone and lime', making allowance for the translations through which the work has gone, is probably to be read as 'brick and plaster'.
40. Al-Sa'di, ed. of 1964, pp. 14-16.
41. Kāti, ed. of 1913, p. 56.
42. Mayer, 1956, pp. 21-3.
43. Barth, 1859, III, p. 323.
44. Kuhnel, 1966, p. 127.

45. See e.g. Kuhnel, ibid; Hoag, 1963, p. 26.
46. Kāti, ed. of 1913, pp. 282, 320.
47. Al-Sa'di, ed. of 1964, pp. 177, 330.
48. Tajkirat al-Nisian, ed. of 1901, pp. 16, 58, 158.
49. Caillie, 1830; Barth, 1859.
50. Mauny, 1952, p. 902.
51. Barth, 1859, III, p. 323.
52. Mauny, 1952, p. 905.
53. Kāti , ed. of 1913, p. 222.
54. Ed. of 1901, pp. 57-8.
55. Mauny, 1952, p. 907.
56. Al-Sa'di, ed. of 1964, pp. 31-2.
57. Ibid, p. 179.
58. Mauny, 1952, p. 910.
59. Kāti, ed. of 1913, pp. 56-8.
60. Ibid, p. 52 n.
61. Al-Sa'di, ed. of 1964, pp. 23-4.
62. Mauny, 1961, pp. 494-5.
63. See e.g. Lewis, 1966, Introduction.
64. Al-Sa'di, ed. of 1964, p. 22.
65. Wilks, 1961, ch. 1; Wilks, 1962, passim.
66. Mauny, 1961, p. 500; Dubois, 1897, p. 167.
67. Dubois, 1897, pp. 170-1.
68. Ibid, p. 180 et seq.
69. Ibid, pp. 177 - 187.
70. Kāti, ed. of 1913, p. 166.
71. Dubois, 1897, pp. 184-5.
72. Marty, 1920, II, p. 235.
73. Monteil, 1932, p. 151.
74. Marty, 1920, II, p. 236.
75. Dubois, 1911, p. 189.
76. Marty, 1922, pp. 243-261.
77. Wilks, field-notes, 18 April 1964.
78. This column apparently shows all mosques that were proper roofed buildings, and includes Friday mosques listedin the previous column.
79. Tauxier, 1921, appendix 15.
80. Wilks, field-notes, 15 May, 17 May, 1966.
81. Ibid, 12 April 1962; 18 April 1964.
82. Dougah, 1966, pp. 48-9; Wilks, field-notes, 3 Aug. 1964.
83. Wilks, 1966, passim.
84. Uncel, 1959, pp. 14-5.
85. Wilks, field-notes, 11 May 1966.
86. Data on the many mosques in these areas is required. The mosque of Akka, in northern Massina (see Appendix I), resembles the Great Mosque of Jenne closely, and presumably belongs to Complex I.
87. See e.g. Barth, 1959, I, pp. 355-7.
88. Schacht, 1954, passim.
89. Wilks and Stevens, in preparation.
90. Ibn Baṭṭuṭa, ed. of 19[illegible] pp. 394-5.

91. Kāti, ed. of 1913, p. 173; al-Sa'di, ed. of 1964, p. 33.
92. Wilks, 1969, pp. 24-6.
93. Ibid, p. 27.
94. Ibid, pp. 16-39.

