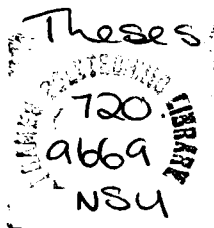


THE TRADITIONAL ARCHITECTURE
OF THE
IGBO OF NIGERIA

by

GODWIN CHIKWENDU (NSUDE MSc (Arch.))



A thesis submitted to the Council for National Academic Awards in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

Thames Polytechnic
School of Architecture and Landscape
Dartford.

May 1987

G.C. NSUDE

The Traditional Architecture of the Igbo of Nigeria.

ABSTRACT

Modern architecture in Nigeria presents a bizarre picture of indiscriminate transplantation of foreign buildings, and a complete abandonment of traditional architecture. Apparently, the transplanted architecture does not respond to the physical and cultural needs of Nigerians, and, at all events, the peoples' attitude to it portrays ignorance, confusion and resignation. This thesis argues that rather than this wholesale transplantation, Nigeria's traditional architecture should be studied to rediscover those principles that are vital for the development of a satisfactory modern architecture. The thesis is confined to Igboland, and traditional Igbo architecture is studied in the context of the physical and cultural environments under which it evolved and developed.

The study reveals that traditional Igbo architecture is a product of physical and cultural factors some of which are peculiar to Igboland and society. These factors create architectural problems and also provide some means of solving them. The physical environment, for instance, causes the problems of rain, heat and humidity, but provides mud, timber, bamboo and palms for house building. Similarly the Igbo world-view imposes a philosophy which constrains ordering in the physical world to mirror a conceptual ideal one. Again, this provides a theoretical principle by which the Igbo order architectural elements in the physical setting. The traditional architecture, therefore, directly relates to their environment and long-established customs and way of life. Colonization and the ensuing transplantation of foreign architecture have, however, undermined it and created problems. These problems are highlighted here, but with the recognition that erasure of the transplanted buildings is no solution. It is further established that traditional architecture is not anachronistic, but possesses valid ordering and design principles, technical solutions and upgradable materials. A compromise is therefore sought whereby these can be exploited to cross-fertilise current practice to achieve a satisfactory modern architecture in Igboland and Nigeria.



TABLE OF CONTENTS

	Page
ABSTRACT	1
LIST OF ILLUSTRATIONS	6
DEDICATION	12
ACKNOWLEDGEMENTS	14
PART ONE	15
CHAPTER ONE	16
INTRODUCTION	16
Aims and Objectives	16
The Scope of the Research Work	19
Methods of Research and the Plan of the Thesis	22
Data Collection	26
A Broad View of the Subject	28
REFERENCES	45
PART TWO: The Traditional Setting and the Domestic Architecture of the Igbo	49
CHAPTER TWO	50
THE PHYSICAL ENVIRONMENT OF IGBOLAND	
Igbo and Igboland	50
The Geology and Topography of Igboland	51
Soil	58
Climate	60
Vegetation	63
Demography and Rural Population Distribution Pattern	66
Formation, Growth and Distribution of Settlement Types in Igboland	68
The Physical Environment as a Limiting Factor in Traditional Igbo Architecture	75
REFERENCES	80

CHAPTER THREE	84
IGBO SOCIETY AND CULTURE	
Origin, Settlement and Dispersal	84
The Igbo World-View and Religion	87
Social Structure and Organisation	93
Ethics	98
Domestic Tasks and Manner of Living	100
Traditional Economic Activities	106
Land and Land Tenure	111
Choice of Building Site	118
REFERENCES	120
 CHAPTER FOUR	 126
TRADITIONAL BUILDING MATERIALS	
Introduction	126
Mud	126
Timber	132
Bamboo	134
Building Materials derived from Palms	137
Thatch	139
Fastening Materials	144
REFERENCES	145
 CHAPTER FIVE	 146
TRADITIONAL BUILDING CONSTRUCTION	
Introduction	146
Structural Systems	149
Site Work and Setting Out	152
Foundations	156
Walls	159
Roofs	170
Ground Floor Construction	184
Raised Floors	186
Doors and Windows	187
Wall Surface Finish	190
Conclusion	192
REFERENCES	196

CHAPTER SIX	198
TRADITIONAL ARCHITECTURAL DECORATION	
Introduction	198
House Decoration Techniques	199
Motifs	207
REFERENCES	228
 CHAPTER SEVEN	 231
TRADITIONAL DOMESTIC IGBO ARCHITECTURE	
The Village Group, Villages, and Wards	231
The Compound and its Elements	246
REFERENCES	311
 PART THREE: Analysis of the Traditional Setting and Domestic Architecture	 314
 CHAPTER EIGHT	 315
ASPECTS OF ENVIRONMENTAL INFLUENCE AND RESPONSES	
Responses to the Physical Environment	315
Cultural Influences	321
REFERENCES	341
 CHAPTER NINE	 344
EVOLUTION AND PRINCIPLES	
The Evolution and Development of Architecture in Igboland: A Hypothetical Reconstruction	344
Some Basic Principles of Spatial Ordering in Traditional Igbo Architecture	364
REFERENCES	379
 PART FOUR: Current Architecture and Tradition: Problems and Prospects	 384
 CHAPTER TEN	 385
CHANGE AND THE GENESIS OF CURRENT ARCHITECTURAL PROBLEMS	
REFERENCES	413



CHAPTER ELEVEN	415
CURRENT ARCHITECTURE IN IGBOLAND: A CRITICAL APPRAISAL	
Introduction	415
In the Towns	417
In the Countryside	444
REFERENCES	454
CHAPTER TWELVE	457
TRADITIONAL ARCHITECTURE FOR TODAY AND TOMORROW	
Traditional Architecture and Today's Needs	457
Lessons from Traditional Architecture	468
REFERENCES	485
SUMMARY AND CONCLUSIONS	488
APPENDIX ONE	i
NOTES TO APPENDIX ONE	ii
APPENDIX TWO	iii
<u>Uno nkpo</u>	
APPENDIX THREE	v
<u>Ozo</u> Title Society	
SELECTED BIBLIOGRAPHY	vi

LIST OF ILLUSTRATIONS

	Page
Ill. 1	a. Sketch Map of West Africa. 52
	b. Modified Tribal Map of Nigeria. 52
Ill. 2	Igboland. 54
Ill. 3	Geology and Topography. 55
Ill. 4	Vegetation. 65
Ill. 5	Demography and Rural Population Distribution Patterns. 67
Ill. 6	Distribution of Settlement Types. 72
Ill. 7	Comfort Chart. 79
Ill. 8	Dispersal. 86
Ill. 9	Igbo Universe. 90
Ill. 10	The Social Structure of a Notional Village Group 'A', comprising Villages B,C,D and E, and Four Levels of <u>Umunna</u> Patrilineage, F-X. 96
Ill. 11	Traditional Couches and Seat. 103
Ill. 12	Stools used in Igbo Homes. 105
Ill. 13	An Igbo Farmer inspecting Yams in his Barn. 107
Ill. 14	Products of Igbo Smiths. 109
Ill. 15	Room Temperatures of Concrete and Mud Walls, under Hot Climatic Conditions. 131
Ill. 16	Bamboo for Building Construction. 135
Ill. 17	Palm Trees. 138
Ill. 18	Grass used for Thatching. 140
Ill. 19	Preparing Roofing Mats. 142
Ill. 20	Finished Thatching Mats. 143
Ill. 21	House of Mazi Ogbonnaya Ani in Akegbe under Reconstruction, Load-Bearing Wall Structure. 150
Ill. 22	House of Mazi Uwaezuoke in Ebenebe, Timber-Framed or Skeletal Structure. 151
Ill. 23	House of Chief Arum Ogbodo in Akwuke, Composite Structure. 153
Ill. 24	House of Mazi Agubalu Ebe in Nise, Composite Structure. 154

Ill. 25	Foundations.	158
Ill. 26	Rammed-Earth Method of Wall Construction.	162
Ill. 27	Stages of Construction of a Wattle and Daub or Skeletal Structure with Mud Infilling.	165
Ill. 28	a. Locally-Made Wooden Trowel.	166
	b. Wattle and Daub Structure showing exposed Skeletal Members.	166
Ill. 29	Timber Board Walling in Uratta.	168
Ill. 30	House of the First Wife of the Chief Priest of Oguruttee Agu, Enugu Ezike, Non Load-Bearing Wall.	169
Ill. 31	House of Mazi Igweshi be Ede in Agbani.	171
Ill. 32	Steeply Pitched Roofs of some Igbo Houses.	173
Ill. 33	House of Chief Arum Ogbodo in Akwuke, Gable Walls bearing the Ridge-Beam.	175
Ill. 34	Gable Post Bearing the Ridge-Beam.	176
Ill. 35	House of Mazi Nwokorie Nwasa in Awka.	177
Ill. 36	A Disused House in Mazi Igweshi be Ede's Compound showing Inclined Pegs that carry Eaves-Beams.	179
Ill. 37	a. Roof Construction in Progress.	181
	b. Completed Roof.	181
Ill. 38	Central Post supporting the Apex of a Conical Roof.	183
Ill. 39	A Removable Wickerwork Panel used as a Door.	188
Ill. 40	Traditional Igbo Carved Door.	189
Ill. 41	Relief Decoration on Igbo Houses.	201
Ill. 42	Insertions.	202
Ill. 43	Mural Painting from Okwu Wall.	204
Ill. 44	Mural Painting from Nri Court House.	205
Ill. 45	Simple and Complex <u>Uli</u> Motifs.	208
Ill. 46	<u>Uli</u> Motifs used for House Decoration.	211
Ill. 47	<u>Uli</u> Motifs used for House Decoration.	212

Ill. 48	<u>Uli</u> Motifs used for House Decoration.	213
Ill. 49	<u>Uli</u> Motifs used for House Decoration.	214
Ill. 50	Geometrical Motifs used on Traditional Carved Door.	216
Ill. 51	Geometrical Motifs popular in Nri.	217
Ill. 52	Geometrical Motifs popular in Nri.	218
Ill. 53	Geometrical Motifs used on <u>Mbari</u> .	219
Ill. 54	Pattern of Layout of an Igbo Village Group.	233
Ill. 55	Layout of Uzuakoli Village Group.	235
Ill. 56	Village Layout.	237
Ill. 57	Umu Aram Ward of Umune Ngwa Village in Nsukka Village Group.	238
Ill. 58	Traditional Igbo Village Group Layout.	240
Ill. 59	Umune Ngwa Village in Nsukka.	242
Ill. 60	Layout of Afikpo Village Group.	243
Ill. 61	Mgbom Village in Afikpo Village Group.	245
Ill. 62	Compound of Mazi Aro Ukwu in Akegbe.	248
Ill. 63	Entrance to a Traditional Compound.	249
Ill. 64	Compound of Mazi Ugbo in Onitsha, Impluvium Compound.	251
Ill. 65	Block Plan of Ndi Aja Compound in Ohaffia.	254
Ill. 66	Ezi Akputa Compound in Afikpo, an Amorphous Compound.	256
Ill. 67	Compound of Chief Arum Ogbodo in Akwuke.	258
Ill. 68	Mazi Eyisi's Compound Main Gate in Nneni Njikoka.	263
Ill. 69	Simple Main Gates.	264
Ill. 70	More Structurally Developed Main Gates.	265
Ill. 71	Mazi Ogbe's Compound Main Gate.	266
Ill. 72	Compound Walls.	268
Ill. 73	Compound of Mazi Igwesi in Nri, Single Court Compound.	272
Ill. 74	Compound of Mazi Ayogu in Enugu Ezike, Single Court Compound.	273
Ill. 75	Compound of Mazi Nwaozo Ude in Ngwo, Single Court Compound.	274

Ill. 76	Compound of Mazi Uwakwe in Akabo, Double Court Compound.	275
Ill. 77	Block Plan of the Compound of Mazi Ewuzie in Ozubulu, Multiple Court Compound.	276
Ill. 78	Compound of Mazi Nwokorie Nwasa in Nanka, Multiple Court Compound.	277
Ill. 79	<u>Obu</u> House in Ozubulu.	283
Ill. 80	<u>Obu</u> House under Reconstruction in Nneni Njikoka.	284
Ill. 81	Traditional Carved Panels, Pillars and Doors.	285
Ill. 82	Mazi Oyeke's Inner House in Enugu Ezike.	287
Ill. 83	Men's Houses in Akabo and Nri.	288
Ill. 84	Mazi Ogbonnaya Ani's House in Akegbe.	289
Ill. 85	Mazi Aro Ukwu's House in Akegbe.	290
Ill. 86	Man's House in Ugwuoba.	291
Ill. 87	Neo-Vernacular <u>Obuma</u> in Akabo.	292
Ill. 88	<u>Obuma</u> Houses in Akabo. a. Traditional <u>Obuma</u> . b. Neo-Vernacular <u>Obuma</u> .	293
Ill. 89	Traditional Igbo Barn.	296
Ill. 90	Woman's House in Akegbe.	297
Ill. 91	Woman's House in Enugu Ezike.	298
Ill. 92	House Shared by Man, Wife and Children in Obinagu Awkunanaw.	299
Ill. 93	a. Woman's House in Nri. b. Woman's House in Ozubulu.	300
Ill. 94	Woman's House in Awtanchara.	301
Ill. 95	House Occupied by other Members of the Family in Mazi Igwesi's Compound in Nri.	302
Ill. 96	a. House Shared by Two Women in Ututu. b. Linear Multicellular Houses in Ohaffia.	303
Ill. 97	Possible Earliest Shelter Contrived by Igbo Ancestors.	304
Ill. 98	Further Development of the Earliest Shelter.	355
		356

III. 99	Possible Earliest Use of Mud in House Building by Igbo Ancestors.	358
III. 100	Near-Oval House Plan in Ezinifite near Awka.	360
III. 101	Dogon Theoretical Layout of Cultivated Land Spiralling Around the Three Original Fields, a,b,c.	367
III. 102	Continuity in the Ordering of the Residential Layout.	370
III. 103	Resultant Concentric Ordering Pattern of Igbo Residential Layout.	373
III. 104	The Zoning Pattern that Exists at all Levels of the Residential Layout's Hierarchy.	374
III. 105	Early Church Built at Obiawma in the 1940s.	388
III. 106	The Railway Line through Igboland.	392
III. 107	Suggested Zoning System for the Planning of Towns.	394
III. 108	Pre-Independence European Reservation Layout in Enugu.	397
III. 109	House Typical of the European Reservation Layouts.	398
III. 110	Pre-Independence Non-Reservation Layout in Enugu.	400
III. 111	a. Open Shallow Gutters in front of Houses in the Non-Reservation Layout in Enugu.	401
	b. Poor Drainage and Sanitation Systems in the Non-Reservation Layout in Enugu.	401
III. 112	Old Houses in the Non-Reservation Layout in Enugu.	402
III. 113	Early Stages of Urban Development in the Non-Reservation Layout in Enugu.	403
III. 114	Early Residential Quarter for Miners in Enugu.	406
III. 115	Post-Independence Government Reservation Layout in Enugu.	419

III. 116	Post-Independence Government Reservation Layout in Enugu.	420
III. 117	Post-Independence Non-Reservation Layout in Enugu.	422
III. 118	Spatial Order of a Plot in the Non-Reservation Layout in Enugu.	425
III. 119	An Early Town Compound in the Non-Reservation Layout in Enugu.	427
III. 120	Modern Apartment Buildings in Enugu.	428
III. 121	A Typical Two-Bedroom Apartment in Enugu.	429
III. 122	Modern Construction Site in Enugu.	433
III. 123	Screen Wall used purely for Aesthetic Purpose.	436
III. 124	High-Rise Buildings in Enugu.	440
III. 125	Ohaffia Village Group.	445
III. 126	Modern Compound Walls.	447
III. 127	Many Faces of Modern Architecture in the Countryside.	
	a. Traditional House.	449
	b. Mixture of Traditional and Modern Methods and Materials.	449
III. 128	A More Advanced Form of Building of Traditional and Modern Methods and Materials standing side-by-side with Purely Traditional Houses in Ututu.	451
III. 129	New Houses in the Countryside.	452
III. 130	Mud Theatre built in Zaria.	465
III. 131	Modern Doors Carved in Traditional Fashion in Awka.	483
III. 132	<u>Uno nkpo</u> in Nibo.	iv

DEDICATION

To my country Nigeria, my wife Rachael, my children Nneka and Chinedu, my mother Udewo, and all my fellow citizens whose aim is to transmit our cultural heritage to succeeding generations in a better form than we inherited it, I dedicate this thesis.

It has persistently occurred to me that the current architecture in our society is devoid of certain vital qualities. In fact, the present trend is highly indicative of a senseless diversion from what was once the main stream of Nigerian architecture, into a blind alley which will eventually lead to deadlock.

The most effective remedy is to re-examine our much neglected indigenous tradition in order to draw inspiration from its wealthy store of time-honoured solutions.

G.C. NSUDE

ACKNOWLEDGEMENTS

Throughout the period of this research work, many people rendered invaluable assistance to me in one form or another. I therefore most gratefully acknowledge their help and kindness.

My unreserved thanks are due to my supervisor, Dr Anthony Quiney of Thames Polytechnic, whose continuous inspiration and assistance gave me enough encouragement and fortitude to pursue the research work to its conclusion. I also wish to express my gratitude to my other supervisors, Dr M.R. Airs, of South Oxfordshire District Council and Dr E. Bowler of Thames Polytechnic for their excellent assistance. Mr David Hall of the School of Oriental and African Studies Library and Mrs C. Keane of the Commonwealth Institute's Library also deserve my profound gratitude.

For very useful advice and much assistance especially during my field work in Nigeria, I am also grateful to Professor Adeyemi of Ahmadu Bello University Zaria, and Dr Awotona of the University of Jos. Other people I must not fail to acknowledge for their kindness and help during the field work include Mr Akunnie of Odinani Museum, Nri, Mr Moore and Mr Ogunsisi of the Jos Museum, and Mr Okufulure of the Federal Ministry of Works and Housing, Lagos.

Finally I am also much indebted to my wife, my children, Mr Odo, and all other members of our family for their whole-hearted support and patience throughout this period of research work. I owe all these people and others, not mentioned here, profound gratitude, knowing that without their efforts, this thesis might never have been written.

PART ONE

CHAPTER ONE

INTRODUCTION

Aims and objectives.

This thesis was conceived out of a deep feeling of concern for the present state of the built environment in Igboland and more widely in Nigeria, rather than simply an ambition for higher academic attainment.

For many decades, the architectural trend in Igboland has remained very much analogous to the voyage of a ship sailing an unfamiliar and indeterminate course. If maintained, this course promises nothing to her passengers but increasing indifference to their needs and desires. It promises hardship, and, eventually, an unpleasant destination. Igbo towns present no better picture than that of dumping grounds where house designs originating from other parts of the world are transplanted indiscriminately. This practice is rampant in spite of the fact that it neither offers a suitable solution to the present architectural problems of Nigeria, nor a satisfactory alternative to the indigenous architecture. Yet, as Brinkworth pointed out many decades ago, " ... there is a tradition of architecture in Nigeria which could form the basis for buildings expressive of the country's culture".¹

For the traditionally built environment, this trend has ushered in a period of decadence and a continuous drift towards total obliteration through negligence and unnecessary destruction.

At present, this experience is not peculiar to Igboland or Nigeria alone. People are becoming increasingly aware of similar situations in many developing countries of the world. But generally the little that happens, in terms of

positive action, is aptly recaptured in these lines of Alexander Pope:

What oft was thought
But n'er so well expressed.

In fact it is now obvious that unless something is done, and immediately too in the case of Igboland, the wealth of meanings, knowledge, experience and skill in this unique aspect of the Igbo cultural heritage will be lost for ever, while the built environment will continue to deteriorate.

The preliminary investigations I conducted prior to this thesis showed that very little research has been carried out in this area of Igbo studies. Most of the earliest documented accounts, for instance, are typical short references to 'African mud huts', made in passing by nineteenth-century explorers, missionaries, traders, colonial workers and anthropologists. A few outstanding exceptions to these sketchy accounts are found in the autobiography of Equiano written in the eighteenth century, and the anthropological treatise written by Talbot and Basden in the early part of this century. Equiano was an Igbo who was sold into slavery in the eighteenth century. In his autobiography, he included a brief description of Igbo homes and home life as it was then.² Talbot conducted a general survey of houses in Southern Nigeria, but the area covered in his survey proved too large to allow adequate attention to be paid to Igbo buildings.³ Basden, in addition to documenting the traditional ways of life of the Awka Igbo, recorded traditional building construction there in the early part of this century. His account of the traditional building activities, though fairly detailed, is, however, that of a civilized man discussing the crude building technology of a primitive people.⁴ Rural buildings in Igboland were also investigated by Udemezue in the 1950s, but again his work is too sketchy to be of any assistance

here.⁵ In the 1960s, the Federal Government of Nigeria commissioned a general survey of indigenous buildings in the country, but the findings of this survey have never been published. Even then, in view of the fact that there are over 250 different ethnic groups in the country, traditional Igbo architecture is unlikely to be considered in detail, whenever the findings of the survey are published. In recent times, only one major work has been done in this field, and that is Aniakor's study of form, function and typology in Igbo architecture.⁶ This work is very broadly based, as the author attempted to cover many aspects of Igbo architecture. Moreover, in the final analysis, Aniakor made no attempt to explore the relevance of these aspects of Igbo architecture to current architecture. More recent publications have been very few and most in other related fields of Igbo studies. It is not intended to belittle the contributions of these scholars, yet it can be rightly said that, if anything, traditional Igbo architecture has been only minimally studied.

As a result of this very small body of academic material and the apparent general lack of interest in this field, numerous questions still beg answers. Some of these answers are fundamental and indeed vital, if more light is to be shed on the study of traditional Igbo architecture. It therefore seems most appropriate to outline the aims of this thesis through these questions, for, as Heinrich Engel noted in his study of Japanese architecture:

The idea of any study is best understood and consequently best pursued when expressed through a series of questions. For question is not only the origin of all intellectual endeavour of man but also, if precisely formulated, indicates the sphere that encircles the answer.⁷

Seen in this light, this thesis is an attempt to answer such fundamental, but vital questions as;

1. In what peculiar manner have the Igbo responded to the limitations imposed by the physical geography of Igboland and their social needs, to produce the type of architecture indigenous to them?
2. On what discernible principles is the resulting traditional architecture based?
3. What is the general state of architecture in Igboland today?
4. Has the traditional architecture any meaning, relevance, or value in the contemporary context?

The thesis seeks answers to these and other related questions; firstly, to make a major contribution to the existing body of academic material in this field of study, especially regarding the reconstruction and documentation of the general pattern of traditional Igbo architecture; secondly, to shed light on the nature of the relationship between the physical and social environments of Igboland and the expression of this relationship in the traditional architecture; and thirdly, to provide some sources of inspiration for further development of this architecture, which is indigenous to the Igbo, by uncovering some general directions through which the traditional architecture can be useful in the creation of more suitable contemporary architecture in Igboland and Nigeria.

The Scope of the Research Work.

For the purpose of this thesis, the word 'tradition' is used in its most elementary sense to connote anything transmitted or handed down from the past to the present. In its use here, emphasis is on the indigenous quality of the architecture being discussed and its continuity. Within this context, 'traditional Igbo architecture' should be construed as that which has ever been particularly identified with the Igbo, having been transmitted from one generation to another. Other terms commonly used for this type of

architecture include vernacular, anonymous, spontaneous, indigenous, and primitive.

This type of architecture has existed wherever there has been an indigenous culture to support it. As was pointed out by Adeyemi, it is the type that relates to users' financial capabilities and needs, and it is very much under their control. In Rapoport's view:

... it is the direct and unselfconscious translated into the physical form of a culture, its needs and values - as well as the desires, dreams and passions of a people. It is their world view writ small, the 'ideal' environment of a people expressed in buildings and settlements⁸

In the light of these definitions, the scope of this thesis embraces not only a detailed study of the physically built environment of Igboland per se, but also includes a study of the geographical and social environments. This derives from the fact that these environments on one hand partly generate the habitational problems and limitations peculiar to Igboland, and, on the other, provide the raw materials and the theoretical framework used by the Igbo to restructure their natural environment into a man-made one. Implied also is the study of the technological environment which provides the necessary tools by which the available material resources are engineered, and the principles which enable all these concrete realities to be transformed into a significant schemata that forms the architectural setting.

The words 'traditional' and 'indigenous' are used synonymously in this thesis to convey the definitions given above, while 'neo-vernacular' will be used to refer to those types of buildings erected by skilled carpenters and masons, with traditional or non-traditional materials, and with or

without architectural drawings, but in a traditional style. These types are today popularly known in Igboland as ulo gbam gbam - zinc houses.

The area covered by the research work is the whole of Igboland, so samples are drawn from the various parts of the land, where they have survived. However, the Igbo heartland and the regions around it feature more prominently in the thesis, as earlier works on Igbo studies have shown that within these areas, the culture and traditions of the Igbo have experienced less external influence and therefore remain more stable and less adulterated.⁹ Different types of buildings will be used to elucidate claims where necessary, but the thesis is primarily concerned with the traditional domestic architecture of the Igbo. This further narrowing of the scope of the thesis follows from the fact that for centuries domestic buildings have borne most of the major characteristic expressions and important achievements of Igbo architecture. Furthermore, the results of my preliminary investigations show that no other aspect of Igbo architecture will enhance the achievement of the aims and objectives of this thesis more adequately than the humble dwellings of the Igbo.

It is also intended here to discuss alien architectural activities in Igboland, but only to highlight their intrusive nature and hence their failure to respond to the needs, desires and values of the Igbo.

Finally, general directions of cross-fertilization, modernization, and upgrading will be outlined, but on a broad base as more specific details of these exercises regarding any particular aspect of Igbo architecture will surely necessitate more detailed inquiries and the assessment of prospective solutions.

Methods of Research and the Plan of the Thesis.

From the outset, it was clear that to achieve the aims and objectives of this thesis, it would be necessary to undertake exhaustive and direct research. This is inevitable as the scope of the research work involves the evaluation of what is still largely regarded as primitive architecture, in the context of what meaning, value and use it might have in the architecture of today. It became obvious that the objectives could not be fully realised by simply describing and depicting only the visible features of this seemingly past architecture. This is because such a simplistic approach would have resulted in suggestions that would encourage superficial copying only. So, in addition to the study of the physiognomy of the traditionally built environment, there was also the need to penetrate the motives or imperatives that gave birth to its visible features to understand the basic principles for ordering them in space. Penetration of the core of Igbo tradition and culture further facilitated the interpretation and application of some of these principles, that are still valid to contemporary situations. But the insignificance of the existing documented material in this field placed a heavy constraint on this alternative approach. There arose, therefore, the need for the collection of a large volume of data from the field to complement the scanty documented sources. The thesis is thus an outcome of a two-pronged research work which involved the investigation of documented primary and secondary sources and field work trips.

The first part entailed a theoretical study of traditional and vernacular architecture in general. This was done to enable the traditional Igbo architecture being studied to be placed in a wider framework so that parallels could be drawn whenever necessary. This was followed by a study of the geographical and socio-cultural factors prevailing in Igboland, and the description of building

materials and technique. The aim of this was to facilitate an understanding of the relative meanings and shaping effects of these factors on the traditional Igbo architecture.

The second part of the research work involved two periods of field work. Both trips were to Nigeria and mainly to Igboland. They were intended to uncover the variety of indigenous domestic buildings and some typical examples of alien architecture in Igboland, choice of their sites, their forms, general spatial ordering system, construction, internal planning and functions. During the field work, both traditional and contemporary builders and craftsmen were interviewed to obtain a first-hand account of their methods. Similarly, the Igbo occupants of various buildings were questioned to find out how they occupy them. The field work trips also offered opportunities for discussions with academics in related fields, with architects, and even some ordinary citizens, to obtain a wider view of the theme of the research work. Both the theoretical and physical data were carefully analysed and arranged in four parts of twelve chapters, as follows.

Part One consists of Chapter One, the Introduction. In this chapter, the aims and objectives of the thesis, its scope, the methods of research adopted here, and that used for collecting the data are outlined. A general discussion of the subject is also included. The general discussion surveys the subject matter in a broad perspective, considering the past and present trend in African, Nigerian and Igbo architecture. The causes of this trend, and its effect on the built environment in Africa and Igboland are pointed out. Furthermore, the need for a knowledge of traditional architecture is discussed and the consequences of its neglect emphasised. Data and examples which lend support to the argument are drawn from various sources, including European History. The Introduction concludes with a suggestion that African and, ipso facto, traditional Igbo

architecture, can only be rightly understood and interpreted in its own context.

Part Two deals with the traditional setting and architecture. It is made up of Chapters Two, Three, Four, Five Six and Seven. Chapter Two is an outline of the physical geography of Igboland. Relevant geographical factors are discussed, thus enabling their limiting effects on the traditional architecture to be highlighted. Chapter Three examines traditional Igbo society, pointing out the obvious constraints that will be placed on the traditional architecture by the different social institutions operative in the society. In Chapter Four, the different indigenous materials used by the Igbo in their buildings are discussed under various sub-headings. Their methods of acquisition and preparation are also explored. Chapter Five considers the building techniques which are indigenous to the Igbo. This chapter explains the different structural systems the Igbo employ. It concludes with a general observation involving some special features in Igbo buildings and compares them with practices elsewhere. Chapter Six explores the traditional architectural decorations employed by the Igbo. The different motifs and techniques the Igbo use are also discussed in detail here. Chapter Seven is a detailed discussion of the traditional architecture. The chapter starts with the general layout of a typical traditional residential setting, discusses the different scales involved in the hierarchy of the layout, and the different components of each scale. This is done to establish the fundamental spatial ordering pattern peculiar to the traditional Igbo layouts. It is followed by a thorough discussion of the basic domestic unit, the compound. This involves the examination of individual elements that make up the compound. The chapter ends with a general observation which again involves explaining the meanings of some features of traditional architecture, and drawing parallels with other cultures.

Part Three, 'Analysis of the traditional setting and domestic architecture', is a further discussion of the materials considered in the preceding part. It is made up of Chapters Eight and Nine. In Chapter Eight, traditional architecture is analysed relative to the physical geography of Igboland and the social factors operative in Igbo society. This is necessary in order to explore the degree of response of this architecture to those factors which are, to a large extent, a measure of its success or failure in the service of the culture that produced it. In Chapter Nine, a hypothetical reconstruction of the origin of Igbo architecture is made, relying much on logical conclusions reached after analysing the available archaeological, geographical, and historical data. The second part of this chapter tries to establish the principle on which the spatial organisation peculiar to the traditional architecture is based.

Part Four, 'Current architecture and tradition', comprises Chapters Ten, Eleven and Twelve. Chapter Ten traces the historic origin of the so-called modern architecture in Igboland and Nigeria. Chapter Eleven critically appraises the current architecture in Igboland relative to the society it is meant to serve. In the first part of Chapter Twelve, the contemporary validity of traditional architecture is discussed. The second part is an outline of areas of possible cross-fertilization between the traditional and the current architectural practices in the land.

The thesis ends with a Summary and Conclusion.

Data Collection

The data for this thesis were collected mainly from Britain and Nigeria. Documentary material of primary and secondary nature served as the first source. It included published articles and books on related fields of study, and original note books, diaries and letters of explorers, missionaries and colonial administrators. The archival department of the Church Missionary Society in London proved very helpful especially for accounts of traditional life found in the Gleaner, the Church Missionary Intelligencer, the Western Equatorial African Diocesan Magazine and the journals of individual missionaries. The Foreign and Commonwealth Office likewise has a good stock of well preserved letters, notes, anthropological reports and photographs made by colonial administrators. All these were very useful in view of the general lack of primary material in this field of study.

I also went to Nigeria twice to undertake field work. The first trip lasted between January and May 1984 and the second was in May 1986. These trips served as the second source of data. During these periods of field work, I undertook a series of journeys within Igboland and in other parts of Nigeria. Most especially I visited Lagos, Kano, Zaria, Kaduna, Jos, Enugu, Ibadan, Owerri, Port Harcourt, Ikem, Enugu Ezike, Nsukka, Ugwuoba, Nri, Awkunanaw, Agbani, Akabo, Ututu and Aro Chuku for the purposes of both documentary research and to see modern architecture in the Nigerian context. I was also able to discuss my thesis with museum workers, civil servants, contemporary architects and builders, and many occupants of modern buildings. I was lucky in discussing my thesis with Professors Adeyemi and Aradeon, with Dr Awotona and Dr Okpala, and other lecturers in schools of architecture in Nigeria. The discussions I had with them were useful in determining the problems and prospects of both current and traditional architecture in their broadest context.

However, the most rewarding aspects of the field work were the journeys I made to the rural areas of Igboland. For there I observed and studied traditional building practices by direct participation in the building activities and in Igbo home life. I was also able to obtain first-hand information from village heads, titled men, traditional builders and many occupants of different types of rural buildings.¹⁰ In addition, I made measurements and surveys, drew sketches, and took photographs of existing traditional and modern buildings there. These field data went a long way to complementing those documentary ones I had collected earlier on.

The field work was, however, not without difficulties. In the first place, the financial allowance granted for it was so meagre that my original itinerary had to be readjusted. Moreover, the uncertainty caused by the political situation in the country in 1984 called for caution about movement. For these reasons, places like Abakaliki, in the north-eastern part of Igboland, and all the western part of Igboland had to be dropped from the itinerary during my first trip. This actually created the need for the second field work when the situation was better in 1986. The rate at which traditional buildings are disappearing in the land is very alarming. I consequently discovered that some places which I believed had much to offer for field work had changed. Many traditional domestic buildings of interest which I had admired during my preliminary investigation in places like Awkunanaw and Ikeduru, for instance, had either been bulldozed or left to dilapidate and collapse. This was because their owners had built new houses in the so-called modern fashion. As a result, some of my journeys were not as fruitful as I had anticipated.

Fortunately, however, helpful documentary material on some of these areas was obtained from the Museum of

Traditional Architecture in Jos, and generally the overall result of the field work indicates that the inevitable limitation was quantitative in nature and not necessarily qualitative.

It also seems worthwhile to point out that I drew most of the sketches and diagrams using geometrical instruments with straight edges, although in some cases, the original buildings were far from being straight themselves. So walls and other parts of the buildings that tended to be straight or curved are here represented as perfect straight lines and curves for the purpose of clarity.

On four occasions, during the field work, I had the opportunity to discuss the data collected from the field with Professor Adeyemi, the head of the Faculty of Environmental Design in Ahmadu-Bello University, Zaria, especially regarding the selection of samples and the analysis of those collected.

Both the documentary and field data were finally analysed together in England, in pursuit of the main aims and objectives of this thesis.

A Broad View of the Subject

For many centuries, 'architecture' remained a word which was applied to the sub-Sahara African built environments with much caution and even stinginess. Mud huts, cave dwellings and similar expressions imbued with derisive sentiments were considered more appropriate for them. This is, however, expressive of the old general attitude in the western world towards African society as a whole. The remark by Professor Trevor Roper of Oxford University in the sixties that African History is no more than 'the unrewarding gyrations of barbarous tribes in picturesque but irrelevant corners of the globe' only brings to one's mind, the persistence of this attitude in some

circles in the present time.¹¹

Regarding some records that have survived, Paul Oliver has noted that:

Curiosity, condescension and contempt are to be found in the writings of different traders, voyagers and men of God who, for different reasons, found themselves in contact with African Societies of the past .¹²

Furthermore Carter aptly recaptured the denigratory attitude with which African Societies were treated when he wrote:

The undeniable fortitude and hardships which the explorers and missionaries bore were translated by the newspapers, congregations and mission societies in Europe, into the imagery of savagery - of heroes doing battle with cannibalism, lust and depravity - the forces of darkness.¹³

The same view was expressed long before in Jonathan Swift's Africa, the Unknown, which reads:

So geographers in Afric maps
With Savage pictures fill the gaps
And over Uninhabited downs
Place elephants for want of towns.

The general long-headed impression was, therefore, of a darkest Africa peopled by cannibals, savages and strange animals roaming steamy jungles. African societies were consequently considered to be seriously lacking in political organisation. In the architectural context, the Africans themselves were, therefore, considered quite incapable of either having any understanding of design or showing any appreciation of aesthetics, hence the popular reference to

their "living in isolated and unstructured bush communities", the types of built environments that did not qualify to be included in the universal framework of architecture.

As an instance of this, there is the often told story of a team of photographers who were sent to Africa some years ago to document a feature article about the great epochs of African history which should include illustrations of African architecture. They came back empty handed to report, "All we could find were a bunch of mud huts". Undeniably, some early voyagers and explorers appreciated and recorded some marvellous qualities of African architecture, but such people constituted an absolute minority, while the disparagement of the other school of thought was overwhelming.

This negative impression about the built environment in Africa did not change much until recently. The only improvement is that lately it has attracted more attention of scholars, but still only in terms of the study of primeval shelters devoid of any architectural meaning and meriting only descriptions of primitive building technology. Examples of this attitude are articles such as those published in the 1950s and '60s by Gluck and Gutkind. Gluck's discussion of African architecture, for instance, reduces it to mere primitive building technology. In a more contemptible manner, Gutkind has argued that building activities in sub-Saharan Africa derive from black magic and are expressions of cave feelings. Such activities cannot, therefore, be related to architecture.¹⁴

The reasons for this attitude are not entirely far fetched. In the first place, it must be realised that people are bound to judge other people's culture relative to their own indigenous ones. Having been constrained by their own cultural background, the early Europeans in Africa judged everything they saw relatively. But when one judges strictly

with European architecture as a yard-stick, the meaning and essence of African architecture can be very elusive. Secondly, the dearth of ancient literature from within sub-Saharan Africa itself must also have impeded early attempts to unravel the meanings in her architecture. Thirdly, the architectural standards of the past were defined in the context of historic edifices and grandiose monuments, and the built environment in Africa had not many of these to offer.

Against this, however, Igboland and the whole of Africa do have a long-standing history of living, settling and building. Accounts of magnificent settlements, cities, palaces and houses, though few, do still survive. Among these few glowing records is that of Edward Bewdich, who in 1816 described the palace of Asante Hene in West Africa as an:

... immense building of a variety of oblong courts and regular squares, the former with arcades along the one side¹⁵

In much the same spirit, Moffat while travelling in the Transvaal in 1829 wrote about the houses he saw, thus:

... The walls and doorways were neatly ornamented with architraves and cornices; the pillars supporting the roof in the form of pilasters projecting from the walls and fluted showing much taste.¹⁶

Similarly, to Joseph Thomson, the savannah of East Africa, in the last century, was:

... a perfect Arcadia, not just the fertile and pleasant countryside but a whole landscape of well planned neat forms interspersed with immense shady trees and charmingly neat circular huts with

conical roofs¹⁷

Further, when the Portuguese arrived in Benin about 500 years ago, they found a city-state which was "... a nautical mile to the gate", whose inhabitants were prosperous and experienced in metal-working. In 1668, just two years after the Great Fire of London, the Dutchman, Dapper, described Benin thus:

The city has thirty quite straight streets. Each is about thirty-six meters wide with many broad though somewhat narrower cross streets running into them. The houses stand along orderly streets, close to each other as in Europe, decorated with gables and steps, and roofed with palm and banana leaves. Though not very high, they are usually large with long corridors¹⁸

What is perhaps incomprehensible in the denigratory attitude of the other school of thought is that archaeological excavations have established that those types of African building that became objects of scorn also existed, at one time or another, in several parts of the world. For instance, round houses, built of mud or even unmortared rubble and stone, were ubiquitous during the Bronze and Iron Ages in England. At that particular time, a more developed form of architecture had already evolved in Egypt and the Middle East, but that has not stopped an appraisal of the Iron Age in England within an architectural context. The persistence of any particular form in any society cannot, therefore, be justifiably seen as an indicator of the absence of architecture in that society. Furthermore, it can also be established that the social and economic organisation which made possible the evolution of architecture elsewhere was not lacking in ancient sub-Saharan African societies and cultures.

However, the prejudice towards the Africans and their

architecture compounded the problem of paying any proper attention to the study of her architecture in early days. Consequently, only superficial descriptions of buildings and methods of construction can occasionally be found. On the other hand, vital characteristics of African architecture, such as the expression of settlement organisation and family relationships in the physical layouts, or even the use of space, of hierarchies and symbolic values in buildings that were peculiar to the African, were hardly appreciated, much less studied or documented.

Traditional Igbo architecture was in no way excluded from this superficial view. For although trading activities between the Igbo and the Europeans had been going on even as early as the sixteenth century, these activities were restricted to the coastline of the Atlantic Ocean. The interior of Igboland remained unpenetrated until the missionary and colonial era in West Africa. Even then, Igbo architecture was considered too unattractive for any detailed study. This was because it was then generally believed that the Igbo political system was not capable of rallying people to build in a grandiose style. Moreover, the rain forest climate and environmental condition of the land imposes a short life-span on the traditional materials that the Igbo use in their buildings. Any form of the built environment worthy of study in Nigeria was thought to exist only in the northern part of the country where a well-organised monarchical system existed and the effects of the climate were less severe on the traditional building materials. This partly explains why very few detailed accounts exist today of architecture and building activities in Igboland. On the other hand, the very few fairly detailed descriptions that were made follow the general trend and only describe the primitive building technology. So, the fact remains that, following the general attitude towards African society, the early Europeans in Igboland were unable to judge Igbo buildings outside their own cultural context. Consequently much of what they saw in Igboland did not merit

any architectural consideration. Basden says it all: "... a collection of huts of irregular shape deposited anyhow and anywhere".¹⁹

Yet, as King pointed out: "Cultures are autonomous and should be evaluated only in their own terms".²⁰ A corollary which is equally true is that architecture, which is an important aspect of culture, should also be interpreted within the terms of the culture that produced it. This accords with recent interpretations of architecture pioneered by architectural critics, historians and practitioners such as Allsop, Rudofsky, Rapoport, Alexander, Jenks, Baird and Norberg-Schulz. They pioneered the view that architecture can no longer be restricted to grandiose or monumental buildings alone, but must embrace the totality of the man-made environment. The quality of architecture derives from man identifying himself with what he builds, and using it as a means of expression.²¹ Various definitions of architecture that lend support to this view can be found today. Baldwin Smith, for instance, defines it as a product of the skilful organisation of space done in order to express a people's social ideals.²² According to Riviere, the purpose of architecture is "to express man's notions of reality".²³ In Norberg-Schulz's view one theme that is basic to all buildings is man's need to establish a meaningful, coherent and stable image of architectural space; space with which he can identify and relate to, space which defines his existence and thus reaffirms his humanity.

It follows that architecture involves not only the concrete man-made environment, which embodies physical grandeur and aesthetics, but also some latent principles which it expresses. From this, it is evident that a full understanding of architecture in any particular place and at any period requires a consideration of the whole of its man-made environment as part of a material culture possessing both conceptual and physical dimensions.

Norberg-Schulz has further shed more light on this by identifying some concepts which form the universal themes in the world architectural framework. These concepts are also essentially employed by man to express, in concrete terms, his images and dreams. They include the concept of centre, boundary, path, direction, area and domain.²⁴ The concepts are not unique to the architecture of highly sophisticated, technologically advanced societies. They are equally existent in Igbo architecture. What may be unique in traditional Igbo architecture are the ways in which they are employed within the framework of Igbo society.

Before the Igbo-Ukwu treasures were unearthed in 1938, any suggestion that an Igbo culture, capable of producing iron and bronze implements, had flourished about the ninth century would have been met with scorn by the proponents of Africa's perpetual primitiveness.²⁵ Among the numerous finds in the archaeological excavations were implements of daily usage such as stools, bowls and pots, all made of iron or bronze, and beads. This important discovery shows that arts and by extension architecture have a very old tradition in Igboland. Historians and archaeologists usually associate the degree of advancement of ancient peoples of various parts of the world with what they produced. In this connection, any culture that produced iron and bronze implements is described as advanced. If the standard of cultural development in Igboland was already at an advanced stage by the time of the Viking raids in Europe, need it be stressed that traditional architecture equally attained a high standard of development?

However, the scornful attitude adopted towards this architecture by early Europeans, and the consequent neglect it has suffered, prepared the stage for what Richard Martin aptly summarised as "the destruction of the traditional values of Africa and their replacement with alien ones". This situation in Africa is the same throughout Igboland and Nigeria and similar situations are known in many

developing countries of the world. Throughout Nigeria the traditionally built environment is not given any consideration. Rather, in various parts of the country, many valuable architectural relics are being systematically effaced owing to lack of understanding and appreciation. This is how Awotona described this current senseless trend:

Historic sites, family compounds, shrines, groves, oju oriris, special buildings of historical and architectural merit and importance in whole sectors of our villages and towns, which are perfectly suitable for the purpose they fill and which are aesthetically satisfying, are systematically being bulldozed to give way to increasing 'modernizations' and 'change' and to buildings of an entirely alien culture.²⁶

An outstanding example of this, in the country, is the destruction of a part of old Zaria City because the buildings and the materials used are traditional and therefore unacceptable.

Indeed, architecture as seen today throughout the country can rightly be described as a rapid, haphazard process of transplantation, in which the physiognomy of Nigerian towns and villages is being transformed into a grotesque imitation of western cities. Of course, any attempt to challenge this implies attempting to answer the more difficult question of "whether any individual culture can survive today as a separate entity entirely uninfluenced by the current onslaught of western civilization?". The answer to this question is surely "no", but the fact still remains that this transplanted architecture is riddled with serious problems and does not adequately reflect or respond to the needs and desires of the people it is imposed on.

The capital of any nation, it is said, embodies the general characteristics of the country. Lagos, the present

capital of Nigeria, portrays the architectural woes of our time and gives a clear picture of what obtains in several other Nigerian cities. The unreliability of all forms of public utility, the insoluble traffic problems, the drab aesthetic appearance of the town, and the inefficiency of the imported architecture, are among the major factors that have transformed that group of lovely islands into a man-made monster. The situation is not much better in many other countries. In fact, as this concerns the whole of Africa, Onita Coker, one time chairman of the African Union of Architects, said:

Most of these buildings in the name of modernization throw overboard those ideals the Africans love and cherish.²⁷

The genesis of this state of the built environment can be rightly identified as the inability of contemporary architects to invoke the spirit of yesterday in their work. In short, they have failed to seek out and respond to the meaning and essence of the tradition of living, settling and building in society. Put in another way, the generating factors that have fused together to produce the architecture that served society so efficiently in the past have eluded them. This is largely in consequence of their neglect and denigration of the indigenous traditions in architecture. The only choice left for them seems to be to retrace their steps and rejoin the main stream by returning to tradition. This assertion can be further buttressed by the fact that every culture that has existed has possessed an indigenous architecture that satisfied it fully, as opposed to an exercise of wholesale transplantation.

It will, however, amount to a gross underestimation of the world-wide neglect of traditional architecture to restrict this discussion to Nigeria or the developing nations alone. In Europe and America, for instance, the early part of this century saw the growth of modernism and

the radical ideas that overturned the old order. For example, in the heyday of modernism, the view was widely held that reference to history and tradition must be totally abandoned in order to achieve modernism. Henry Ford is accredited with the slogan, 'History is bunk', and the pioneer of modern architecture, Walter Gropius, belonged to the same school of thought. He once wrote:

A breach has been made with the past, which allows us to imagine a new aspect of architecture corresponding to the technical civilization of the age we live in ... and we are returning to honesty of thought and feeling.²⁸

Thus, the pioneers of modern architecture believed that this age is unique and its architecture must be severed from the past. They hoped to build a brave new world through technology. But as a consequence of some modernists' ideas, the delicate relationship between man and his building has often been violated or destroyed. This has resulted in the creation of many unsatisfactory environments. So ironically, some of the modernists' radical ideas proved to be a rebellion against the natural course of events. Over the years this has culminated in what Jean Dathier referred to as "the violation of collective memory acquired over centuries".²⁹ Middleton called it "a crude dismissal of the past", while Brent Brolin described it as "Myopic utopianism".³⁰ Perhaps Richard MacCormic's view on the issue summarizes it all. According to him:

Modern architecture in its heroic phase projected a new future, but the damage it has done, as is now realised, is not only that it has left us with fragments of unfulfilled prophecy, but with the partially dismantled fabric of our own inheritance.³¹

In the light of all this, it is apparent that modernization

in architecture which violates the existing tradition in any society, is "modernization at all costs" and will definitely do more harm than good.

True, this is a time of rapid change in almost all spheres of human activity, but it is not the first time that momentous changes have occurred in history. Examples from even the history of art and architecture in Europe show that in times of great change in the past, ideas of the old were never abrogated, but were revived and employed. Before the beginning of the first century AD in Europe, Vitruvius wrote in his De Architectura a summary of the professional wisdom and practical experience of both his contemporaries and their Greek spiritual ancestors. In the Renaissance, his work became the object of thorough and enthusiastic study. In 1485, the Italian master Alberti published his own De Re Aedificatori, full of reverence for Vitruvius, but developing and modernizing his ideas to serve his own society at that time. Thus, the people of the Italian Renaissance were creating new values within their own culture on the basis of the old ones. This process follows the canon that is contained in the Italian word 'cultura', which means cultivation, and, indeed, they were cultivating or growing new plants on their old soil. They did not abrogate their traditional basis, neither were they satisfied with mere acquaintance or acceptance of the achievements of their ancestors. They instead adopted and developed that heritage to suit their own time and circumstances.

Nineteenth-century architectural activities in France saw a diversified approach to the maintenance of the European architectural traditions. About the end of the second decade of the century, a generation of architects emerged, among whom was Jacques-Ignace Hittorff, who believed that architecture should be enriched through a reassessment of the past. Although their efforts have been described as superficial owing to their inability to

penetrate the core of the tradition enough, their work nevertheless shows that the past in architecture need not be entirely rejected in the present.³² It should rather be continuously reassessed and used as an active ingredient of contemporary architecture.

Another inference that could be made is that the further forward we go in knowledge, the farther back we have to explore in search of original wisdom in order to go forward again. Tradition forms an indispensable aspect of human society as a whole. Expressed in architectural terms, in any given society, certain forms of architectural experience retain their validity through many generations, and are, therefore, handed down continuously. This is how Eliot Norton put it in one of his essays on architecture:

I have always regarded the past as something not dead but an integral part of existence, coming to understand more and more the wisdom of the Bergsonian saying that the past gnaws incessantly into the future.³³

Put in a precise form, knowledge of the past is absolutely necessary to understand the present and prepare for the future.

Maintaining an indigenous tradition in architecture, as is implied here, should not be construed to mean mere conservatism. Instead it means maintaining a degree of continuity by employing and improving the underlying architectural principles of many generations of people. The maintenance of this continuity in any society is vital for the success of its architecture. On the other hand, if this continuity is lost, architectural chaos and disaster may be ushered in. This is evident from the multifarious architectural problems that abound in many developing countries today. The current neglect of traditional architecture and the consequential absence of continuity, in Igboland as well as in Nigerian modern architecture more

widely, explains the persistence of this obvious but rather embarrassing question which many Nigerian architects and planners evade: "Why is contemporary Nigerian architecture not as expressive of her people's way of life, culture and tradition as are her contemporary music, painting and sculpture?". The simple answer to this question, however, is that the contemporary architects and planners in the country have voluntarily chosen not to understand, appreciate and reflect the tenet of architectural tradition indigenous to the country.

These views are, however, not shared by all today. There is, for instance, a school of thought which still believes that traditional architecture can offer misleading solutions to today's architectural problems. In their own view, it should remain a luxurious symbol of the past that only the developed countries can afford to possess today.³⁴ Maxwell Fry, like others who share this view, does not believe that modern architecture in Nigeria can draw from traditional architecture in any way, or even relate to the cultural setting of the country. A recent interview conducted on this issue by Moffet shows, however, that divided opinions exist among practising architects in the country. Whereas Fry still maintains his convictions, his partner Jane Drew compares the remoteness of the rebirth of traditional architecture with the birth of an architectural genius in the country.³⁵ But in earnest, this does not require any genius any more than Japan would have required geniuses to be able to draw from its traditional architecture. On the other hand, James Cubitt is very optimistic about the emergence of an indigenous modern architecture in Nigeria, although he is not definite about how.

Today, the need to reassess the virtues of traditional architecture in Igboland and Nigeria is not justified by a mere sense of nostalgia, but to understand better the

complex relationship between man and his environment as it applies to Igboland and Nigeria, so as to be able to create a more responsive environment. It is not, however, maintained here that all modernization is bad and everything traditional is good. Rather, the crux of the matter is that physical planning and architecture in Igboland should represent a continuum between the traditional socio-cultural heritage of the Igbo on the one hand, and their projected needs and aspirations on the other. Contemporary architecture should, therefore, fit in as an appropriate link between the past and the future of Igbo architecture. In other words, there must be continuity. But today, for continuity to be possible, it is imperative for contemporary architects in the land to think, in the widest terms, of the particular relationship between the man-made environment of the land and the society which has created and sustained it. This entails the penetration of the core of the tradition and culture that society has maintained for many centuries, and is still upholding today. Said in a more concise form, architects and planners in Igboland should strive to understand architecture in an Igbo context and their practice must reflect this understanding. Meanwhile, in this respect, it can rightly be said that they are simply illiterate at present.

Traditional Igbo architecture, and by extension, Nigerian and African architecture, is not merely a collection of crude shelters resulting from man's instinctive response to the elements as has often been implied. It shares many basic characteristics with the architecture of other peoples, including that of more technologically advanced cultures. The variations that exist in the architecture of the various cultures in the world can be explained as the influence of many factors, but the varying nature of the ideals the different peoples seek are often the most influential. In traditional African and ipso facto Igbo architecture, the ideals seem to be the paramount factor. A full understanding of this architecture is,

therefore, not possible by mere superficial observation of its humble mud structures outside the ideals or principles that form the conceptual framework.

The need to see Igbo architecture in this context can be briefly demonstrated by the Igbo concept of home and its realisation in the architecture of the compound. To Igbo, the word 'home' means much more than a concrete shelter, a compound building, or a place to return to after the day's work. Conceptually it is an expression of their ideal world where everything is supposed to be at peace. This theme forms the basic principle underlying the design and construction of the compound and life in the home. This ideal order has its roots and its meaning in Igbo cosmology. The ideal expressed in the architecture of the home thus relates to the Igbo explanation of existence itself, and derives from a concept originating from beyond the physical world. A man without a home is unthinkable in Igbo society. Such a man, if he ever exists, cannot be considered a potential member of the physical society of men, nor can he be admitted into the spiritual world of ancestors when he dies. In Nsukka such a man would be called mkpokoro, in Nkanu he would be referred to as efulefu, in Nri as akala ogori, while in the Owerri area as onye अपरि. All these references cannot be adequately translated into the English language, but the nearest meaning they convey is 'shameless and incapable of any responsibility'. As an Nkanu elder told me during my field work, "Be na mmadu bu ofu", meaning, "Man and home are inseparable". Thus, the architecture of the home or the compound does not mean only the physical structure, but embodies a philosophy.

This architecture is an age-old tradition that has much to do with the life of the Igbo people. The traditional buildings that survive today, therefore, represent the result of many centuries of perfecting an architecture in relation to Igbo philosophy, culture, social organisation, geography, building materials, and the level of technology

attained in Igboland. To build for the Igbo today, contemporary architects must understand these and other factors affecting the Igbo in their home environment, and the principles that have made settling, building and living in Igboland possible for centuries.

REFERENCES

1. I. Brinkworth, 'Wanted - A new Architecture', West African Review, 30, no. 382 (1959), 549-551.
2. O. Equiano, The Interesting Narrative of Olaudah Equiano or Gustavus Vasa the African, first published in 1789, abridged and edited by Paul Edwards (London, 1967), pp.5-6.
3. P.A. Talbot, The Peoples of Southern Nigeria, 4 vols (London, 1926), III, 880-902.
4. G.T. Basden, Among the Ibos of Nigeria (London, 1921), pp.165-9.
5. O.A. Udemezue, 'Ibo Rural Housing and Planning' (unpublished B.Sc. dissertation, Massachusetts Institute of Technology, Swarthmore, 1954).
6. C.C. Aniakor, 'Igbo Architecture: A Study of Forms, Functions, and Typology', 2 Vols (unpublished doctoral dissertation, Indiana University, 1979).
7. H. Engel, The Japanese House: A Tradition for Contemporary Architecture (Tokyo, 1964), p.23.
8. Amos Rapoport, House Form and Culture (Englewood Cliffs, 1969), p.2.
9. In this thesis, Igbo heartland refers to the area in Igboland bounded by an imaginary line running outside the towns of Awka, Okigwi, Orlu and Owerri. See ill. 2. See also E. Isichei, A History of the Igbo People (London, 1976), p.6.
10. The term 'traditional builders' here refers to people

that I interviewed while they were engaged in building construction during the field work.

11. K.O. Dike, 'The Scientific Study of Africa's History', UNESCO Courier (June 1967), 9-13.
 12. Shelter in Africa, edited by P. Oliver (London, 1971), p.8.
 13. B. Carter, 'The Development of Africa: Primitive Architecture in rural Communities of Nigeria', Architecture East Midlands (July-August 1969), 23-5.
 14. J.F. Gluck, 'African Architecture', in People and Cultures of Africa, edited by P.E. Skinner (New York, 1973), pp.230-244.
- E.A. Gutkind, 'How other Peoples Dwell and Build', Architectural Design, 23, no. 5 (1953), 121-4.
15. R.W. Hall, Urban Design and Architecture in Pre-Colonial Africa (Mimeograph, New York University, 1971), p.16.
 16. R. Moffat, Missionary Labours and Scenes in South Africa (London, 1842).
 17. J. Thomson, To the Central African Lakes, 2 vols (London, 1881), I.
 18. U. Kultermann, New Directions in African Architecture (New York, 1969), p.15.
 19. G.T. Basden, op. cit., p.50.
 20. A.D. King, Colonial Urban Development (London, 1976), p.xiv.

21. B. Allsop, The Study of Architectural History (London, 1970), p.83.
- B. Rudolfsky, Architecture without Architects (Englewood Cliffs, 1965).
- A. Rapoport, op. cit.
- C. Alexander, Notes on the Synthesis of Form (Cambridge, 1971).
- Meaning in Architecture, edited by C. Jencks and G. Baird (New York, 1969).
- C. Norberg-Schulz, Existence, Space and Architecture (New York, 1971).
22. B. Smith, Egyptian Architecture as Cultural Expressions (New York, 1939).
23. G.H. Riviere, 'Folk Architecture Past, Present and Future', Landscape, 4 (1954), 3-12.
24. C. Norberg-Schulz, op. cit., p.114.
25. T. Shaw, Igbo-Ukwu: An Account of Archaeological Discoveries in Eastern Nigeria (London, 1970).
26. A. Awotona, 'Towards Appropriate and Culturally Relevant Architectural Education and Practice in Nigeria: An Analysis of Research Needs' (A paper presented at the International Symposium on the Cultural Implications of Science Education held in Zaria Nigeria, 21-24 November 1983), p.13.
27. O. Coker, 'A Boost to Architectural Profession in Africa', Daily Times of Nigeria, 26 May 1981, p.7.

28. W. Gropius, The New Architecture and the Bauhaus (London, 1937), p.19.
29. J. Dethier, Down to Earth Mud Architecture: An Old Idea, A New Future, translated from French by R. Eaton (London, 1982), p.17.
30. R. Middleton, 'The Architect and Tradition', Journal of the Royal Society of Arts (November 1983), 719-739.

B.C. Broolin, Architecture in Context: Fitting New Buildings with the Old (New York, 1980), p.43.
31. R. MacCormac, 'Tradition and Transformation', Journal of the Royal Society of Arts (November 1983), 741-753.
32. R. Middleton, op. cit., p.733.
33. Space, Time and Architecture: Lectures for 1938-9, edited by S. Giedion, fifth edition (London, 1967), p.XLIII.
34. M. Evans, Housing, Climate and Comfort (London, 1980), p.1.
35. N. Moffet, 'Nigeria Today', Journal of the Royal Institute of British Architects, 84, no 6 (1977), 244-254.

PART TWO

**The Traditional Setting and the
Domestic Architecture of the Igbo.**

CHAPTER TWO

THE PHYSICAL ENVIRONMENT OF IGBOLAND

Igbo and Igboland

The Igbo are the largest tribal group in the eastern part of Nigeria. The actual meaning and origin of the word 'Igbo' are still not very clear despite several attempts to establish them. Basden, an early twentieth-century missionary who lived for over thirty years in Igboland, after several attempts, concluded in 1925 thus:

The origin of the word Ibo is obscure ... There was a small town between Onitsha and Idah called Igbo, but this could hardly have supplied the name by which a whole country is known.¹

The doubt he expressed many decades ago still holds because it is possible today to find a number of towns and villages called 'Igbo' or having 'Igbo' as a prefix or suffix. Most of them are purely coincidental and do not offer any explanation for the origin and meaning of the word 'Igbo'. In another attempt at discovering the origin of the word, Jeffreys wrote that it was originally used for people who lived in the bush and even for slaves.² Ismagilova went even further, maintaining that these meanings still hold elsewhere in Nigeria.³ Meek suggested that the word 'Igbo' means simply people.⁴ His suggestion seems to have been confirmed in recent times as Onwuejeogwu, after analysing the semantics of different words with 'Igbo' as prefix or suffix, arrived at the conclusion that the word means 'the community of people'.⁵

In some books and documents it is common to see the anglicized form 'Ibo', which was adopted by early Europeans for easy pronunciation.⁶ But the people call themselves ndi

Igbo and their homeland ala Igbo, which in translation means Igbo people and Igboland respectively. So the word 'Ibo' in this context does not exist in their language and is therefore wrong. Similarly, using 'Ibo' for the people and 'Igbo' for their language, which is common, is also wrong. In this thesis, therefore, 'Igbo' will be used for the people and their language, and Igboland for their homeland, except for verbatim quotations.

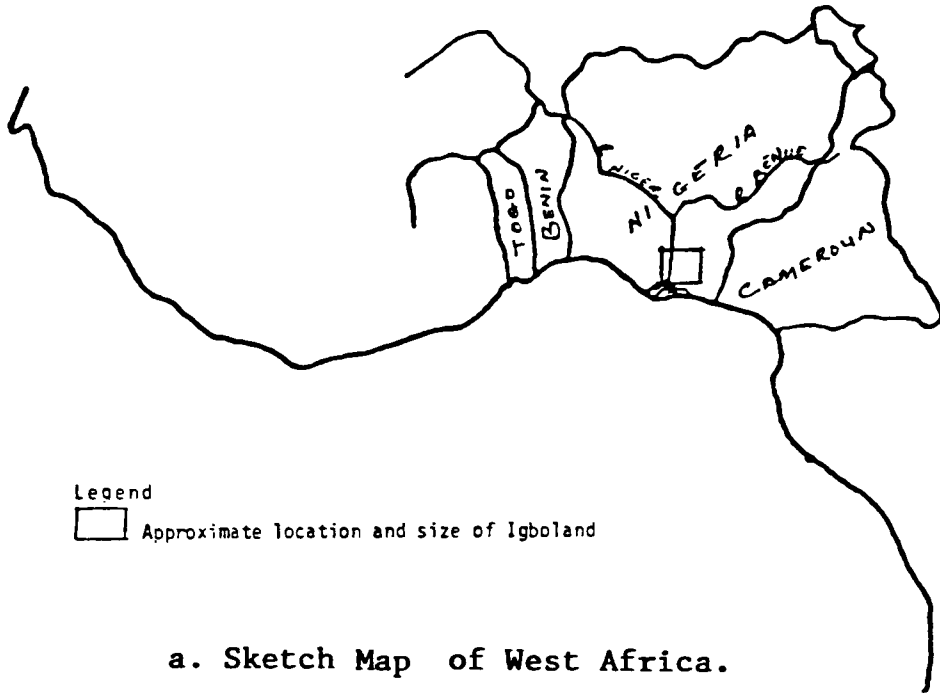
Igboland is located on both sides of the lower part of the River Niger (ill.1a). A bigger portion is on the eastern side of the river. Administratively, this portion is in Anambra, Imo, and River States, while the portion on the western side is in Bendel State of Nigeria. The whole territory lies across and slightly outside latitudes 5° and 7° North and within longitudes 6° and 9° East. The area of Igboland is approximately 41,000 square kilometres.⁷ The territory is bounded by an imaginary line running outside the settlements of Eha Amufu, Ikem, Enugu Ezike and Adani on the north, Isiogo, Afikpo, Akanu and Arochuku on the east and north-east, Umuagbai, Port Harcourt, Diobu and Ahoada on the south, and Obiaruku, Kwale, Agbor and Illah on the west.

As their neighbours, the Igbo have the Igala and the Idoma on the North, the Boki, the Ekoi and the Ibibio on the east and north-east, the Ijaw on the south, and the Edo and the Urhobo on the west (ill. 1b).

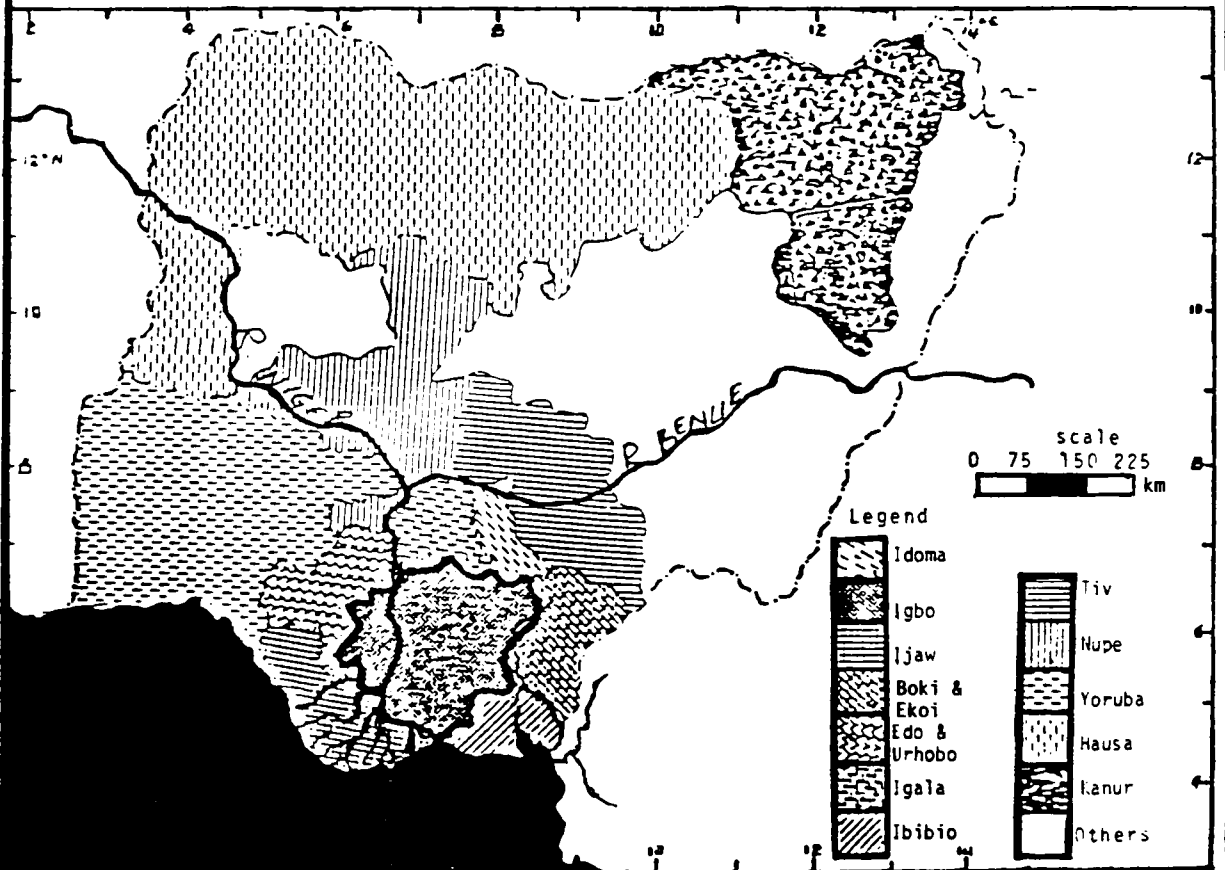
The Geology and Topography of Igboland

The geology and topography of a place are often instrumental in determining the character of its traditional architecture. Here, a broad survey of the geological formations and the resultant topography of Igboland shows how they generally affect settlements and to what extent the Igbo have been able to exploit some of these formations, such as stones, in their traditional building activities.

Illustration 1



a. Sketch Map of West Africa.



b. Modified Tribal Map of Nigeria.
(after Nigeria Tribal, 1966).

The geology of the southernmost part of the land, including areas around the towns of Port Harcourt and Aboh, is composed of unconsolidated beds of coarse sands and gravels, dispersed layers of silty clay and peat, and decomposed remains of vegetable materials. Deltaic deposits from the Rivers Niger and Benue and alluvial formations lie under the areas between Port Harcourt, Aboh, Ahoada and flank the Niger north of Aboh.

The topography of these areas portrays a delta plain through which water from the River Niger empties into the Atlantic Ocean. Contrary to the constant overflowing which characterises deltas, this one rarely overflows owing to the barriers formed by natural sand banks thrown up along water ways by the river. The land is, however, swampy, so settlement in the area is scanty and confined to higher and drier ground. Further north along the Niger, between the delta and Illah, a river valley is formed and during the rainy seasons, the River Niger often overflows its banks. On both sides of the river, therefore, there is a considerable flood plain of alluvium (ills. 2 and 3).

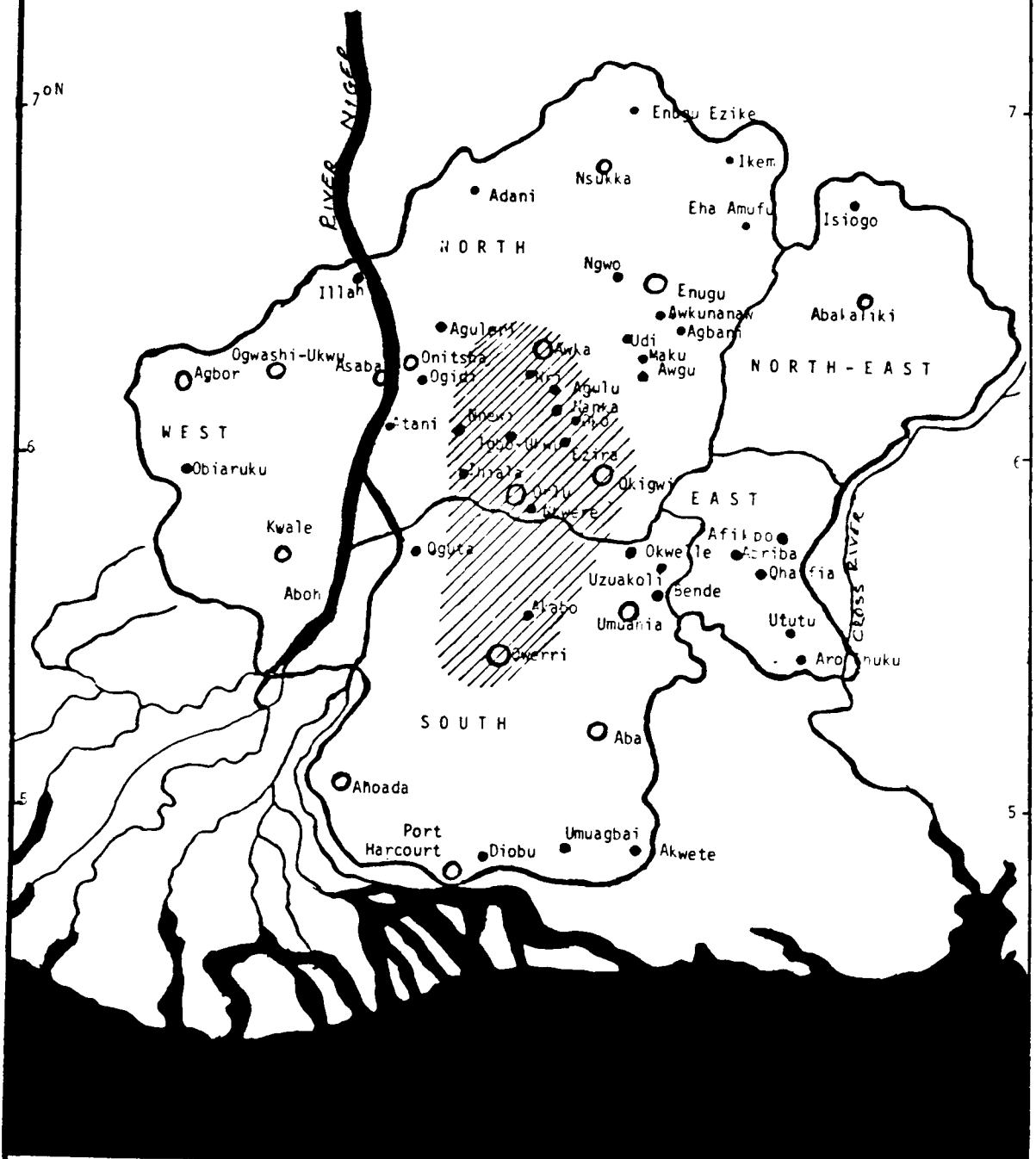
At Onitsha, it eventually tapers to a point owing to the narrow nature of the river valley, but further south, the river again flows through a broad flood plain until it reaches the delta. Settlement in this flood plain is scanty owing to the lack of high and dry ground. Illah, Aguleri, Onitsha, Asaba and Oguta are within the Niger flood plain.

The greater part of the southern part of Igboland and about a half of the western part is underlaid by unconsolidated coarse to medium fine-grained sands and clayey shales. Lignite formations and sands underlie areas such as Nnewi, Onitsha, Okwelle, Nanka, Bende and Ogwashi Ukwu.

The areas underlaid by these geological formations form

Illustration 2

Igboland.



Scale 0 10 20 40 60km

Legend






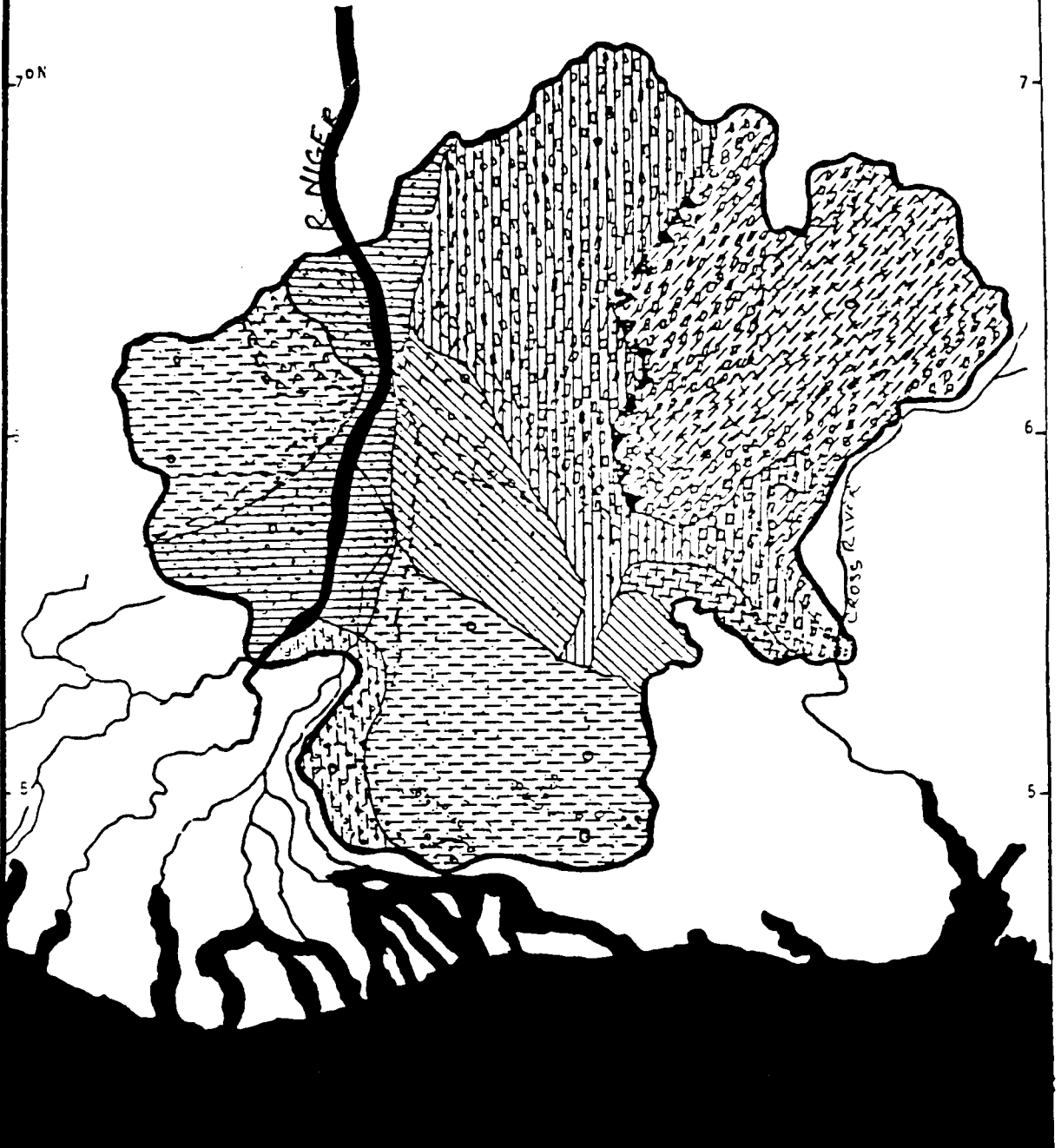
-  Boundary of Igboland
-  Boundary of sub-cultural area
-  Igbo heartland
-  Town
-  Village group

Illustration 3

Geology and Topography.



Scale 0 10 20 40 60km

——— Boundary of topographical and geological formations

----- Boundary of geological formation

▲ Scarp

Legend

	Delta plain		Alluv. and deltaic deposit
	Flat coastal plain		Coastal plain sands
	Polling Coastal plain		Lignite formation
	Plateau and escarpments		Shales, coal and sand stones
	Cross River Basin		Lime stone and volcanic depos.
	Niger flood plain		
	Diversified lowland		

the largest topographical zone in Igboland, and include the coastal plain, which covers the stretch of land lying south of Onitsha, and its extension southwards towards the delta. Towns like Ihiala, Orlu, Owerri, Aba, Agbor and areas around them are also within this zone. Over this large area, the most apparent topographical differentiation is that its northern sector has a more rolling topography while the southern sector is almost completely flat. Other remarkable features include a few outcrops of sandstone and shales in its north-western part, and a complicated topography of narrow ridges and valleys around Umuahia. Settlement is high here, and the population of Igboland attains its greatest density in the northern rolling sector of the coastal plain.

The strip of land running approximately diagonally north to east of Igboland, which includes areas around the towns of Nsukka, Udi and Okigwi is underlaid by impervious unjointed clay-shales with occasional beds of clay, ironstones, sandstones, upper and lower coal measures, false bedded sandstones and shales. These geological formations give rise to a topographical zone of escarpments and plateaux, which has two plateaux-like cuesta separated by a wide valley. The first starts outside Igboland, swings southwards as it enters Igboland, passing the towns of Enugu by the west and then turning east at Okigwi. It continues eastwards until it reaches Afikpo where it turns south again to Arochuku and ends there in a series of knolls. The second, Awka Cuesta, is smaller and less continuous. The topography of the scarpland is complicated. Erosion has carved out the shales into valleys, leaving the sandstones as ridges or scarps. Settlement here is generally sparse on the escarpment but dense on the top of the plateaux.

The north-eastern part of Igboland, bounded by the Nsukka escarpment and Awgu plateau on the west, the Afikpo escarpment on the south-west, and Cross River on the east, is underlaid by sandy-clayey rocks, impervious shales, mudstones, porous limestones, micaceous sandstones and

volcanic rock. This area forms the Cross River basin. The topography here presents a uniform, gently sloping, drainage basin slightly tilted towards the south-east. Occasional ridges of isolated hills of igneous formations occur in some parts of the basin. Settlements are sparse here and mostly on the hills.

These geological formations found in Igboland are primarily of the quarternary, tertiary and cretaceous periods.⁸ The general view of the resultant topography shows a gradual ascent from the southernmost part of the land to the north, with areas of moderately rolling plains, hills and plateaux.

Within these various topographical zones there occur outcrops of stones suitable for building, but the Igbo traditionally do not use stone as a building material. The fieldwork yielded no definite reason for this, so far as nobody connected with building today was able to offer an explanation. Nevertheless, this failure to use readily available stone that would make good masonry appears to be general among the tribes in the southern part of Nigeria. Prussin has attributed this to the lack of an adequate technology for dressing stones in West Africa.⁹ Additionally, in the case of the Igbo, is the absence of a traditional building mortar of relatively high cohesive strength. Perhaps these explanations cannot be entirely dismissed, but a more obvious one is that the alternative method of building in mud seems to be very old in Igboland, and it is pre-eminently suitable to local conditions.

For a start, the abundance of clay formations has meant that a suitable mud for building is readily available throughout the land. Furthermore, the traditional cooperative method of building in Igboland ensured that the technique of building in mud was known to virtually all Igbo. From very early times, therefore, there was no pressing need for alternative building materials and

consequently neither the necessary technology nor the mortar essential for stone building were developed.

There are parallels with other countries where various forms of unbaked earth have persisted as building materials despite the ready availability of other, apparently more permanent materials, like timber or stone. In England, unbaked earth was used in many different ways as a building material from prehistoric times until at least the early twentieth century.¹⁰ Despite the damp, cold climate, it could be made relatively permanent, and, as everywhere in the world, thick walls made of unbaked earth tend to ameliorate the affects of the climate. This quality is lacking in stone, which tends to be cold, and in timber-framing, which tends to be drafty. These may be reasons for the continuing popularity of unbaked earth, for instance in Devon and Cumbria, even though stone is available there and so was the craftsmanship to use it effectively.

As regards settlement and topography in Igboland, it can be seen that settlement is dense in the coastal plain and on the top of the plateaux, and sparse in the delta and flood plains, the escarpments, and the Cross River basin. Geology and topography are, however, not fully accountable for this traditional pattern of settlement, as will be seen later. The fertility of land and the traditional occupation in a particular area also play important parts.

Soil

Soil is important here because mud is a major building material in traditional Igbo architecture. In addition, soil also supports the vegetation from which the Igbo acquire building timber, bamboo, grass and cord. It is, therefore, discussed herein both for these contexts.

D'Hoore identified four main groups of soil in Igboland.¹¹ Their different locations roughly correspond to

the locations of the various geological formations that underlie them. Their fertility and hence the kind of vegetation they support, and their clay content, which relates to their suitability as traditional building mud, vary greatly from place to place.

Soils derived from recent river-deposited alluvium are found in the Niger delta and flood plains. They have developed from detrital materials laid down by the rivers during the floods of the rainy seasons. Such soils are found in areas like Aguleri, Aboh, Ndoni and Atani. They are pale-brownish in colour, loamy, and possess a high percentage of clay and are therefore suitable for building purposes. They occur in areas of high rainfall and support vegetation such as timber, palm, bamboo and different climbers, all used for building in Igboland.

Ferrallitic soils derived from sandy deposits are also found in different parts of Igboland. Deep porous brown types occur in the lower half of the coastal plain. They consist of greyish-brown, sandy loamy surface soil and brown sandy, clayey subsoil. Their humus content is very low but their clay content is high and, again, this makes them suitable for building purposes. Another group of ferrallitic soils occurs as deep porous red soil, found over a large area in the central part of Igboland and also on the Nsukka-Udi plateaux. The top soil has only a little humus, but they generally have good clay content and are easily worked. A third group of ferrallitic soils occurs in areas such as Umuahia and Ezeaku. These types are deep-red in colour and consist of sandy clay soils derived from shales. Ferrallitic soils are generally not very rich but they support fairly good vegetal growth and possess a good percentage of clay, which makes them suitable as building mud.

The steep escarpment slopes of Nsukka, Okigwi, Arochuku and Maku areas are covered by lithosoils. Lithosoils are

yellowish to reddish-brown in colour, and are formed by resistant sandy shales and silt stones. To some extent they are fertile, so the area where they occur supports good vegetal growth, the steep topography involved notwithstanding.

The soils found in the Cross River basin are hydromorphic types, characterised by seasonal waterlogging, caused by the impervious nature of the underlying shales. They consist of reddish-brown gravelly, pale, clayey soil and scattered iron concretions derived from shales. They are less fertile than the loamy upland soils.

These various soils found in Igboland are generally not very fertile, but sustain a good vegetal cover. As a result, varieties of timber, bamboo, palms, grass and climbers, which the Igbo use traditionally as building materials, are freely obtained from the bush and forests. The clay content of the soils is also good enough to let them be widely used as traditional building mud. The particular colour of soil found in each part of the land forms the characteristic colour for all the houses built in that part when the houses are not coated with other pigments. In some areas, such as Awka, where red ferrallitic soils occur, the red colour is used advantageously to give the walls a particularly beautiful reddish surface finish.

Climate

Traditional building construction is a seasonal activity in Igboland. Similarly, the acquisition and preparation of building materials are subject to seasons. Basden, for instance, observed as follows:

With the advent of the dry season the builders bestir themselves, and on working days the site is alive with a company of busy men and boys.¹²

So, except in a few areas, where water is very scarce, or in cases of emergency, it is a dry season activity. The prevailing climatic conditions, therefore, have a complex relationship with building activities and the materials used in them. Rainfall, for instance, favours the growth of the timber, palm, grass and climbers used by the Igbo as building materials, but at the same time it is also destructive to undried mud walls and disturbing to the builders too. Similarly, under constant rain, new timber and thatch are hard to erect. This explains why the period of the year when there is little or no rain is preferred for building activities.

The climate that prevails in Igboland is characterised by two major seasons, the rainy and the dry seasons, and a minor one, the harmattan.

The rainy season lasts between May and September, when rainfall is very frequent and the monthly rainfall may be as high as 750mm, especially in the south where the influence of the Atlantic Ocean is greater.¹³ The southern coastline is among the wettest parts of Africa, but the climate becomes progressively drier inland. The difference in annual rainfall between the south and the north of Igboland is very marked. Annual rainfall decreases from 4300mm in the south to 1650mm near the northern boundaries of the land, a difference of over 2500mm.¹⁴

The dry season lasts between October and April. During this period, the lowest rainfall and the highest temperature are recorded, namely less than 50mm of rain throughout the period and a daily temperature above 27°C. The harmattan is a minor season within the dry season. It lasts between December and February, and is marked by high diurnal temperatures, dusty winds and dryness. Temperatures are high during the day but comparatively low during the evenings and nights. Rainfall is at its lowest during this period.

These climatic seasons have a direct influence on the life of the Igbo and also on their building activities. Before the rain sets in, every Igbo should have carried out all the necessary repair work on his house and planted his crops too. During the rainy season, domestic life is often confined to the houses. If there is little or no rain during the season, famine and scarcity of some building materials, such as grass for thatching, may occur. On the other hand, if the rainfall is too great, the harvest will be poor. The direct effect of heavy rains on mud-built houses can also be devastating.

As was mentioned earlier, the dry season is the most active season in Igboland for building construction. Building materials such as timber, bamboo and grass are acquired and prepared at the beginning of this season, and new houses are erected. Most domestic activities are undertaken outside the house, but within the compound. During the harmattan, most old people, nursing mothers and children sleep on beds warmed by open fires. Also at night, children sit around fires listening to stories. Owing to the increased use of open fires for warmth, and the unusual dryness resulting from the low humidity, fire is a particular hazard in Igboland at this time.

The harmattan and the rainy season notwithstanding, the basic temperature throughout the land is high all the year round, and there are no marked differences or diurnal variations. This is partly because a great part of the land is exposed to maritime influence and partly because these climatic conditions are controlled mainly by two air masses, the equatorial maritime air mass from the south-west, and the tropical air mass from the north-east, both of which are of tropical origin. The mean annual temperature over most parts of Igboland is 27°C, with monthly maxima and minima, deviating from this by about 6.5°, while the mean annual range is about 11°C. The daily range increases from the south inland, but stays around 7°C. The highest

temperatures, 34°C, occur in February and March, while the lowest maximum temperatures occur in July, August and September.¹⁵

Igboland experiences a high intensity of solar radiation all the year round owing to its latitudinal location. Daylight hours are nearly constant from month to month. A lower rate of solar radiation is, however, experienced during the harmattan because of the cloud cover and harmattan haze, but, as Floyd noted:

... the overall annual experience of solar radiation throughout the Eastern provinces [of Nigeria] is that of marked and sustained intensity. House design, clothing, and social custom - such as afternoon rest - all reflect the impact of insolation upon the life of the people.¹⁶

In the central part, the monthly and annual relative humidity is high throughout the year, 70 - 80 percent. This figure increases gradually towards the south and similarly decreases towards the north.

Vegetation

The types of traditional building materials such as timber, palms, and external roof covers used in Igboland largely depend on the vegetal growth typical of each particular area. It is widely believed that the whole of Igboland was once within the rain forest zone of West Africa, but, owing to man's clearance of forests, a part of the rain forest zone has been modified and today the rain forest zone is confined mostly to the central and southern part of the land where the forests easily regrow after being cleared.

Two main vegetation zones are, therefore, discernible;

the rain forest and the derived Savannah zones. To them must be added a third, fresh water swamp (ill. 4).

The fresh water swamp lies in the southernmost part of Igboland, flanking the estuary and delta of the River Niger. Port Harcourt, Ahoada and Aboh are within this zone. Here heavy rainfall and rivers maintain a steady supply of fresh water. Relative humidity is high, so evaporation is minimal. Drainage is also rendered almost impossible by the small fall in the land. As a result, the soil is waterlogged, and a condition that favours the growth of trees, shrubs, lilies, lianas and grasses is thus created. Large trees, whose trunks and branches are used as building timber grow tall to form canopies. Prominent among them are mahogany, abura and palm trees.

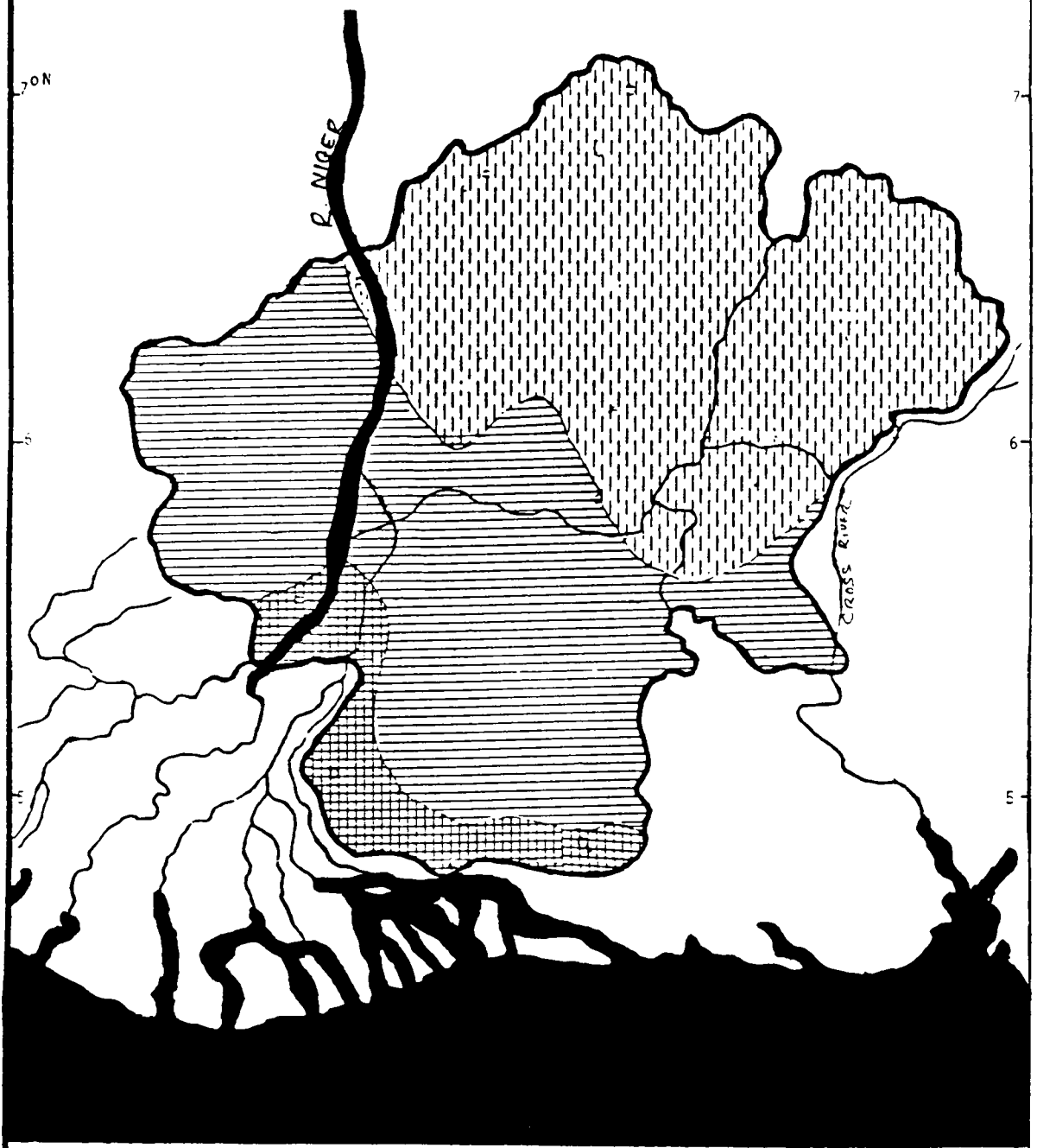
The rain forest covers the greater part of the Niger flood and coastal plains, which include parts of western, central and southern Igboland. Here the climatic condition, typical of rain forest, promotes the growth of perennial trees and a varied combination of plant groups, such as herbs, shrubs, many parasitic and saprophytic growths, climbers, tall grasses, and big trees with robust trunks and buttress roots. Among the best known of the trees are mahogany, obeche, iroko, utile and ofara. Palm trees, citrus, mangoes, pear, pawpaw and banana also grow to a large extent in this zone. Timber, bamboo, palm fronds and leaflets, and cords used as traditional building materials by the Ibgo are therefore plenty and freely acquired from the bush and forests that abound here.