APPENDIX I

CATALOGUE OF MOSQUES STUDIED, WITH SOURCES OF DATA

| MOSQUE | DATA SOURCES | SAMPLE NO., IF ANY | EXTANT 1966? |
|---|---|---|---|
| AKKA, Mali | Photos, 1959 | - | Yes |
| BAMAKO I, Mali | François, 241 | 40 | ? |
| BAMAKO II, Mali | François, 57 | - | ? |
| BAMAKO III, Mali | B.C.A.F., R.C.1, 1908, 5 | - | ? |
| BAMAKO IV, Mali | Engestrom, 1955, 125 | - | ? |
| BANDA NKWANTA, Ghana | Photos, 1959-66 | 2 | Yes |
| BANGAON, Ghana | Photos, 1950-9 | 1 | ? |
| BOBO-DIOULASSO, Volta | Photos, 1959-66 | 3 | Yes |
| BOLE I, Ghana | Photos, 1958-66 | 4 | Yes |
| BOLE II, Ghana | Photos, 1958-66 | 5 | Yes |
| BONDUKU I, Ivory C. | Clozel, 1906,187; Tauxier, 1921, p. 216 f. | 43 | No |
| BONDUKU II, Ivory C. | Delafosse, 1908, 113 | - | No |
| BONDUKU III | Photos, 1959 | - | ? |
| BOROMO, Volta | Photos, 1960-66 | 6 | Yes |
| BORON | B.C.A.F., Aug.1897, 370 | - | No |
| BOUGANIENA, Volta | Binger, I, 441-3 | - | ? |
| BUNA I, Ivory Coast | Delafosse 1908, 137; Marty 1922, 456 f; Tauxier 1921, 104; Haselberger, 62 | 7 | ? |
| BUNA II, Ivory Coast | Photos, 1960 | 8 | Yes |
| DABOYA I, Ghana | Photos, 1950 | - | ? |
| DABOYA II, Ghana | Photos, 1950 | - | ? |
| DAR AL-SALAM, Volta | Clozel, 1912, 284 f; photos 1966 | 9 | Yes |
| DIEBUGU, Volta | Photos, 1959 | 10 | Yes |
| DIRE, Mali | Photos, 1959 | - | No |
| FIELMON, Ghana | Photos, 1964 | 11 | Yes |
| GAHOUE, Ivory Coast | Marty 1922, 142 f. | - | ? |
| GINDABO, Ghana | Photos, 1950 | 12 | ? |
| GUENTEGUELA, Ivory C. | Marty 1922, 244 f. | 50 | ? |
| GUROPISE, Ghana | Photos, 1965 | 13 | Yes |
| GWOLU, Ghana | Photos, 1950-62 | 36 | ? |
| HAMALE, Ghana | Photos, 1950-64 | 14 | Yes |
| JENENE I, Ghana | Delafosse 1908, 240-3 | - | No |
| JENENE II, Ghana | Photos, 1964-6 | - | Yes |
| JENNE I (OLD JENNE), Mali | Dubois, 1897, 176-87; Dubois, 1911, 186-9. Photos. 1959. | 15 | Yes |
| JENNE II (Ahmadu's mosque), Mali | Dubois, 1897, 184-5 | - | No |
| KANKAN, Guinea | D'Ollone 1901, 233; Frobenius, 1933, 614 | 38 | No |
| KAWARA, Ivory Coast | Photos, 1959 | 16 | Yes |
| KONG, Ivory Coast | Monnier, 204 f; Binger I, 295-9; Dernus, 272 f; photos 1959 | 17 | Yes |