The derived Savannah has resulted largely from indiscriminate clearing of forests. It covers a large area of the northern part of Igboland, the northern part of the Niger flood plain, the scarplands, and the Cross River basin. This includes towns such as Afikpo, Abakaliki, Udi, and Nsukka. The vegetation here is thinner and more deciduous in character. When forests are cleared here, the poor soil and weather conditions do not allow quick

6 7 80E

Illustration 4

Vegetation.



Scale 0 10 20 40 60km

Legend



Derived Savannah

Rain forest

Fresh water swamp

regrowth. So, often, such forests are replaced by a type of parkland which represents an encroachment of the Guinea Savannah into the rain forest zone. The vegetation is made up of different tall grasses, such as spear and elephant grasses, and trees such as oil palm, Indian bamboos and oil bean. Although the vegetal cover here is not as much as that in the rain forest, there is an abundance of traditional building materials such as timber, bamboo and grasses.

In addition to being an important source of building materials, the vegetation of Igboland is also an important element in the design of out-of-door spaces, as it provides shade and protection from solar glare.

Demography and Rural Population Distribution Pattern

Igboland is one of the most densely settled areas in Sub-Saharan Africa. According to the 1921 census, there were over three million Igbo in the land.¹⁷ The census of 1953 showed that the population had increased to almost five million, and today this figure may well have tripled.¹⁸ Of this population about 80 per cent lives in rural Igboland, or still maintains strong ties with it.¹⁹ Owing to environmental and cultural factors, this rural population is distributed in varying densities which fall into three broad density zones (ill. 5).

High and very high densities of 300 - 450 persons per square kilometre are observed in the area forming an axial belt starting from Awka and moving north-west to south-east across the centre of Igboland, and towards the Cross River estuary. This belt is broken by zones of medium density around Umuahia and Nsukka. The highest densities of 450 persons per square kilometre and over in this zone are observed around Orlu and Okigwi in the coastal plain.

Flanking the zone of high and very high densities and

5

7

8°E

Illustration 5

Demography and Rural Population Distribution Patterns.
(after Udo, 1965).

7°N

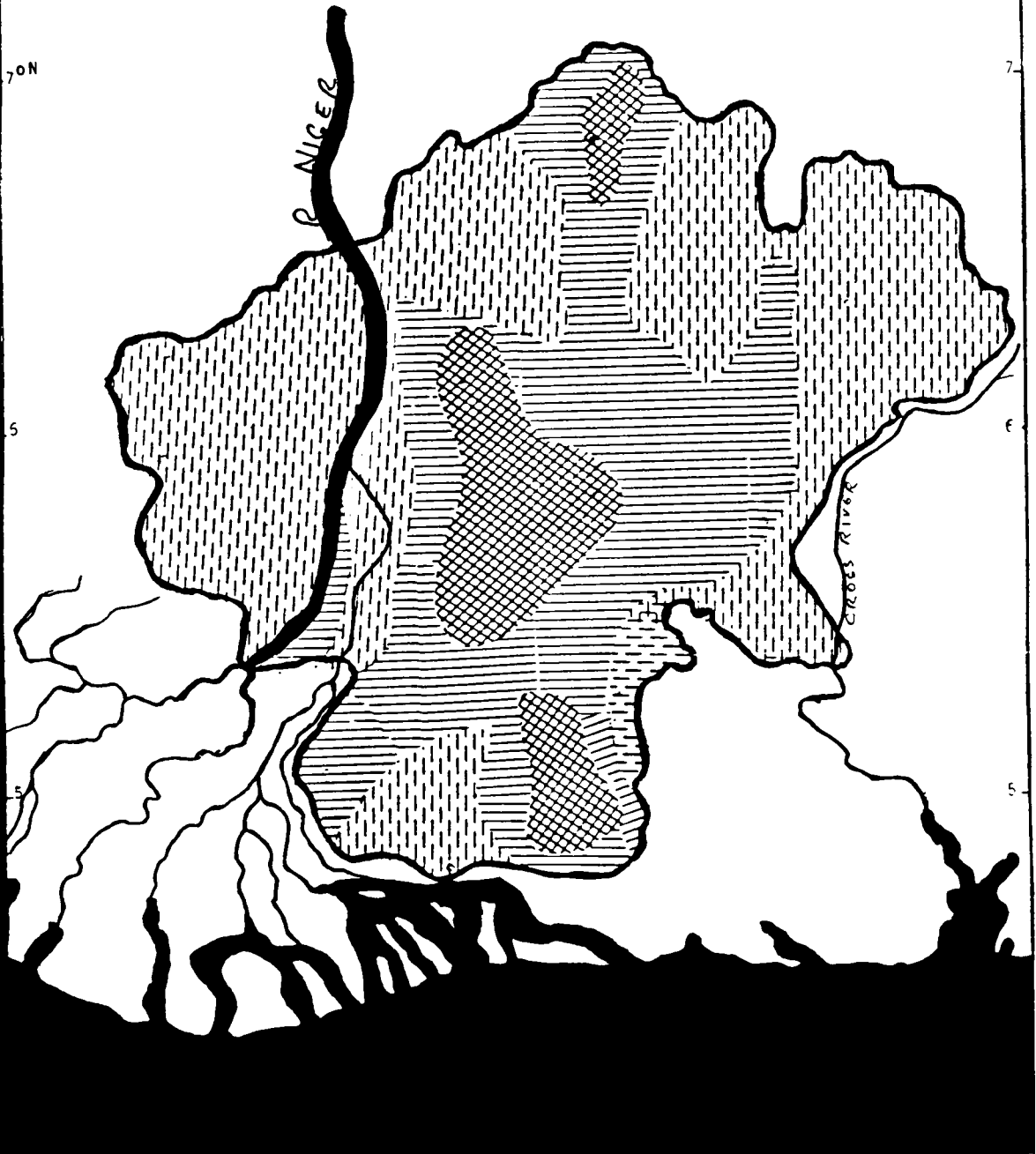
7

5

E

5

5



Scale 0 10 20 40 60km



Legend



300 - 450 persons per sq. km

150 - 300 persons per sq. km

150 persons per sq. km and under

extending approximately north to south across the centre of Igboland is a zone of medium to high density of 150 - 300 persons per square kilometre. The rural areas south of Owerri and Onitsha, Udi, Awgu, Aba, Enugu, south-west of Abakaliki and Afikpo, Umuahia and Aba are within this zone.

The third zone, which is of low to medium densities of 150 persons per square kilometre and under, approximately surrounds the zone of medium to high densities. Areas included in this zone are West Igboland, the Niger flood and delta plains, and some parts of the Cross River basin.

The foregoing shows that the coastal plain and the northern plateaux have the highest densities of population while the scarps, the flood and delta plains and the Cross River basin have the lowest densities of population.

Formation, Growth and Distribution of Settlement types in Igboland

For an objective assessment, the house must not be seen in isolation from the settlement, but should be considered as part of a social and spatial system in which the way of life, the settlement and the landscape are all related. It follows that settlements themselves reveal a lot about the traditional architecture found within them. This is because the way of life of a people and the manner in which they conduct some social activities, which effect house form, are themselves affected by the nature of settlements. Rapoport, for instance, has pointed out that a dispersed or a nucleated settlement pattern can affect house form because certain activities which are restricted to the house in a dispersed settlement could possibly take place out of doors in a nucleated one, and this can affect the form and design of houses adopted in a particular settlement.²⁰ The relationship between settlements and house forms is, however, not always entirely consistent with this view of Rapoport's, but it is always there in one form or another.

It is therefore necessary to see if the settlements found in Igboland do in fact influence traditional Igbo architecture in any way. Before that, it is important also to understand the relationship between man and land, particularly the amount of land available for building and the economic purpose to which it is put, the spatial relationships that exist between individual villages, the wards of which they are composed, the compounds that make up the different wards, and finally the scarcity or superfluity of forest-based materials that are used in building, owing to deforestation resulting from land hunger.

The Igbo heartland formed by the Awka, Orlu, Okigwi and Owerri areas, (see ill. 2) is believed to have served as the cradle of Igbo civilization about four thousand years ago.²¹ As time went on, however, the proto-Igbo population dispersed more widely to establish settlements throughout what is today known as Igboland. These settlements evolved over many years and as a result of various pressing needs. One need could have been for more land. As Isichei noted, the Igbo heartland might have repeatedly built up levels of population which the environment was unable to sustain. This condition, therefore, might have induced migration from time to time. Other possible causes of migration and the spread of Igbo settlements throughout Igboland could have been social or political.

Over-population of the earliest settled areas, for example, appears to have led to scarcity and over-exploitation of the available land in many villages. When the available land became inadequate, a group of hard-pressed people were probably forced to leave in search of unoccupied land elsewhere. As soon as unoccupied land was found, it was settled and its ownership was claimed by the new people. This process of dispersal was gradual, but many rural settlements appear to have come into existence this way.

According to Jones, the process of development of these settlements should be examined in three stages.²² He called the first stage the 'colonization' stage. This was when settlement had just been made. The new settlement still maintained political and social ties with its parent village, and in some cases bore its name or one that reflected its origin. During the next stage, the 'consolidation' stage, the settlers established their permanent hold on the land and planted cash crops and perennial trees. The relationship with the parent village declined. Jones, who carried out extensive fieldwork in Igboland, maintains that the north-eastern part of Igboland underwent a transition from the colonizing to consolidating stage in the 1940s. The third stage is the 'disintegration' stage. When the population had grown big enough for the settlers to assert themselves as a separate and independent village group, links with the parent village group either disappeared or became no more than legendary. This disintegration was also a stage of reorganisation when some members of the new settlement might themselves move out in search of yet new unoccupied land in order to reduce the pressure of population and relieve the land of over-exploitation. The greater part of northern Igboland and most of the Igbo heartland have been either in the stage of disintegration or undergoing transition from the consolidating stage to the disintegration stage since the '40s.²³ Disintegration here does not mean total collapse and dispersal, but implies that the social factors that bound a community together, such as kinship relationship, are yielding to over-population and land-hunger, which induce migrations.

This method of formation and development of settlements is a dynamic one in which transition from one stage to another is always taking place. As a result, nucleated settlement would be expected as a sign of colonization, dispersed settlement as a sign of consolidation, and dispersed and continuous settlement as a sign of an eventual

disintegration. Another implication is that settlements in the longest-settled areas of Igboland would tend to be dispersed and continuous - showing signs of disintegration, while areas of latest occupation would tend to have highly nucleated settlement pattern. To some extent this pattern applies, but owing to geographical and cultural factors, other ways of formation and growth of settlements are known to have taken place in the land too.²⁴

Nucleated settlements are found in various forms in Igboland (ill. 6). They occur as nucleated hamlets and villages, and villages with nucleated compounds. Nucleated hamlets and villages are typical of the Nsukka and Udi plateaux, the Uzoakoli and Bende areas of the southern plateaux, and of Owerri in the coastal plain. In the Nsukka, Udi, Uzoakoli and Bende areas, differences in topography have prevented an even spread of settlements in all directions. These have created nucleated villages held together by traditional ties. On the Udi and Nsukka plateaux the villages are larger and are separated by broad, open country. The majority of the people living there are farmers and the villages are sited within dense groves of forests or palm bushes. The southern plateaux are more dissected owing to the action of erosion than the northern ones, so development of large villages was not possible there, because new settlers had to move a greater distance from their parent village to find a favourable site for the creation of a new nucleus. Villages in the southern plateaux are therefore much smaller than those in the north. In the nucleated villages around Owerri, houses are grouped in circles so that their outer walls form an outer screen. This form of settlement, it has been suggested, was induced by the need for defence.²⁵

Villages with nucleated compounds occur in the coastal plain and in the western part of the Cross River. There, houses are grouped in compounds on either side of one or more pathways. Villages so formed are normally small in size.

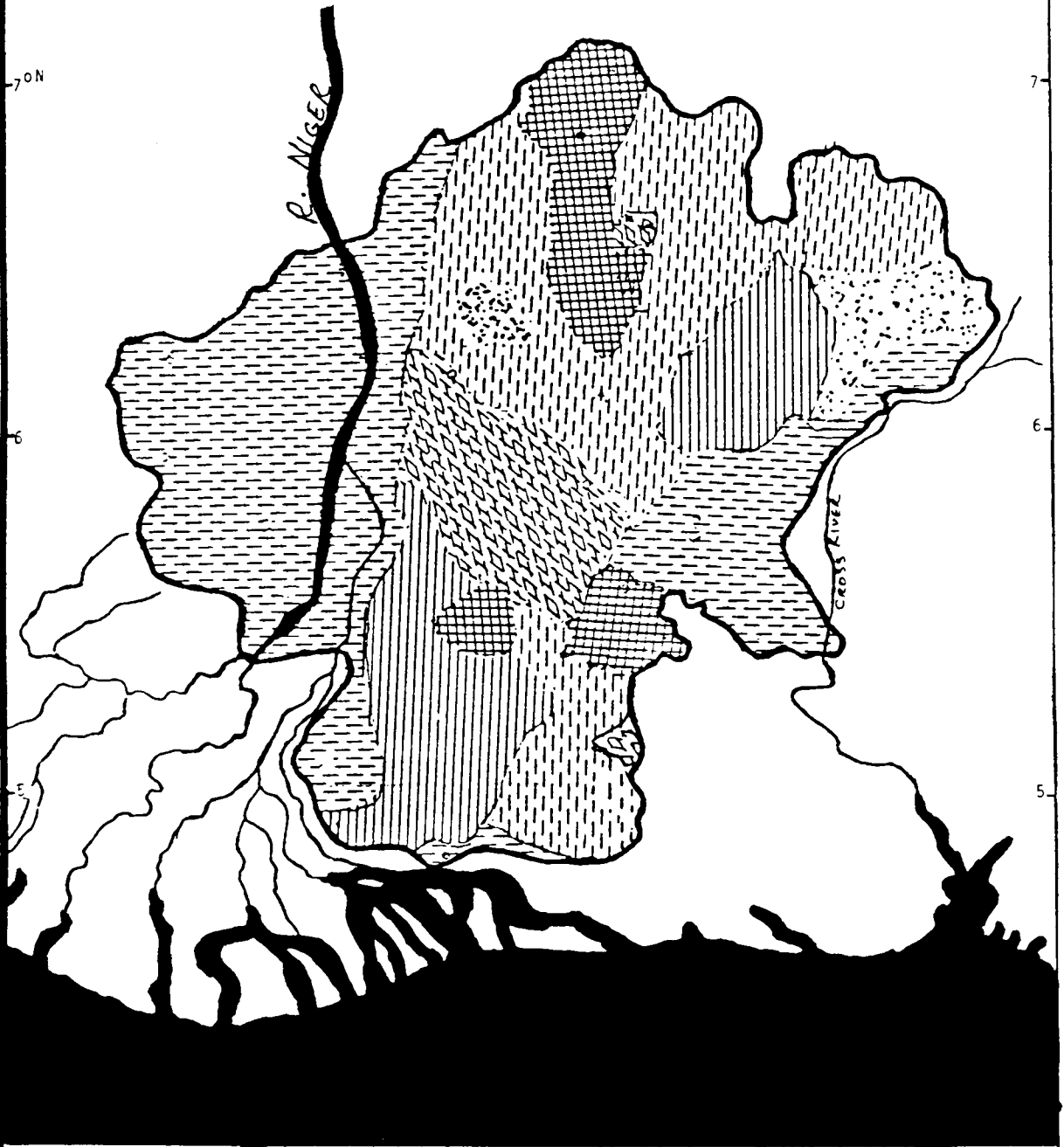
6

7

8°E

Illustration 6

Distribution of Settlement Types.



Scale 0 10 20 40 60km

Legend



Dispersed compounds
 Highly dispersed compounds
 Dispersed and continuous compounds



Nucleated hamlets and villages
 Villages with nucleated compounds
 Compact hamlets and villages

Compact hamlets and villages are found along the broad stretch of land starting from the Niger delta, around Ahoada, and encompassing the lowlands of the Niger valley, the western part of Igboland, and areas around Afikpo, Ohaffia and Arochuku. In the Niger valley and delta, the physical characteristics of the areas compelled people to pack tightly in hamlets and villages on the few areas of dry land above flood level. There are a few places, mainly towards the coast, where favourable conditions exist over a wider area and here larger but still compact villages have developed. People there are mainly engaged in fishing and river transportation.

Dispersed settlements also occur in different forms. Dispersed compounds are observed on the scarps of Nsukka and Awgu, in the northern part of the Cross River basin, and in the eastern part of the coastal plain. Highly dispersed compounds are found in the Awka areas, and in the eastern part of the Cross River basin. Dispersed and continuous compound settlements, in which the compounds of one settlement are barely differentiated from those of the adjoining one, are found in the northern part of the coastal plains. Villages with dispersed compounds also occur in the southern part of the coastal plains and in the western part of the Cross River basin. These forms of dispersed settlement are products of the gradual disintegration of densely populated nucleated settlements.²⁶

The northern parts of the coastal plain are the most densely populated in Igboland. There, settlements follow a single pattern of dispersed compounds. As is the case with the highly dispersed and continuous type, no village boundaries are discernible and rural settlement is continuous with villages having as many as four to nine thousand inhabitants. Areas having this type of settlement pattern include Orlu and Okigwi. A similar settlement

pattern also exists in the southern part of the coastal plain. There also, the rural occupation of land is virtually complete. The establishment of many compounds owing to population pressure has resulted in the disappearance of a normal outer farmland. In most of the areas therefore, settlements are such that the compounds of one village are adjoining those of an adjacent village.

In the western part of the Cross River basin, houses are grouped to form dispersed compounds along narrow pathways. The traditional village form is hardly found here. It is believed that this form of settlement was adopted by the Igbo to maintain their firm hold on the land following a belief that the best way to confirm ownership of land is to occupy and exploit it.

Successful attempts were made in the past to reintegrate some of the scattered compounds to form nucleated settlements, but these only affected a small area of the Cross River basin and therefore did not produce the required impact to alter the settlement pattern there.²⁷

In these traditional Igbo settlements, social bonds are strong, and, to the Igbo, the whole territory of a settlement is the setting for life. The compounds and houses are only a progressively more private, enclosed and sheltered part of the residential realm. Social activities are therefore never restricted to the compounds, but extend beyond them to other spaces in the settlement. Rapoport has suggested that this type of life style, in which social and domestic activities spill beyond the houses, is typical of nucleated settlements. If this suggestion were to be followed, then only nucleated settlements would be expected in Igboland. However, granted that population growth, land-hunger, and desire to increase land holding are some of the external factors that bring about disintegration and dispersed types of settlements, an obvious inference is that, from the outset, Igbo settlements were traditionally

nucleated. This view is further reinforced by the fact that the highly dispersed compound types of settlements found in the Cross River basin derive primarily from the method adopted by the Igbo there to consolidate their tenure of land.

The typical nucleated settlements of Igboland are usually separated by open country used as farmland. This creates a pattern in which two distinct territories are recognised by settlers, the home territory and the farmland. The building of compounds and social and domestic activities are restricted to the home territory while the farmland and the forests are for economic purposes. Any buildings erected on the farmland, therefore, only serve as temporary sheds during farm work. Land is plentiful around nucleated settlements, so there is still ample area for further expansion. Individual compounds are also larger and both villages and compounds are spaced further apart from one another. In this type too, large gardens surround the compounds.

On the other hand, in the dispersed and continuous compound types of settlement, which result from over-population and land-hunger, spaces between individual villages, wards, and the normal gardens are sometimes non-existent, having all been used up for building purposes. The sizes of the newer compounds are also minimal and the growth of the settlement is highly restricted. The effect is therefore to produce a sprawl.

The Physical Environment as a Limiting Factor in Traditional Igbo Architecture

The limitations imposed by the physical environment of any place are among the major factors shaping the traditional architecture of that place. How far these limitations affect architecture has been differently

assessed by various scholars, but it is generally accepted that although man has great adaptive capacity, his ability to adapt to varying environmental conditions is not limitless. Man's adaptive capacity is not only limited but also narrow. So, to maintain a healthy and comfortable range of environmental conditions means seeking an accommodation with nature, by either overcoming the environmental limitations or at the least finding a compromise by artificial contrivances. Here it is necessary to point out what limitation the physical environment of Igboland has imposed on the Igbo in their quest to make their homeland habitable through their architectural activities. This will facilitate an attempt to determine to what extent the traditional architecture has been responsive to the physical geography of the land.

Although the soils of Igboland have a good clay content that makes them suitable as building mud, the physical environment places a number of limitations on the use of mud for building. For example, mixing mud for building requires water, so those Igbo living in areas that have neither rivers nor streams nearby have to build in the rainy season. This necessitates the added task of protecting the wet mud from rain until it dries. Mud is not a very strong material, and so it has to be used with massive thickness if it is to serve as a load-bearing structure. But the hot and humid climate of Igboland calls for thin, breathing walls, which will eliminate dampness and promote the air flow that is necessary to ameliorate the effect of the climate. This is especially the case in the south, where relative humidity is extremely high. Furthermore, all mud structures are prone to cracking, and must be protected against torrential rain. Moreover, the soils support various vegetal growths. On the one hand, this ensures an adequate supply of the building timber, bamboo and grass used by the Igbo for building purposes; on the other, the bush and forests encourage the breeding of different insects, such as destructive termites and disease-bearing mosquitoes, and dangerous reptiles. The

Igbo builders, therefore, have to solve the problem of isolating them from their homes.

Openness is often advocated as the basic design principle in areas with a hot, humid climate like Igboland, but the topography of some parts of the land renders such a principle counter-productive.²⁸ For example, in places that are well above sea level, such as Udi and Nsukka, ventilation must be controlled as permanently open buildings could be too well ventilated and therefore very cold during some seasons. Equally, valleys and similar lowlands which can restrict the free movement of air impose limitations of ventilation on Igbo architecture.

The tropical rainfall also has drastic effects on buildings in the land. Rainwater, if not checked, penetrates the building through the roof, wall openings, cracks and even by rising from ground level up the walls. This causes a wetness in building that constitutes a potential hazard to health and comfort, and is also a source of aesthetic, material and structural damage.²⁹ The Igbo living in the riverine areas have to build to cope with constant flooding. Land erosion also frequently occurs in the escarpment zone, in the Awka-Orlu uplands, at the east of the Nsukka-Okigwi escarpment, and around the villages of Agulu, Nanka and Oko. Erosion generally impoverishes soils, destroys buildings, and deters settlements in Igboland.

Except in the early morning hours and during the harmattan, direct sunlight heats up the surroundings and the buildings. The roof and the east and west walls and openings receive the bulk of the heat. Consequently the ambient temperature is normally too hot to be comfortable. At night, the little diurnal fall in temperature makes the flywheel effect of mud walls ineffective as there is little or no change between the outside and room temperatures.³⁰

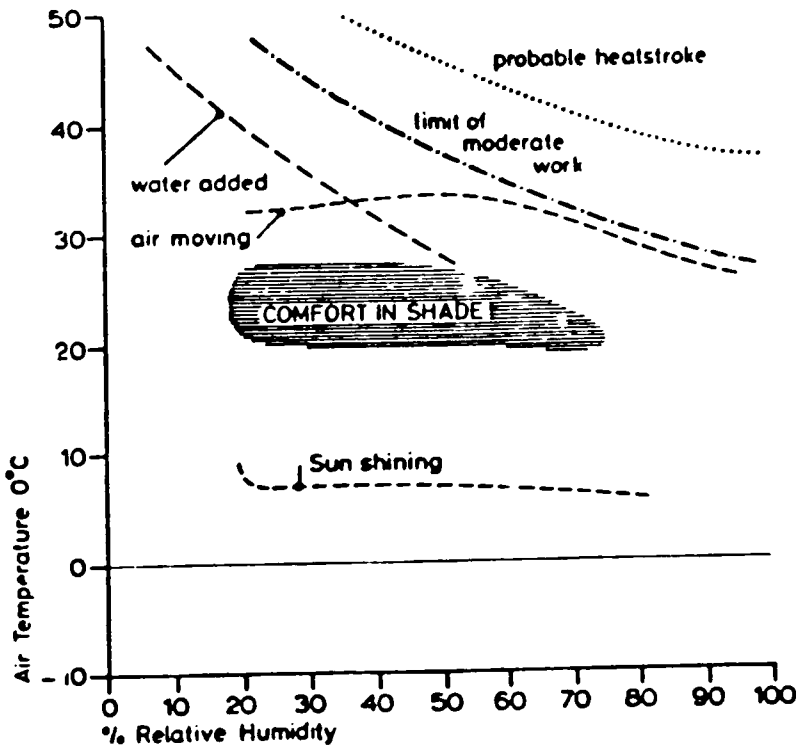
Glare also poses a big problem as the cloud cover is

only about 50 percent. A task of the traditional builder in the land therefore is to avoid excessive heat from reaching the interior of the building and to reduce the effect of glare.

Illustration 7 shows a comfort chart after Olgyay. On the chart, the comfort zone is expressed in terms of air temperature and relative humidity. From the chart it can be inferred that high temperature could be tolerated if the relative humidity is low. On the other hand, if both variables are high, uncomfortable conditions occur sooner. The daily temperatures of Igboland are not often outside the comfort zone temperatures, but high relative humidity hampers the ability of the body to maintain a constant temperature, reduces evaporation of sweat on the skin surface and thus causes bodily discomfort. It also causes dampness which encourages the breeding of fungi, insects and bacteria. Under conditions of high relative humidity, roofing materials rot away.

On the other hand, lower relative humidity which is experienced in the land during the harmattan, causes dryness of the body, throats to become sore, lips to crack, and eyes to become easily irritated. Dusty, high winds, which are frequent during the harmattan, are also a menace as they stir up dust which infiltrates all parts of the buildings and covers all the furniture and utensils.

Illustration 7



COMFORT CHART (after Olgay, 1969).

REFERENCES

1. G.T. Basden, 'Notes on the Ibo Country, Southern Nigeria', Geographical Journal, 65, no 1 (1925), 32-41.
2. M.D.W. Jeffreys, 'Dual Organisation in Africa', African Studies, 5 (1946), 82-105, 155-176.
3. R.N. Ismagilova, Narodui Nigerii: The People of Nigeria, Russian text (Moscow, 1963), p.18.
4. C.K. Meek, Law and Authority in a Nigerian Tribe (London, 1937), p.1.
5. M.A. Onwuejeogwu, 'Igbo Cultures and Igbo Civilization', Odinani, no 1 (1972), 39-41.
6. G.T. Basden, op. cit.
7. U. Okonjo, The Impact of Urbanization on Ibo Family Structure (Gottingen, 1970), p.42.
8. B. Floyd, Eastern Nigeria: A Geographical Review (London, 1969), p.69.
9. L. Prussin, 'An Introduction to Indigenous African Architecture', Journal of the Society of Architectural Historians, 33, no 3 (1974), 182-205.
10. A. Clifton-Taylor, The Pattern of English Building (London, 1972), pp.287-293.
11. J. D'Hoore, 'La Carte des Sols d'Afrique au Sud du Sahara', Pedologie, 10 (1960). Quoted in B. Floyd, op. cit., p.102.
12. G.T. Basden, Among the Ibos of Nigeria (London, 1921), p.166.

13. Y. Karmon, A Geography of Settlement in Eastern Nigeria (Jerusalem, 1966), pp.22-3.
14. Ibid.
15. Y. Karmon, op. cit., pp.20-1.
16. B. Floyd, op. cit. p.135.
17. Census of Nigeria, i (1921), 5-7. Quoted in C.K. Meek, op. cit., p.1.
18. Population Census of Nigeria 1952-53. Quoted in R.N. Ismagilova, Narodui Nigerii (Moscow, 1963), p.21.
19. B. Floyd, op. cit. p.55.
20. A. Rapoport, House Form and Culture (Englewood Cliffs, 1969), p.70.
21. Although archaeological discoveries suggest that the earliest settlement in Igboland may be outside the heartland area, it has not been established that those earliest settlers were Igbo ancestors. Moreover, the earliest yet known Igbo civilisation originated in the northern part of the heartland. See E. Isichei, A History of the Igbo People (London, 1976), pp.3-4.

See also D.D. Hartle, 'Archaeology in Eastern Nigeria', Nigeria Magazine, no 93 (1967), 134-143.
22. G.I. Jones, 'Ibo Land Tenure', Africa, 19, no 4 (1949), 309-323.
23. Ibid.
24. Whereas Morgan maintains that such a process can only

be confined to the northern part of Igboland, Grossman points out that other methods exist by which the process of formation and development of settlement in the land could be initiated. Examples include settlements formed as a result of wars or even by negotiation. See W.B. Morgan, 'The Grass Land Towns of Eastern Nigeria', Transaction and Papers of the Institute of British Geographers, no 23 (1957), 213-224.

See also D. Grossman, 'Do We have a Theory of Settlement Geography? The Case for Iboland', The professional Geographers, 23 (1971), 107-203.

25. M.K. Barbour, J.S. Oguntoyinbo, J.C. Nwafor, and J. Onyemelukwe, Nigeria in Maps (Hong Kong, 1982), p.86.
26. R.K. Udo, 'The Disintegration of Nucleated Settlements in Eastern Nigeria', Geographical Review (January 1965), 53-67.
27. Ibid.
28. B. Givoni, Man, Climate and Architecture, second edition (London, 1976), p.353.
29. Wetness in a mud-built house reduces the strength of the mud walls. It lowers the internal temperature of the building, increases the likelihood of condensation, causes thermal discomfort, reduces the thermal resistance of the walls, encourages the growth of fungi on the walls and the breeding of harmful bacteria. It also causes bad odours and warping of the wooden parts of the building. See B. Givoni, op. cit. p.163.
30. By flywheel effect is meant here the property of mud walls to retain heat and delay its propagation by conduction from the external to the internal parts of

the building when solar radiation is high, but to release the accumulated heat slowly when solar radiation is low. This property of mud is of great advantage in areas with hot-dry climate where the diurnal temperature variation is high.



CHAPTER THREE

IGBO SOCIETY AND CULTURE

Origin, Settlement and Dispersal

Various hypotheses concerning the origin of the Igbo have been put forward by anthropologists, linguists, historians and the Igbo themselves. For example, Equiano, Ojike, Ike and Matthew have all implied that the Igbo originated in the Middle East.¹ Basden and Jeffreys did not accept this, but believed that the Igbo came under Jewish or Egyptian influence some time in the distant past.² Palmer and Johnson also put forward a hypothesis suggesting that the Igbo originated in Asia.³ Some Igbo claim their origin from Igala, some from Ibibio, and some from Benin. Many Igbo, on the other hand, assert that they have always been in Igboland. Those who uphold the latter view explain their origin by claiming that Chuku, the Igbo Supreme God, either sent down their ancestors from the sky or made them spring up from the ground. None of these hypotheses has been convincingly proved. All of them were based on either oral traditions or coincidences of the cultural traits of the Igbo and other peoples. None of them has been supported by either archaeological or other scientific evidence. They, therefore, cannot be accepted as a comprehensive explanation of the origin of the Igbo.

The Igbo belong to the Kwa linguistic sub-family of the Niger-Congo group, whose members, according to linguistic scholars, were believed to have separated from their ancestral stock about five to six thousand years ago.⁴ That separation might have taken place in the area around the Niger-Benue confluence of the present Nigeria, from where these people moved out to occupy their present locations. This suggestion has been reinforced by similar conclusions made by art historians through the study of the artistic

tradition of the people.⁵ This evidence supports Karmon and Henderson, who stated that the Igbo originated from within Nigeria, in the region of the Niger-Benue Confluence, from where they moved into the rain forest.⁶

Historians now believe that on entering the rain forest, the Igbo ancestors first settled in the northern part of Igboland. This view has been strengthened by archaeological and ecological evidence. For instance, recent archaeological excavations reveal that by the third millennium B.C., Igbo ancestors were already living in some parts of present day Igboland.⁷ Significant evidence that suggests the primacy of northern Igboland, in the history of Igbo settlement, is the extent to which the rain forest environment there has been transformed into a derived savannah by the Igbo using only simple tools.⁸

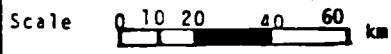
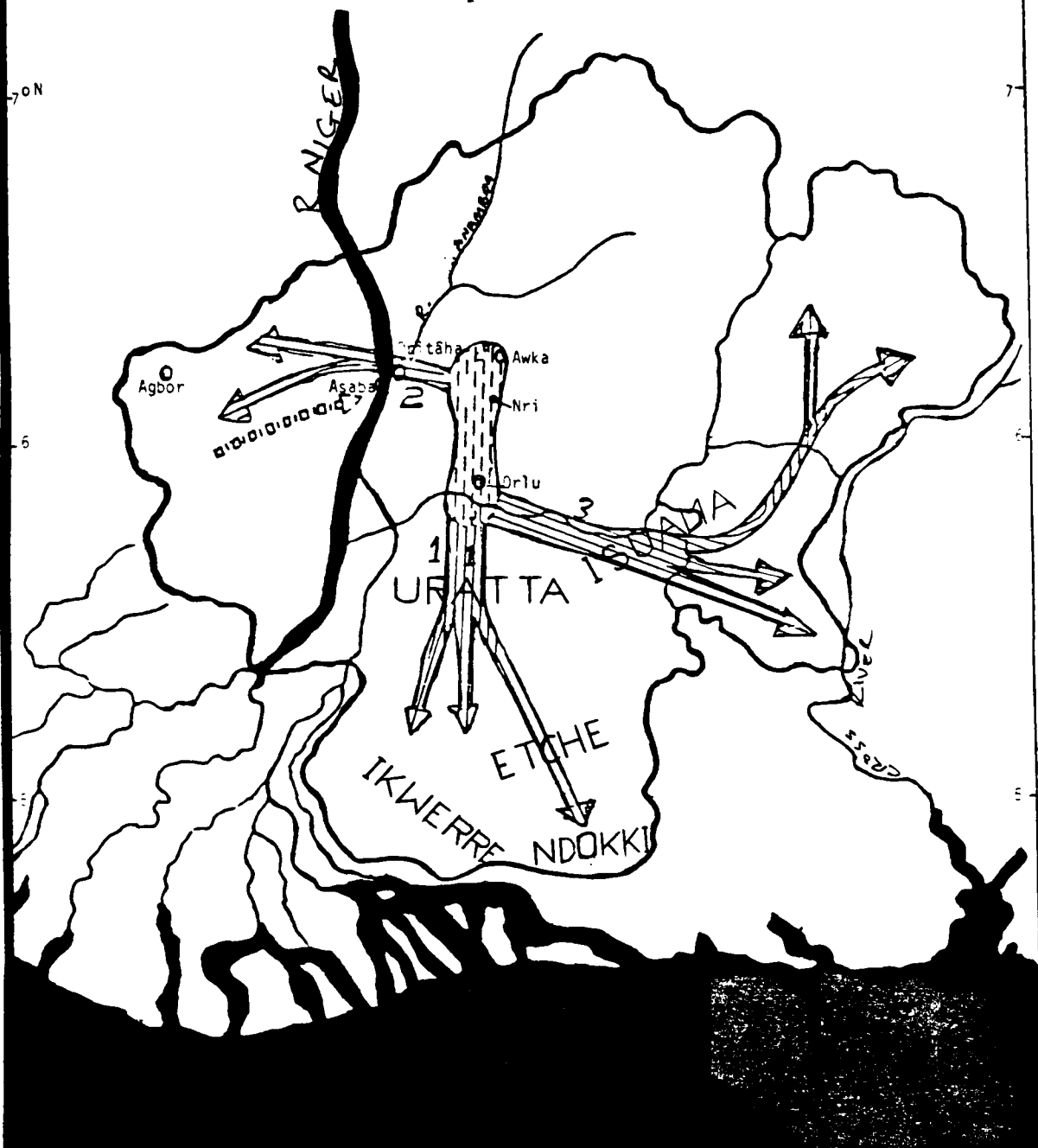
From the available data, therefore, the Igbo most probably originated from within Nigeria, in the region of the Niger-Benue confluence, and the northern part of Igboland was the area first settled by them when they separated from their ancestral stock. It was in that area that they evolved a distinct 'Igbo Culture', and from there they dispersed to occupy other areas of present-day Igboland.

Leonard suggested that the dispersal from the northern part of Igboland would appear to have started from the Nri-Awka and Orlu axis.⁹ With the help of this suggestion and on an analysis of traditional claims of descent from the Awka-Orlu axis, Jones reconstructed a pattern and stages of Igbo dispersal within their present homeland (ill. 8).

According to him, population pressure, over-exploitation of the available land, and the need for more land, must have forced some of the earliest settlers to move out of their earliest settlement in search of unoccupied land. He suggested that the earliest of such movements was,

Illustration 8

Dispersal.



- Legend
- Boundary of Igboland
 - Boundary of subcultural areas
 - Dispersal outward thrust
 - Dispersal: Backward thrust
 - Core area of settlement

most probably, to the southern part of Igboland, now Uratta, Ikwerre, Etche, Asa and Ndoki. Later movements were to the south-west and south-east. The western Igbo are believed to have come from the Nri-Awka area too, crossing the Anambra-Niger plains to occupy the uplands stretching from Asaba to Agbor. Their westward movement would have continued had they not run into the Edo. This westward movement must have been completed before A.D. 1300, since the fragmentary Igbo communities would not have proved any match for the then strong, aggressive and expanding Benin empire.¹⁰ Those of them who went farthest had to flee from the Benin empire and some even re-crossed the River Niger and settled at Onitsha and other riverine areas of Igboland. Those people brought Benin culture with them into the land and it has survived to this day.

Meanwhile another group of Igbo migrants left the Orlu area, and moved eastwards. These people settled in the area known today as Isuama. From there, they continued their territorial expansion eastwards until they ran into the Ibibio and other Cross River peoples. Some of them, therefore, curved northwards to settle in the present north-east of Igboland. North-east Igboland thus seems to be the area of the latest Igbo settlement.

The Igbo form a speech community, the Igbo language being one of the main cultural factors which all Igbo share. As they dispersed from their earliest settled area, their language developed into various dialects, but the multiplicity of dialects does not inhibit effective communication among all Igbo. The Igbo language, therefore, forms a significant identifying factor of the people as a tribal group. Two dialects, Onitsha and Owerri, predominate. So when Igbo people, speaking different dialects, live together, the tendency is for individuals to speak one of these predominating dialects.

The Igbo World-View and Religion

The Igbo world-view and religion have architectural

implications because in them are found the reasons for certain features of traditional Igbo architecture and the meanings of such features.

The traditional world-view and religion were just two among many aspects of the Igbo culture that most early Europeans in Igboland found very difficult to understand. This is obvious from the various contemptuous names they received from those who wrote on the subject. To many, like Sidney Smith, the Igbo were totemists; to others, they were either idolators or animists.¹¹ In reality none of these views was correct, for even before the advent of Christianity into Igboland, the Igbo recognised the existence of a Supreme God, Chukwu, who created everything and whose goodness, wisdom and powers are infinite. On this issue, Basden wrote:

The people are intensely religious. A casual observer might pronounce them superstitious, but the fact is, the belief in the spiritual exercises profound influence over every detail of their lives. Their religion is not an idolatrous one as that term is commonly interpreted, the idols, so called, being merely tangible symbols to assist them in the service and worship of the invisible.¹²

In 1841, another early missionary in Igboland similarly wrote:

The Igbos are in their way, a religious people. The word 'Tshuku' - God - is continually heard. Tshuku is supposed to do everything ... - Their notions of some of the attributes of the Supreme Being are, in many respects, correct, and their manner of expressing them striking. 'God made everything: He made both White and Black', is

continually on their lips. Some of their parables are descriptive of the perfection of God.¹³

The Igbo conceptualise the universe as consisting of three major worlds (ill. 9). These are known as eluigwe, uwa and ala mmuo. Eluigwe is the abode of the Supreme God, Chineke or Chuku, the creator of everything. Uwa is the physical world of created beings and things, while ala mmuo is the world of spirits, and the abode of metaphysical being-forces, known as alusi. The Igbo believe that the spirit world, ala mmuo, is also a world full of similar activities as on earth, or uwa.

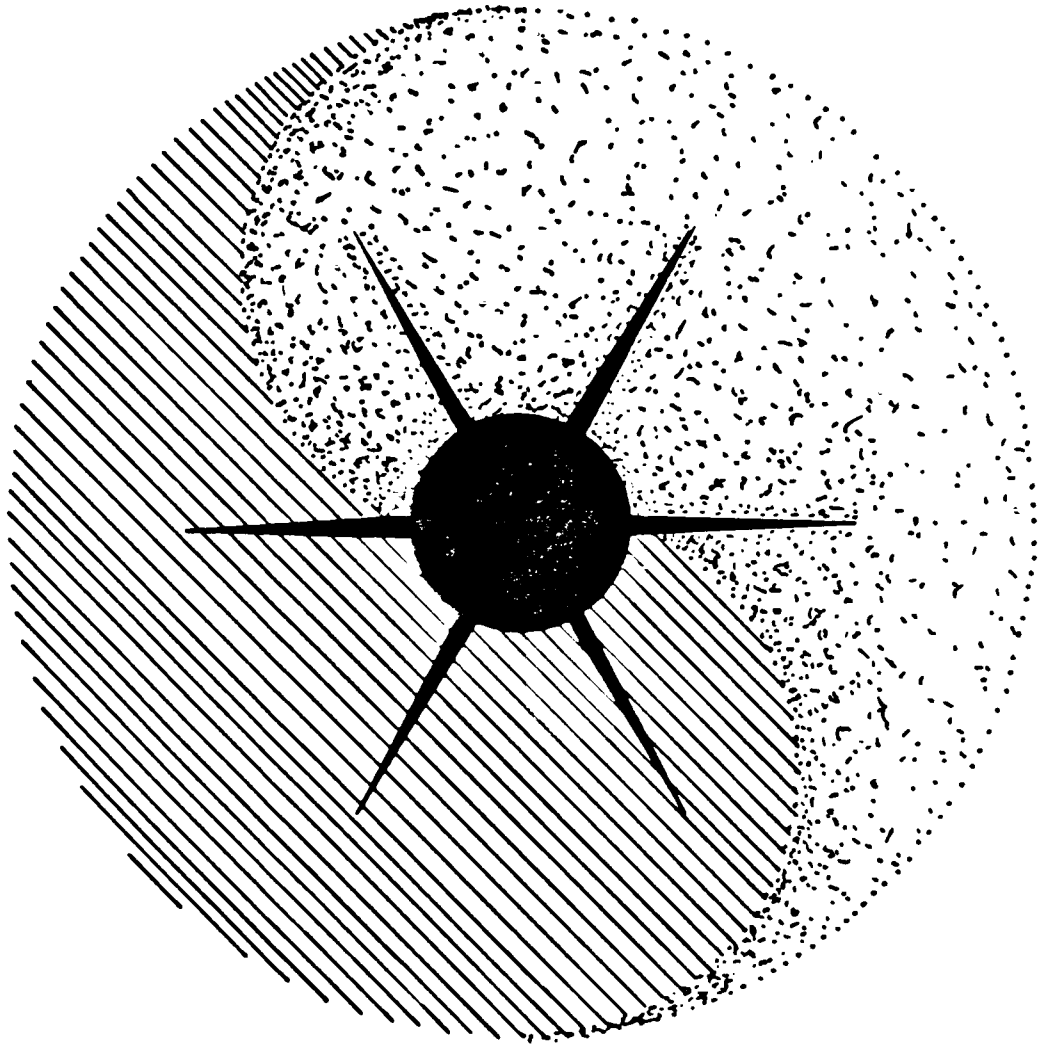
Chineke, the Creator, manifests himself as the author of light, knowledge, fertility and procreativity. He is always benevolent and gives to all human beings their procreative force and a guardian angel, known as chi, as a guide and to ensure the perpetuity of the lineage. This chi reverts to Chineke at each person's death. Chineke cannot be manipulated, so the attitude of the Igbo toward him is one of resignation.

One's chi is regarded as always being with one, directing one's action on earth. It may be influenced for good, or for evil by an alusi known as agwu, which can temporarily take the chi's place in an attempt to misdirect one. The success or failure of agwu in such an attempt, however, depends on the ability of one's chi to resist it.

Alusi, generally, are metaphysical being-forces that may have the attributes of men but they are neither living human beings, mnadu, nor the dead, mmuo. Among them are ala, the earth being-force, igwe, the firmament being-force, and amadioha, the thunder being-force. Alusi intrude into the lives of human beings, and, depending on circumstances, could constitute a blessing, or a force of destruction, punishing social offenders, and those who knowingly infringe their privileges.

Illustration 9

Igbo Universe.



eluigwe

uwa

ala mmuo

Mmuo are dead people. If a man has lived a well-spent life on earth, died in a socially approved manner, and received proper burial rites, he is regarded as having continued to live in ala mmuo.¹⁴ He also becomes ndi ichie, a canonized ancestor who watches over the living and could be reincarnated among them. If, on the other hand, a man had led a bad and unsuccessful life, died a bad death, and consequently lacked correct burial rites, he can neither enter ala mmuo, nor return to uwa by reincarnation. He becomes a mischevious spirit, ajo mmuo, and wanders homeless and dispossessed expressing his grief by causing harm among the living. The ndi ichie can thwart any ill attempt by ajo mmuo, so a good relationship must be maintained between the ndi ichie and the living members of their lineage. The Igbo call the ndi ichie every morning when they pray and drop crumbs of food and libations for them before eating or drinking. Sacrifices are also offered to them from time to time.

Death is seen only as a transition from corporeal to incorporeal, a necessary condition for joining the ancestors and for reincarnation. Thus, in Igbo world-view and religion, the living, the dead and the unborn form part of a continuum.

Furthermore the Igbo believe that uwa, ala mmuo, and all in them, and Chineke interact in a complicated web of cosmic relationships which affects everything in many ways. This interaction is continuous, and the nature of the resulting cosmic relationships between everything in uwa, ala mmuo and Chineke at any time can be revealed by agwu. The traditional diviner, dibie, can interpret the revelations of agwu by manipulating the afa symbolism.¹⁵ The diviner is, therefore, believed to explain the supernatural nature of events, interpret inexplicable events, and prescribe sacrifices which could influence and control the activities of the supernatural world. The priests of the

different alusi are also responsible for offering sacrifices to them. Before the advent of Christianity in Igboland, every village group, village, ward and compound therefore had its shrines for its numerous alusi.

For the Igbo, therefore, existence is a dual and inter-related phenomenon, involving the interaction between the material and the spiritual, the visible and the invisible, the good and the bad, and the dead and the living. Their general conception of the physical world is one of dynamic equilibrium. But this is constantly under threat by the intrusion of ajo mmuo and alusi, both of which can cause social calamities. On the other hand, these threatening forces can be controlled and manipulated to favour the Igbo. For a man to survive in this world, to live a successful and happy life, and to rejoin his ancestors when he dies, he strives at all times to maintain a harmonious relationship with all the forces that impinge on his life and being. This means a continuous quest to maintain a delicate equilibrium by wooing benevolent forces and keeping in check malevolent ones. The maintenance of this social and cosmological balance becomes, therefore, a dominant theme which influences all aspects of Igbo life including their traditional architecture.

In the traditional setting, all social activities including architectural activity have to conform to the framework of this world-view. Therefore the Igbo believe in a philosophy that portrays residential territory and the home as representing a microcosm of their universe of three worlds. Consequently their architecture has its meaning in this concept of the three-world universe where god, being-forces, the dead, the unborn and the living interact on each other. Furthermore, this also implies an architecture heavily weighted by the need to achieve cosmological balance through suitable structures and spaces that can facilitate a series of rituals. Occasionally, for instance, a particular alusi may demand a special

architectural structure as in the Owerri and Umuahia areas of Igboland, where temples are built in the form known as mbari or mbaja.¹⁶

As with their world view, Igbo architecture is not divorced from religion. Statues and paintings are found in Igbo village groups and village shrines and obu houses. Although the Igbo use them for effective communication with the elaborate pantheon of alusi involved in their religion, they form an integral part of Igbo architecture.

Social Structure and Organisation

In traditional societies, the design and layout of houses in cities, towns and villages or hamlets, often reflect social structure and organisation. As elsewhere, the pattern of social structure and organisation that operates in Igbo society has architectural implications. This pattern has, however, remained one of the most controversial issues in Igbo studies. Many scholars, including Talbot, Meek, Green, Rowlings and Obi have studied it, but the patterns suggested by most of them do not agree one with another on certain issues. Their disagreements centre around such key issues as the number of groupings that make up the Igbo social structure, the hierarchical order of these groupings, and the proper Igbo words used to describe them.

There is confusion particularly about the use of the terms 'umunne' and 'umunna'. Meek wrote that both umunne and umunna mean kindred. Green translates umunna as kindred, while Obi wrote that it means localised patrilineage. All together the various views of social structure produced by these scholars disagree widely in their final analysis (see Appendix 1).

The word 'umunne' is often translated into English as brothers or sisters, but in Igbo, it literally means 'children of the same mother'. It is, however, often used in

a broader sense to denote the lowest patrilineage descent level. Umunna translated literally means 'children of the same father', but colloquially it is often used to mean family in the widest sense. There must always be a common father who could be anyone from the village's paternal ancestor to an immediate father.

The social structure that exists in Igbo traditional society is based on the principle of agnatic descent. The highest socio-political unit, a village group or a township is always believed to have been established by one man, whose male offspring in turn founded the different villages that make up the village group. So each of these male offspring is believed to be the father of the members of the village he founded. Thus, all the members of any of these villages are known as umunna, the children of one father. The same idea of descent from one father applies to the members of each of the wards which make up the villages. Umunna, however used, is always a system of patrilineage organisation. Its actual meaning is fluid and depends on the context where it is used.

The Igbo social structure is based on the concept of umunna. Umunna itself operates on a number of distinct levels. In different parts of the land, the levels may range from two to four, three levels being the commonest and the highest level corresponding to the village.

The lowest level of umunna represents the smallest named social grouping, and is made up of a number of nuclear families living in individual compounds. The individual nuclear families, therefore, form the basic units of the Igbo social structure. Each of such families consists of a man, his wife or wives, his unmarried sons and daughters, and his married sons and their wives, and their children. All these members of a family live in a single compound and are all regarded as dependants of the head of the family as long as he is alive.¹⁷

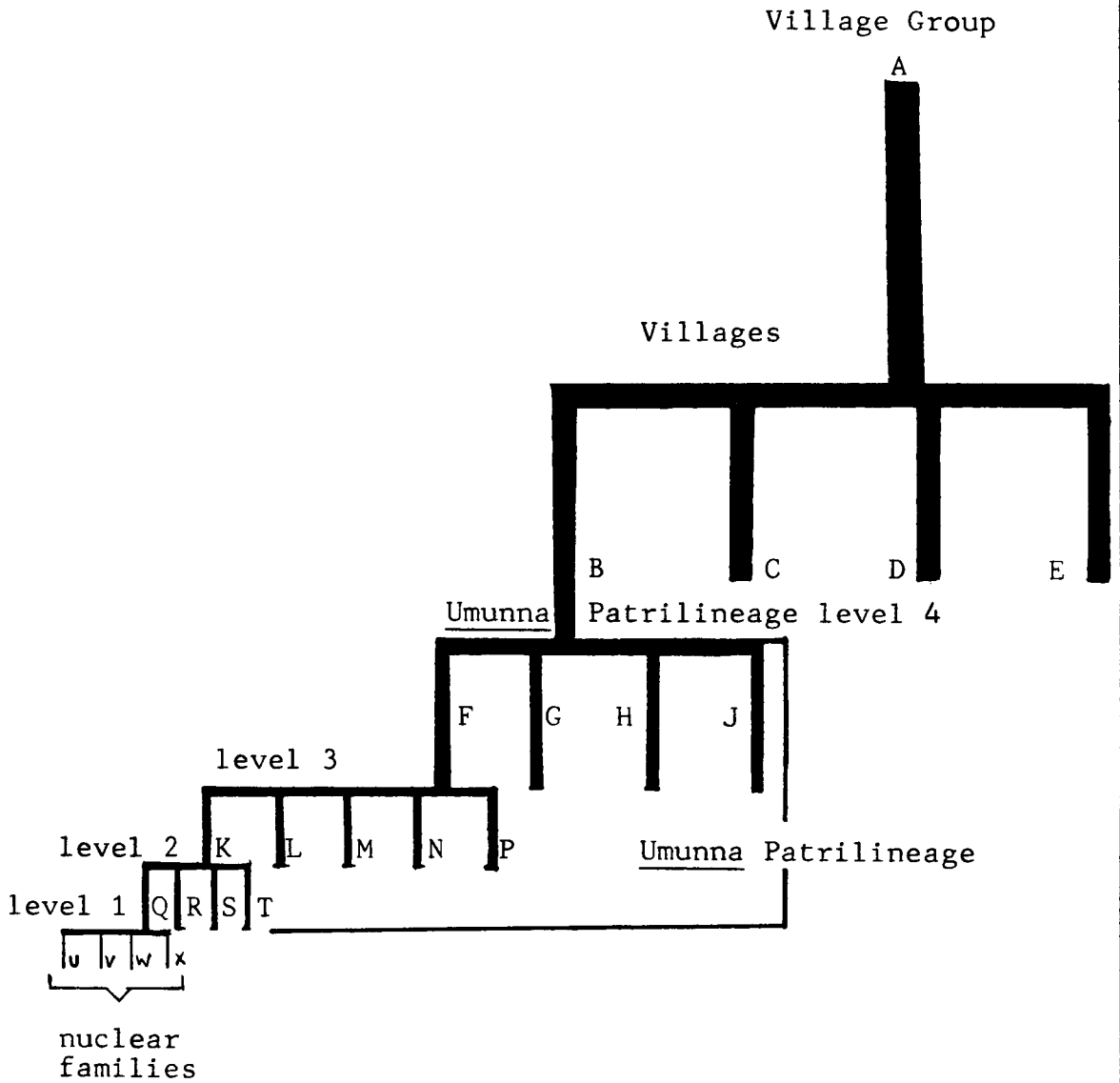
A number of nuclear families form the lowest level of social grouping, which is given many different names throughout Igboland. Several of these lowest level of social groupings form a higher level of umunna. Similar formations make up other higher levels, the highest usually being the village level.¹⁸ As is the case with the nuclear family, each of the different levels of these social groupings that form the village, is identified with a particular territory in the layout of the wider village group and also recognises a single immediate authority, that of the oldest living male. To illustrate this, the hierarchical levels involved in the social structure of a notional village B of village group A is shown diagrammatically in ill. 10.

The difficulty with a social structure based on agnatic descent is that the different groups involved develop unevenly and tend to split into unduly large numbers of small segments. So as the prime agnatic bond that links people to the founding father recedes into the past, the original balance in the social structure could be lost. In the case of the Igbo, this balance can be regained by the simple process of any level of the social structure dividing into two.¹⁹

Before colonial days, Igboland consisted of an intricate network of village groups whose social organisation was designed to encourage popular participation, to uphold popular opinions and to accord respect to age, experience and ability. Except within each individual nuclear family, authority was vested in the hands of the people, and a common denominator in Igbo social organisation was consultation and consensus at all levels of the social structure.²⁰

The social structure produces its own system of organisation and authority. Just as the village group has a supreme elder, so too do the individual villages have their

Illustration 10



The Social Structure of a Notional Village Group 'A', comprising Villages B,C,D and E, and Four Levels of Umunna Patrilineage, F-X.

elders, and so do the lower social groups as well. These elders form councils with authority over certain matters relating to the village group. There are also age grade councils of youth, with members taken on a village-by-village basis, and there is a general assembly of all free-born adult males, all with their own sphere of authority. Furthermore, there are a number of associations and secret societies.²¹ Each of the councils is presided over by the eldest person from the oldest group. Each elder is entrusted with a staff made of wood known as ofo, which enables him to communicate with their ancestors. In a similar way, all the members of a nuclear family are under the authority of the head of the family, the eldest living male or the man who has inherited the family compound. At his death, his first son or the first son of his deceased first son inherits his compound, and his other sons may have to move out to establish their own compounds.

Each head of a nuclear family is expected to be subordinate to the head of the next higher social level of their umunna. The head of a family settles all disputes in his family and represents or designates representatives of his family to the Council meeting of the next level of their ummuna. The members of each family are identified in society by the character of the head of the family. His weakness and poor reputation would impose hard work on all members of the family if they are to improve its standing in society. On the other hand, his fame and good reputation reflect esteem on all the members of the family. At each level of the different groupings that make up every ummuna, political dialogue, equality, co-operation and egalitarianism are encouraged.

The village group is a type of confederation of villages bound by supposedly real blood ties, very close dialect, a common tutelary shrine, and the common staff, ofo, held by the eldest of the most senior village in the group. Before colonial administration in Igboland, village

groups were administered by the councils of elders and titled men.²² A decision which affected the whole village group, for example a decision to wage war, would normally be put to the people by way of an assembly of free adult males. Title-holding encouraged individualism and gave much prestige and a considerable amount of political and ritual power to the holders.

In different localities in Igboland, there is some variety in the traditional social organisation, but, as Isichei noted, the fundamental basics are the same.²³ In the western and riverine areas of the land, there is a well-organised monarchical or monarchical-sacerdotal system of social organisation. But it is still principally structured around umunna. The difference is that the village groups are presided over by monarchs rather than elders, but nevertheless still with councils of elders and titled men.

Traditional Igbo architecture reflects the Igbo social structure in general. Each part of the residential setting from the basic dwelling unit upwards reflects a stage of the social hierarchy. This is manifest in the architecture of the compound, the ward, the village and the village group. The personal identity of individuals is first expressed in a group identity that is embodied in the character of the family head and the home. This demands a domestic architecture which serves as a reference point for the individual Igbo. Rank and membership of special societies also make a significant impact on traditional architecture in terms of special architectural forms, spaces and details.

Ethics

Ethics, the moral principles that guide the Igbo family, and hence Igbo society, play a major role in shaping their traditional domestic architecture. Consequently this can only be fully understood through understanding the ideals embodied in their ethics.

Basden noted that the Igbo have strong rules for the regulation of conduct applicable to almost every detail of life.²⁴ The impact of western culture on these ethics, in recent times, has brought some changes, but their fundamentals are still much alive in Igbo society. All persons, irrespective of age, sex or rank exchange greetings with each other as they meet. Titled men are greeted by their titles. Hand-shakes are very common, and to refuse a hand-shake is a sign of enmity. The Igbo regard it as morally binding to welcome a visitor hospitably. The visitor need not give any warning of his visit. The kola ceremony is a sign of this hospitality and a proof of one's cleanliness of mind. Normally after preliminary greetings, the visitor is invited to sit down and a kola nut is presented to him in a wooden dish, okwa oji. The kola nut is normally broken by the host with prayers to ancestors and everybody present receives a share. If a woman is there, she must not take a share before the men have done so. In every sphere of life, man takes precedence over woman. He is the lord and master, but not necessarily in an over-bearing manner. Both sexes recognise each other's rights and privileges, and they do not interfere in each other's affairs and vocations. In assemblies where both sexes are present, for instance, men and women sit separately.

The Igbo believe that beauty starts in the home, 'A na esi n'uno mara mna puta ezi'. As each individual finds his identity in his home or family, it is obligatory to safeguard the good image of the home by observing proper morals and behaviour. Every Igbo therefore strives to see that his home is a good one and that it is regarded with honour in society. The understanding of a bad and good home is such that no man contemplates taking a wife from a bad home. Similarly, no woman dares give her consent to be married to anyone from a bad home. Immoral behaviour is an abomination that brings an evil end to any home whose members indulge in it, alu n'ekpo ezi n'uno. To the Igbo,

therefore, the home is not a mere collection of buildings. It is also a physical realisation of the ideals of the society in which each finds his personal identity.

It has also often been suggested that the Igbo are characteristically individualistic.²⁵ Their individualistic nature, however, does not imply that they are aggressive or secretive. Nor does it imply an absence of collective or communal spirit in Igbo society. Igbo individualism emphasises recognition and respect for individual achievement. Mutual help and fraternal understanding are not weakened by it, but individual struggle to achieve the merit that will project the good image of ones family is highly encouraged.

Domestic Tasks and Manner of Living

A people's domestic life style, that is their manner of carrying out their domestic chores and other habitual activities such as sleeping, sitting and eating, is an essential factor in the evolution and development of their traditional domestic architecture. Banham, using the story of a savage, illustrated the association between forms of human shelter and the predisposing cultural habits of the people involved.²⁶ Ferree also wrote, "The manner of life is an essential element in determining the form and character of a dwelling".²⁷ By analysing the Igbo traditional domestic life style, the actual relationship between the act of living in the Igbo context and the resultant domestic architecture can therefore be more directly established.

In Igbo families, the head of the family starts his daily activities by washing his hands, mouth and face. Water for doing this is normally provided at a corner of the compound. Then, with morning kola nuts, oji ututu, he prays to his ancestors and benevolent alusi on behalf of all the members of his family for a good day ahead and for general well-being. He then takes up his chewing stick to clean his

teeth. If there is an early morning discussion to be held somewhere or sympathy to be extended to a bereaved family, he sets off for it. He tries to conclude these activities so as to be at work early. If it is a working day he may have his breakfast before going to work, but often it is served at work.²⁸ One of the days in the Igbo four-day week is not a farming day and the Igbo belief is that for anyone to go to the farm that day will bring bad luck. On such days, sacrifices may be offered, but some domestic tasks such as mending a leak in the roof or repairing the compound fence may be carried out. Markets may also be attended on such days.

Lunch is often taken at the place of work. At the end of the day the man either takes his bath in a nearby stream or at home. Many Igbo farmers work collectively in turns for each other as members of an age-grade society or ordinary self-help organisation, isusu. So during farming seasons, all the members of such a group, take their evening meal together after work in the home of the particular member helped that day. After the meal, palm wine is enjoyed with stories and discussions out of doors in the compound of the host. On a non-working day, the pattern of the daily activities is similar, except that farm work is omitted.

Wives start their day with the same washing of hands, mouth and face. Then each wife goes to the house of the head of the family to exchange greetings with him. Next, she goes to the stream to fetch water for domestic use. When she comes back from the stream, she sweeps the compound and prepares the breakfast in good time. When it is ready, she serves her husband, eats with her children or supervises them eating before joining her husband at work. She has to come back to prepare the lunch, and sends his back to his place of work after she has fed the children. She may remain in the farm helping him until it is time to prepare the dinner. Then she must serve her husband dinner and attend to the children. At night, the younger children sleep with her.

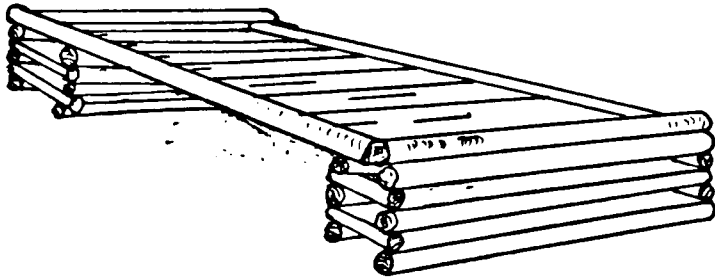
On a non-working day, her daily routine is much the same, except that her activities are concentrated in the compound. She may also go to the market that day to replenish her stores. On the whole, the position of women in traditional Igbo families is lower than that of adult male members of the family. This condition obtains even in towns, where women's cultural gatherings must be headed or supervised by a man.

The children also have to wash their hands, faces and mouth, and use chewing sticks every morning. They then have to exchange greetings with their father and every elder member of the family. If they are of age, their main task is to help in whatever they can do in the family's daily work. The grown-up boys may help their mother in her morning domestic activities, such as sweeping the compound and fetching water from the stream. After that, they join their father in the farm. The girls and all other children look after the very young ones and help their mother in her daily routine. During moonlit nights, children play, either in the compound or in the village square, and listen to stories. The family daily routine may vary in some localities, but the basics remain the same throughout the land.

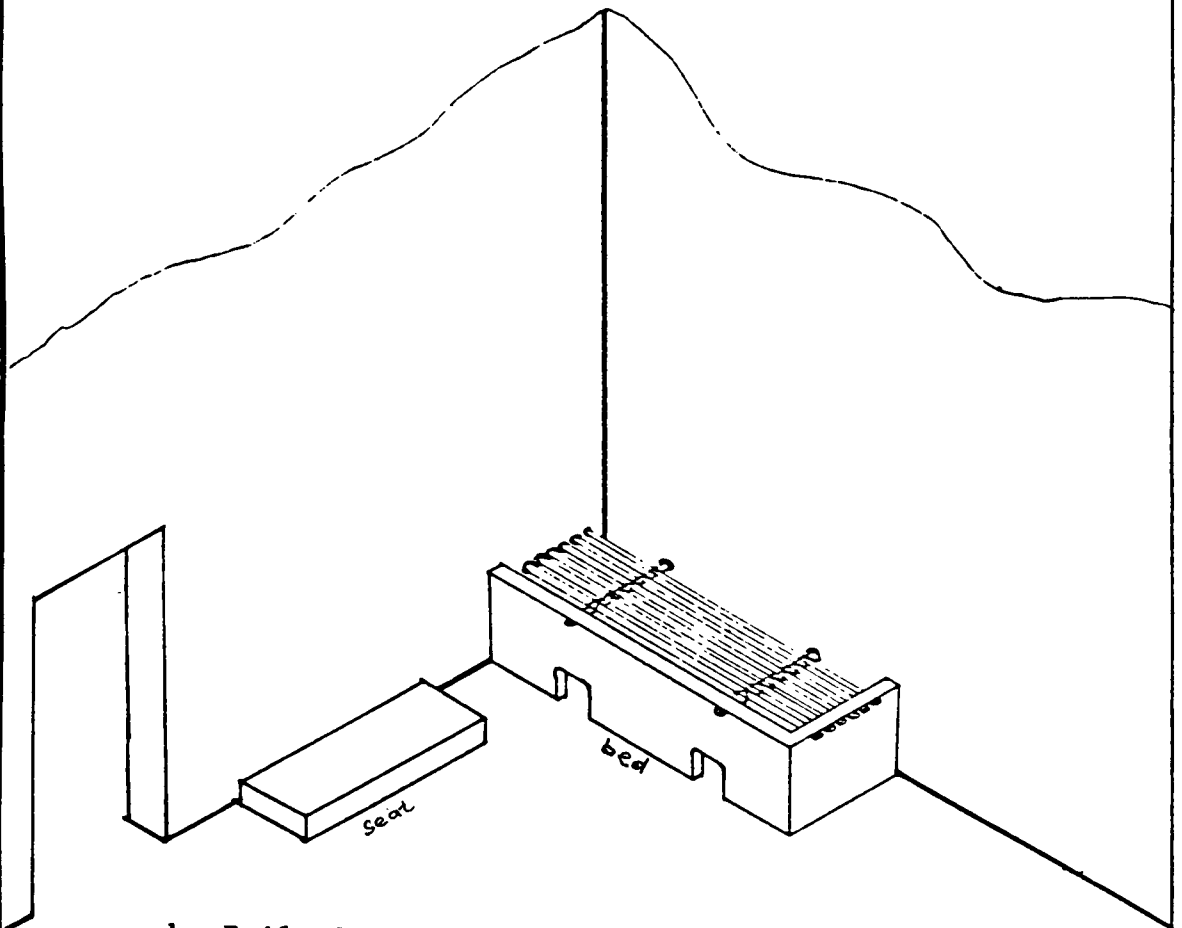
The Igbo sleep inside the house or outside in the compound. They prefer to sleep on couches. These are either made wholly of raphia bamboo, in which case they are movable (ill. 11a) or made of mud and bamboo, forming an integral immovable part of the wall structure (ill. 11b). Locally made mats or animal skins are used to cover the top of the couch so they form the surface directly in contact with the body. The built-in couches allow a fire to be made underneath for warmth, especially for nursing mothers and old people during the harmattan. Most daily activities, with the exception of sleeping and movement, are carried out sitting. Sitting is preferred on elevated but low platforms. The platforms may be made of clay, heaped by a wall to a height of 0.2 - 0.3m. These are normally finished thoroughly

Illustration 11

Traditional Couches and Seat.



a. Movable Bamboo Couch.



b. Built-In Couch and Seat.

by scrubbing and then covered with a locally made mat or animal skin, spread on top. Wooden carved or bamboo or joined stools (ill. 12) are also commonly used in Igbo homes. Mats, animal skins and the stools are used inside the house as well as outside during domestic work and relaxation.

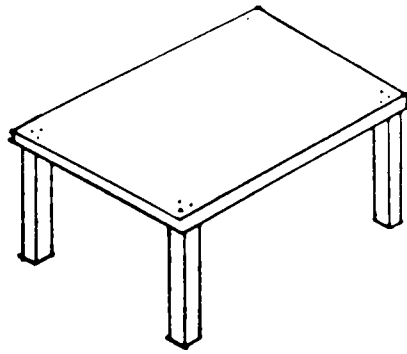
Food is prepared by wives in the kitchen. Much of the food preparation is done sitting on a low stool. The kitchen may be located inside a woman's house, or nearby in the compound. Often both internal and external kitchens are present so cooking can be done inside and outside the house, depending on the weather.

The main meal of the day is supper. The men and women and children eat separately, but at the same time. The head of the family is served in his house. All children of the same mother eat together under her supervision. The meal is placed in the centre and the children sit around it. A guest who arrives at meal time is expected to partake of the meal. Even if the guest arrives unexpectedly, immediate arrangements are made to expand the family ration. If he stays overnight, he is accommodated by the head of the family if a man, and by his wife if a woman or a child.

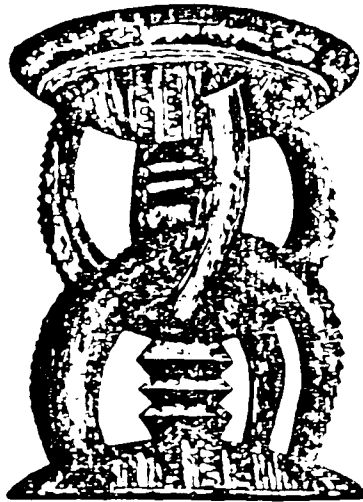
The Igbo bath at least once every day, and preferably after the day's work. Bathing can either be in a stream or at home. In the streams, separate places are prepared for men and women. The use of latrines is also common in Igboland, but where they do not exist, people use the bush.

The various domestic chores and the whole manner of living call for a series of different architectural spaces and forms which will facilitate their fulfilment. For example, the segregation of the duties of the head of the family and of his wives calls for a dwelling in which a man's area is segregated from his wife's areas. The presence of a number of generations similarly implies an architecture

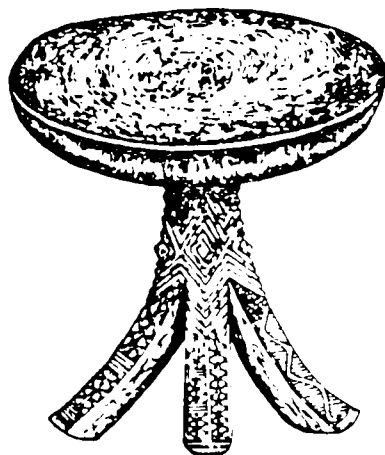
Illustration 12



a. Joined Stool used by Women.



b. Carved Stool used by Men.



c. Carved Stool.

Stools used in Igbo Homes.

which facilitates simultaneous activities by the different generations involved. Furthermore, although the compound is regarded as a domestic unit, the assignment of much of the domestic work to the wife or wives will make their own area of the compound more domestic in character.

Traditional Economic Activities

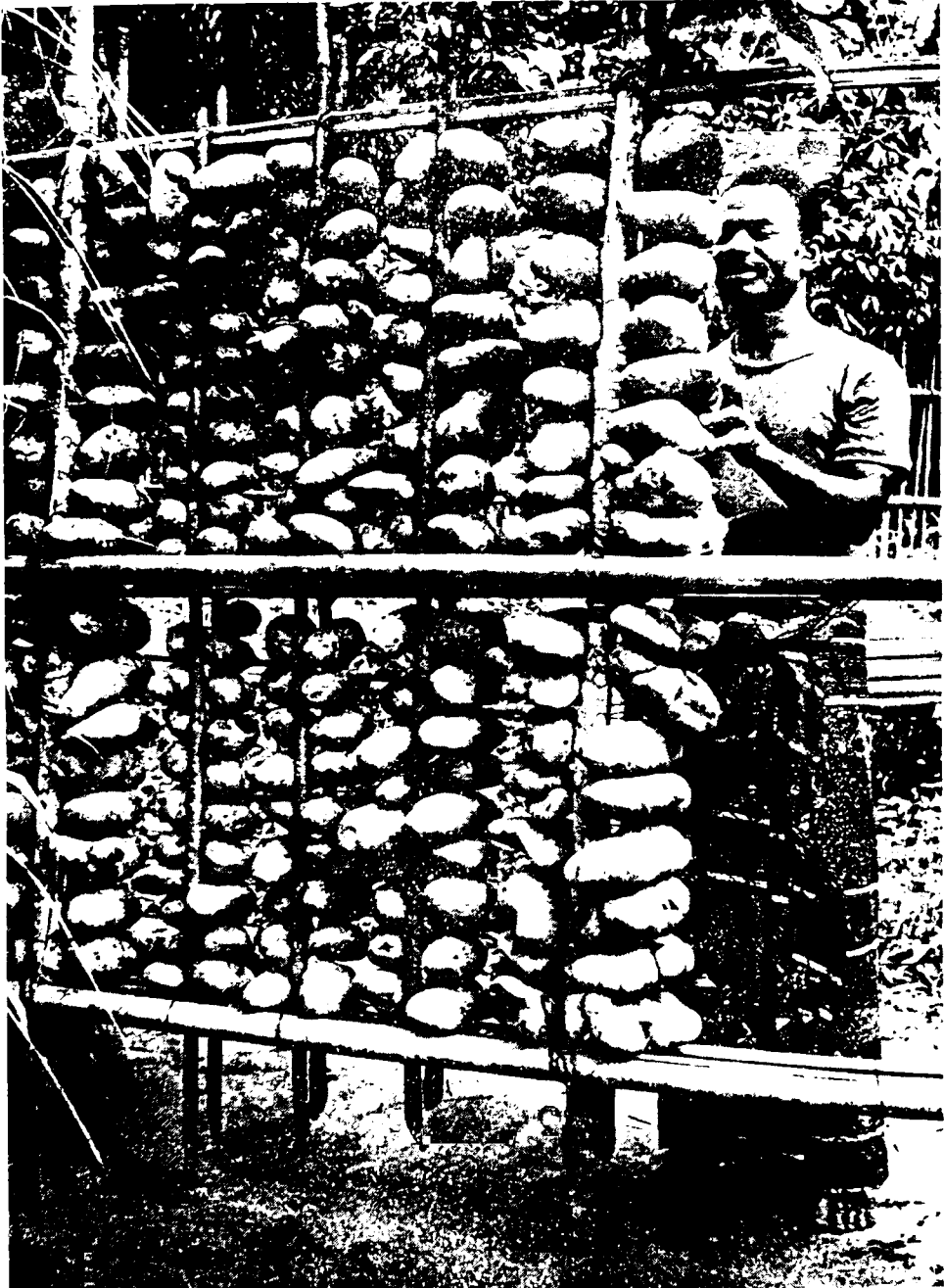
Agriculture forms the major occupation of the Igbo. Jones has suggested that the system of agriculture used by the Igbo contributed much to their being able to master their environment and evolve a particular spatial form characteristic of their village layouts.²⁹

The Igbo practice rotational farming on a subsistence scale. Their system of agriculture involves farming within the village on the compound land and farming far away from the village on the farmland. Gardens are made around the compounds and certain crops and trees are grown there.³⁰ A village layout normally presents a beautiful landscape comprising compounds of individual households dispersed in gardens and under trees. The important implements used include hoes and machetes, and indigenous food crops include yam, coco-yam, beans, rice, okro and oil palm.

The farmland is usually cleared, tilled, and ridges or heaps are made before the first rain. Yam was the most important crop before European contact. Because of this importance, yams had an alusi, called ifejioku which still remains one of the major alusi in Igboland today. Yam seedlings are sowed first, and after the rain, sowing of other seeds follows. These crops can be stored for a season after harvest in a barn, but they are vulnerable to animals, rodents and insects, and if not well stored, can rot. Yams, for example, have to be staked to allow circulation of air, otherwise they will rot (ill. 13). Barns, therefore, form an important element of the residential unit. A successful yam farmer is held in high esteem in society and is immediately recognised by the size of the barn in his compound.

Illustration 13

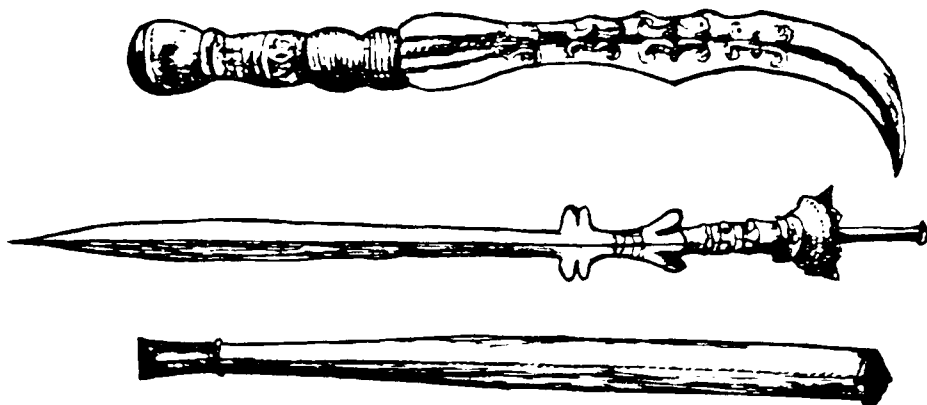
An Igbo Farmer inspecting Yams in his Barn.



Animal husbandry is also practised in Igboland, though on a small scale. The Igbo rear cows, goats, sheep and fowl. The sheep are never shorn for wool, but animal skin is extensively used for various crafts and as mats. Rearing animals, no matter the scale, calls for the provision of accommodation for them in the form of pens or roosts.

Iron-working is also a very old craft in Igboland. Excavations at Afikpo show that iron-working had reached Igboland by the beginning of the Christian era.³¹ Iron ore was found in Igboland, especially around Udi.³² The discovery of iron and the knowledge of iron-working was of extreme importance to the development of Igbo culture. They transformed the quality of life in the land by making many aspects of physical labour easier. They also laid the foundation for a highly skilled and sophisticated tradition of metallurgy, which had reached great heights of artistry and technical mastery by AD 800. This is attested by various iron implements and utensils unearthed at Igbo-Ukwu and Nri. Prominent iron-working centres in the olden days included Awka, Nsukka, Nkwerre, Bende, Ezira and Aribi. Articles manufactured included swords (ill. 14a), decorative ornaments, working implements of different types and sizes, and domestic utensils. Archaeological excavations at Ezira and Igbo-Ukwu and later discoveries at Oguta and Aribi revealed the hitherto unsuspected existence of a brilliant Igbo bronze age. The raw materials for bronze-work were imported into Igboland. Shells with elaborate surface decorations, bells, bowls, belts, animal heads, and a hanging vase were among other bronze objects recovered from the Igbo-Ukwu excavation (ill. 14b).³³ These portrayed an amazing mastery of the arts and a high knowledge of metallurgy. Surprisingly, however, despite their ability to produce richly decorated domestic utensils, working implements, masks and other artistic objects, there is no trace of the Igbo ever being able to use metal in the structural part of their buildings.

Illustration 14
Products of Igbo Smiths.



a. Seventeenth-century Swords (after Isichei, 1976)



b. Igbo-Ukwu Finds (after Sassoon's paintings of the finds).

Among other remarkable arts possessed by the Igbo were wood and ivory carving, textile weaving and pottery. People engaged in these forms of arts produced wooden utensils, elaborately carved doors, shields, stools, masks and statuettes used for rituals and religious purposes.

Trading was established at an early period. Failure of agriculture in the earliest settled part of Igboland, reinforced by uneven distribution of resources such as iron ore and brine, must have induced a form of trade by barter. This later developed into a fully-fledged commercial activity. Before the colonial days the forms of currency used were cowrie shells and iron. Cowries originally used as a form of currency were later employed in traditional architectural activities as mosaic for decorations.

Markets are sacred institutions and shrines built for them often reflect their sanctity. It is the duty of women to sweep market places early in the mornings each market day. The most common goods sold at market include yam, coco-yam, meat, fish, salt, palm products, maize, vegetables, domestic animals and textiles.

The slave trade later developed in Igboland with strategic markets for slaves at Nike, Uzuakoli, Bende and Arochukwu. People were taken from different parts of the land for various reasons, and bartered for goods or sold. From there, reselling continued until eventually the slaves arrived at the coast from where they journeyed to the Americas.

Every village and village group has at least one main market. The markets consist mainly of covered stalls arranged in a way that traders dealing in a particular commodity are located in a particular part of the market. Apart from serving as business premises, markets also served in the past as social centres where a group could congregate

for a discussion, especially on a day when the market was not in session. The Igbo, however, never traded as builders, and building materials were never sold in Igbo markets until colonial days.

Land and Land Tenure

The significance of land in traditional Igbo society is not confined to the common understanding that land is merely a platform on which people build their homes and work. Land is also very prominent in Igbo cosmology as one of the alusi which guide the world and all the activities in it. It therefore had a remarkable influence on Igbo socio-political evolution in the past, and remains among the most important economic assets the Igbo have. Consequently it is necessary to survey the actual relationship between the Igbo and the land on which they build their homes and work, and the land appropriation system which exists in the traditional society. This again will make for the understanding of certain characteristic features of Igbo domestic architecture, which result from their system of land tenure.

In Igbo cosmology, land is regarded as a motherly alusi and therefore worshipped and respected as such. Meek wrote:

The most important deity in the public and private life of the Ibo is not Chuku or Anyanu or Amadi-Oha, but Ala or Ale, or Ana or Ane or Ani, the earth deity ... Ala is regarded as the owner of men, whether alive or dead. The cult of ancestors is, therefore, closely associated with that of the Earth-deity, who is Queen of the underworld. Ala is the fount of human morality, and is, in consequence, a principal legal sanction.³⁴

Besides providing the Igbo with a platform on which their homes are built, land sustains the major part of their

food crops and acts as an inevitable passage-way to ala mmuo after life on Uwa. The shrine of ala is, therefore, a conspicuous architectural feature of every village group centre and village square. It is normally expected to serve as a tutelary spirit. Until the missionary era, it was generally believed in Igboland that land was a vital witness which was ever present in all activities. Igbo elders drop morsels of food and drink for it as they pray, before anyone can start eating or drinking.

To the Igbo, ala is a generous alusi who can make food plentiful, but on provocation can also cause harvests to fail and men to die young. Many laws and taboos are connected with it to guide conduct between man and his neighbour and man and spirit. Any transgression of any of the laws or taboos of ala, in traditional Igbo society, is regarded as an abomination. Only high priests of ala can interpret the consequences of such abominations and cleanse people of them.

On the socio-political evolution of Igboland, land served as a binding factor. Land-owning consciousness gave rise to land-exploiting communities that became land-owning, land-defending and land-seizing confederations. Such confederations were able to work out exploitative arrangements up to the village-group level. As Afigbo noted, it was impossible for communities that failed to work out a common exploitative agreement to become members of the same polity.³⁵ Land also often caused disputes and even wars between Igbo communities that were not of the same land-exploiting polity. As an economic asset land is the key factor in Igbo agriculture, but in the past, there was enough to go round: it was inconceivable for the Igbo to hear of anyone without enough land to build on and exploit.

Classification of Land

Traditionally, land falls into two categories: house land, ala ulo and farmland, ala agu. House land is that on

which the compound and gardens are located. It is an area of land under moderate tree cover. The trees are usually those that have economic value, such as oil and raphia palms, orange, pear, oil bean and African bread fruit. House land is farmed, but mostly garden crops are grown there. It is normally inherited or bequeathed to a man by his father. Ownership of the house land, however, means holding it in trust for the next generation.

The other category of land, farmland, normally surrounds the house land and is separated from it by the house land expansion zone. It is on the farmland that other crops such as yam and casava are grown more extensively. Farm land is owned, collectively by umunna. A man has the right to farm on the parcel of land originally farmed by his father. He is eventually recognised as the holder of that particular parcel of farmland, but if he ceases to make use of it, that parcel reverts to the umunna and could be re-allocated to another member of that land-owning umunna. The farm land cannot be alienated by any single individual and it is the duty of the land-owning group to defend it against any encroachment from the members of other land-owning communities.

Land Tenure System

Rights of tenure over land may be of two types, viz; inherited rights and acquired rights. Land over which inherited rights could be exercised include personal land, community land and common land.

Personal land is inherited by someone directly from his father or a dead relative. Each head of a family is bound to share out part of his household and part of his farmland holdings to his sons when they become adults or when they marry. At his death, the rest of his land is shared out among them. Brothers of a deceased man can hold the right

over personal land for their nephews who are still too small to cultivate the land at their father's death, but it is obligatory for them to return the land to their nephews when they are of age so that they can farm it. The uncles must not pass the land to their own sons. Personal land is inherited by sons, and only by brothers where a man dies without any surviving male child. In the Afikpo, Edda, Uwana, Enna, Ohaffia and Bende areas, inheritance is matrilineal so women may inherit personal land there.

Community land is owned by a group whose members have equal rights over the land. The social unit that owns and exercises control over such land varies in different localities. For example, in Mgbo, Agbaja, Mbieri and some areas around Umuahia, control rests within the umunna. Rights over this land is inherited automatically if one is born into such a land-owning community. A farm could be also owned by the umunna. It allots plots to individual members and enforces land laws too. No single person has a right to alienate the use of communal land, and, as Chubb noted, if such land can be said to be owned by anyone, it is by the dead and the unborn. The living are no more than its trustees.³⁶

The only class that may be considered not to own personal land or have a share in the communal land is the class of osu or slaves, dedicated to cults. Such people are, however, allowed land by the community for their homes and for their farming needs.

Evil forests, ajo ofia, are where people who died of leprosy, small-pox and swollen stomach, the abominable diseases, were thrown. Both the evil, and big forests, oke ofia, dedicated to deities, are also regarded as common land, owned by a village group or an individual village. Control of these forests is vested with the priests of the deities to which the forests are dedicated. With the advent of Christianity, however, these forests have lost their

credibility and the control of both elders and priests is slipping in some areas, but they are still considered common land.

Rights over land by acquisition also take different forms. Traditionally, before European contact, the Igbo had no conception of a holding in fee simple which carries with it the right of an individual to sell land outright to any applicant.

Acquisition of right over land may be by pledge. This is a system which enables anyone short of land who wishes to expand his farming activities to do so. Such a person in need of land approaches families with land to spare, or families in financial difficulty who may wish to pledge their land. If an agreement is reached, a sum of money is paid to the land-owning group for the use of their land. Such land when pledged for money is redeemable at any time the condition of the pledge can be met. The occupant is, however, given enough time to harvest his crops and the original pledge money is also returned to him. This practice is common in Igboland, but the procedure may vary slightly in different parts.

Acquisition of land may also be by lease. A form of leasehold practised widely in Igboland is a one-year tenancy of land, sufficient for a man and his family to plant and harvest their crops. The period could be more than a year, and rent is payable subject to revision on agreed terms. A system of lease whereby rights over land are leased for a fixed period and on a single initial payment also exists in some areas. Another form of lease widely practised is lease for an indefinite period with a fixed annual rent. In most cases, however, leases to strangers are for fixed periods and at very high rents. Some lease agreements may restrict the type of activities that can be carried out on the land and seldom is the erection of any permanent building on leased land allowed.

Kola tenancy is another form of acquisition of right over land. It provides a permanent authority to use a parcel of land, granted subject to good behaviour. This could be granted to a stranger on a single original payment. In the olden days, the payment was marked by the ceremonial presentation of kola nuts and perhaps palm wine. In most cases, then, it was generally agreed that a kola tenancy was granted for the life time of the tenant and his or her successor for as long as they occupied the land. Such land could be built on. On the death of a kola tenant, however, the heir was expected to give another kola and palm wine to the landlord in acknowledgement of his superior title. The landlord was not expected to refuse the kola in order to impose new tenancy conditions. The tenant could neither sell nor sublet the land. Both individuals and land-owning groups could grant kola tenancy.

Acquisition of rights over land can also be in the form of showing land izi ala. A man requiring land for a season's farming could approach a man or a family whom he knows has land to spare. The approach is usually made with wine and his request to be shown land is made directly. If the parties are of the same village or are connected by marriage, no payment is made, but such a tenant is expected to give food, wine and other material presents after the harvest. If the prospective tenant is from another village, the transaction could take the form of a lease. Land could be shown to a relative who wishes to build a new compound. In such a case only wine and kola nuts are offered. Land could also be shown to a whole village or even village group for permanent settlement. For example, the village-group of Isingwu in Umuahia was settled on land shown to them by two village-groups of Ibeku.³⁷ Land so acquired for building or settlement purposes becomes the property of the acquirer. He can build on it and can also pass it on to his sons at his death. If, on the other hand, he or his inheritors move elsewhere, the land reverts to its original owner although

such an acquirer and his inheritors may still retain rights to cash crops they planted.

Acquisition of land can also be by exchange. This is done more often for building purposes. A man may want to develop a plot of his which is small. He could agree with the landlords of adjoining plots to offer them other plots elsewhere in exchange for their adjoining plots. Money may also be offered to induce the other landlords. Depending on the agreement reached at the time of exchange, land so acquired may or may not be immutable. The general practice, however, is that such exchanges are normally permanent, especially if a house is erected on any of the exchanged plots.

From the foregoing, some important points emerge concerning building and man - land relationships in traditional Igbo society. The first is that land is revered as a deity responsible for the sustenance of life. It therefore follows that it belongs to all the members of the community whether dead, living or not yet born, and cannot be alienated from the community without its consent. As a result, a land tenure system which does not allow individual sale of land, but provides every member of the community with land for building and farming purposes without financial obligation has to be adopted. From this it follows that, traditionally, there is no landless class in Igboland.

The result of this type of land tenure system is that the available land is continuously divided into smaller parcels as the population rises, and consequently the time may come when the land will be reduced into innumerable parcels that are too small to be useful for farming or building purposes. Although there is a system by which one can expand one's share, this system of continuous division, to a great extent, dictates the size of any compound. In thickly populated areas of Igboland, for instance, it is common to observe that older compounds, built when land was

plentiful, are more spacious and bigger in size than those built in later years.

The Igbo land tenure system is quite different from the feudal systems known in Europe. It is also different from the Benin and Yoruba land tenure systems in Nigeria. The most significant difference is that in the tenure systems of these other tribes land is held in trust for the whole community by a living monarch or his designates who administer it.³⁸ This is much closer to feudal land tenure than the Igbo system.

On the whole, however, the traditional Igbo system can be said to be more equitable as it guarantees each individual land for his home and for his personal farming activities at no cost.

Choice of Building Site

To a non Igbo, the traditional settlements and the houses that make them up may appear haphazard and without any way of allowing choice of settlements or building sites. An early missionary, Basden, for instance, saw it like this: "The huts are planted down just where the builders fancy, in all sorts of places and at every conceivable angle."³⁹ This may well be the case in some tribal societies. For example, Prussin noted that among the Kasuliyili of Dagomba in northern Ghana, the site of a new compound is dictated only by the availability of space in the immediate vicinity of an area inhabited by one's kinship group and the approval of the elders.⁴⁰ This is, however, far from the Igbo method of choosing a site for building.

In Igboland, to establish a compound is always a mark of coming of age. As already explained above, at the death of the head of a family, his first son normally inherits his compound. But it is binding on each father before his death to show his other sons parcels of land on which to build

their compounds when they wish to do so. If he dies before doing this, the responsibility passes to the minimal lineage segment of one's umunna. So the intention to establish a new compound is firstly shared with one's father if still alive, otherwise with the head of the minimal lineage segment of one's umunna. The choice of where to build and the morphology of the resultant traditional settlements are, therefore, to a great extent governed by the socio-political and land-tenure systems operative in traditional Igbo society.