| | | | |
|---|---|---|---|
| LARABANGA I, Ghana | Photos, 1962-65 | 18 | Yes |
| LARABANGA II | Photos, 1962 | - | No |
| LARABANGA III | Photos, 1962 | - | No |
| LARABANGA IV | Photos, 1964-66 | 19 | Yes |
| LEO, Volta | B.C.A.F. Feb. 1898, 49; Marc, 1909; photos 1966. | 49 | Yes |
| LOHOGNILE, Ivory C. | Binger I, 277-9 | - | ? |
| LOKOSSO, Volta | Haselberger, pl.52 | 45 | ? |
| MALUME, Ghana | Photos, 1955-60 | 20 | Yes |
| MANDARA, Ghana | Photos, 1960 | 41 | Yes |
| MENJI, Ghana | Photos, 1952-9 | 21 | No |
| MOPTI, Mali | Photos, 1959 | - | Yes |
| NAKORA, Ghana | Photos, 1950-64 | 22 | Yes |
| NAMASA, Ghana | Photos, 1959-64 | 23 | Yes |
| NANDAM, Ghana | Photos, 1950 | 24 | ? |
| NANTON, Ghana | Photos, 1950 | 25 | Yes |
| NASA, Ghana | Photos, 1964 | 26 | Yes |
| NIAMINA, Mali | Decourt, 281 | - | ? |
| ODIENNE, Ivory C. | Marty 1922, 82 f. | - | ? |
| SAFANE, Volta | Chivas-Baron, 146 | - | ? |
| SALAGA, Ghana | Binger II, 93 | 46 | No |
| SAMANIGUILA, Ivory C. | Marty 1922, 245 f. | - | ? |
| SAN, Mali | Photos, 1959 | - | Yes |
| SANSANDING, Mali | Desplagnes, 454 f. | - | ? |
| SANSANNE-MANGO, Togo | Calvert 1918; Gehrts 129; Kuas 145 f. | 39 | ? |
| SEGU I, Mali | Delafosse 1912, II, pl.xxv; Perignon, 153; Marty 1920, IV, 188 f. | 37 | ? |
| SEGU II, Mali | Chailley, 172 f. | 47 | Yes |
| SOROBANGO, Ivory C. | Binger II, 158; Delafosse 1908, 123 | 48 | ? |
| TIMBUKTU JINGEREBER | Photos, 1959 | 27 | Yes |
| TIMBUKTU SIDI YAHYA | Mauny, 1952, 908 | - | Yes |
| TIMBUKTU SANKORE | Photos, 1959 | 28 | Yes |
| TUNA, Ghana | Photos, 1964 | 29 | ? |
| WA I, Ghana | Delafosse 1908, 173; Kitson 1916, 381 f. | 42 | No |
| WA II, Ghana | Photos, 1950 | 31 | No |
| WA DONDOLI, Ghana | Photos, 1960-66 | 30 | Yes |
| WALABU, Volta | Binger I, 417; Haselberger, 106; Photos, 1959-66 | 32 | Yes |
| WALEMBELE, Ghana | Photos, 1962-64 | 33 | Yes |
| WALWALE, Ghana | Photos, 1956-62 | 34 | ? |
| WECHIAU, Ghana | Photos, 1950 | 35 | ? |
| YOROBADI, Ivory C. | Marty, 1922, 216 f. | 44 | ? |

(All photographs from the collection of Ivor Wilks)

APPENDIX II

BIBLIOGRAPHIES

A ISLAM IN THE WESTERN SUDAN


Arnaud, R. L'Islam et la Politique Musulmane Française en Afrique Occidentale Française, in Bulletin du Comite de l'Afrique Française, Renseignements Coloniaux 1, Jan. 1912; 3, March 1912; 4, April 1912.

Bernus, E. Kong et sa Région, in Etudes Eburnienes, VIII, 1960.

Chatelier, A. L'Islam dans l'Afrique Occidentale, G. Steinheil, Paris, 1899.

Delafosse, M. Le Clergé Musulman de l'Afrique Occidentale, in Revue du Monde Musulman, XI, June 1910.

Delafosse, M. L'Islam et les Societés Noires de l'Afrique, in Bulletin du Comité de l'Afrique Française, Renseignements Coloniaux, 1922.

Delafosse, M. L'Animisme Nègre et sa Resistance a L'Islamisation en Afrique Occidentale, in Revue de Monde Musulman, 1922.

Goody, J. A Note on the Penetration of Islam into the West of the Northern Territories of the Gold Coast, in Transactions of the Gold Coast and Togoland Historical Society, I, 2, 1953.

Gouilly, A. L'Islam dans l'Afrique Occidentale Française, Larose, Paris, 1952.

Kāti, Maḥmūd Ta'rīkh al-fattāsh, French translation by O. Houdas and M. Delafosse, Leroux, Paris, 1913.

Lewis, I.(ed) Islam in Tropical Africa, O.U.P., London, 1966.

Levtzion, N. Muslims and Chiefs in West Africa, Oxford, 1968.

Marty, P. Etudes sur l'Islam et les Tribus du Soudan, Leroux, Paris, 4 vols., 1920-21.

Marty, P. L'Islam en Guinée: Fouta Diallon. Leroux, Paris, 1921.

Marty, P. — Etudes sur l'Islam en Côte d'Ivoire, Leroux, Paris, 1922.

Muḥammad Saghanughu — Al-jawahīr wa'l-yawāqīt, fī dukhūl al-Islām fī'l-Maghārib maᶜā 'l-tawqīt. MS in the author's library, Bobo-Dioulasso. English translation by Salīh Ibrāhīm, Institute of African Studies, Ghana, IASAR/246(tr)., 1964.