Building sites are usually on the family's compound land. However, cases do exist where people establish compounds on the farmland, but this is only because of their desire to be near their farms. Building sites are traditionally never chosen near the evil forests because they are believed to be haunted by evil spirits.

Sons shown land on which to build their future compounds often express their gratitude by presenting wine, kola nuts, and sometimes domestic animals to their fathers or umunna. Some may even devote extra working days to their fathers. In return they receive further blessings.

The actual establishment of the new compound may not start until the father is dead, when his first son inherits his compound, and the other sons wish to move out. In some areas such as Ututu, where giant compounds are built, there may be no question of any member of a lineage moving out of a compound until a compound circular formation is completed. Only then can a new formation for another giant compound begin.

REFERENCES

1. O. Equiano, The Interesting Narrative of the Life of Olaudah Equiano or Gustavus Vasa the African, first published in 1789, abridged and edited by Paul Edwards (London, 1967), p.1.

M. Ojike, My Africa (New York, 1951), pp.1-4.

A. Ike, The Origin of the Ibos (Aba, 1946), p.4.

H.F. Mathews, National Archives, Enugu, Nigeria, MSS, Aro Subtribes, Code no AD 635.

2. G.T. Basden, 'Notes on the Ibo Country and the Ibo People, Southern Nigeria', The Geographical Journal, 39, no 3 (1912), 241-2.

M.D.W. Jeffreys, 'Dual Organisation in Africa', African Studies, 5 (1946), 82-105, 155-176.

M.D.W. Jeffreys, 'The Umundri Tradition of Origin', African Studies, 15 (1956), 119-131.

3. H.R. Palmer, Kaduna archives, Nigeria, MSS, Tribes of Nigeria, Code no Lokoprof 159/1921.

H.R. Palmer, Kaduna archives, Nigeria, MSS, Memorandum on the Eastern provinces. Attached to 8014/1921, 19:06:28, Code no 15911, Vol. 1.

4. R. G. Armstrong, 'Glottochronology and African Linguistics', Journal of African History, 3, no 2 (1962), 283-290.

R. G. Armstrong, The Study of West African Linguistics (Ibadan, 1966).

R. G. Armstrong, 'Prolegomena to the Study of Idoma Concepts of God', African Notes, 4, no 1 (1966), 11-17.

A.E. Afigbo, 'Prolegomena to the Study of the Culture History of the Igbo Speaking-Peoples of Nigeria', in Igbo Language and Culture, edited by F.C. Ogbalu et al. (Ibadan, 1975), pp.28-53.

5. A. Rubin, 'Review of Philip Allison: African Stone Sculpture, and Frank Willet: Ife in the History of West African Art', African Notes, 6, no 2 (1971), 113-123.
6. Y. Karmon, A Geography of Settlement in Eastern Nigeria (Jerusalem, 1966), p.28.

R.N. Henderson, The King in Every Man (Yale, 1972), p.39.

7. Archaeological survey of eastern Nigeria carried out between 1963 and 64 under the leadership of Professor Hartle yielded, among other things, pottery sherds and implements of daily use. The pottery sherds have been dated 2,555±130 by C14 method. See D.D. Hartle, Archaeology in Eastern Nigeria, Nigeria Magazine, no 93 (June 1967), 134-143.
8. There is a general consensus among scholars that the whole of Igboland originally had tropical rain forest vegetation. But owing to intensive and extended human activities, the vegetal cover of the northern part has been reduced to derived savannah while the soil has become less fertile owing to exhaustion. See Y. Karmon, op. cit. p.28-9; and K.M. Buchanan and J.C. Pugh, Land and People in Nigeria (London, 1955), p.35.

P.A. Allison, 'Historical Interference to be drawn from the Effect of Human Settlements on the Vegetation of

Africa', Journal of African History, 3, no 2 (1962), 241-9.

G.I. Jones and H. Mulhall, 'An Examination of the Physical Type of Certain Peoples of South-Eastern Nigeria', Journal of the Royal Anthropological Institute, 79 (1949), 11-18.

9. A.G. Leonard, The Lower Niger and its Tribes (London, 1906), pp.11-47.
10. A.E. Afigbo, op. cit., p.40.
11. S. R. Smith, 'Totemism in the Ibo Country', Western Equatorial Africa Diocesan Magazine (1905), 25.

Miss Willson, 'Village Life in the Ibo Country', Western Equatorial Africa Diocesan Magazine (1906), 43-49.
12. G.T. Basden, op. cit., p.246.
13. Journal of the Reverend J. F. Schon and Mr S. Crowther ... (1842), 50-1. Quoted in E. Isichei, A History of the Igbo People (London, 1976), p.24-5.
14. Death by diseases such as swollen stomach or small-pox is traditionally regarded as a result of an evil curse and therefore socially unacceptable. In the past the victim was just thrown away in the bad bush or ajo ofia. Such a victim never received traditional burial rites.
15. Afa is the material tool of cosmic divination. One type consists of cowrie shells, bones and a tortoise shell.
16. Mbari is a special temple which is usually decorated with mural paintings and mud sculptures. It is common

in Owerri areas of Igboland, and is built in honour of ala, which is the earth alusi. See H.M. Cole, Mbari: Art and Life among the Owerri Igbo, (Bloomington, 1982).

Mbaja is a wall erected in honour of ala in Umuahia area of Igboland. It is richly decorated with painted figures. See K.C. Murray, 'The Okwu Wall near Umuahia', Nigeria Magazine, no 27 (1947), 19-24.

17. The head of an Igbo family is the man who either inherited or established the compound in which the family resides.
18. M.A. Onwuejeogwu, 'The Igbo Culture Area', in Igbo Language and Culture edited by F.C. Ogbalu et al. (Ibadan, 1975), p.5.
19. G.I. Jones, 'Dual Organisation in Ibo Social Structure', Africa, 19, no 1 (1949), 150-6.
20. Early European visitors to Igboland were struck by the extent to which democracy was practised in Igbo society. Johnson, for instance, wrote that while he was in the land, he felt that he was in a free land among free people. Another early visitor similarly wrote that true liberty existed in the land, though it was not inscribed on ornaments. See J. Henry, 'The Missionary on the Upper Niger', Church Missionary Intelligencer (September 1882), 547.

See also Ferrie to Poirier of 26 November 1906, in L'Echo des Mission Africaines de Lyon (1907), 18.

21. An age grade society is one formed by people of the same age.

A secret society is a masquarading or similar society

in which members are bound by oath not to divulge the principles of the society to any non member.

22. Olaudah Equiano wrote that Igbo traditional government was conducted by elders and chiefs. That would have been the case in the western part of Igboland where Benin influence dominated in the past. However, in other parts of the land this would mean elders and titled men since before the colonial days no chiefs were known in these other parts. See O. Equiano, op. cit., p.1.
23. E. Isichei, A History of the Igbo People (London, 1976), pp.21-4.
24. G.T. Basden, Niger Ibos, first published in 1938, new impression (London, 1966), pp.161-7.
25. G.I. Jones, op. cit., 19, no 1 (1949).
26. R. Banham, The Architecture of the Well Tempered Environment (London, 1969).
27. B. Ferree, 'Primitive Architecture: 1 Social Influences', American Naturalist, 23 (January 1889), 24-32.
28. The Igbo have a four-day week system, Eke, Orie, Afo and Nkwo. One of the four days is considered a non-farming day. The particular day varies from one locality to another.
29. G.I. Jones, 'Agriculture and Ibo Village Planning', Farm and Forest, 6 (January-March 1945), 9-15.
30. Trees that bear edible fruits and therefore have economic value are here referred to as economic trees. They include palm, citrus, mango, pear, ukpaka, African

bread fruit, and coconut trees.

31. E. Isichei, op. cit., p.29.
32. Ibid.
33. T. Shaw, Igbo - Ukwu: An Account of Archaeological Discoveries in Eastern Nigeria (London, 1970).
34. C. K. Meek, Law and Authority in a Nigerian Tribe (London, 1937), pp.24-5.
35. A.E. Afigbo, op. cit., p.42.
36. L.T. Chubb, Ibo Land Tenure, Second edition (Ibadan, 1961).
37. G.I. Jones, 'Ibo Land Tenure', Africa, 19 (1949), 309-323.
38. R.K. Udo, The Human Geography of Tropical Africa (London, 1982), p.51.
39. G.T. Basden, op. cit., (1966), p.47.
40. L. Prussin, Architecture in Northern Ghana (Los Angeles, 1969), 28-32.

CHAPTER FOUR

TRADITIONAL BUILDING MATERIALS

Introduction

Even armed with impressive knowledge and technology, modern builders are in many respects worse than the builders of the past. Fitch and Branch attributed the success of earlier builders partly to their remarkable knowledge and understanding of the characteristics of building materials locally available to them.¹ Expressing a similar opinion about the Africans and their traditionally built environment, the architect Louis Kahn remarked: "I saw many huts that the natives made. They were all alike, and they all worked. There was no architect there. I came back with the impression of how clever was man who solved the problems of sun, rain, and wind".²

Before contact with Europeans, the Igbo carried out all their building activities with the traditional materials that were obtainable from their natural environment. As is the case in many other traditional societies, the Igbos' knowledge of these building materials is a result of centuries of experimentation and adaptation, which have been handed down generation after generation.

The traditional materials chiefly used by them for building construction are types of mud called aja uno, aja ozuzo, and otto, various timbers such as osisi, bamboo, known as achara or otosi, palm midribs, known as ogugu ofolo, thatch, known as akanya, akilika, ejo, eyo or ata, and rope and string, known as udo, akili, ekwele or elili.

Mud

Mud suitable for building abounds everywhere in

Igboland. The Igbo use it both in its pure state and mixed with various additives to improve its qualities.

The equipment required for the acquisition and preparation of mud for building purposes includes machetes, hoes, diggers, and pots. To prepare the mud, the Igbo clear an area of land close to the chosen site. This eliminates the problem of transportation. Generally, the topmost layer of earth is not used owing to its inadequate clay content. The second layer is tilled with diggers and hoes. Water is added and the mud is kneaded by trampling with feet. Kneading the mud is usually spurred on by accompanying songs. To a foreign observer, the scene may resemble a dance. More water is added from time to time while kneading continues until the required plasticity is achieved. This is determined by experience, but the required consistency is similar to that of building putty. In some areas of Igboland such as Obolo Eke, where the mud has a high clay content and a much lower sand content, the sandy top soil is added to the mud to reduce the possibility of serious cracks which characterise mud of very high clay content when it dries. Among the Agbani Igbo, palm oil or its by-product known as oguru is added to the mud during the process of kneading to improve its plastic quality.³ Cow dung is another additive used by the Igbo to improve the water resistant quality of building mud.

The use of additives to improve the qualities of building mud is a practice known world-wide. In England, straw was widely used as an additive to improve the strength of cob. Similarly throughout the Arab world and among the Hausa of Nigeria, finely chopped straw is added to improve the strength of adobe. According to Afolabi Ojo: "The walls of the Aremo's [the Yoruba monarch's] residence in old Oyo stood up high, long after those of other houses in the town had disintegrated, probably because palm oil was used instead of water to mix the mud".⁴

When the required plasticity is achieved, the mud may either be used immediately or stored in a heap for a period of up to one month to let excess water drain out. In the later case, the mud is covered with banana leaves or palm fronds. This allows excess water to drain away, but minimises excess evaporation and consequent hardening.

In parts of Igboland where water is scarce such as Enugu Ezike, mud for building is usually prepared towards the end of the rainy season. The procedure is similar to the one described above, but in this case one or more channels are dug to conduct surface water to a ditch in which the mud is to be prepared. Mud so prepared is often too saturated with water for immediate use, so it is removed from the ditch and heaped nearby, and covered with palm fronds or banana leaves for some time to enable excess water to drain away.

In other parts of Igboland, for example among the northern Igbo of Ikem village group, until recently there has been a tradition of building with sun-dried mud lumps. A similar practice has been found in many parts of the world including some eastern counties of England. In those parts of Igboland where mud lumps were used in the past, wet mud was made into lumps and left to dry in the sun for at least fourteen days. This tradition has declined owing to the problems of drying the mud and protecting it from sudden rainfall. Traditionally, these processes do not involve any financial expenditure, but all who take part are usually lavishly entertained after each day's work.

The Igbo use mud for foundations, floors, walls and sometimes roofs. For walls, mud is used in varying thicknesses and is sometimes reinforced with timber, especially in the southern part of the land where very high humidity dictates stronger but thinner walls.

In the past, mud was certainly the most popular

building material in the world. It is known by several names around the world and among the most popular of these names are adobe, cob, noggin, swish, pisé, tubali, tapia, teroni, aja, and earth.⁵ In recent times, however, mud has conjured up an unfavourable impression of weakness, primitiveness and poverty, in spite of the fact that many historic edifices built of it have survived for several centuries. Among them can be mentioned the granary of Rameses II built in 3500 BC in Egypt, the Great Wall of China begun in the third century BC was built mainly of mud, the famous Alhambra begun in the thirteenth century in Granada in Spain, the villages of Milton Abbas built in 1773 in Dorset, numerous churches and castles of the thirteenth century built in the Dauphine and Burgundy regions of France, and the centre of the town of Weilburg near Frankfurt in Germany.⁶

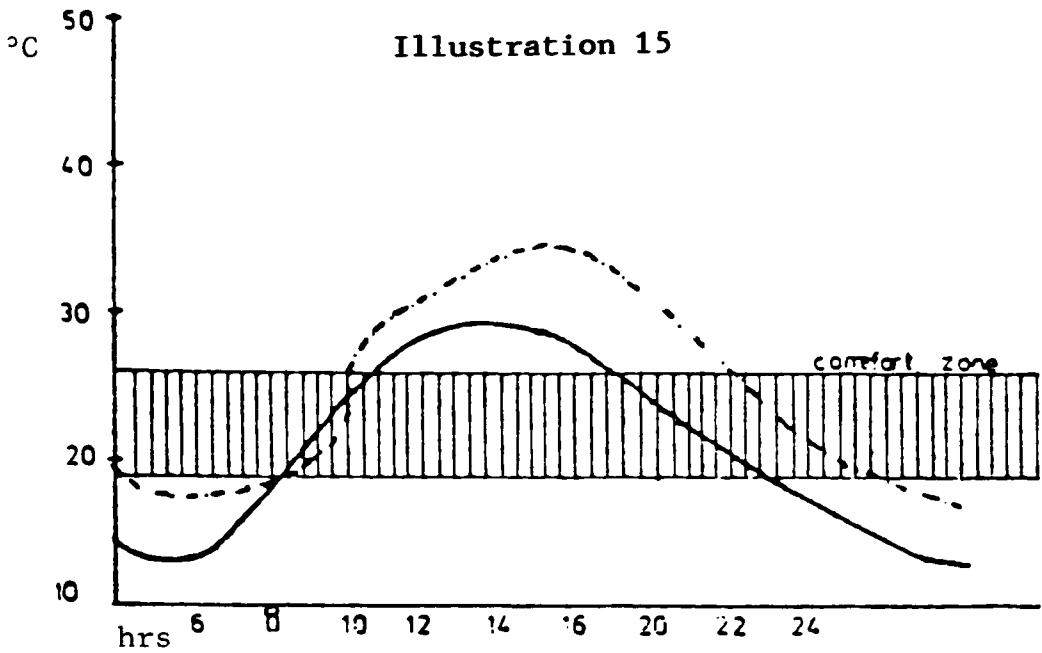
Mud used as a building material is usually a mixture of clay, sand, silt and aggregates. The clay content determines its structural strength, cohesiveness and plasticity, while its sand content provides resistance to abrasion and water damage. Better results are achieved by removing gravels and organic matter such as humous. Hair and fibrous materials such as straw and creepers improve its strength. Mud nevertheless has strength in compression, but none in tension. It is, therefore, very suitable for load-bearing walls, domes and vaults. The walls have to be either very thick or reinforced to carry heavy loads, but, since mud is cheap and easily obtained, the cost of construction still remains minimal even if the walls have to be unusually thick. Because of the use of mud in massive thickness and its low thermal conductivity, houses built of mud are much cooler in hot regions and warmer in winter than those built of some other materials.

Experiments carried out by Allan Cain, Farroukh Afshar, and John Norton in Egypt and Oman on mud and concrete houses, specifically to compare their responses to temperature variations, demonstrate that houses built of mud

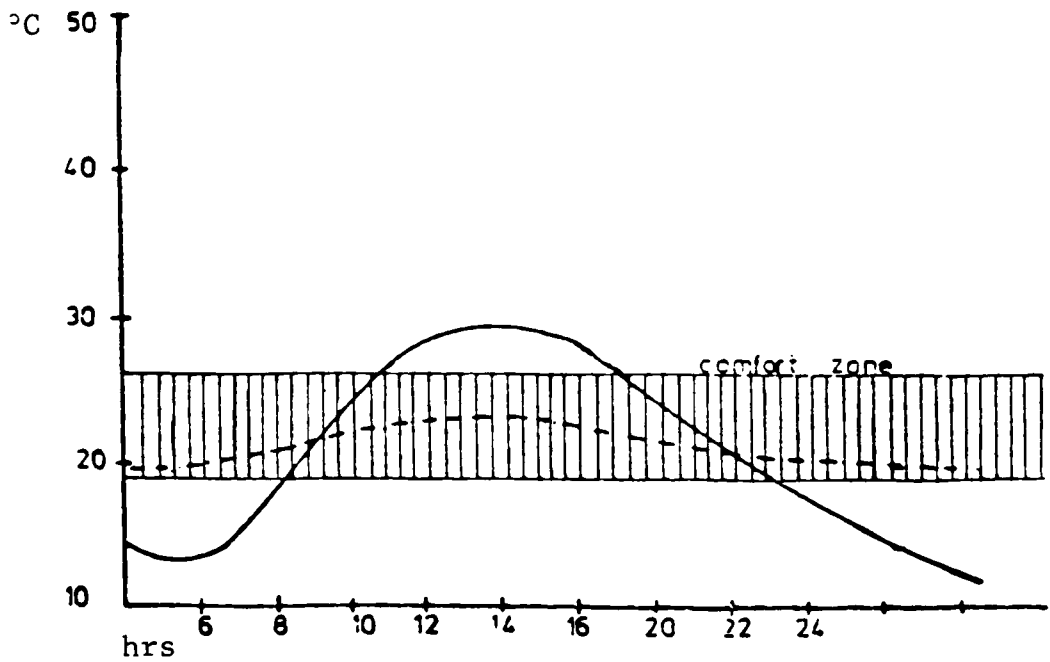
in hot climatic regions maintain more favourable temperatures than those built of concrete. As shown in ill. 15a, during the day, heat builds up on the exteriors and roofs of both types of houses. Concrete walls, being relatively thin and having a lower resistance to heat flow, conduct the solar heat into the interior of the building within a short period. Thus, as graph 'a' shows, only an hour or so after the peak heat outside, the air temperature inside the house can soar higher than the outside temperature. Similarly, if the nights are cold, the air temperature inside concrete houses can quickly drop to an uncomfortable level.

On the other hand, owing to their lower thermal conductivity, mud walls heat up to a lesser extent during the day than concrete walls. Also, owing to the usual massive thickness of mud walls, heat from the exterior wall surfaces does not reach the interior surfaces as quickly as is the case in the concrete walls. So during the peak heat hours, the interior surfaces of the walls tend to remain at a constant temperature, which approximates to the average of the range of the exterior wall temperatures.⁷ As a result of this, the interior air temperature in a mud house, during day time, is normally below those outside, as shown in ill. 15b. At night, when the outside air temperature is very low, the surfaces of mud walls release the heat they accumulated during the day and keep the interior air temperature well above the outside air temperature. The ability of mud walls to accumulate heat during the hot period of the day and release it during the cold period of the night is here referred to as the 'fly-wheel effect'. For the fly-wheel effect to be noticeable or effective, the diurnal temperature range must be large. It does not, therefore, apply throughout Igboland, especially towards the coast because of the small diurnal temperature range experienced there.

Mud structures, however, call for constant maintenance,



PREFAB CONCRETE ROOM



MUD BRICK ROOM

- - - Inside air temp.
 ——— Outside air temp.

**Room Temperatures of Concrete and Mud Walls,
 under Hot Climatic Conditions (after Cain et al,
 1975).**

especially in areas such as Igboland that experience constant and heavy rains. Mud buildings are also prone to damage caused by rodent burrows and cracks, both of which encourage penetration of the structure by rainwater, and consequent further weakening. Another weakness of mud is that it grips wood poorly. As a result, in many traditional houses, gaps often appear around wooden door and window frames.

Against these weaknesses of mud used as a building material can be set many advantages. They include its ubiquity, which eliminates the problem of transportation and minimises building cost. Mud can be obtained and prepared with unskilled manual labour. Because of its plasticity, it can be used with artistry. These qualities of mud make it attractive to people who lack sophisticated building technology. The Igbo, for instance, exploit its admirable plastic property in their traditional architecture to give soft rounded contours to the walls, and door and window openings of their houses.

Timber

In Igboland, timber has been and is still a very popular building material. This is in part a consequence of the variety of timbers that grow there in abundance. Acquisition is possible with simple traditional implements, such as axes and matchets. Among those timbers commonly used for building purposes are uri, uda, the silk cotton tree or akpu, and apata, ewo, oduree, ugba, uze-gze, inyi, oji, ukpaka, uko, ugiri, mkpochi, okwe, odo, cam wood or ufie, and the stem of the fan palm. Trees that bear edible fruits and cash crops such as oil palm are also used but with much caution. Some trees are not used at all in building construction by the Igbo, either because of their weakness or sacredness. Examples are the sacred ngwu and ofu trees. The ngwu is regarded as a residence for alusi while the ofu tree is used as a medium of communication with ancestors in

ala mmuo.

The qualities the Igbo require of building timber include strength, straightness, length, resistance to termite attack, durability and the ability to retain these qualities for a long time.

Acquisition is usually direct from nature, and is the sole responsibility of the prospective house owner. Often, however, communal effort is sought and obtained even at this stage of building construction. Fan palm, uburu, grows in limited quantity in Igboland, and its trunk, which is used as building timber, unlike other species of timber, is scarce.

Normally these trees are felled, stripped of little branches, leaves and other growths, and, if their stems or branches are large, are cleft with axe and matchets to obtain split pieces varying in length between 1.5 to 4m with 0.05 to 0.2m cross sections. They are then laid out in the sun on a raised platform to season well. The length of seasoning depends on the particular species of timber in use, but normally lasts not less than seven Igbo weeks, or twenty-eight days. Seasoning is necessary to minimise shrinkage, rot, and termite and pest attack, and reduce excessive weight. Acquisition and preparation is normally done during the dry season.

Special forms of timber are needed for particular uses. For example, if a piece of timber is to be used as a bearing post, it is preferable that it possesses a forked end, whereas if it is to be used as a beam or rafter, it is expected to be straight, strong, and long. An artificial forked end may, however, be given to a piece of timber by carving a 'V' shaped notch at one end of it, but experience shows that there is always the danger of a badly carved fork breaking off and causing a structure to collapse.

The Igbo use timber as posts and reinforcements for mud walls. In the roof structure, timber is used as eaves-beams, wall-plates, rafters, purlins and ridge-beams. Doors, windows, frames, lintels, rails and furniture are also made from timber. As a decorative material, the Igbo use timber extensively in their traditional architecture as raw material for carving and in the production of local paints.

Timber responds poorly to changes in temperature and may develop cracks in varying temperature conditions. The high temperature and humidity that characterise the climate of Igboland do not in any way alleviate this weakness of timber. Often cracks develop in timber used in Igbo houses and rot can set in unnoticed. This calls for frequent attention. Another problem posed by the use of timber in Igboland is its susceptibility to pests and termite and fungus attack. Termites are very common in the northern part of the land especially the subterranean types. They eat up timber in or on the ground and render it structurally useless. All these weaknesses of timber, besides calling for frequent attention, explain why certain species such as uburu, which is crack, termite and rot resistant, are much sought after in Igboland for building purposes. The Igbo also have a number of ways of minimising these weaknesses. In an area that is prone to termites or other pests the Igbo normally smear wood thoroughly with palm oil or soak it in oguru, after which it is laid out in the sun to dry again before use. This treatment makes timber very unpalatable for the termites and pests. On the other hand, if termite attack is noticed after construction, one way of stopping further attacks is to mix up a solution of wood ash, smear it on the part attacked, and pour some into the termite haven. Another approach is to use oguru in the same way instead of wood ash.

Bamboo

Bamboo (ill. 16) is found in different parts of Igboland. The Igbo use it for fencing, for beams and posts,

Illustration 16

Bamboo for Building Construction.



for wattle, rafters and purlins, for the construction of light structures such as scaffolding and ceilings, and as window rails. In the past, anyone could obtain bamboo freely from nature, but now it is cultivated or has to be bought in markets.

Bamboo used for house construction is normally cut during the dry season, cleaned of small branches and leaves, and, in a similar way as timber, spread out on a platform to season in the sun. This is necessary to avoid uneven seasoning. A period of at least twenty-eight days is also allowed before use. After seasoning, bamboo can be stored for a long period before use, provided that it is protected from constant rain, termites and pests.

Bamboo grows tall enough for building purposes. Its properties of long length, the strength of its culm, and its natural hollowness, which makes it light after seasoning, are useful advantages when it is used as a building material. Furthermore, its glossiness, colour, the roundness of its culm, and the horizontal nodes, all have aesthetic qualities which are often exploited when bamboo is used in buildings. Although in comparison with timber, bamboo has less compressive strength, it has better tensile strength, which makes it useful as a spanning element in traditional Igbo building construction. The ease with which bamboo can be split with simple tools makes it very useful for different purposes in house building. This same property, however, precludes the use of nails as a fastening device for bamboo.

As in Igboland, bamboo has been used extensively in building construction by different peoples in south-east Asia, the islands of the Pacific and Indian Ocean, as well as much of the rest of Africa. In these other places it is similarly used for posts, beams, rails, fencing, ceiling and walling.⁸

Bamboo is, however, highly susceptible to rot, fungi, termite and pest attack. So, unless it is specially treated

to resist the humid climate of Igboland and the abundance of termites and other pests, its life span may be only three years or even less.

Building Materials derived from Palms

Palms thrive in Igboland. The different species that grow there include two species of raphia palm, known as ngwo (ill. 17a), oil palm or nkwu (ill. 17b), and fan palm or uburu. They are valuable commodities, providing food in the form of oil, kernels, and wine, and materials for furniture, domestic utensils, and building material for the house. In Igboland, palms are planted even in the compounds, for economic, social and ritual purposes.

Building materials obtained from palm trees include the midribs, called ofolo, which are used extensively for purlins, rafters, wattles and fencing; the leaflets are used as thatching material, and the fibres are used for fastening in traditional building construction. All these materials are easily acquired and, even at present, acquisition involves little or no cost. Unlike the fan palm, the trunks of oil and raphia palms are rarely used for building purposes in Igboland.

The midribs required for building purposes are cut, stripped of leaflets, and left to season in the sun. Seasoning may take as long as sixteen days, before the midribs can be used. In addition to reducing excessive weight, and preventing rot and cracks, this minimises future shrinkage. After seasoning, the midribs are usually up to 6m in length and 0.07m in diameter. Palm fronds are also used as temporary walling material in traditional Igbo construction. Seasoning is not then necessary. The palm fronds are woven, fresh, into panels used for space enclosure. As they dry up and openings show, more woven panels are fixed to cover up the openings until the required

Illustration 17

Palm Trees.



a. Raphia Palms



b. Oil Palms

privacy is achieved. The Igbo use these panels for constructing temporary back drops for masqueraders and dancers.

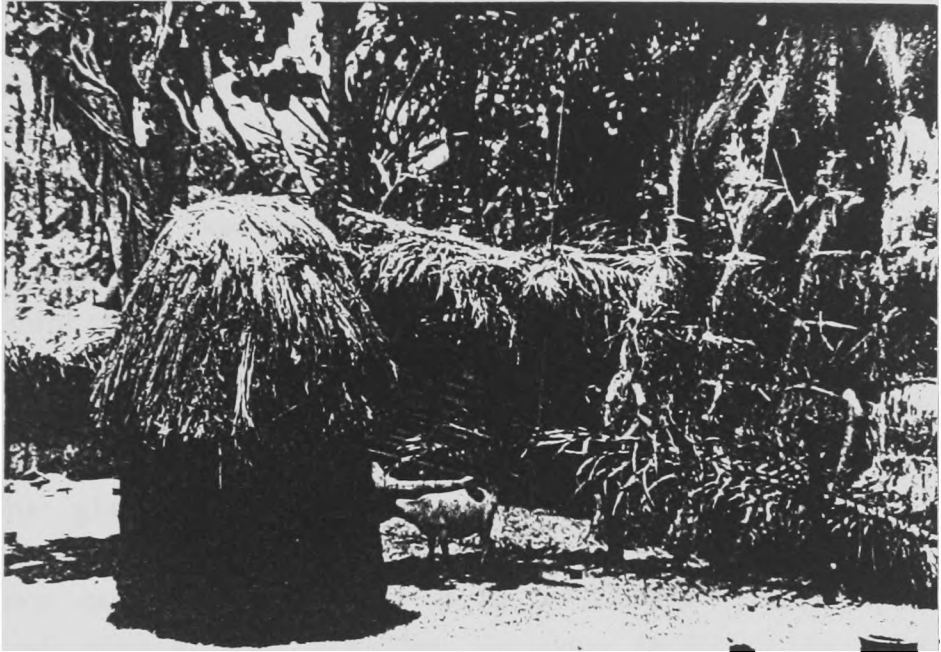
Thatch

Thatch is the material traditionally used by the Igbo as a roof cover. The derived Savannah vegetal cover of northern Igboland includes different species of grass. In the southern part of the land, raphia palms abound. As a result, two main types of thatch are in use, grass and raphia palm leaflets. Uma leaves are occasionally used as thatch, but their use is minimal. The use of all these materials is not strictly restricted to the areas where they grow in abundance, but grass is predominantly used in the north, uma leaves in the west, and palm leaflet mats in the south.

Two main species of grass, locally known as ejo or eyo and ata, are popular for this purpose (ill. 18). They grow naturally in Igboland and can be obtained free from common land with machetes and sickles. The most suitable period to obtain them is the beginning of the dry season. Ata grass is spear-like in shape and normally comprises several shoots growing to a height of more than a metre with a blade 0.03m wide. Ejo is bamboo-like, but consists of very thin culms growing to a height of more than 3m. Both species, after acquisition, require a seasoning period of twelve days before use. They are usually stacked in bundles against the wall or on a raised platform to dry in the sun. Seasoning precludes further shrinkage and reduces the weight on the roof structure when eventually used. A house measuring 7 x 8m with a gabled roof may require 40 to 60 large bundles of grass. When sufficiently dry, smaller bundles of about 0.20 - 0.30m cross section are made from the large bundles. These smaller bundles are secured directly to the roof purlins to form the roof outer cover. Both species of grass are water-proof and retain this quality for about three years,

Illustration 18

Grass used for Thatching.



a. ejo or eyo



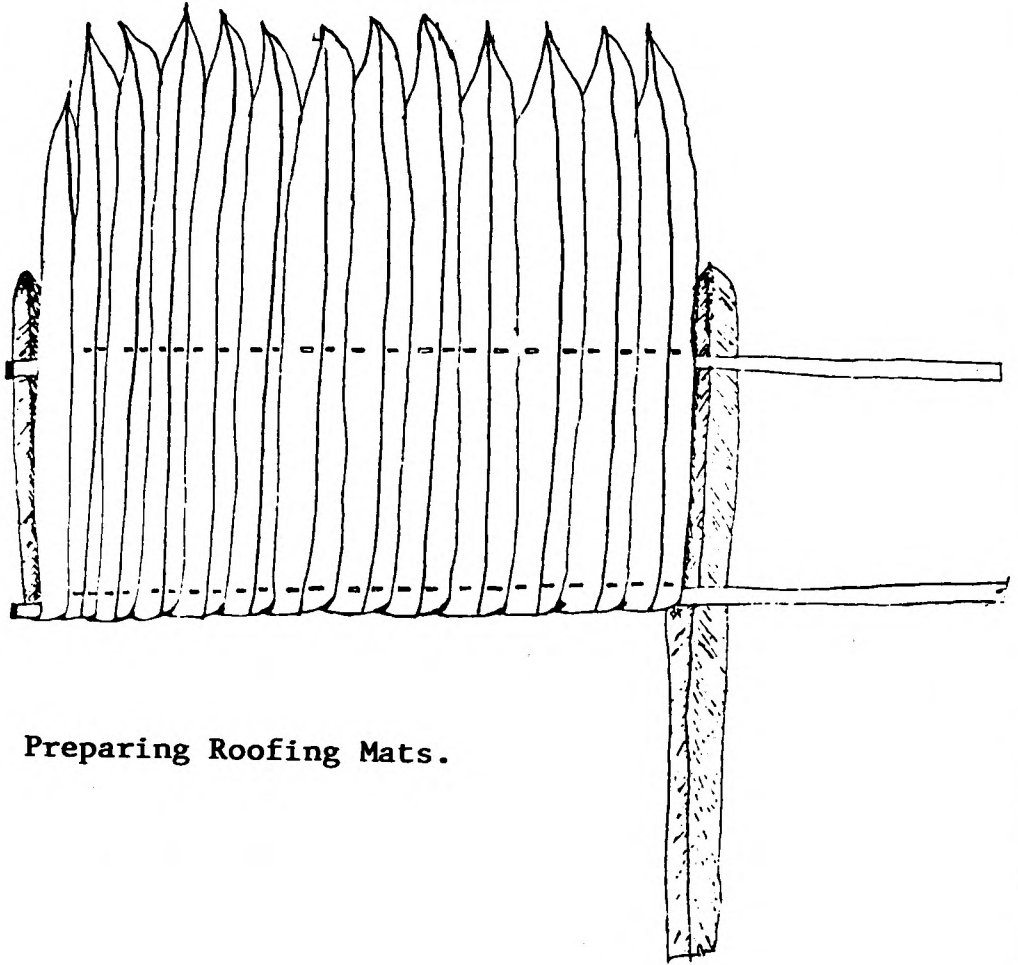
b. ata

if well seasoned.

Raphia palm has compound leaves or fronds. Each leaflet can be as long as 1m, and 0.05m wide, and has one of its faces smooth and the other rough. Each leaf is also waterproof and remains so for a fairly long time after seasoning. The leaflets are obtained fresh and woven into mats, known as akanya or akilika measuring 0.2 x 0.5m. A mat consists of a framework made up of two pieces of split raphia palm midrib, 1.5m long and 0.02m thick, placed at 0.15m centres, parallel to one another. Each leaflet is folded in two to envelope the framework (ill. 19) and to overlap the preceding one slightly. It is then pinned to the framework. For best results, the folding is always done so that the glossy sides of the leaflets serve as the outer surface of the mat when finished. The pins used are splinters cut to sizes of 0.02 x 0.005m from the outer casing of raphia palm midribs. As many leaflets as possible are attached in this manner, until the framework is covered. After weaving, the mats are stacked on a platform (ill. 20) and allowed to season in the sun. A period of not less than twelve days is allowed before using them. They can last for three years but are vulnerable to termite attack.

Akanya is combustible but also a bad conductor of heat. It has a negligible thickness and mass so it neither holds nor transfers much heat to the inside of the house. For optimum performance and for longer life, constant attention must be paid to roofs covered with akanya to check them for repairs. Uma leaves are also obtained freely from nature near the banks of rivers and in low lying areas. Unlike the grass and palm leaflets, prolonged seasoning is not necessary as that makes the leaves twist and shrivel. They have a shorter life-span and require more constant attention. The use of leaves as thatching material is also known among other peoples. Aflolabi Ojo, for instance, notes that leaves of phrynium plants are used by some Yoruba of Nigera.⁹ Another example is found among the Mbuti pigmies of

Illustration 19



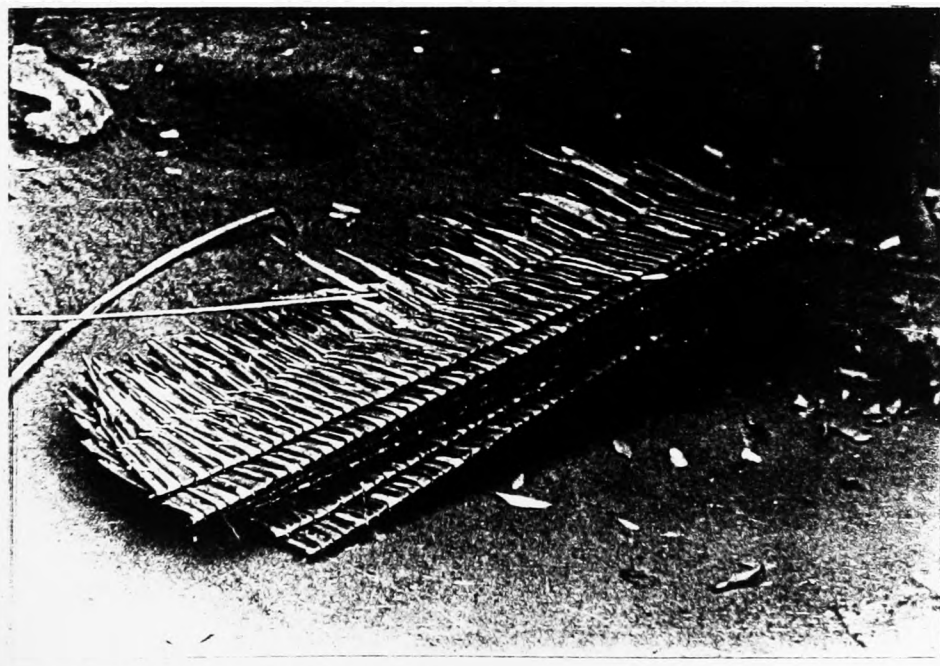
Preparing Roofing Mats.



Illustration 20
Finished Thatching Mats.



a. Inspecting Thatching Mats.



b. Mats Ready for Use.

the north-eastern Zaire who simply cover their huts with leaves.¹⁰ The use of leaves as a roof cover has, however, lapsed in Igboland.

Fastening Materials

In traditional Igbo architecture, joining two or more parts is never done with nails, but with various kinds of cord and string. The Igbo have a number of words for cordage which includes ekwele or akwala, best translated as rope, udo or cord and twine, and elili, string and thread.

Akwala or ekwele and elili are all widely used in Igbo building construction. They are made from various plants such as ana or rattan, from midribs of oil palm, fibrous materials from raphia palm, abali and manilla and similar creepers.

The raw materials are obtained from the bush or forest, soaked in water for two or three days, dried and twisted into ropes and string, and used for lashing different members together. This treatment makes it possible for the ropes and string to retain their pliability and not turn brittle with age or during the harmattan. If they are not used immediately after preparation, they are stored hanging over cooking areas, but re-soaked in water for some hours before they are to be used.

REFERENCES

1. J.M. Fitch and D.P. Branch, 'Primitive Architecture and Climate', Scientific America, 203 (December 1960), 134-144.
2. 'A Statement by L. Kahn', Arts and Architecture, 78, no 2 (February 1961), 29.
3. The traditional palm oil production process involves cooking the palm fruits first, then pounding them mixed with water. The palm kernels and their fibrous covers are then removed. Finally the oil itself is sifted out and boiled before use. After the sifting process, a liquid by-product, dull-greenish in colour, remains. This by-product is locally known as oguru and is thus referred to in this thesis.
4. G.J.A. Ojo, Yoruba Palaces (London, 1966), p.57.
5. A. Agarwal, Mud, Mud: The Potential of Earth-based Materials for Third World Housing (London, 1981), p.38.
6. J. Dethier, 'Down to Earth', Mud Architecture: An old Idea, a new Future, translated from French by R. Eaton (London, 1982), p.27.
7. A. Cain, A. Faroukh and J. Norton, 'Indigenous Building and the Third World', Architectural Design, 45 (April 1975), 207-224.
8. H.S. Murison and J.P. Lea, Housing in Third World Countries: Perspectives on Policy and Practice (London, 1979), p.127.
9. G.J.A. Ojo, 'Traditional Yoruba Architecture', African Arts, 1, no 3 (1968), 14-17 and 70-72.
10. D. Fraser, Village Planning in the Primitive World, edited by G.R. Collins (New York 1968), p.13.

CHAPTER FIVE

TRADITIONAL BUILDING CONSTRUCTION

Introduction

Basically, construction in architecture is the process by which architectural aims are realised practically, using available materials and technology. As Heinrich pointed out, it is construction that gives character and substance to architectural space and therefore it has always been a decisive formulative medium in the practical realisation of both the earliest artificial shelter and contemporary architecture.¹ From the earliest time, construction in architecture has had to solve problems involved in the organisation of spaces which are psychologically and physiologically suitable for human activities. This has meant dealing with the problems of spanning and enclosing space and that entails counteracting stresses to which the space-enclosing components are subjected.

Anderson has noted that in solving these problems different cultures of the world have shown great ingenuity and skill aimed at achieving maximum positive effect with minimum means.² Typical examples of ingenuity of construction are found even in the primitive architecture of the different peoples of the world. Such examples include the igloos of the Eskimos, the tepee of the American Indians, the tent of the Bedouin Arabs, and the huts of the tropical dwellers. In fact, as Rapoport pointed out, "Since the number of solutions to any particular structural problem at least in principle, is limited, it can be said that every form of construction can be found in primitive and vernacular building, including many structural concepts considered new".³ The basic similarity between, say, the space-frames found in Yagua dwellings and modern space-frames, or even between the relatively simple load-bearing

mud structures found in Africa and modern load-bearing structures, go a long way to substantiate this fact. It, however, has to be added that owing to such factors as varying geographical and social conditions and the availability of different building materials in various parts of the world, certain methods of building construction are more developed in some parts than in others. Skolle notes that in arid regions, the methods of constructing both walls and roofs with mud are well developed, whereas in the tropics, where palm trees and suitable grass grow in abundance, the construction method makes use of thatch as a roof cover and sometimes timber as structural members of the walls.⁴ The implication is that irrespective of the different levels of cultural development of the various peoples of the world, many cultures have been able to develop different techniques of building construction relative to the building materials provided for them by nature.

In line with this view, Aradeon has pointed out that long before Nigeria came under foreign influence Nigerians had learnt how to use the building materials provided by their natural environment to develop fascinating spatial concepts and house forms.⁵ Among the Igbo, for example, the art of building was an age-old activity known to virtually everyone before the coming of the Europeans.

Traditionally, building construction in Igboland is more of a social activity than an industry. Talbot, an anthropologist who worked in Southern Nigeria during the early part of the century, noted that "among the Ika Igbo, often all the people of a quarter join together to build a house ..."⁶ This is not limited to the Ika Igbo only, in fact building a new home for anyone throughout Igboland is never a one-man affair. It is always an opportunity to get together and almost everybody in the community is normally involved. A traditional building site in Igboland is easily recognised by the unusual number of people present there.

Riddles, jokes and songs are all part of the building activity. Cole, during his study of mbari temples in Owerri, for example, noted that during the construction process, a series of interrelated and overlapping art forms such as dances, songs and chants usually accompany the physical activity of erecting the house.⁷

The involvement of men, women and children calls for a division of labour. Igbo men are usually engaged in the more difficult and strenuous tasks, such as acquisition and preparation of materials and doing the major construction work. Women and children fetch water, hand in the materials to the men, prepare food for all taking part, and sometimes do the wall surface finishes. Communal participation in building construction is a practice widely adopted in tribal societies although exceptions can be found. Denyer, for instance, noted that building construction in most rural areas of pre-colonial tropical Africa was always a major social occasion in which everybody in a village co-operated.⁸ This, in a way, is similar to the practice of raising the timber frame of a house or a barn which was common in England and America up to the nineteenth century. On the other hand, among the Hausa of Zaria City, Schwerdtfeger has noted that building tradition is more or less treated as an exclusively inherited craft by a certain lineage, and members of that lineage impart the knowledge of how to build only to their own children.⁹ There, communal participation is rarely practised. Similarly, among the Bakossi of Cameroun, it is mostly the tribe originating from the Manengouba who are highly distinguished as builders.¹⁰

Generally it appears, however, that where co-operation exists as in traditional Igbo construction, there has always been a similar sense of division of labour. Among the Kikuyu of Kenya, for instance, the men erect the walls while the women do the thatch work.¹¹ Among the Tongo of Northern Ghana, the men do the whole construction while the women do only wall finishes and decoration.¹² The division of labour

in traditional Igbo building construction has also to do with the Igbo social order, their etiquette and the ownership of the finished building. Certain activities are strictly masculine. Most heavy tasks, such as doing the actual construction, are, therefore, male tasks. Moreover, compounds are exclusively owned by men, so the major task of erecting them should rightly be borne by them.

Except in cases of emergency, building is an activity confined to the dry season in Igboland. In addition to the problems posed by constant rains, to get the co-operation of most members of a community, building work has to be carried out when everybody can afford the time, that is when there is less work to be done in the farm and leisure is plentiful. The most favourable period is once again the dry season, when harvests have been gathered and the new farming season has not yet begun.

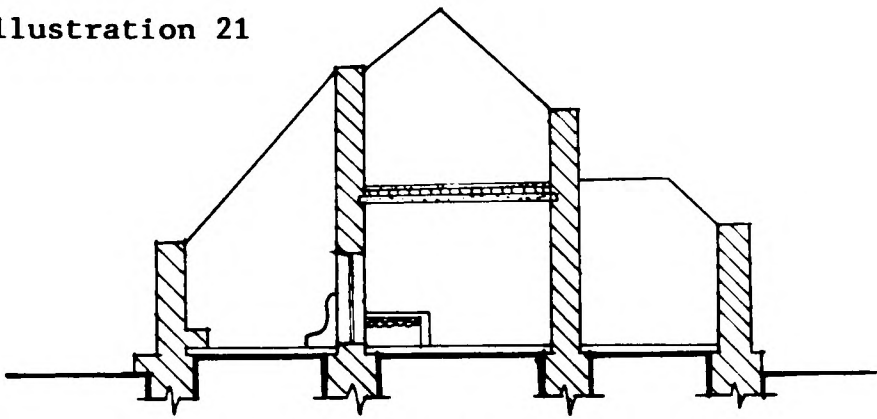
Structural Systems

Three main types of structures are used by the Igbo in their building construction. They are the load-bearing wall or solid mud wall structure; the skeletal or timber-framed structure; and the composite structure.

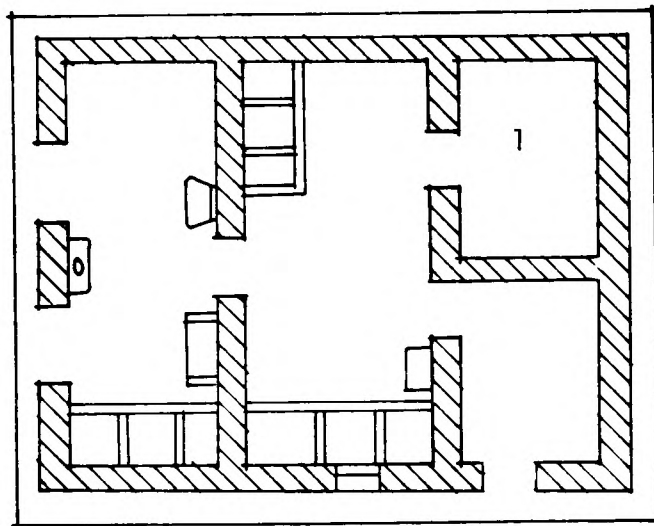
The load-bearing wall structure (ill. 21) usually consists of monolithic non-reinforced mud walls, 0.30 - 0.60m thick, which bear the load of the roof. This type of structural system is common in the northern part of Igboland, apparently because the diurnal temperature range is slightly higher there than in the south and the fly-wheel effect of mud walls is, to a certain extent, effective.

The skeletal, or timber-framed structure (ill. 22) makes use of timber posts and beams to transmit the weight of the roof to the ground. Walls are not needed structurally, but are used only as space-enclosing or partitioning elements. They may either consist of timber

Illustration 21

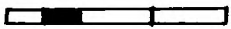


Section A - A



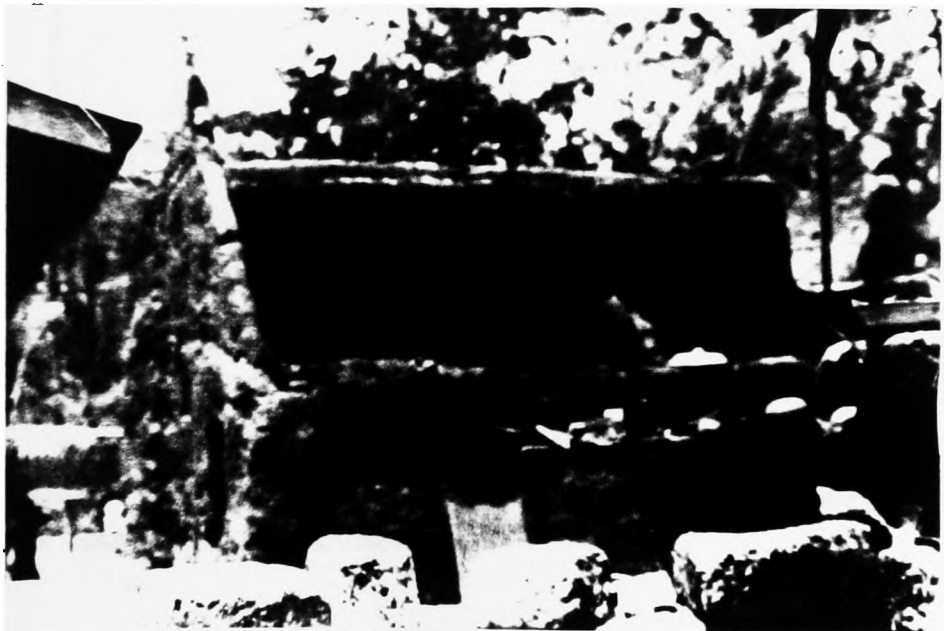
1. Ndrme

Scale



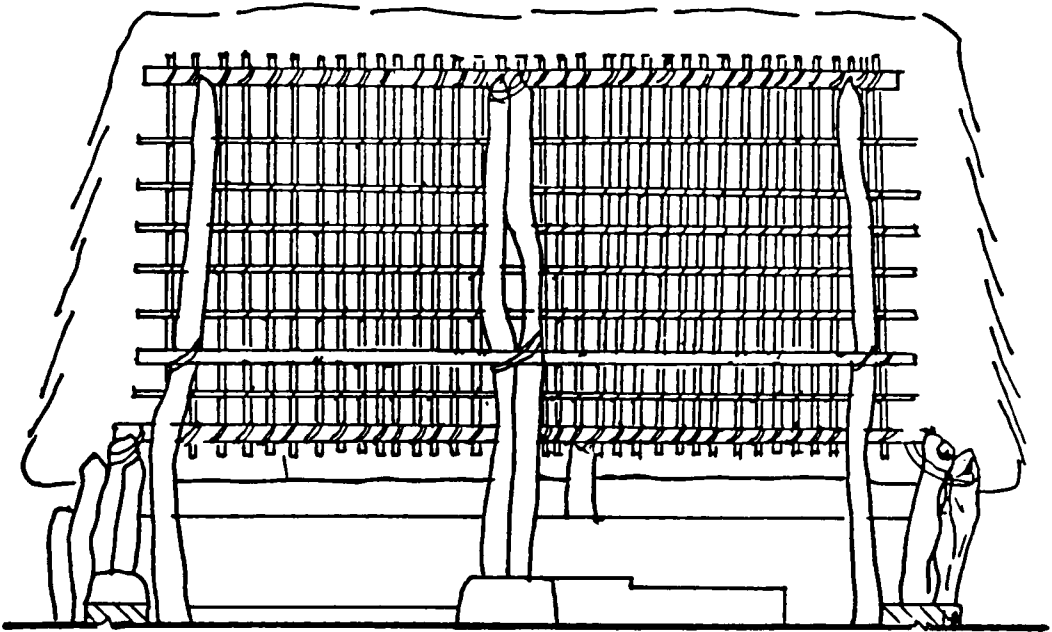
0 1 2 3m

Plan

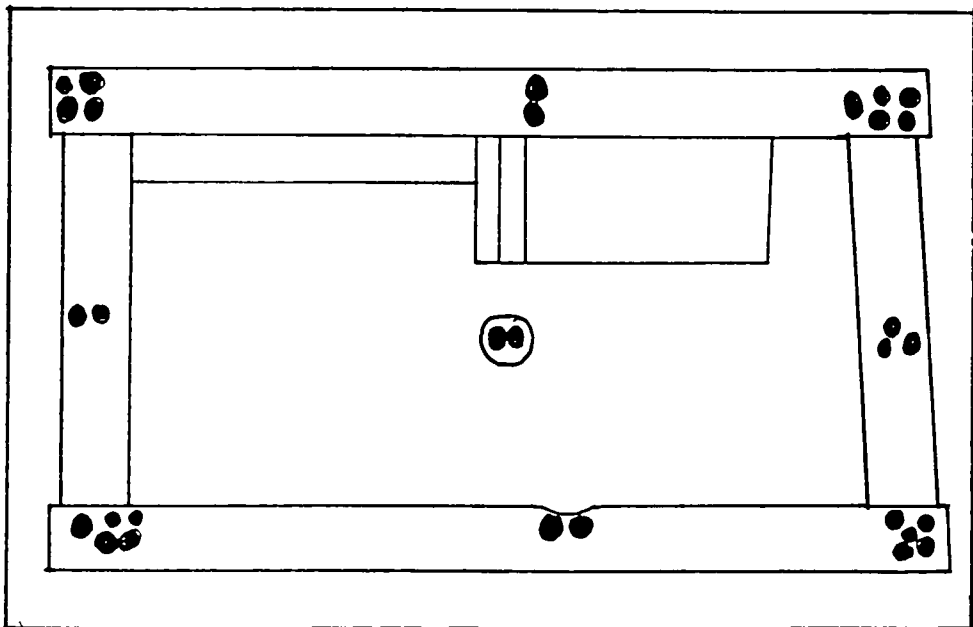


House of Mazi Ognonnaya Ani in Akegbe under Reconstruction, Load-Bearing Wall Structure.

Illustration 22

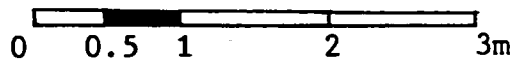


Section A - A



Plan

Scale



House of Mazi Uwaezuoke in Ebenebe, Timber-Framed or Skeletal Structure.

boards closely fitted together, as is common in Uratta near Owerri, or as separate non load-bearing mud walls, or as non-structural mud infilling. This type of structure is flexible and performs better under lateral forces. It is easier to construct, and easier to re-adapt to changing situations in terms of repartitioning or expansion. This is because walls of the type mentioned above can easily be knocked down or raised within a short time, without endangering the building structure. The skeletal or timber-framed structure is more in use in the southern part of Igboland, especially toward the coast where higher humidity and little diurnal temperature change dictate the use of thin, breathing walls. In these areas, walls may be as thin as 0.20m or less.

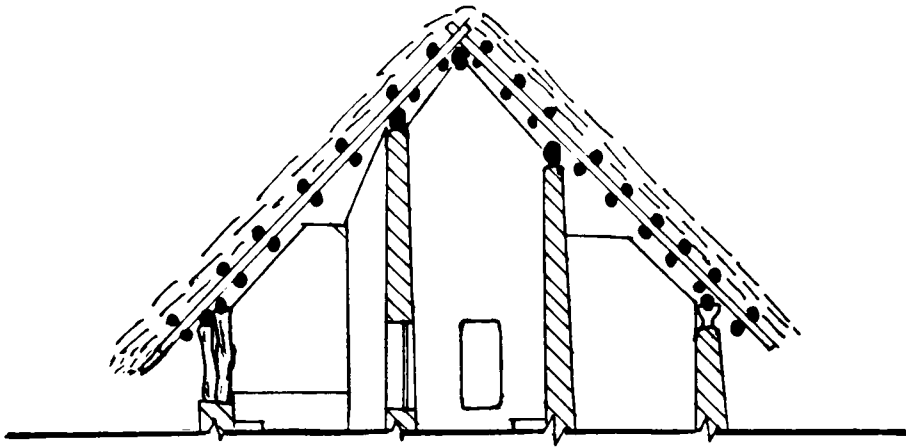
The third structural system used by the Igbo is the composite type. In this type (ill. 23), the weight of the roof is borne partly by a load-bearing wall and partly by load bearing posts. Variations of this type of structural system include arrangements where the roof structure is jointly carried by both the walls and an external timber structure as in ill. 24, and another arrangement in which a part of the roof is carried by the walls, while another part of it is borne by a timber structure as in Ill. 23.

The composite structural system is the most common of all the three. It can be found in both the northern and southern parts of Igboland. Its popularity may be because it has all the advantages of the other two and therefore can bear a heavier roof load. More materials and a larger labour force may be needed for a composite structure, but both materials and labour are obtained free in traditional Igbo construction. The factor that finally determines which of these structural systems is predominantly used in a particular part of Igboland, however, seems to be the existence of a long-established tradition.

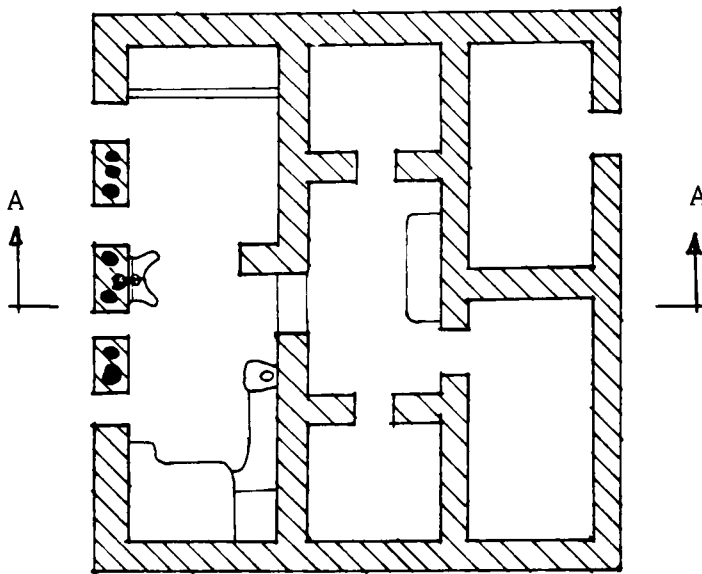
Site Work and Setting Out

Having obtained a site for the establishment of a new

Illustration 23

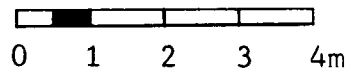


Section A - A



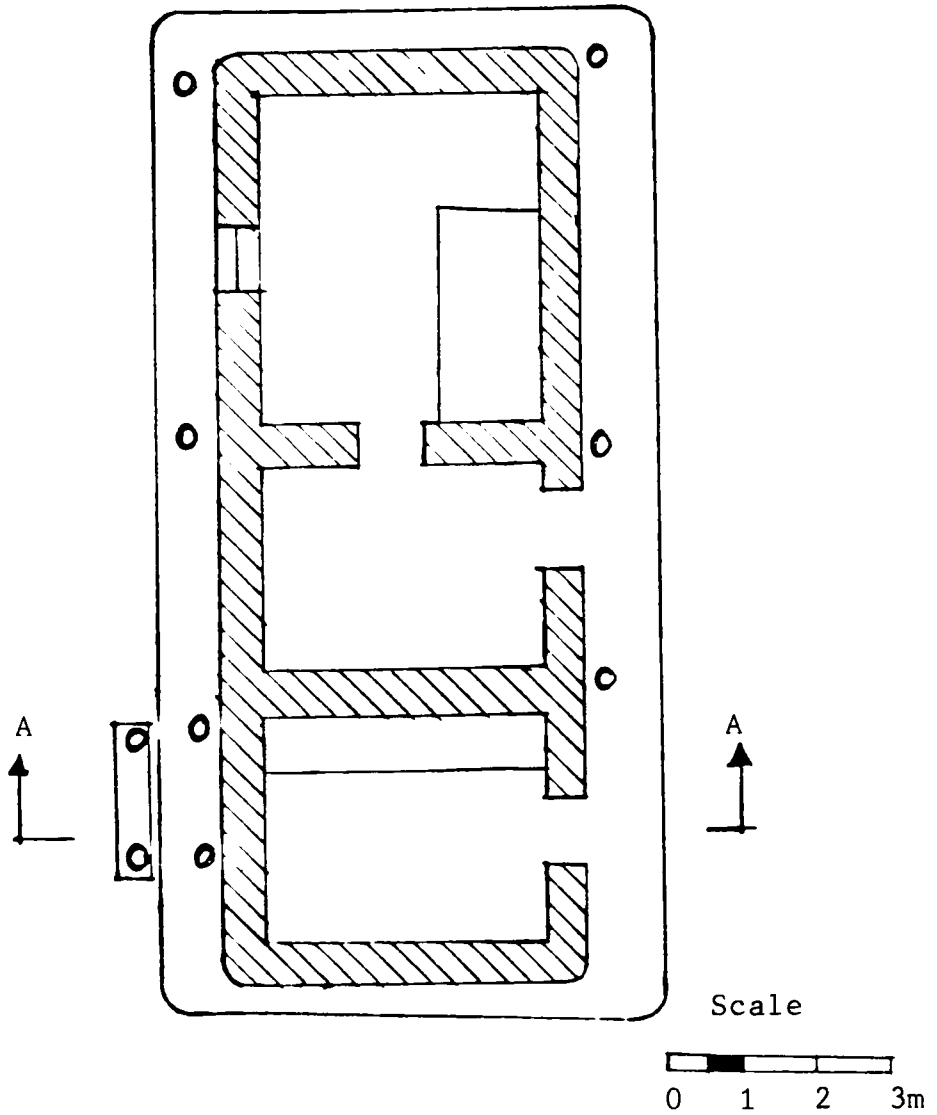
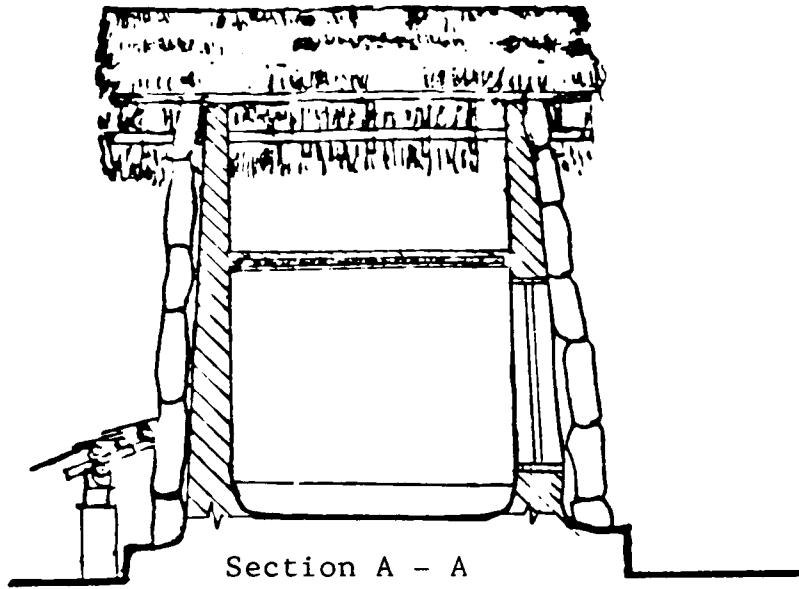
Plan

Scale



House of Chief Arum Ogbodo in Akwuke,
Composite Structure.

Illustration 24



House of Mazi Agubalu Ebe in Nise,
Composite Structure.

home, called ipu obi or ikwa be, a series of rituals usually precede the actual construction work there.

First, a traditional diviner called a dibie is consulted to ascertain the opinion of various alusi, for instance ala, and the opinion of the ancestors of the family, that is the ndi ichie in the land of the spirits, ala mmuo. Sacrifices may be recommended by the dibie if the alusi are not in accord with the intentions to establish the home on the chosen site. On the other hand, if the diviner is satisfied that everything is in order, the site is cleared and a sign, denoting a future home, is placed on the site. In different parts of Igboland, different objects are used for this. In Awkunanaw, for instance, a stone or ani obi is used and a ceremony connected with this, known as igwu ani obi is held. In Ogurutee Uno of Enugu Ezike, a yellow palm frond, omu, is used for the same purpose. In yet other parts of Igboland, other rituals are performed on the chosen site to signify obedience to ala, and earnest supplication to her for prosperity and success in the future home. Among the Agbani Igbo, for instance, a ritual known as iho ihe is usually carried out on the site before the actual building work commences.¹³ In the Njikoka area, prior to the commencement of construction work on a chosen site, surviving trees such as ogilisi and ogbu are planted and observed. Should they die, it is a very bad omen and the site must be abandoned. On the other hand, their survival signifies the consent of alusi and ndi ichie. When the compound is eventually built, these objects, used as signs of the future home, become religious objects in the compound. The significance of the 'sign of home' is demonstrated by the fact that, in Awkunanaw for instance, if the prospective compound owner dies before building his proposed compound, he is buried on the site, for it is regarded as his home from the day the sign was placed.

These preliminary rituals usher in the site work and subsequently the actual construction of the buildings. The initial site work, ikwado ala ezi, includes clearing the site of vegetation, tilling and levelling it, constructing a pathway to connect the site with the existing network of pathways in the village, and planting some trees, such as palms.

As soon as the site work is completed, the chosen form of the proposed house, which may be rectangular, square, circular, oval, or a combination of any of them, is marked out on the site. The orientation is normally such that when the compound wall is built, the compound main gate will face the main pathway. Neither pegs, ropes nor tapes are used by the Igbo in setting out the proposed building; instead they employ a number of means of measurement, such as close-foot stepping, nzo ukwu, normal walking steps, ije, and the use of the midrib of palm fronds, ogugu. Using close-foot stepping, for instance, a standard rectangular room size is about 10 x 16 steps.

Having thus marked out the desired form of the house on the site, the next step in the building process is to construct the foundations.

Foundations

The Igbo use three types of foundations in their building construction. The choice of which type to use for a particular building depends on the structural system to be used in the building. For instance, a load-bearing wall structure requires a trench or strip foundation, the skeletal or timber-framed structures require that the timber used as posts be footed firmly on a good holding ground, while the composite structure may require both trench and footing foundations.

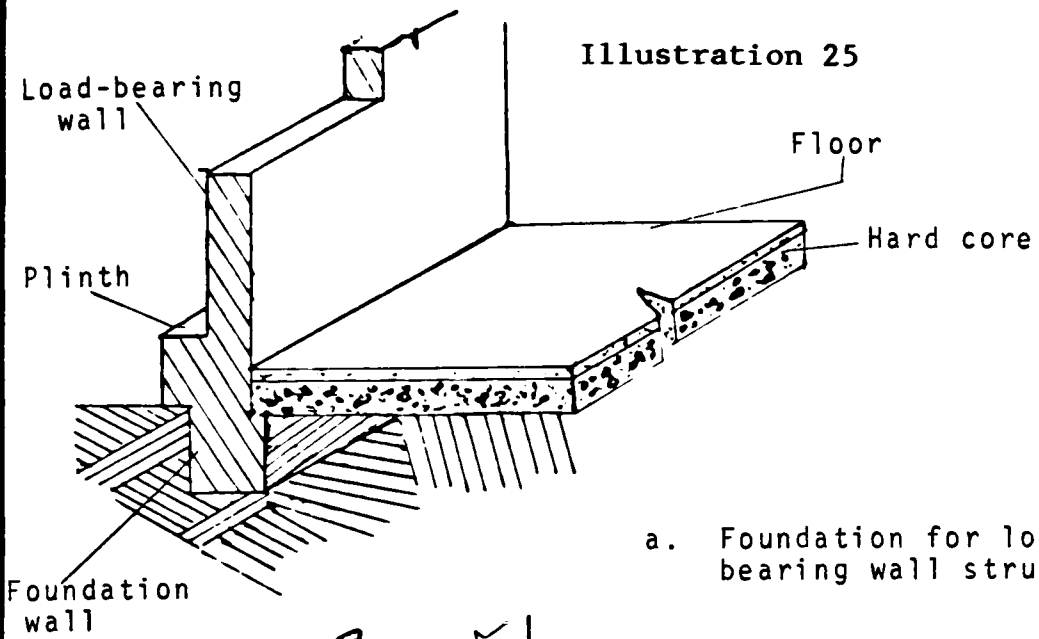
To construct a foundation for a load-bearing wall,

(ill. 25a) shallow trenches are first dug along the contour of the proposed building marked out on the site. The depth usually depends on how far a good holding ground is from the surface. This is, however, often found just beneath the loose top soil. So the depth seldom exceeds 1m. The width of the trench is usually 0.40m or more, and generally the foundation wall is thicker than the normal wall it carries, although the same mud is used for both. Already prepared mud is laid on the good holding ground and the foundation wall is built on it. If preformed, sun-dried mud lumps are to be used, wet mud is also first laid in the trench and then the mud lumps laid on it. Even at this critical stage wet mud is the only mortar used.

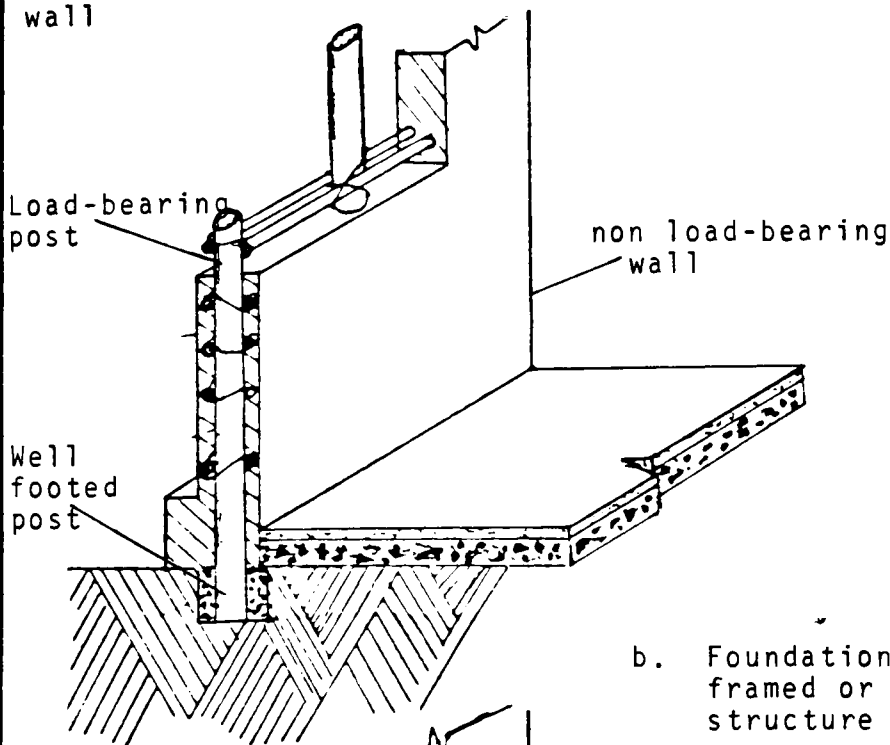
The foundation for a timber-framed or skeletal structure (ill. 25b) does not require a trench. Holes are dug at intervals along the form marked out on the site. Intervals for the holes are determined by experience because they vary with the strength of the timber used as posts. My survey, however, shows that such holes are placed at intervals of 0.75m to 3m. Timber posts or columns are erected in the holes. The holes are then filled with rubble and mud, and strongly rammed. These posts actually carry the whole structural framework. This form of construction was widely used in Europe, and archaeological evidence in England shows it to have been a form of construction from the Bronze Age to at least AD 1200. Because of the danger posed to this type of foundation by termites in Igboland, the holes and the bases of the posts used are usually treated with oguru, the liquid by-product of palm oil.

A composite structure normally requires a trench foundation for the load-bearing walls and a footing foundation for the timber structure (ill. 25c). The methods of constructing them are similar to the ones described above. This form of construction was also widely used in England in the earlier Middle Ages.

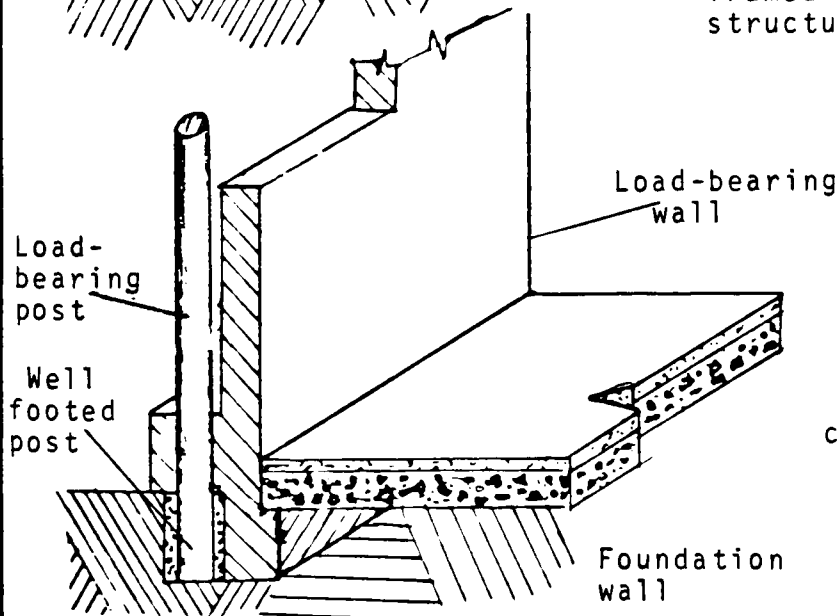
Illustration 25



a. Foundation for load-bearing wall structure



b. Foundation for timber framed or skeletal structure



c. Foundation for composite structure

Foundations

Most foundations of Igbo houses are susceptible to deterioration owing to constant leaching of the wall base by rain and flood. This is averted by building the foundation wall into a plinth which surrounds the base of the external walls. Normally both the plinths and the foundation wall are built up to a varying height of 0.30 - 1m, and left to dry before the wall of the house is built on top.

Walls

Wall construction starts immediately the foundation walls have dried out sufficiently to carry a weight. The methods the Igbo use vary and the use of a particular one may depend on the intended structural system. For example, the walls of a load-bearing solid mud structure can be constructed by the dry mud, the layering, or the rammed earth method. The walls of a skeletal or timber-framed structure are usually constructed with a wooden framework and then finished with either timber boards or mud infill, while those of a composite structure can be constructed by any of these methods.

Solid Mud Walls

Solid mud walls may be load-bearing or non load-bearing. It is, however, very easy to differentiate one from the other, because load bearing walls are usually very thick.

There are three main traditional methods of constructing solid mud walls known to the Igbo. These methods are the dry mud method, the layering method, and the rammed-earth method. Of these three main methods, the first, the dry mud method, is not popular in Igboland any longer. It involves the use of preformed lumps of sun dried mud used in a similar way to bricks. Wet mud serves as binding mortar. Among the Arabs and the Hausa of northern Nigeria, the use of preformed sun dried lumps of mud for building

purposes is still very popular. In England, this form of building is called clay lump or clay bat.

In traditional Igbo construction, a number of courses of about 0.5m high is laid each day and left to dry before any subsequent course is laid on top of it. Walls built by this method show fewer cracks in course of time, but time is wasted waiting for the lumps of mud to dry out in the sun. Furthermore, in Igboland, where convectional rainfall may occur even during the dry season, there is the added problem of sheltering the lumps and the walls from the rain during construction.

The second method of constructing solid mud wall is by layering with wet or puddled mud. This method is similar to English cob construction. Kneaded wet mud is delivered to builders in lumps of about the same size as a football. The builders drop them into position with force. The wall is then rammed and shaped by fist. Any excess that may bulge is pinched off in the course of ramming and shaping, and both sides of the wall are smoothed with the palm of the hand. The wall is built up in this way, in courses of 0.35 - 0.50m, each course being allowed to dry out before the next course is laid on top. The drying period allowed for each course is usually not less than four days. Before adding the next course, the straightness of the former courses is checked by eye and corrected by ramming and shaping if need be. This process is repeated until the walls have grown to the required height. The walls of a small house may take as much as 30 days to construct, those of larger buildings taking proportionately more. The homogeneity of the whole walls is achieved by the cohesion of the wet clayey mud.

Window and door openings are subsequently cut out during the process of wall construction. Timber is commonly used for lintels, although for smaller openings, such as those for windows, the necks of disused pots may be fixed in the openings.

The walls are finally dressed by beating and smoothing with the side of a matchet. They are then left for a longer period to dry out. Before they are quite hard, however, they are re-checked for straightness and any fault is corrected immediately. At this stage, a severely out-of-plumb wall usually involves the removal and rebuilding of the affected courses. As shrinkage occurs and cracks show up, the cracks are plugged up with wet mud and rubbed down with clayey water.

This method of constructing walls is simple and direct, but it is slow as adequate time has to be allowed for each group of courses to dry sufficiently before the next is added, and the cracks that develop during the drying period may allow water to penetrate the structure and weaken it if not immediately filled. The method is not very common in the southern part of Igboland, especially towards the coast where relative humidity is very high, because thick solid mud walls absorb and hold moisture, which is detrimental to the stability of the structure and the health of the occupants.

The third and perhaps the most sophisticated traditional method of constructing solid mud walls is the rammed-earth method. Unkneaded mud is piled and pounded hard by foot, rammed and beaten with wooden beaters, and finally trimmed by hand. During these processes, the faces of the wall are occasionally moistened with a spray of water squirted from the mouth and rubbed in by hand (ill. 26). The wall is then beaten again with the beater, and, after wet-rubbing once more, is sufficiently strong for an ordinary building.

This method is similar to the pise method which was widely used in Europe from prehistoric times and recorded in France as late as 1562.¹⁴ The difference, however, is that in the pise method, mud was rammed into a type of form-work, but the Igbo make no use of it.

Illustration 26

Rammed-Earth Method of Wall Construction.



My survey shows that in Igboland, load-bearing walls taper upwards from the base in order to minimise weight and avoid structural failures. This tapering or battering is more noticeable in walls constructed by the rammed-earth method than the others. Such walls may be as wide as 0.60m at the base and only 0.15m at a height of 2m. They are also usually not as strong as those constructed by layering with wet or puddled mud. They are, therefore, expected to carry only light roofs and so are most suitable for compound walls and small houses. The great advantage of this method is that it is very quick. A missionary who witnessed the construction of a rammed-earth wall while visiting Nteje and Asaba in 1898, wrote:

In an incredibly short space of time a few men will raise a wall, which, with a mat covering on top, will last a long time. The other day, at Asaba, forty Nteje men astonished the people there by raising a very long wall round the large piece of ground on which the European missionary's house is to be built. The Asaba people attribute their work to magic.¹⁵

Less water is used in this method so shrinkage is minimal. Also the total absence of a drying period increases the rapidity of the process. Walls constructed by this method are, however, easily breached by rodents.

During the field work, I observed that usually when load-bearing walls are used in a particular building, even partition walls that do not carry any weight are of the same cross sections as those carrying the weight of the roof. A further observation is that the Igbo are always cautious of allowing too many openings in load-bearing walls, as they weaken the structure.

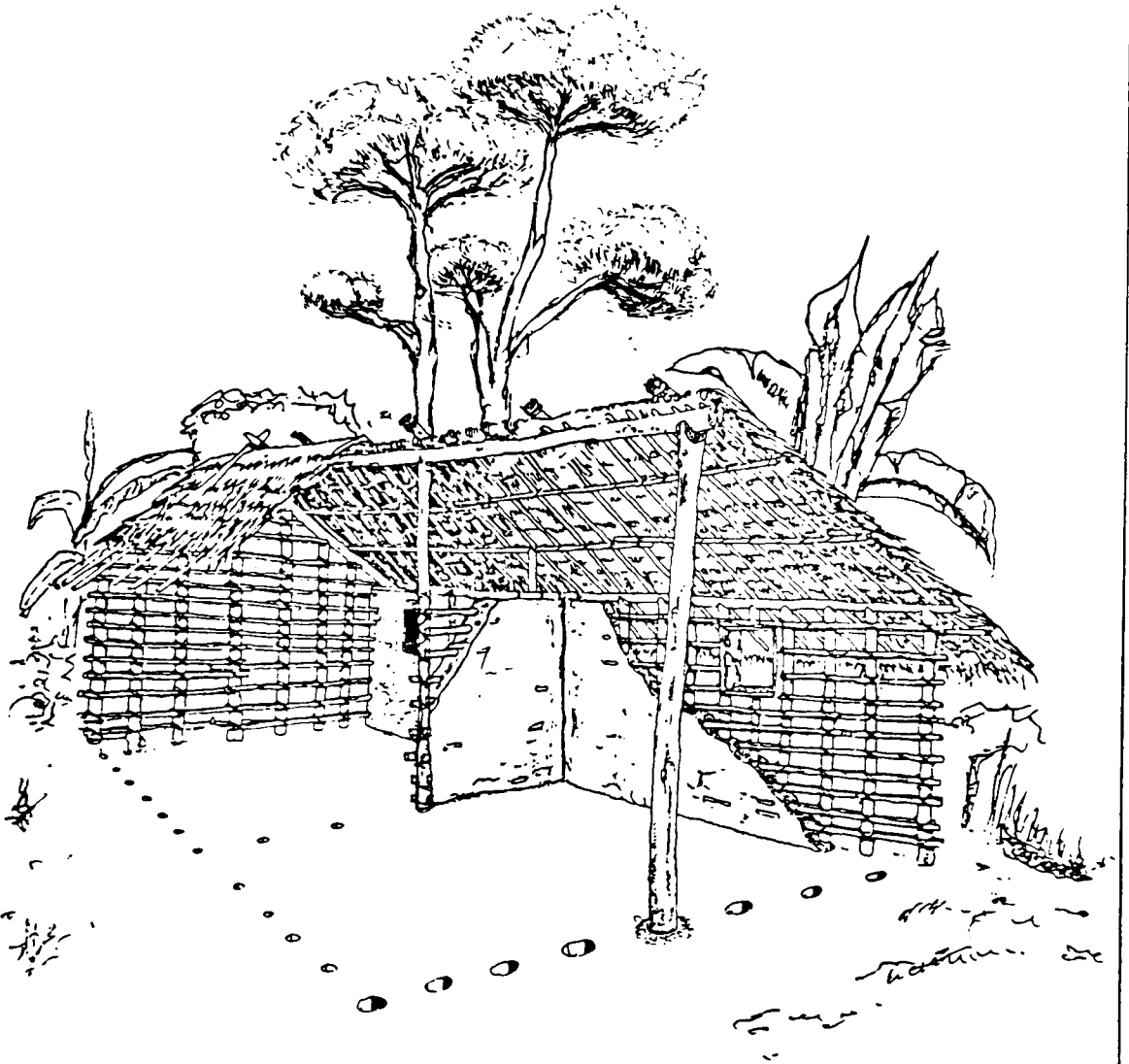
Walls for Skeletal and Composite Structural Systems

Talbot, in his broad survey of rural houses in southern

Nigeria, wrote: "In Owerri Division the walls are thinner and strengthened by a framework of sticks inside the clay, ..." ¹⁶ He was in fact referring to a variation of timber-framed wall system used in the southern part of Igboland. Here, timber-framed walls predominate, and may be constructed in various ways. Some are non load-bearing and mainly serve as external walls or partitions. These are thinner than the load-bearing types, but generally their thickness ranges from 0.15 - 0.28m, the thickest being found in the northern part of this region. In all there are three main methods of constructing timber-framed walls.

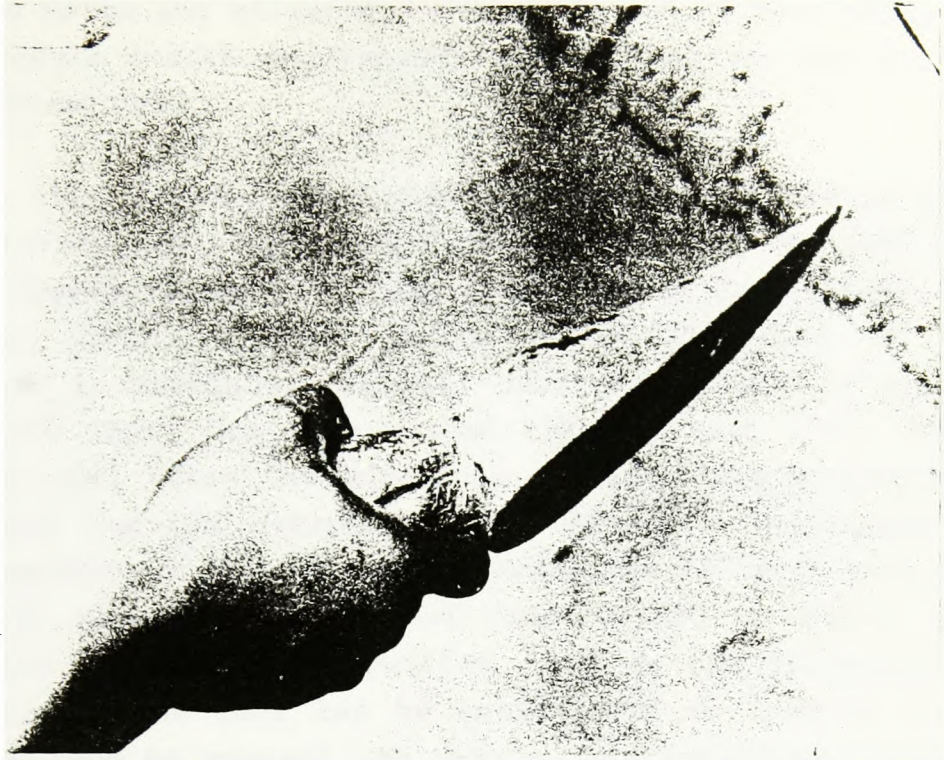
The first method employs wattle and daub. The structural framework of the house is first erected. The different sizes of timber needed are selected by experience, but observation again shows that the Igbo often use more timber than is necessary for structural stability. Vertical timber posts of 0.15 - 0.30m diameter are fixed firmly in the ground following the outline of the proposed building and spaced at 0.75 - 3m centres. They are strengthened, inside and outside, by horizontal members of split timber, bamboo, or palm midribs 0.03 - 0.08m in diameter. All these members are lashed together with rope to form a type of trellis framework. This forms the main wall structure of the building, but it still has many small rectangular openings between the posts and the horizontal members (ill. 27). Into these small rectangular openings, lumps of wet mud are pressed by hand as infilling. Additional layers of mud 0.03 - 0.06m thick are then plastered on to both sides of the structure to cover the timber framework. Both surfaces of the wall are smoothed over with locally made wooden trowels (ill. 28a). The timber framework is protected by the mud plaster and it in turn helps to control shrinkage and minimise cracks. It is best to allow the mud infilling to dry before plastering the covering layer on to it, as this produces a better result. Although walls can be raised within a few days by this method, it is better to work more

Illustration 27

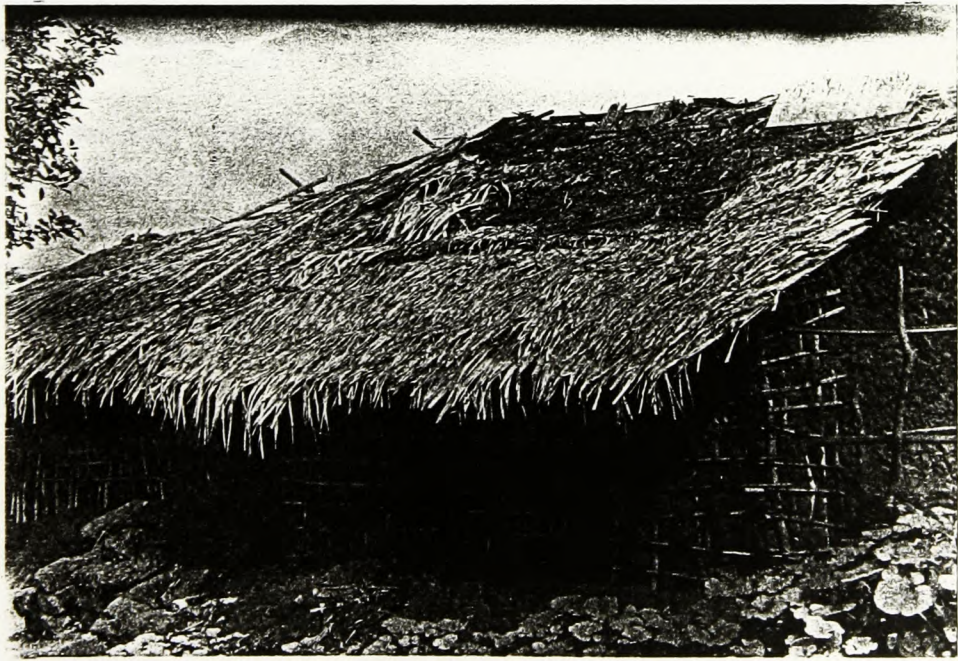


Stages of Construction of a Wattle and Daub or
Skeletal Structure with Mud Infilling.

Illustration 28



a. Locally-Made Wooden Trowel.



b. Wattle and Daub Structure showing exposed Skeletal Members.

slowly by applying the mud infilling in courses of not more than one metre and allowing a drying period of four days, so as to reduce cracks and improve the grip of the mud on the timber framework.

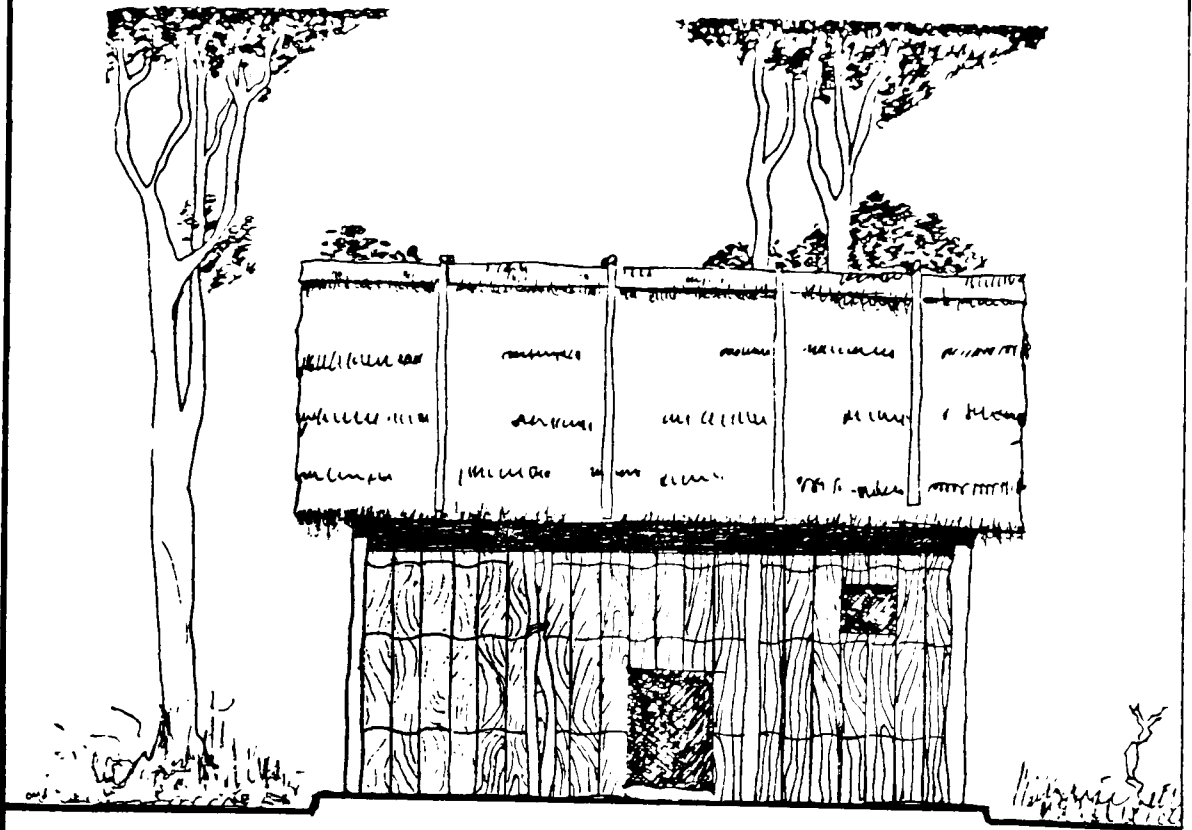
By this method, the thickness of the wall can be kept to a minimum. Its main disadvantage, however, is that the timber framework may rot away unnoticed or be attacked by termites. This is more likely to be the case if the framework is initially not well covered with mud or if the protective layer has been washed away by rain (ill. 28b). That may well cause the structure to fail. Long overhanging eaves and regular re-daubing are, therefore, necessary to avoid exposure of the structural framework to heavy rain. On the other hand, this method of construction is easier than the solid mud wall construction, and as the framework is built first, the roof can be constructed as soon as it is finished, and so protect the undried mud infilling and daub beneath it in case of sudden rain.

Because of its advantages of quick and easy construction, this method, which was originally predominant in the southern part of Igboland, is now widely adopted in some parts of the north as well, for instance among the Ikem and Obolo Eke Igbo.