Rougier, F. — L'Islam a Banamba, in Bull. du Comite des Etudes Historiques et Scientifiques de l'Afrique Occidentale Française, 1930.

al-Sa'di, ᶜAbd al-Raḥmān — Ta'rīkh al-Sūdān. Edition of 1964 with French translation by O. Houdas, Paris, 1964.

Stevens, P. F. — Aspects of Intellectual Interaction between Muslim Scholars in North Africa and the Western Sudan. MS.

Trimingham, J. — Islam in West Africa. O.U.P., London, 1959.

Trimingham, J. — History of Islam in West Africa. O.U.P., London, 1962.

Wilks, I. — The Northern Factor in Ashanti History, Legon. 1961.

Wilks, I. — A Medieval Trade-route from the Niger to the Gulf of Guinea, in Journal of African History, III, 2, 1962.

Wilks, I. — The Growth of Islamic Learning in Ghana, in Journal of the Historical Society of Nigeria, II, 4, 1963.

Wilks, I. — A Note on the Arabic MS IASAR/298, and others, from Wa, in Research Review, Institute of African Studies, Ghana, II, 2, 1966.

Wilks, I. — The Transmission of Islamic Learning in the Western Sudan, in Literacy in Traditional Societies, ed. J. Goody, C.U.P. forthcoming 1969 (references to pagination in MS).

## B ISLAMIC ARCHITECTURE: GENERAL


Creswell, K. — The Evolution of the Minaret, with special reference to Egypt, I, II, and II, in The Burlington Magazine, March, May, June, 1926.

Creswell, K. — Early Muslim Architecture, I, The Umayyads, Oxford, 1932.

Creswell, K. — Early Muslim Architecture, II, The Abbasids, Oxford, 1940.

Creswell, K. — A Short Account of Early Muslim Architecture, Pelican, London, 1958.

Garlake, P. — The Early Islamic Architecture of the East African Coast, O.U.P., London, 1966.

Hoag, J. — Western Islamic Architecture, Braziller, New York, 1963.

Kuhnel, E. — Islamic Art and Architecture, Bell, London, 1966.

Marçais, G. — L'Architecture Musulman d'Occident, Paris, 1955.

Maslow, B. — Les Mosquees de Fes et du Nord du Maroc, Paris, 1937.

Meyer, L. — Islamic Architects and their Works, Geneva, 1956.

Piquet, V. — Autour des Monuments Musulmans du Maghreb, 3 vols., Maisonneuve, Paris, 1948.

Richmond, E. — Moslem Architecture, 623 to 1516, Royal Asiatic Society, London, 1926.

Saladin, H. — La Mosquée de Sidi Okba a Kairouan, Paris, 1903.

Schacht, J. — An unknown type of Minbar and its Historical Significance, in Ars Orientalis, II, 1957.

Schacht, J. — Further Notes on Minbars, in Ars Orientalis, III, 1959.

Terrasse, H. — Islam d'Espagne: une Rencontre de l'Orient et de l'Occident, Plon, Paris, 1958.

Terrasse, C. — Medersas du Maroc, Vorancé, Paris, n.d.

Uncel, B. — Turkish Islamic Architecture, Tiranti, London, 1959.

## C ISLAMIC ARCHITECTURE IN THE WESTERN SUDAN


Dreyfus, J. — Notes sur l'utilisation du beton de terre et du beton de terre stabilisé pour la construction, in Bulletin de l'Institut Français d'Afrique Noire, B, XIV, 1952.

Engestrom, T. — Contribution aux connaissances des styles de construction au Soudan Français, in Ethnos, Stockholm, XX, 2-3, 1955.

Engestrom, T. — Wall Decorations of the Oulata Type at Bamako, in Ethnos, XXI, 3-4, 1956.

Engestrom, T. — Notes sur les Modes de Construction au Soudan, Statens Etnografiska Museum, Stockholm, 1957.

Engestrom, T. — Origin of Pre-Islamic Architecture in West-Africa, in Ethnos, XXIV, 1-2, 1959.

Haselberger, H. — Bautraditionen der Westafrikanischen Negerkulturen, Herder, Vienna, 1964.

Jacques-Meunie, D. — Cites Anciennes de Mauritanie: Provinces du Tagannt et du Hodh, Klincksieck, Paris, 1961.