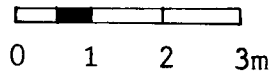
The second method involves using timber to construct both the structural framework and the walls. In this method, the structural framework of posts and beam is first erected. Then the spaces between the posts are filled with closely fitted timber boards lashed together with ropes (ill. 29).

The third variation in the construction of timber-framed walls uses structural posts to carry the weight of the roof and non load-bearing mud walls to enclose the building instead of timber boards. A typical example of this (ill. 30) is seen in the house of the first wife of the chief priest, known as atakama, of Oguruter Agu in Enugu

Illustration 29

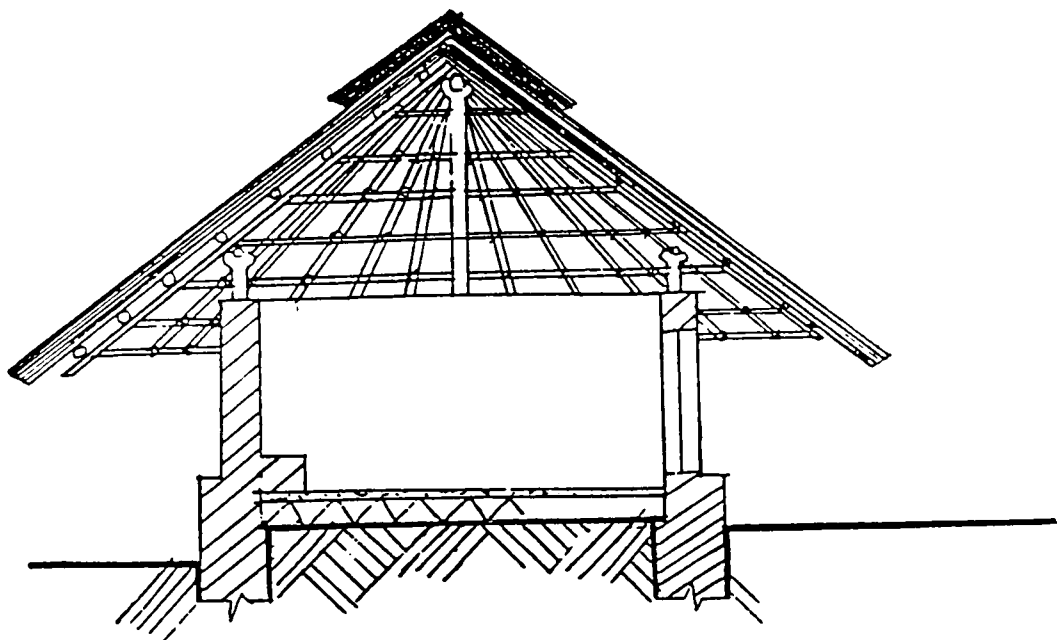


Scale

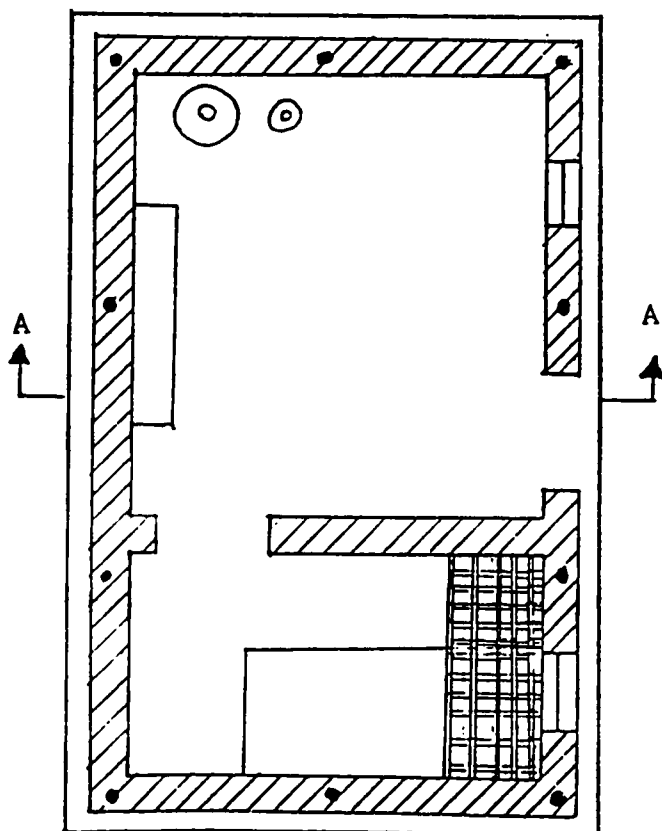


Timber Board Walling in Uratta.

Illustration 30. House of the First Wife of the Chief Priest of Ogurutee Agu, Enugu Ezike, Non Load-Bearing Wall.

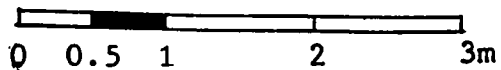


Section A - A



Plan

Scale



Ezike. As the diagram shows, the walls of the house are built up round the timber posts, but stop 0.75m short of the wall-plates, which rest directly on the vertical posts.

In many areas in the northern part of Igboland, rectangular buildings have both load-bearing mud walls and a load-bearing timber frame which together form a composite system (ill. 31). Apparently this type of construction was necessitated by the need to support long overhanging eaves. The methods of constructing the walls for composite structures are similar to those used for solid mud walls, described above, and the posts are set into the ground in the same way as in other timber-framed structures.

In all these cases of traditional wall construction in Igboland, defects such as cracks, are rectified immediately they show up. A very popular method of doing this is to fill in the cracks with a spongy by-product of palm oil, ev-vu, first, and then cover it with kneaded mud.

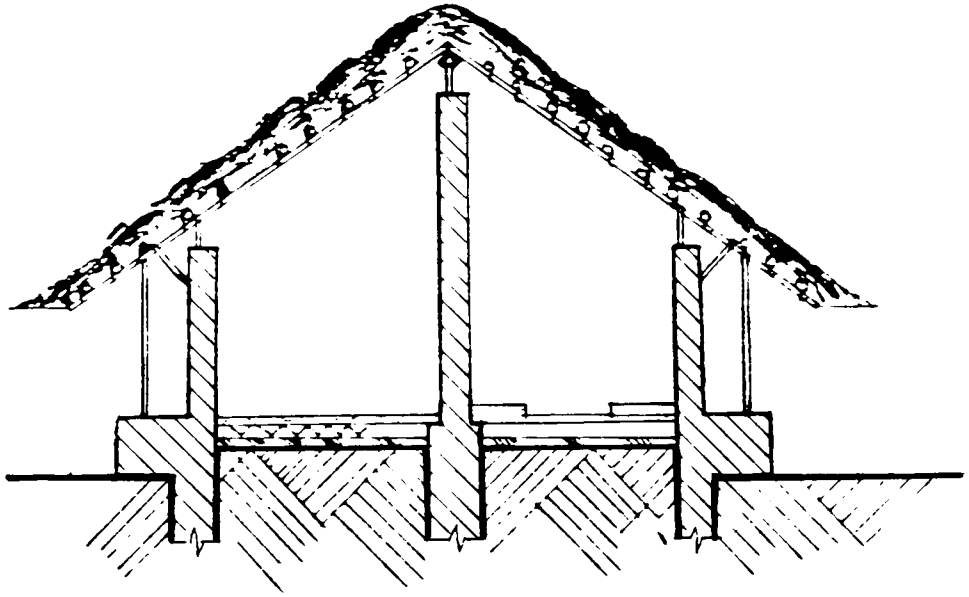
Roofs

As the roof affords most protection from the sun and rain, it receives much attention in traditional Igbo architecture. The choice of the materials used in its construction always greatly depends on the availability of natural materials locally.

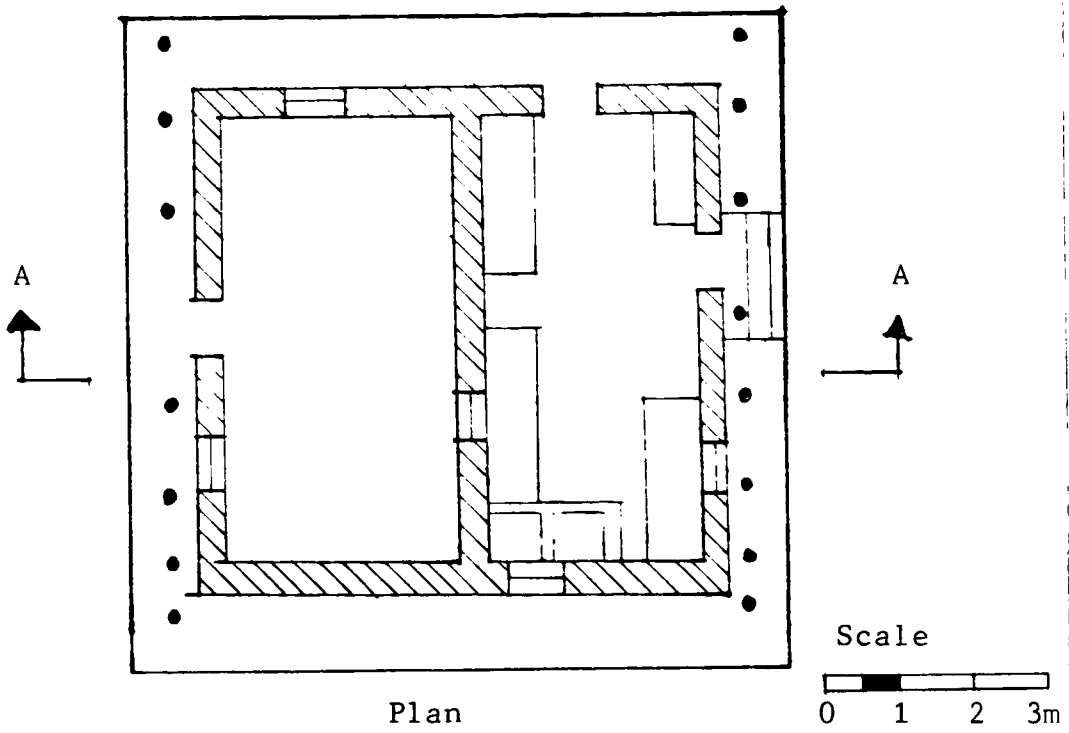
The structural part of the roof must be strong enough to support its own weight and resist other stresses it may be subjected to. Care is therefore taken to select only suitable structural members and experience is equally needed to ensure that the finished roof does not leak. Important structural elements of the roof include the ridge-beam, the central post, the wall-plates, the eaves-beam, the rafter and the purlin.

Unlike the foundation and the wall, the choice of the

Illustration 31



Section A - A



Plan

House of Mazi Igweshi be Ede in Agbani.

roof structure to be used on a particular building is usually independent of the structural system used in the rest of the building. The influence of the wall structure on the roof is seen only in the method of connecting them together. In a load-bearing wall structure, for instance, a wall-plate is necessary, while in a timber-framed structure the eaves-beam may serve as the wall-plate instead. What mostly determines the nature of the roof structure to be used is the intended roof form.

The warm, humid climate of Igboland and its tropical rainfall dictate the use of steeply pitched roofs (ill. 32). Talbot pointed this out in his survey of rural houses in southern Nigeria thus, "South of Onitsha, some of the peoples have peculiarly high-pitched roofs".¹⁷ Roof pitch has, in any case, a significant effect on the performance and life span of a traditional roof. A low pitch has the adverse effect of delaying the run-off of rainwater or even allowing it to collect on the roof. This may cause thatch to rot and consequently leak. A steep pitch of 50 degrees or more ensures the immediate run-off of rainwater and reduces the amount of solar rays incident on it. Consequently, Igbo roofs normally have a steep pitch. In some cases the steepness can be too great for other types of external cover, for instance some sort of tile, which could easily become detached. In practice, while most Igbo houses have steeply pitched roofs, this is not a hard and fast rule. During my field work I surveyed some buildings with roofs that deviate from this norm. It was, however, explained to me by natives that leaks are more frequent in the latter. In addition to being steep, roofs in hot humid zones like Igboland should possess high heat insulating qualities and low thermal mass to ensure the least intake of solar heat and the least heat storage capacity.

Just as the Igbo use several structural systems, so do they also use a range of alternative roofing forms; hipped, pyramidal, gabled and conical. The use of these forms is

Illustration 32

Steeply Pitched Roofs of some Igbo Houses.



determined, in most cases, by the form of the building itself. For instance, Igbo buildings with circular forms usually carry either conical or pyramidal roofs, although it is technically possible to give them gabled or hipped ones.

These roof forms used in traditional Igbo construction form two large groups, the gabled and the hipped roofs, and the conical and the pyramidal roofs. Single pitched roofs are also occasionally used by the Igbo.

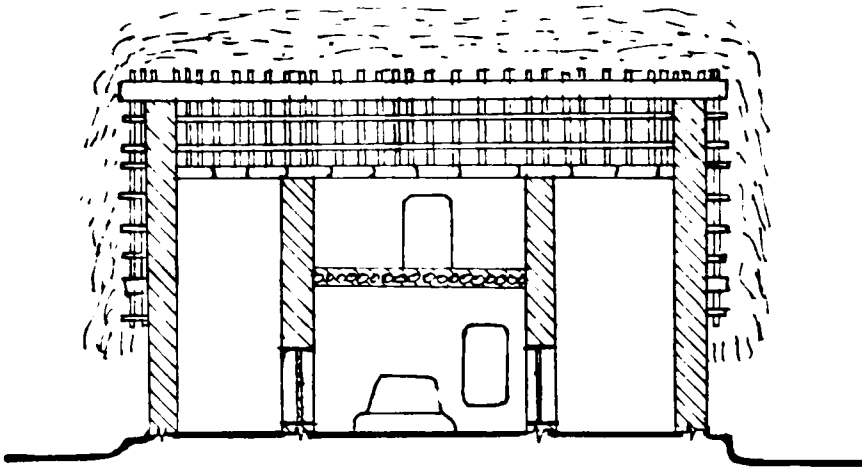
Gabled and Hipped Roofs

Gabled and hipped roofs are commonly associated with houses of rectangular plan. In the construction of these types of roofs, the ridge beam is the most crucial element. It bears the highest point of the roofs and is usually very strong.

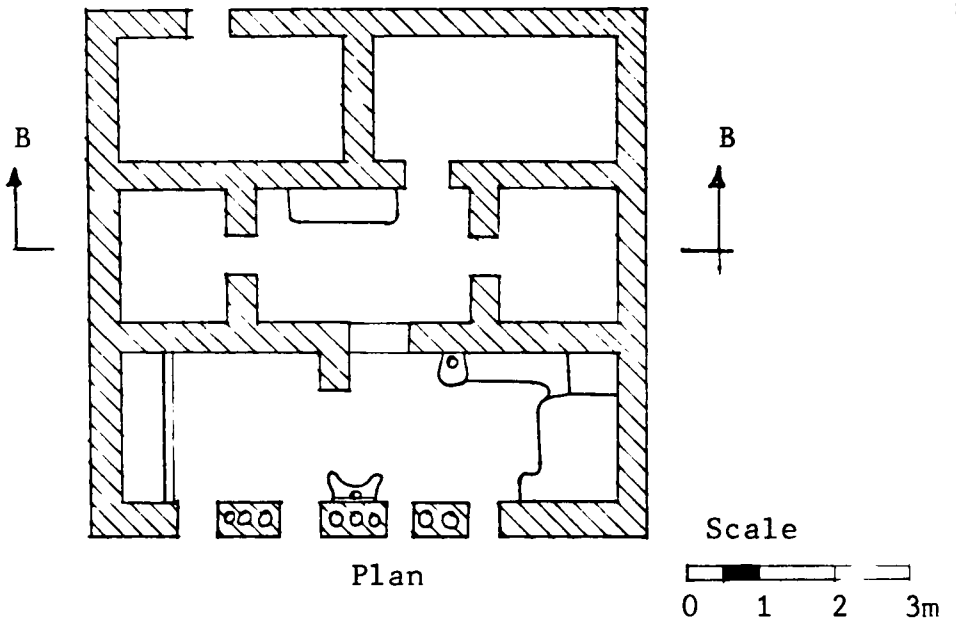
In buildings with load-bearing walls, a central bearing wall may be adapted to carry the ridge-beam. This is the case in the house of Mazi Igweshi Ede in Agbani (ill. 31), in which short pegs fixed on a central bearing wall carry the ridge-beam. Alternatively, gable walls may hold the two ends of a very strong timber ridge-beam instead, as is shown in the house of Chief Arum Ogbodo in Akwuke (ill. 33). In either timber-framed or composite structural systems (ill. 34), a ridge-beam may also rest on two timber posts at each end of the building. Depending on the length of the building, a number of central posts may also be introduced to prevent the ridge-beam from sagging (ill. 35).

The wall-plate serves as the connection between the roof structure and the rest of the building. In a building with load-bearing walls, it may be directly lashed to the top of the wall with rope, or to short forked wooden pegs fixed to the top of the wall. Depending on the weight of the roof and the size and strength of the timber in use, the

Illustration 33



Section B - B



Plan

Scale

0 1 2 3m

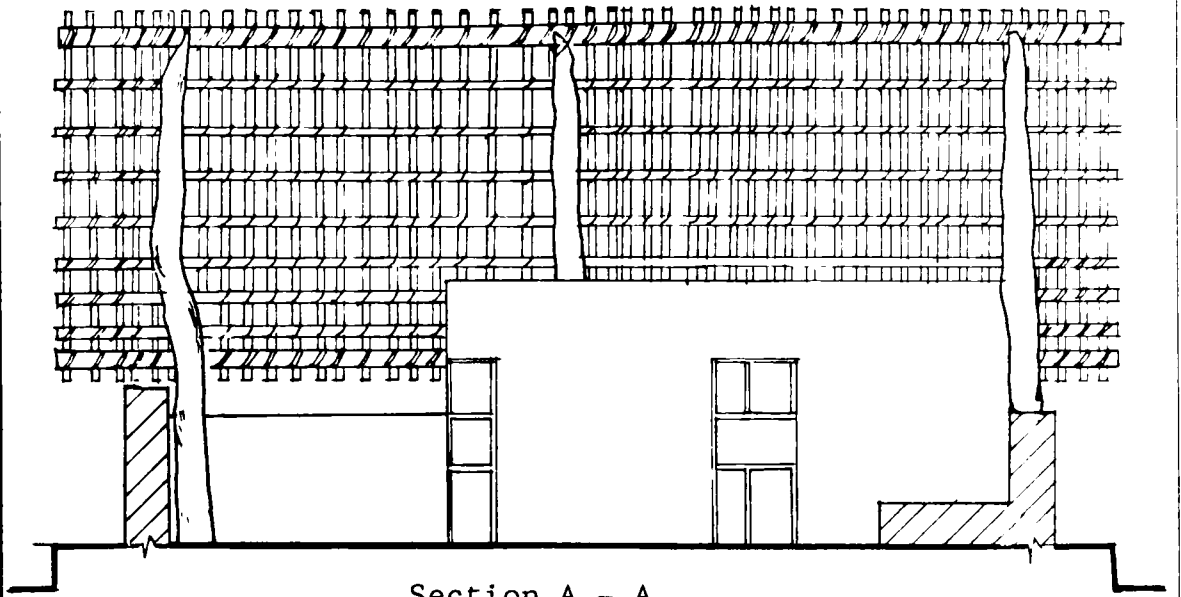
House of Chief Arum Ogbodo in Akwuke, Gable Walls bearing the Ridge-Beam.

Illustration 34

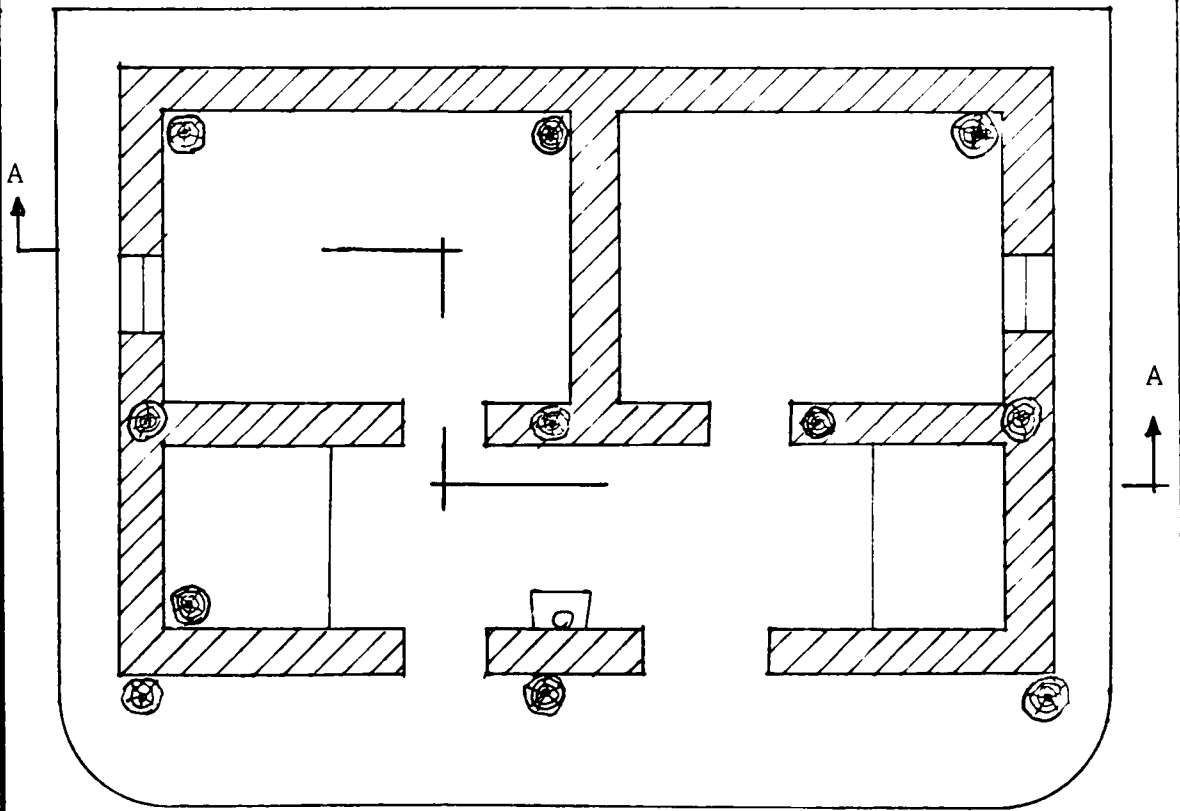
Cable Post Bearing the Ridge-Beam



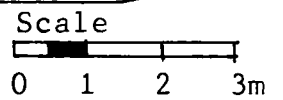
Illustration 35



Section A - A



Plan



House of Mazi Nwokorie Nwasa in Awka.

(Note the Central Ridge-Post)

wall-plate may be a single piece of timber 0.08 - 0.12m in diameter, or a combination of a number of split timber pieces tied together.

Eaves-beams support rafters which extend beyond the walls to form overhanging eaves. In load-bearing wall structures, eaves-beams may not be necessary as the rafters rest on the wall plates and merely extend beyond the walls. In the timber-framed and composite structures, they are borne on forked posts.

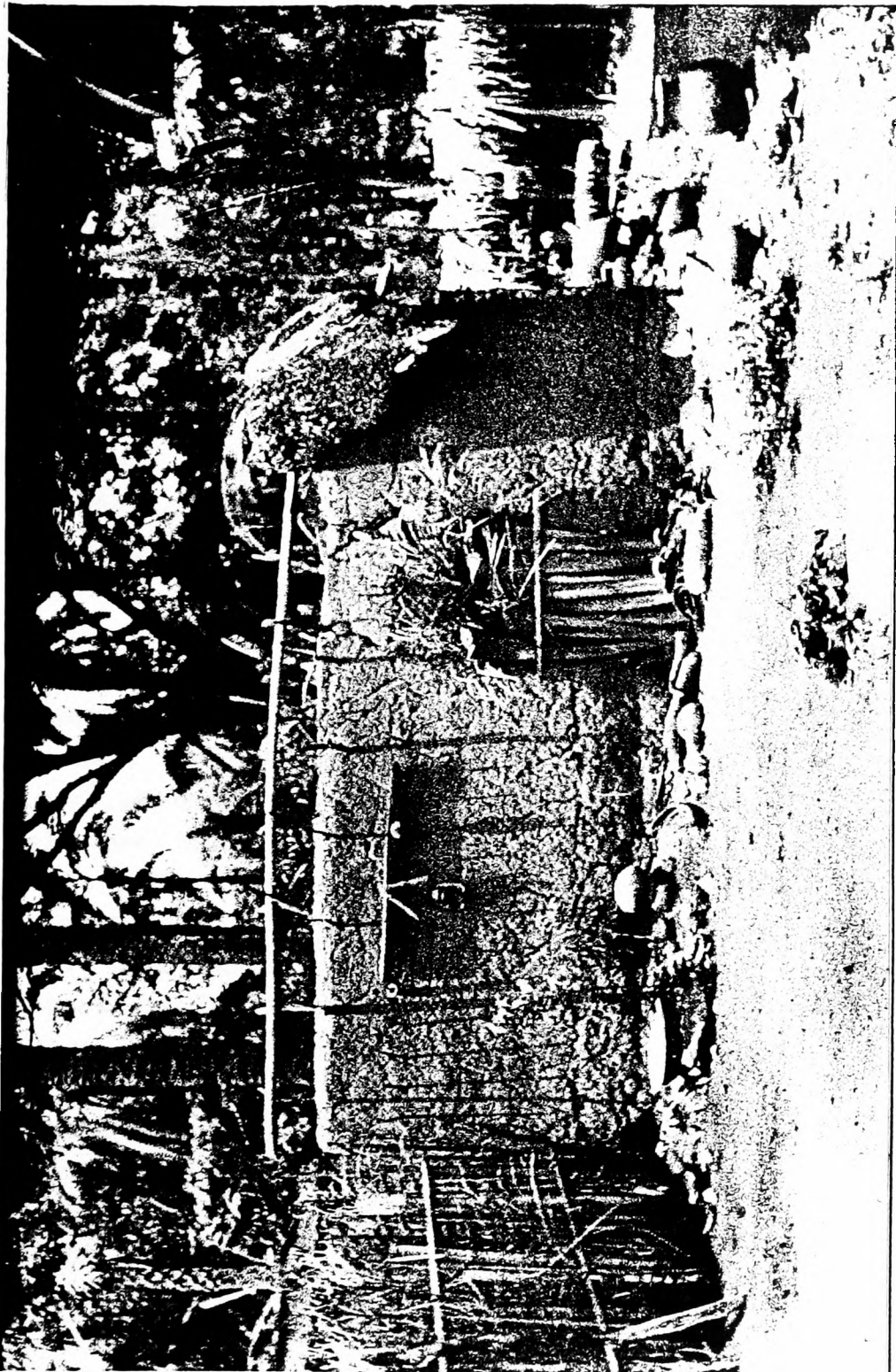
Rafters are usually of split timber, bamboo, or palm midribs arranged to span between the ridge-beam and the wall plates or eaves-beams. There is also an alternative arrangement whereby they are made to extend further by resting on beams borne by short pegs, projecting at angles from the external side of the load-bearing walls (ill. 36). This arrangement makes it possible for the eaves to project downwards to as low as 1.5m or even less, without the use of eaves beams or extra posts to support them. As we have seen, the projection of the eaves is crucial for the protection of the mud walls from the rain and solar heat.

The use of tie-beams and other triangulating members of the roof structure to improve its stability are rare features of traditional Igbo architecture. The absence of triangulation is one of the factors that limits the span of Igbo houses. This factor also dictates that the rafters must be sufficiently strong to resist buckling. It further dictates that the roof cover must be light enough to ensure minimum weight on the rafters.

Lighter split timbers, split bamboo or palm midribs form the purlins. They are laid along the rafters in a direction which is perpendicular to the direction of the rafters, at close distances of 0.05 - 0.10m, and lashed to the rafters with rope or string. In some cases, double purlins may be used, both similarly lashed to the rafters

Illustration 36

A Disused House in Mazi Igweshi be Ede's Compound showing Inclined Pegs that carry Eaves-Beams



but one on top and the other below the rafters.

Generally, the thatching work (ill. 37a) is done in relays. A number of men work on the top of the roof structure while others feed the required materials up to them, either by throwing them, or by attaching them to long poles. If already prefabricated raphia mats are to be used as the external roof cover, these mats are attached directly to the purlins with string, starting with the lowest purlin and working towards the ridge-beam. The rows of mats are laid 0.05 - 0.10m apart from one another and each row is laid so that the end attached to the purlin is overlapped by the free end of the next row.

The ridge is a very critical point and its cover is normally prefabricated on the ground and then raised into position to form a finial. This finial is prepared by lashing pairs of mats to a long bamboo. Grass or palm leaflet packing is tied along the bamboo in between the pairs of mats to improve the water resistance of the ridge. This arrangement is then straddled on the ridge and lashed to the ridge-beam with string. This marks the completion of the thatch work. Bamboo or palm midribs are then laid on the roof and held down by string to avoid the mats being blown away (ill. 37b). In the past, in the Hebrides of Scotland, thatch was similarly held down by rope nets because of strong winds. This method of thatching is common in the south and south-east of Igboland. It is more labour saving and faster than other thatching methods used by the Igbo.

If grass is to be used as the roof cover of a gabled or hipped roof, the method of constructing the structural parts of the roof is similar to the one described above. Mats, woven out of oil palm fronds, a native form of macrame work, are, however, laid on the roof structure first. The grass to be used is arranged in small bundles of 0.15 - 0.20m in diameter. These small bundles are lashed to the purlins in a way similar to the method described above.

Illustration 37



a. Roof Construction in Progress.
(after Basden, 1921).



b. Completed Roof.

The ridge is also covered with a grass finial prepared and raised into place in a similar manner as the one described above. This method is used widely in the northern part of Igboland. Its predominance in that area is dictated by the lack of raphia palm trees and the availability of grass in abundance.

The construction of a conical or pyramidal roof is in some ways similar to the construction of a gabled or hipped roof. A radial system of rafters is set on top of the wall plate. The rafters are held together at the apex to form a conical framework. Concentric, lighter split timber, bamboo, or palm midrib purlins are lashed to the rafters at intervals of 0.05 - 0.10m between the apex and the base of the cone formed by the framework. If the span of the roof is 4m or more, a central post is normally introduced to support the apex (ill. 38).

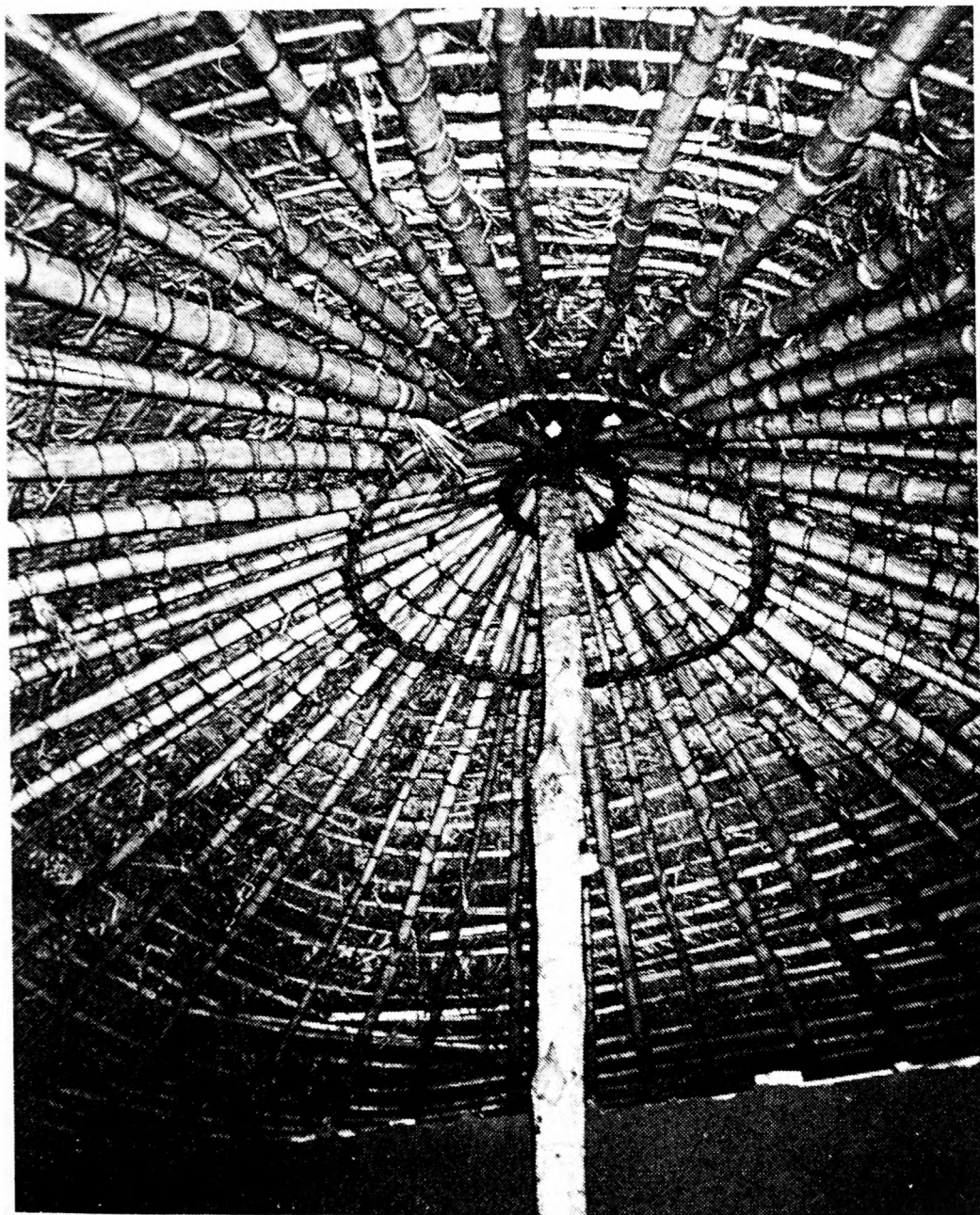
Raphia mats are rarely used by the Igbo on conical roofs, evidently owing to the difficulties in using rectangular mats to cover a conical structure. Grass is used as the outer cover of a conical roof in the same way as for a gabled or hipped roof. Covering the apex again presents a difficult task which requires experience. In some cases, a pot is inverted on top of the apex and held in position with ropes and weights. In others, a separate smaller thatched cone is prepared on the ground and raised into place. It is lashed to the central post or held in place by pegs driven through different points on it across the roof.

A system whereby the whole roof is prepared on the ground and raised into place is also known in traditional Igbo construction, but this is mainly used for conical roofs especially when the span to be roofed is small.

Grass and raphia palm mats, when used as thatching materials, do not produce air-tight roof surfaces like metal

Illustration 38

Central Post supporting the Apex of a Conical Roof.



sheets, so air and smoke still do filter in and out of the house through them. This improves the atmosphere in the house and prolongs the life of the thatching materials. Under the same conditions, a grass-thatched roof lasts longer than a mat-thatched one. This is because of the more delicate nature of the mats.

Beside the limited use of uma leaves for roofing purposes in west Igboland, they were also occasionally used in Nri. The leaves are similarly lashed to the purlins by their stalks. Layers of grass are bound over the ridge and down the corners, in the case of hipped roofs, to make these joints watertight. The leaves are also kept from being blown away in a similar way to the palm mats. These roofs are picturesque while the leaves are new, but, as they dry up, they warp and crumble, leaving holes in the roof.

In each of the methods described here, the edges of the eaves are normally trimmed to present an even appearance at the completion of roof construction. In all these types of roofs maintenance is frequently required, but constant smoke prolongs the life span of the thatch, as it discourages hibernation of insects and rodents and minimises rot.

Ground Floor Construction

Work on the floor normally starts as soon as the walls and the roof are completed. The structural part of the floor of an Igbo house is usually of hard earth. This may be obtained from the walls of a disused house, from clods taken from ant-hills, or mud dug from the ground.

The top soil, 0.05 - 0.08m thick, is first removed from the inside of the house and replaced with the hard earth. This is poured on the dug-out floor and strongly rammed with heavy clubs, called nchi, to form a hard core. The clubs are usually of wood or formed from the stalks of oil palm midribs shaped to be slightly off-centre to avoid hurting

the fingers. Water is sprinkled on the surface intermittently while the ramming and pouring of earth is continued until a hard surface, 0.20 - 0.35m thick, is obtained. Built-in mud seats and couches, called agbidi, agodo, and ikpo, are also constructed during this process of floor construction. In addition to serving as seats and beds, they also act as extra buttresses for the bases of the walls. Having completed the structural part of the floor and the built-in furniture, the rammed core is then covered with a thin layer of well-kneaded mud. A drying out period of at least four days is then allowed. Cracks may develop during this period and must be filled up and the whole floor rammed again.

The floor surface may be finished finally by grinding the mud with coconut husks or any smooth surface. Alternatively, the floor surface may be smeared with a solution of cow dung, and allowed to dry before use. Special treatment of the floor may involve driving palm kernel husks or similar hard objects into it, and grinding the whole surface. This method produces a long-lasting floor. Palm oil may be applied to the surface during the course of grinding to add gloss to the polished floor. Grinding the floor is usually done by women, and, throughout the life span of the house the floor is constantly maintained by polishing or rubbing with cow dung.

Basden noted that the Igbo construct their floors well above ground level. He attributed this to the need to avoid the floods that usually accompany heavy rains.¹⁸ In addition to this, however, my survey reveals that raising the floor well above ground level is a traditional method of making it damp-proof. In England, during the Middle Ages, rising damp and underscoring were prevented by building mud houses on foundations of stone or bricks.¹⁹ Stone is, however, not commonly used for building by the Igbo. In areas where the ground water is very close to the surface, other methods of constructing damp-proof floors are known. For example, a layer of broken earthenware, or kernel husks, or a type of

waterproof fibre sheeting obtained from the palm trees, locally known as orampe in Agbani, may be laid beneath the hard core. In other areas, such as Ututu in the eastern part of Igboland, canals known as oworo mmiri, are dug at appropriate corners of the house to let water off the walls and floor.

Raised Floors

Contrary to the popular belief that mud is a weak material which cannot be used to build houses more than one storey high, mud houses with two or more floors can be found in traditional Igbo architecture. A typical example is the uno nkpo in Nibo (see Appendix Two).

The construction of upper floors is simple but ingenious. Field work shows, however, that their construction is possible only when load-bearing walls are used. Usually, when the load-bearing walls of the ground floor have attained the required height, they are left to dry. Then timber or bamboo beams are arranged closely on the top of the walls to span the area that will carry the next floor. Mats, woven out of oil palm fronds, are placed on the beams and mud clods poured evenly on top and rammed. The rammed surface is then covered with a thin layer of well-kneaded mud. The surface is left to dry and then given a finishing treatment similar to ground floors.

Wooden ladders are used to reach these upper floors. They are just propped up in position when needed and removed afterwards. In most cases the upper floors in traditional Igbo architecture are used for special purposes. In the uno nkpo, for example, the upper floors were used as watch towers in the days of inter-tribal and village group wars, and slave raids. Among the northern Igbo of Ikem, the upper floor is known as oku agba, literally meaning incombustible. It is built as an incombustible ceiling to prevent the total destruction of the whole house in the event of fire. Fire

may gut the outer cover of the roof but the house may be saved by the mud used for the upper floor. In Nkanu, the upper floor is known as enu ere and provided a place for hiding children during the slave raids. Today, in that part of Igboland it serves as a special store or a place for special guests.

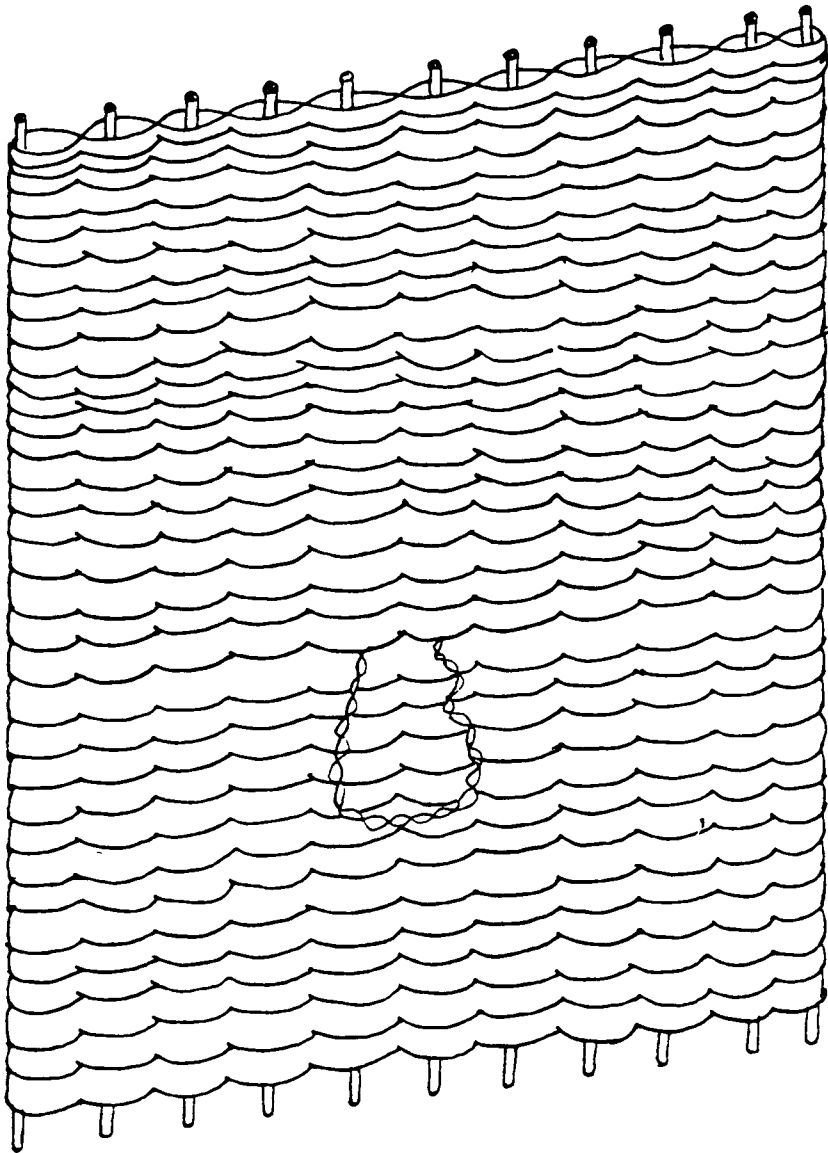
Doors and Windows

The earliest known doors in Igboland were in the form of wooden shutters arranged horizontally along a vertical post which was fixed at the centre of the doorway. To close the doorway, the horizontal wooden shutters were lashed with rope to the post across the doorway. Later, palm fronds or climber stems were woven to form a removable wickerwork panel which was used to close the doorway (ill 39). It was simply placed across the doorway to shut it and carried out when not required. Wickerwork panels were also widely used as door panels in East Africa in the past, and they are still used in the traditional houses of the Kuria of Kenya.²⁰

Window openings were kept to minimum sizes and only wooden rails or shutters were fixed across them. Later still, timber was introduced for door and window panels. Large trees, such as iroko and silk cotton trees, were felled and their trunks cut into panels of about 1.7 x 0.8m, which were used as doors and windows. Before European contact, no saws existed, so the panels were just hewn out using traditional axes and matchets. Some of these doors and windows are still used in traditional Igbo architecture. Doors are hung immediately the walls dry sufficiently.

Originally, hinges were not used, so the doors turned on two butts (ill. 40), one at its top inserted in a hole in the lintel, and the other at its bottom, inserted in a similar hole in the threshold. These served as substitutes for hinges. This method, known as har-hanging, was also

Illustration 39



A Removable Wickerwork Panel
used as a Door.

Illustration 40

Traditional Igbo Carved Door.



widely used in England up to the eighteenth century for hanging doors on barns and other agricultural buildings. On the inside, the Igbo used a drawbar to secure the door. Occasionally, a loop or rope or a few links of chain acted as the handle on the outside. Igbo doors are often elaborately carved, especially the ones being used on the compounds' main gates.

Wall Surface Finish

Applying the surface finish to walls is normally the last stage in traditional Igbo house building. The Igbo have a number of ways of doing this.

One method, which is seldom used, is simply to leave the wall surface undressed. Another method closely related to this and similarly seldom used, is to smoothen the wall surfaces by beating them with the flat side of a matchet or a similar object, while the walls are still fairly wet. The walls are then left to dry after this treatment.

A more sophisticated and popular method involves the use of cow dung on the surface of the wall. The wall surface is first smoothened while still wet and allowed to dry. A thick solution of cow dung is prepared with water, and a piece of cloth or any spongy material is used as a brush to give the wall a thick coating of the solution. As this dries, more layers are applied until the required effect is obtained. The resulting effect is that the house assumes a dull greenish colour, which is more pleasing to the eye than the natural earthen colour. In addition to improving the aesthetic appearance of the house, the dung coating forms a better water resistant surface than ordinary mud. This treatment, however, has to be repeated at least twice in a year if the effect is to be retained. The use of cow dung as a finishing material is also known among other peoples of Africa. For instance, Andersen thus described how houses are traditionally finished by the Luo of Kenya: "The thick walls

are filled up using mud, and then plastered with a thin layer of a mixture of clay and cow dung".²¹ According to Prussin, among the Tongo of northern Ghana, the plaster for exterior wall finishes is a mixture of cow dung, locust bean-pod juices and mud.²² Similarly, the Hausa of Nigeria use vegetable materials, locally known as makuba, mixed with cow dung for the same purpose. All these wall treatments are similar to the traditional plastering used in Britain from at least the Middle Ages and the purpose was the same; to combine decoration with waterproofing.²³

Another method of finishing walls popular among the Igbo is the use of loamy soil, upa, or rotten banana stem, ntute or ikpolo ogede. Upa is obtained from the bed stream, or collected in the course of sinking a well. It is applied to the wall surface with either a piece of cloth or some other similar spongy material, used as a brush. The upa on drying gives the surface an ash colour, while rotten banana stems, ntute, produce a dark brownish colour. Both of these colours are used effectively as backgrounds for more elaborate decorative designs on the wall surfaces.

In addition to their aesthetic effects, all these applications on wall surfaces also help to plug up small cracks that might have developed during the final stages of wall construction. Each of these applications breaks the monotony that would have been created by the similarity of the colour of the building mud and the ground on which the house stands. These wall finishes are only the start of the Igbo's decoration of their homes, and this will be discussed further in Chapter Six.

The completion of the wall surface finish marks the end of the construction process. This, however, does not mean the end of construction work in the compound, because, as was pointed out earlier on, the houses in the compound continue to grow or decrease in number relative to the owner's success or failure in terms of wealth and the number

of his wives and children.