Khane, E. R. — Le 'Guibla' et l'Islam Soudanais, in Revue Indigene, 1919.

Marty, P. — Etudes sur l'Islam en Côte d'Ivoire, Leroux, Paris, 1922, Book 3, ch. 2.

Mauny, R. — Notes d'Archeologie sur Tombouctou, in Bulletin de l'Institut Français d'Afrique Noire, B, XIV, 1952.

Mauny, R. — Tableau Géographique de l'Ouest Africain au Moyen Age, Dakar, 1961.

Monteil, C. — Une Cité Soudanaise - Djenne, metropole de Delta Central du Niger, Paris, 1932.

Paris, E. — Les Mosquées de Tombouctou et l'architecture Soudanaise, in Tam-Tam, 1, 1947.

Schacht, J. — Sur la Diffusion des Formes d'Architecture Religieuse Musulmane à travers le Sahara, in Travaux de l'Institut de Recherches Sahariennes, XI, 1954.

Walton, J. — Patterned Walling in African Folk Building, in Journal of African History, I, 1, 1960.

D PRIMARY SOURCES: CONTAINING DATA ON MOSQUES


Barth, H. Travels and Discoveries in North and North Africa, 3 vols., New York, 1859.

Binger, L. Du Niger au Golfe de Guinée, 2 vols., Paris, 1892.

Bulletin du Comite de l'Afrique Francaise, 1892 - ?

Caillie, R. Travels through Central Africa to Timbuctoo, 2 vols., London, 1830.

Calvert, H. Togoland. Berlin. 1918.

Chailley, M. and others Notes et Etudes sur l'Islam en Afrique Noire, Peyronnet, Paris, 1962.

Chivas-Baron, Cl. Côte d'Ivoire, Larose, Paris, 1939.

Clozel, F. J. Dix Ans à la Côte d'Ivoire, Challamel, Paris, 1906.

Clozel, F. J. (ed) Haut Sénégal-Niger, II, Geographie Economiquem by J. Meniaud, Paris, 1912.

Decourt, F. La Famille Kerdalec au Soudan, Vuibert, Paris, 1910.

Delafosse, M. Les Frontières de la Côte d'Ivoire, de la Côte d'Or et du Soudan, Masson, Paris, 1908.

Delafosse, M. Haut Senegal-Niger, II, Paris, 1912.

Desplagnes, L. Le Plateau Central Nigerien, Paris, 1907.

D'Ollone De la Côte d'Ivoire au Soudan et à la Guinée, Paris, 1901.

Dougah, J.C. Wa and its People, Institute of African Studies, Ghana, 1966.

Dubois, F. Tombouctou la Mysterieuse, Flammarion, Paris, 1897.

Dubois, F. Notre Beau Niger, Flammarion, Paris, 1911.

François, G. L'Afrique Occidentale Française, Larose, Paris, 1907.

Frobenius, L. Kulturgeschichte Afrikas, Berlin, 1933.

Gehrts, M. A Camera Actress in the Wilds of Togoland, Seeley, London, 1919.

Ibn Battuta' — English edition and translation, H.A.R. Gibb, Routledge, London, 1929.

Ibn Khaldun — Histoire des Berbères, French edition and translation, de Slane, II, Geuthner, Paris, 1927.

Kitson, A. — The Gold Coast, in The Geographical Journal, London, XLVIII, 1916.

Kuas, R. — Togo-Erinnerungen, Berlin, 1939.

Leo Africanus — History and Description of Africa, Hakluyt Society, 3 vols., London, 1896.

Marc — Le Pays Mossi, Paris, 1909.

Monnier, M. — France Noire, Paris, 1894.

Monteil, C. — Une Cité Soudanaise: Djenné, metropole du Delta du Niger, Paris, 1932.

Perignon, A. — Haut Sénégal et Moyen-Niger, Paris, 1901.

Tajkirat al-Nisian, edition and translation by O. Houdas, Leroux, Paris, 1901.

Tauxier, L. — Le Noir de Bondoukou, Paris, 1921.


## B MISCELLANEOUS REFERENCES


Bovill, E. — The Golden Trade of the Moors, O.U.P., London, 1958.

Davidson, B. — The Growth of African Civilisation: West Africa 1000-1800, Longmans, London, 1965.