Before the owner moves into his new house, a ceremony, known as mmege uno, or 'opening the house', is carried out. All the members of the community, his friends, and well-wishers are called together to celebrate the opening. The guests are lavishly entertained and prayers and sacrifices are offered to alusi and ndi ichie to bless the new home and defend the occupants from evil human beings and spirits, ajo mmadu na ajo mmuo. After this ceremony, the owner can move into his new home.

Conclusion

To conclude, a theme which characterises traditional building construction throughout the world is 'co-operation with nature', as opposed to entire subjugation or isolation from natural forces. Help is often sought from nature by the traditionalist as a significant partner. In traditional Igbo architecture, nature supplies most of the materials required for house building. Energy from the sun and water are all used extensively in the preparation of the required materials.

The traditional building materials which the Igbo use are mostly temporary ones. The temporary nature of these materials has been a subject of much criticism in recent times, but it suits the organic nature of the traditional family, since building with these materials enables the whole house or parts of the house to be knocked down and rebuilt to suit the growth of the family.

The traditional methods of building, both in Asia and Africa, and, as importantly, those once used in Europe, show that some of the materials used by the Igbo, their methods of preparation, the structural systems they use in their traditional construction, and the different techniques they adopt, are both widespread and have had an extremely long

history. In the same way, some of these constructional techniques, no matter how archaic they may be considered today, are similar in principle to those used in modern times. For instance, the sun-dried mud lump technique the Igbo use for walls is similar in principle to the modern technique of preformed construction with fired bricks, while the rammed-earth technique is similar to the modern poured-concrete technique. The trench foundation is basically similar to the modern strip foundation, while the foundation the Igbo use for bearing posts has some resemblance to modern footing foundations used for columns. Furthermore, structural systems similar in principle to the load-bearing wall, and the framed and the composite structures used in traditional Igbo construction are widely used in modern construction.

Although these similarities exist, a major difference is found in the method the Igbo use in fastening structural members together. Lashing is generally adopted by them, and triangulation of, say, roof structural members, is rare, whereas in some other cultures, for example in Europe, triangulation is common and nails are used for fastening. However, by even late mediaeval standards in Europe, Igbo methods are primitive. The Igbo timber-framed structure is not as imposing or solid. On the other hand, it is more flexible because of the use of rope and the absence of triangulation. It therefore allows individual members some limited independent movement under local stresses. Rope is, however, less reliable as a means of fastening, because it may turn brittle and thus become ineffective without this being noticed.

The involvement of everybody in the Igbo building process explains why the traditional methods are known to practically everybody. This knowledge is usually acquired by the practical participation of all the members of a community. The spread of adequate knowledge of the art of building is attested by the rarity of structural failure in

Igbo houses, as I observed during the fieldwork. This confirms that traditionally the Igbo have always had a very good knowledge of their environment and the characteristic performance of the natural building materials available to them. Furthermore, it demonstrates the success of the traditional methods they use.

It is, however, an overstatement to assert that traditional Igbo construction is entirely successful. The whole building process would be very hard and slow for an individual or a small group of people, because of the labour-intensive nature of the methods used. They are only possible because of the co-operation everybody expects, and indeed gets, from the whole community and in turn gives to it.

The use of thick load-bearing mud walls poses some problems of its own as a result of the high humidity that characterises the climate of the southern part of the land. This is because the mud walls absorb moisture and become weaker and can even harbour disease. Furthermore, mud is prone to cracking. Although the Igbo have methods of minimising this, there is no way of preventing it entirely, such as by the use of expansion joints.

While there is strong evidence to support the view that the Igbo have a good knowledge of the performance characteristics of the materials they use, there is also evidence that they use some of these materials uneconomically. For instance, they do not differentiate the thickness between load-bearing and non load-bearing walls. They also choose the sizes of the timber they use with too much emphasis on strength. Furthermore, their use of inefficient implements and methods, for instance for hewing doors and windows out of thick wood, do not make for economy of material. All these suggest that often more materials than necessary are used in traditional Igbo construction. Nevertheless, they are not alone in this respect. In

medieval England, thick mud walls were used whether load-bearing or not. Timbers were often of excessive thickness for the loads they had to carry, and they were also used with little understanding of the stresses they had to bear. However, in the case of England, to set against these theoretical disadvantages is the fact that the buildings were immensely strong and had the capacity to outlast their builders by many centuries. The traditional buildings of Igboland cannot do that, but their advantages outweigh their disadvantages by far within the social and economic conditions in which they are built.

REFERENCES

1. H. Engel, The Japanese House: A Tradition for Contemporary Architecture (Tokyo, 1964), p.101.
2. R.C. Anderson, 'Primitive Shelter', Journal of the American Institute of Architects, 36, nos 4 & 5 (1961), 33-39, & 46-55.
3. A. Rapoport, House Form and Culture (Englewood Cliffs, 1969), p.106.
4. J. Skolle, 'Adobe in Africa: Varieties of Anonymous Architecture', Landscape, 12, no 2 (1962), 15-17.
5. D. Aredeon, 'Architecture', in The Living Culture of Nigeria, edited by S.O. Biobaku (Lagos, 1976), pp.38-43.
6. P.A. Talbot, The Peoples of Southern Nigeria, 4 vols (London, 1926), III, p.889.
7. H.M. Cole, 'Art as a Verb in Iboland', African Arts, 3, no 1 (1969), 33-41.
8. S. Denyer, African Traditional Architecture (London, 1978), p.92.
9. F.W. Schwerdtfeger, Traditional Housing in African Cities (New York, 1982), p.81.
10. H. Balz, Where the Faith has to live: Studies in Bakossi Society and Religion (Basel, 1984), p.28.
11. S. Denyer, op. cit.
12. L. Prussin, Architecture in Northern Ghana (Los Angeles, 1969), p.57.

13. 'Iho ihe' is a ritual which entails organising a feast to express one's gratitude to one's ndi ichie, ala and chi. The ritual is normally performed according to the directives of a dibie.
14. J. Dethier, Down to Earth Mud Architecture: An old Idea, a new Future, translated from French by R. Eaton (London, 1982), p.57.
15. S.R. Smith, 'Christian Week Itineration in the Ibo Speaking Country', Niger and Yoruba Notes, 4, no 46 (1898), 82-3.
16. P.A. Talbot, op. cit., p.891.
17. Ibid.
18. G.T. Basden, Niger Ibos, first published in 1938, new impression (London, 1966), p.152.
19. H. Braun, Elements of English Architecture (Newton Abbot, 1973), p.31.
20. K. Blegvad Andersen, African Traditional Architecture (London, 1977), p.41.
21. Op. cit., p.134.
22. L. Prussin, op. cit., p.57.
23. R.W. Brunskill, Illustrated Handbook of Vernacular Architecture (London, 1971), p.66.

CHAPTER SIX

TRADITIONAL ARCHITECTURAL DECORATION

Introduction

Decoration is an art practised throughout the world. Its importance as a requisite for defining man as opposed to animal, and architecture as opposed to shelter has been pointed out by Lapidus. According to him, although birds, insects and animals can build impressive shelters:

There isn't a single example in the animal kingdom where an animal adorns itself or its abode. When the first creature looked at itself and decided it needed some form of adornment, purely for the sake of adornment, and when that adornment was created by him, this was no longer an animal - this was a man. When the first cave dweller scratched and coloured the wall of his cave, whether for religious or artistic reasons, he was truly a man, not a beast.¹

Among the different peoples of Africa, this natural instinct to decorate themselves and their homes is highly developed. The wall painting of the snake charmers of Tanganyika and those recorded from hut walls in Angola are among the most outstanding ones.² Among the Igbo, the importance attached to the home is partly reflected by the elaborate surface decorations it receives. This follows the Igbo belief that the respect and prestige one's home should show in society, should not only derive from the social achievements of its inmates, but also from its appearance. To them, home is among the most essential and valuable things in the world. A na esi n'uno mara mma puta ezi or 'home should be the starting point of beauty' they say. On a home, therefore, must be bestowed the most elegant

appearance possible by adorning it with impressive decoration. Early visitors to Igboland marvelled at the artistic prowess of the Igbo. Talbot, for instance, wrote:

Among the Ibos the decorative sense seems both more general and highly developed than with any other West or Central African people as yet known to us.³

Decoration in traditional Igbo architecture is, however, not restricted to their compounds or homes only. Shrines, meeting houses and club houses are also often decorated. Generally, this art is considered as a feminine affair by the Igbo, but the menfolk may also be involved in it, especially when certain techniques are employed.

House Decoration Techniques

The methods used throughout Igboland vary immensely, and some are more developed in certain parts of the land than others. Chadwick, having observed this in his survey, wrote:

Just as the Ibos of different localities have their own distinctive dialects, so also they have their own distinctive styles in the decoration of the walls of their houses.⁴

A simple method, though seldom employed, is to smoothen the surface of the wall while still wet and paint it with either cow dung or rotten banana stems. This, as has been shown in Chapter Five, in addition to being more aesthetically pleasing than the natural earthen colour, minimizes the eroding effect of rainwater on the wall surface. More often, decoration involves bas-relief, insertions, colour mural painting, or the use of moulded and carved objects. Materials such as indigenous paints, plates, pieces of bottle, cowries and clay, are used. It was the

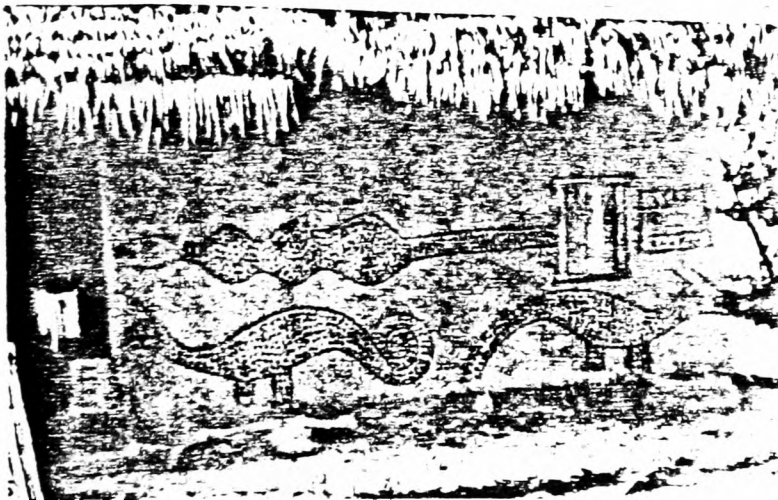
availability of these raw materials in a particular area that established local traditions of decoration. Relief and bas-relief (ill. 41) were widely practised in the northern and western parts of Igboland, especially around Awka, Nnewi and Ogwashi-Ukwu. Basden, writing about the northern Igbo, noted: "The walls themselves provide plenty of scope for clay modelling. The fashion is to trace designs in curves and straight lines: outlines of creatures, real and imaginary, are not so common".⁵ This is surprising because, in fact, outlines of physical objects are used in the patterns of decorations found among the northern Igbo. A knife or a sharp edge is the most important instrument required for this. The bas-relief designs are first cut with the knife when the wall is still wet. The unwanted part of the designs are scooped out of the wet mud wall. The edge of the figures thus exposed is then moulded with the fingers. The figures are smoothed and polished by rubbing with clay water. Hand moulding and the application of water to the surface continue until the required patterns are completed. Finally, everything is smoothed and left to dry out. As the cut patterns dry out and cracks show up, wet mud is used to fill up the cracks. Closely related to this method is another in which an already carved impression is pressed into the wet and soft mud to stamp an image on the wall.

In the South and in some parts of west Igboland, especially around Ikwerrri and Kwale, the walls are decorated by inserting different objects into them.⁶ In Ikwerrri, for example, plates, bottle necks and bottoms, cowrie shells and pottery fragments (ill. 42) are inserted into the mud walls. The plates and bottles are of European origin, but the use of cowrie shells suggests that the plates and bottles were only adopted for use in an age-old tradition. The significant point here, is the ingenuity involved in the use of such articles for decorative purposes. This is surely an aspect of adaptation of foreign materials by the Igbo to enrich their traditional architecture. When plates are used, both internal and external wall surfaces are usually

Illustration 41



a. Relief Decoration on Compound Wall and Gate.
(after Humpidge, 1938).



b. Relief Decoration on Igbo Houses.
(after Chadwick, 1937).

Relief Decoration on Igbo Houses.

Illustration 42

Insertions

(after Talbot, 1916).

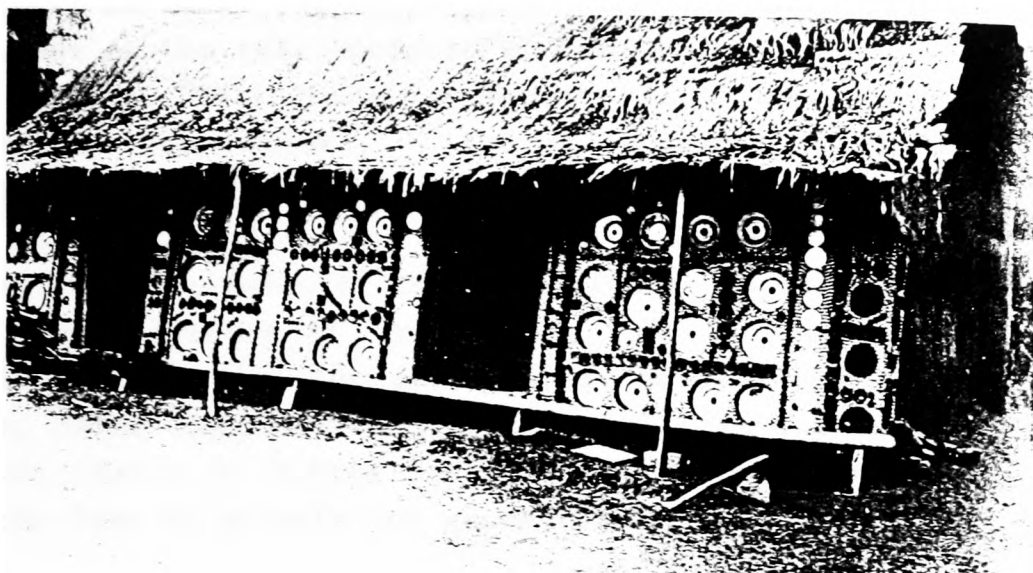
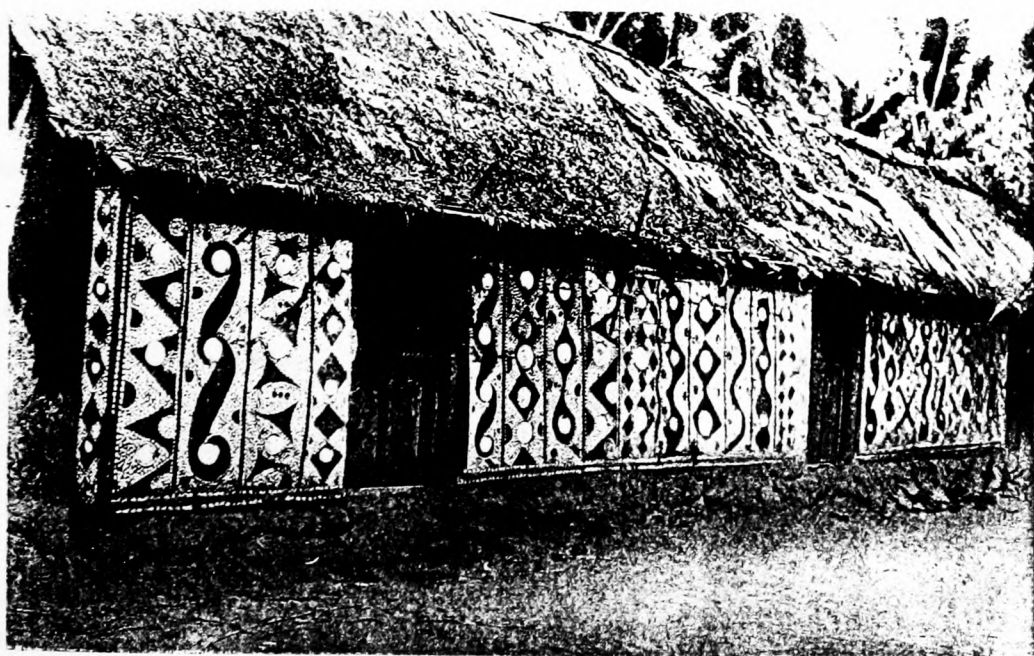


Plate Insertion.



Cowrie Insertion.

decorated with them. White plates are used for the outside wall surface while coloured plates are used for the inside. When bottle parts or cowrie shells are used, they are usually inserted so that their blunt sides are flush with the wall surface. Intricate geometrical and abstract designs are made on the wall surfaces with such insertions. As noted by Talbot: "This forms a particularly beautiful colour scheme on old houses..."⁷ In some aspects this method is similar to the insertion of plates on ceilings practised by the Hausa of Nigeria and the Nubia of Egypt. But unlike the Hausa, where failure of the plates indicate imminent structural failure of the ceiling, the Igbo use plates on their walls purely for aesthetic purposes. Among the Kwale Igbo, canes are inserted into the walls instead of plates, cowrie shells or bottle parts, and are worked into designs in the form of animals and geometrical patterns.

Wall painting is also widely practised as a form of decoration by the Igbo. Indigenous colours mostly employed include red, reddish orange, brown, yellow, white, black and green. Blue is also used now, but it is definitely not of traditional origin, as there is no sign of either early knowledge of its production or any local production today in Igboland. Red and orange pigments are obtained either directly by quarrying or by baking quarried yellow ochre, known as aja nwa mmuo. Brown can be obtained by quarrying too, or from rotting banana stems. Yellow is also obtained from earth or by grinding pieces of yellow cam-wood or edo. White paint is made from chalk gathered from the streams. Soot or burnt tendril is used as black paint, while green is obtained by pulping green leaves. Water is the medium used for all these pigments and they are never intermixed.

The pigments are used to paint intricate abstract designs, geometrical patterns, representations of natural objects, and sometimes a whole event, as seen on Okwu walls and in the Nri court house (ills. 43 & 44).

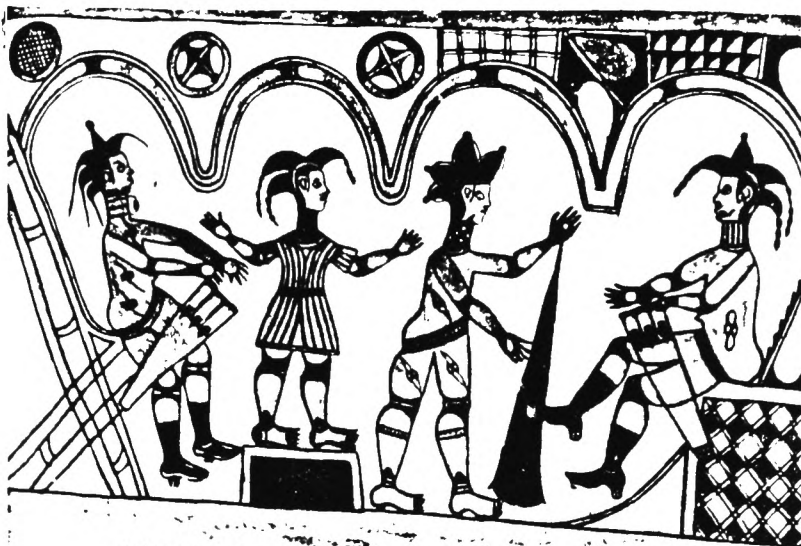


Illustration 43



Mural Painting from Okwu Wall.
(after Murray, 1947).

Illustration 44



Mural Painting from Nri Court House.

Mural painting is not restricted to any specific part of Igboland, nor is it even restricted to Igboland itself. Accounts of impressive mural painting by other peoples such as the Benis are well known. In Igboland painted decoration is usually associated with women. Unlike the relief, bas-relief, and the insertion methods, the surface to be painted is first ground smooth and, in the case of new walls, left to dry out before the painting process commences. For painting the background, a cloth may serve as the brush while fingers or special knives called mma nwuli are used to draw lines and motifs on the walls.

Igbo houses are also often adorned with carved doors, panels and stools and sometimes carved posts. As Basden noted in the early part of this century:

On the western side of the Niger, in the interior parts between Asaba and Benin, the roofs of the reception compounds and the palaces of the Kings were, up to recent times, supported by carved pillars, and many of the doors were embellished with figures carved in bas-relief.⁸

This is very common in areas where carving activities are well developed such as Awka and Ohaffia. The Yoruba and Benis are also known to have similarly used carved pillars and doors extensively in the past, mostly employing naturalistic motifs. The Igbo doors, unlike the Benin and Yoruba types, carry mostly geometrical motifs. Carved wooden sculptures are also used by the Igbo, but they are primarily used for religious purposes except in Ohaffia where some obu houses are decorated with wooden statues of their warriors.⁹

The most extensive use of statues and sculptures in traditional Igbo architecture is, however, observed in mbarri temples. For the sculptures, clay is beaten into a solid compact block and the figure is carved out from it. Again, this work is finished by finger-rubbing, while the

clay is still wet, as is the case with relief and bas-relief. About the quality of the sculptures Basden wrote: "There are specimens of this plastic art which are extraordinarily good: they would earn commendation at any exhibition".¹⁰ Another form of decoration that is common among the northern Igbo is the display of the skulls and tails of large animals that have been killed either during hunting expeditions or during burial ceremonies. Among the Nkanu Igbo, for instance, such decorative elements are seen displayed in the living area of the house of the head of the family. Pegs are driven into the wall facing the entrance door, and the skulls and tails of the animals are conspicuously displayed on the pegs.

Motifs

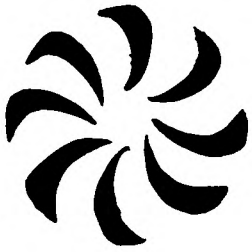
These forms of decoration are not unique to the Igbo. What are peculiar to them and therefore required further consideration are some of the motifs they use, the evolution of these motifs and their possible meanings.

The motifs used by the Igbo may be classified into three main groups, viz. Uli motifs, geometrical motifs, and motifs derived from the representation of natural objects. This classification is not rigid as the elements of one group may occasionally be found in another. This classification can also be extended by further division of each group into sub-groups of simple and complex motifs. Simple motifs include all those consisting of a single element arranged to form a pattern, for example ill. 45a. Complex motifs include all those consisting of an arrangement involving different elements, for example ill. 45g.

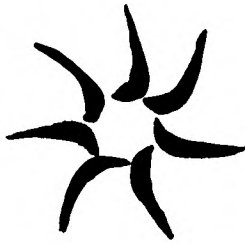
Generally, some motifs are more popular in particular areas of Igboland than others and, throughout the whole of the land, every house decorator has favourites.

Illustration 45

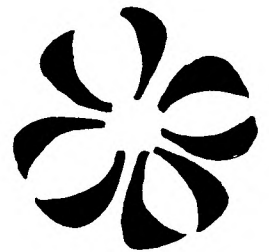
Simple and Complex Uli Motifs.



a



b



c



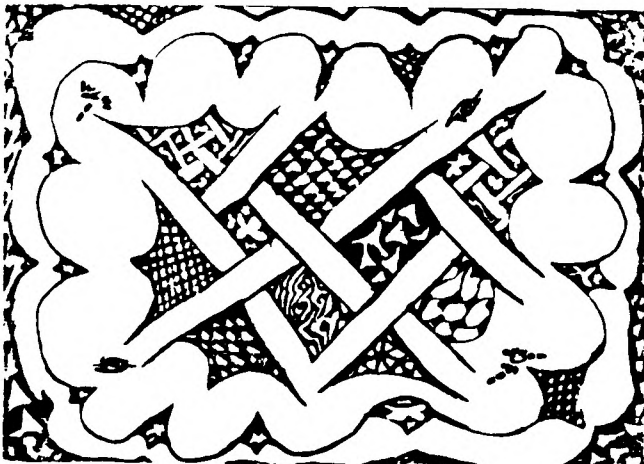
d



e



f



g



h

Items a-h as explained in the text.

Uli and Uli Motifs

Uli or uri refers to decorated patterns often made on the body by Igbo women to enhance their beauty. The art of drawing these patterns on the body was widely practised before the colonial days. It is, in some respects, similar to the ancient British custom of staining the body with woad.¹¹ Many of the motifs used in traditional decoration in Igbo architecture are adapted from these uli patterns. The word uli or uri is also the name given to the species of wild berry whose juice is used as ink for making the drawings of different patterns on the body. It is obtained by pulping and pressing the berries. While wet, the liquid is pale-greenish and when just drawn on the body is faint, but when dry, it is deep-black, and remains indelible for a period of up to a fortnight before fading out.

These patterns are drawn with fingers, a pointed stick, twig, or special curved iron instrument forged by blacksmiths and known as mma nwuli. These instruments are used approximately like the long-haired brush of the sign-writer. With them, the Igbo decorator can pull long sweeping strokes and draw curves of regular lines with precision.

The patterns used are very artistic involving combinations of abstract and geometrical motifs. Arnot, a missionary, who collected some of these patterns wrote:

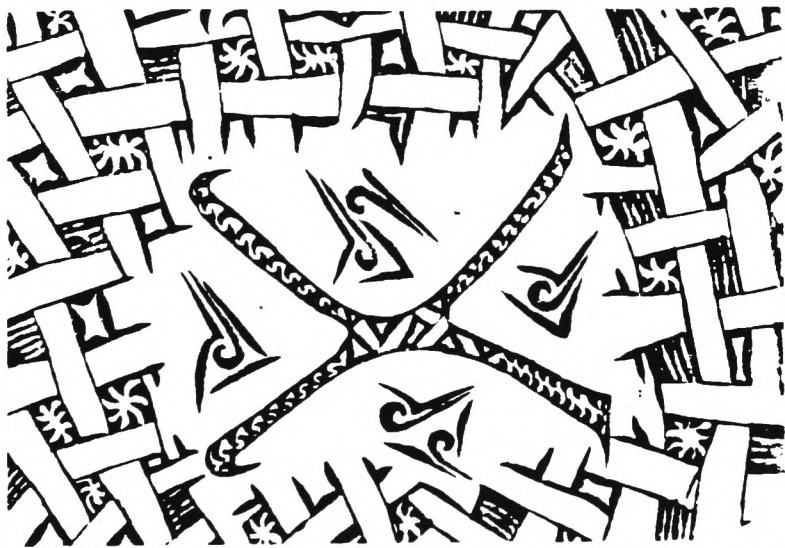
I have collected uri drawings for several years and have shown them to artists and others interested. In every case extreme astonishment was the first reaction, followed by intense admiration and keen curiosity to know more about the designs. While one artist marvelled over curve and line and technique, an anthropologist exclaimed at the boldness and vigour in the design, revealing extraordinary characteristics.¹²

It was usual for women and young ladies to apply these decorations on their bodies as festivals and market days approached. The motifs in use are innumerable and mostly derived from a number of key shapes, the most common of which are shapes of natural objects, for example plants and hooks, and geometrical shapes such as dots, lines and circles. These motifs are also employed by the women for the decoration of the walls of the compound and those of other houses.

All the motifs adapted from uli body painting patterns are here referred to as 'uli' motifs. Some of them are made up of geometrical symbols, but they are not purely geometrical motifs. Ills. 46-9 show some uli patterns commonly used for house decoration by the Igbo.

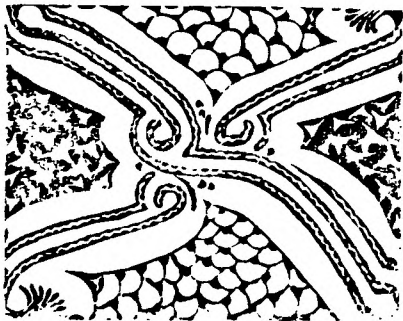
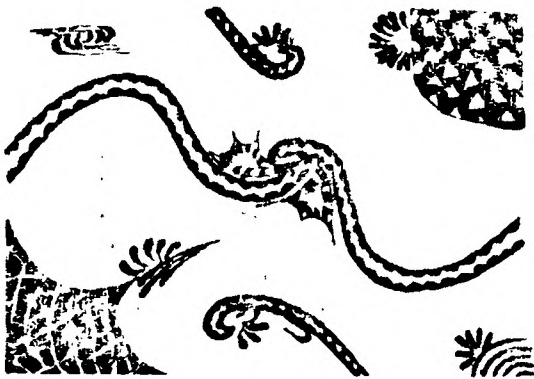
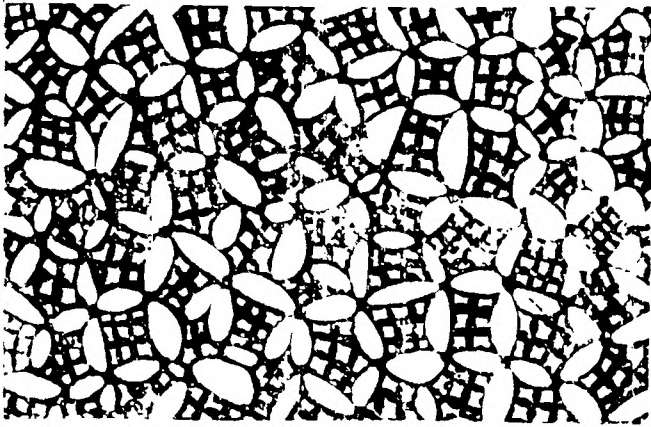
Today, the names of most of these motifs are forgotten, but although they once had names, the motifs do not seem to have had any symbolic purpose. They were purely decorative. Careful observation shows that the motifs are derived from particular key elements whose manipulation in accordance with local rules yields a number of further motifs. Considering the first motif on ill. 45, for instance, the key element is a crescent-like figure and the local rule here seems to be to arrange a number of these crescent-like figures around an imaginary circle. The crescents, though similar, are not regular, so if they are reversed and arranged once more in the same way, a new pattern is produced as in the second figure (b). In the same way a third pattern could be obtained by arranging them in pairs with each member of a pair facing the other way, as in the third figure (c). Thus, by maintaining this rule and manipulating the key elements many other patterns can be achieved. In some cases, the local rule may be extended to accommodate a number of key figures as in ill. 45g.

Illustration 46



Uli Motifs used for House Decoration.

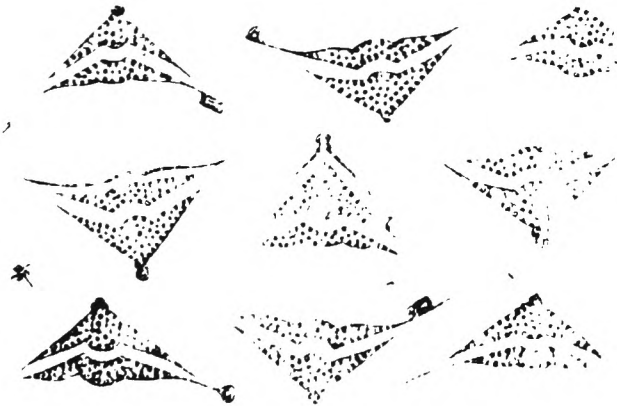
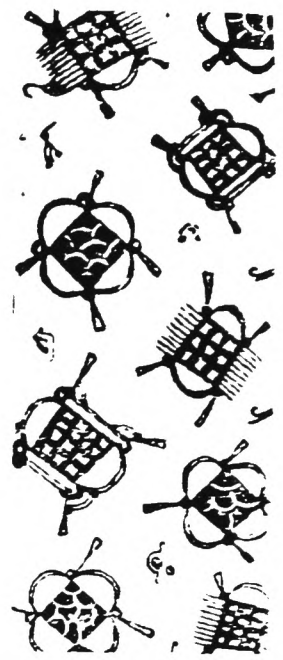
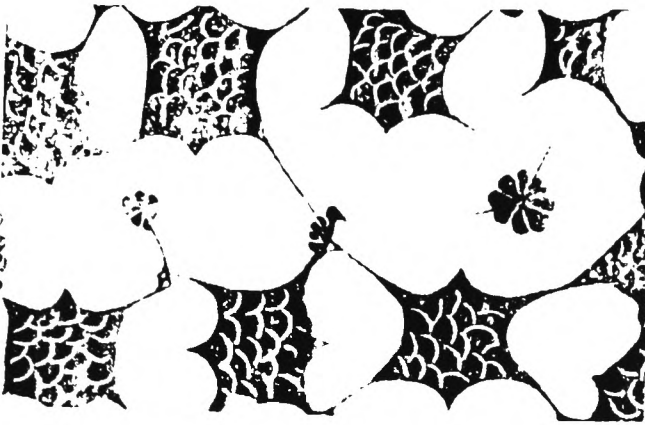
Illustration 47



Uli Motifs used for House Decoration.

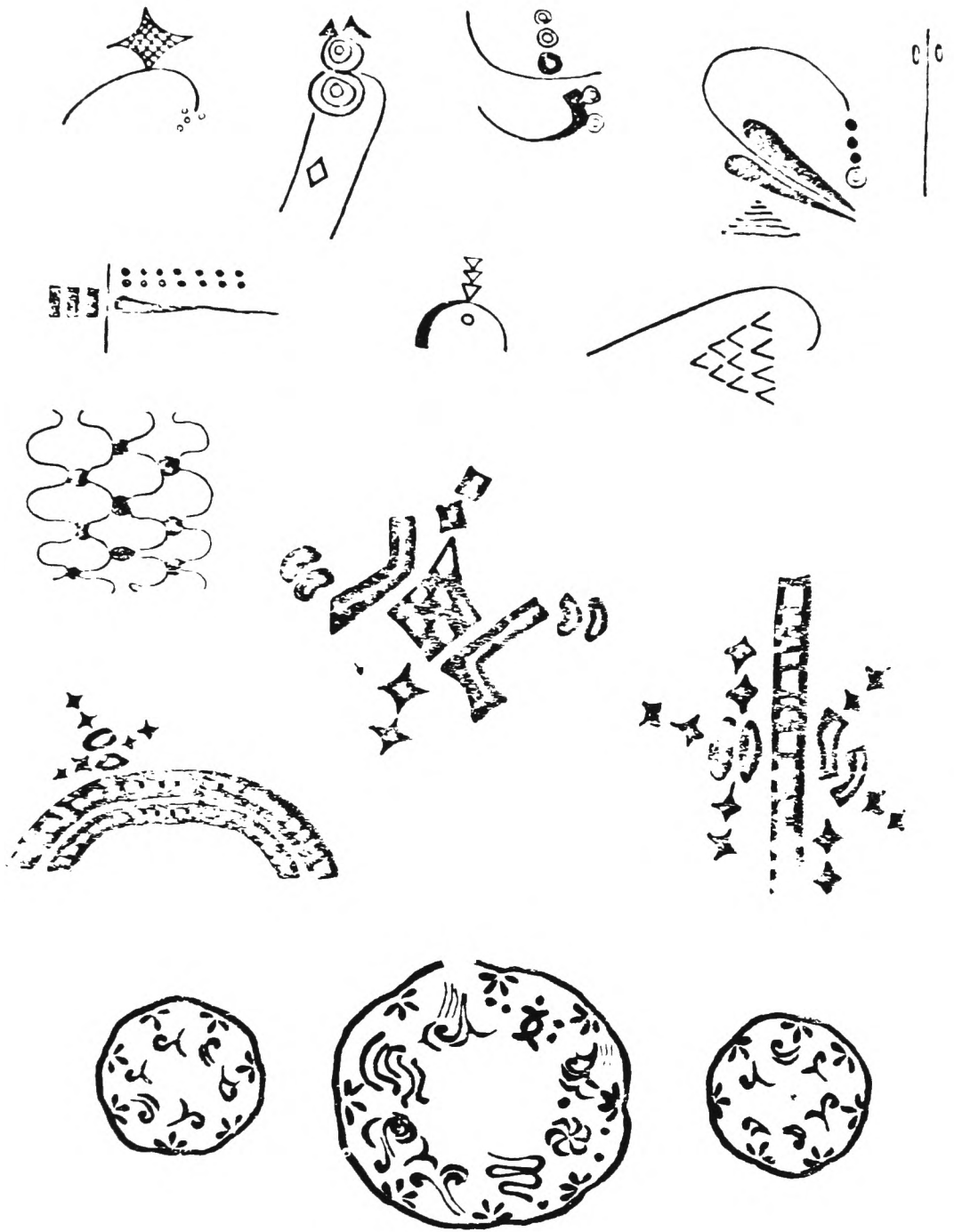
(after Murray, 1935).

Illustration 48



Uli Motifs used for House Decoration.

Illustration 49



Uli Motifs used for House Decoration.

Geometrical Motifs

Geometrical motifs are those derived from mere manipulations of geometrical symbols and shapes such as the dot, line, arc, circle, triangle, quadrangle and polygon. The use of these types of motif is not restricted to walls. Many of them are found on traditional Igbo doors (ill. 50). Some of those used on the doors are not simply decorative, but signify membership of a society such as the social and political Ozo title society in Igboland (see Appendix 3). This significance has led to a suggestion of a possible relationship between geometrical motifs, as used on traditional doors, and itchi ritual marks worn by some northern Igbo.¹³

Generally, geometrical motifs are very common in African decorative art and there is a possibility that some of them got to Igboland by diffusion, either through commercial contact or inter-marriage, but the striking relationship between those used by the Igbo and itchi marks suggests that the use goes back a long time in Igboland, and that many of the motifs are indigenous to the Igbo. Some popular examples used by the Igbo in their architectural decorations are shown in ill. 51-3.

Motifs derived from Objects

The Igbo use various objects as motifs in their architectural decoration. Some of these objects, like the python, have religious significance, but this is not a general rule. The objects commonly used include different species of plants and their parts, heavenly bodies such as the sun, moon and stars, animals, both domestic and wild, especially those prominent in Igbo folklore, reptiles such as lizards and pythons, human beings, masques, musical instruments and utensils.

Illustration 50

Geometrical Motifs used on Traditional Carved Door.

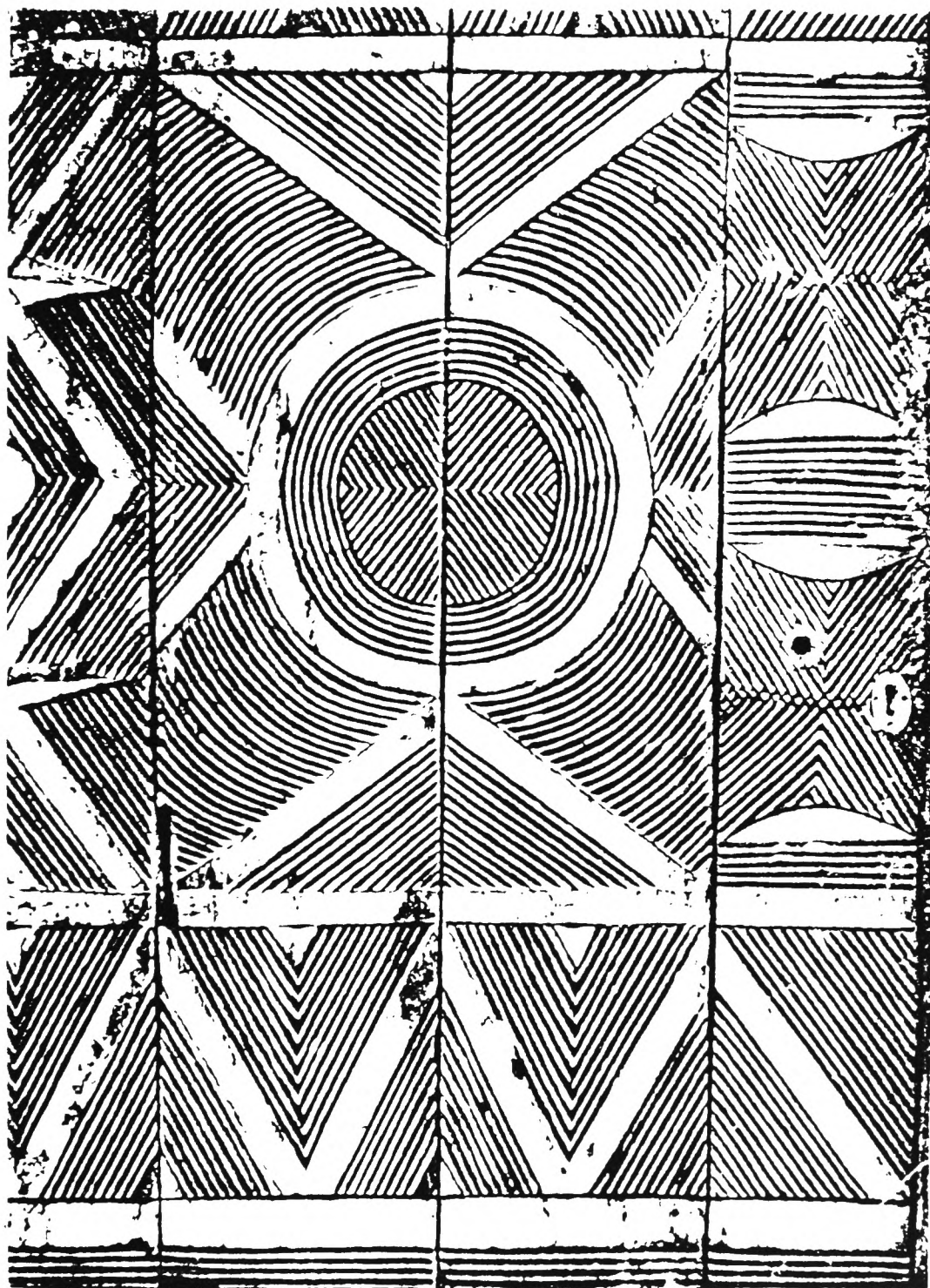
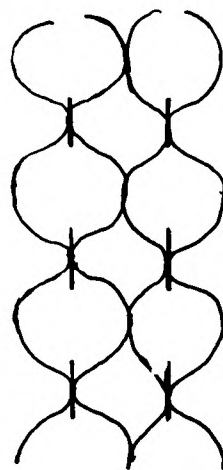
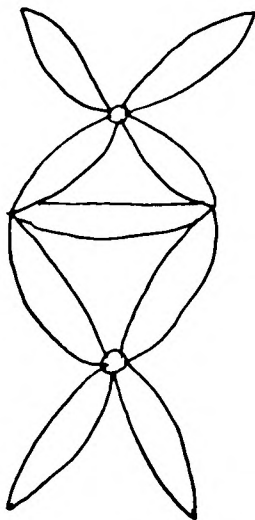
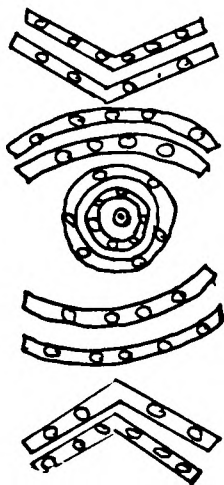
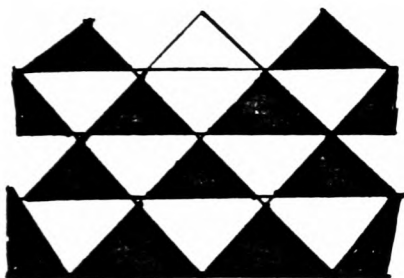


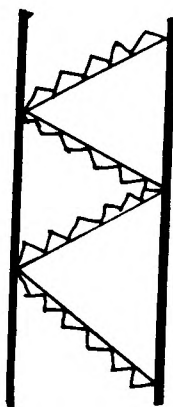
Illustration 51



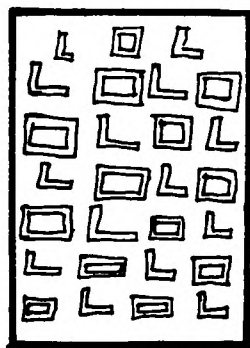
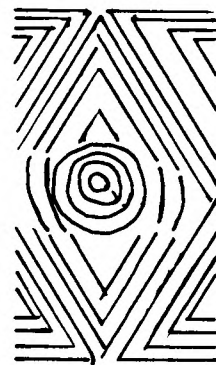
Aga Oba



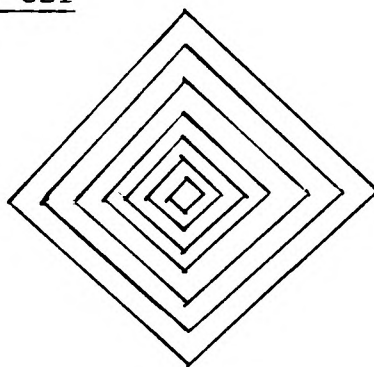
Azu



Mgbo ezi



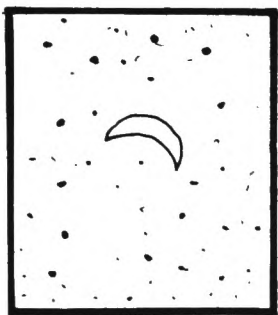
Akwa



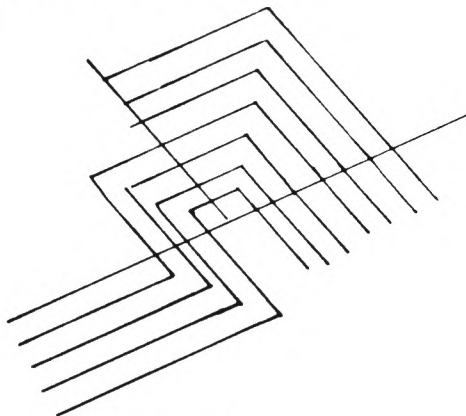
Nkasi ana

Geometrical Motifs popular in Nri.

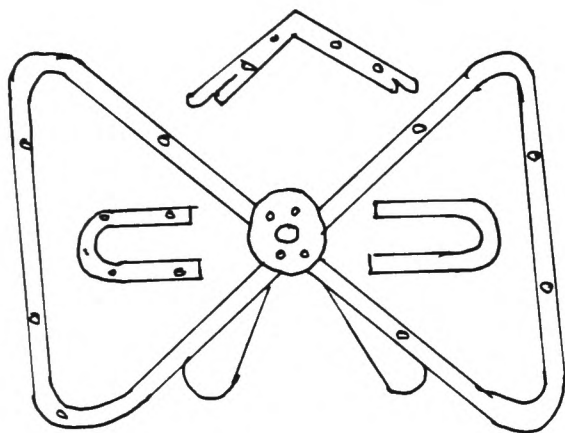
Illustration 52



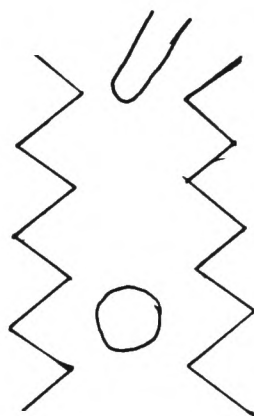
Onwa ofu



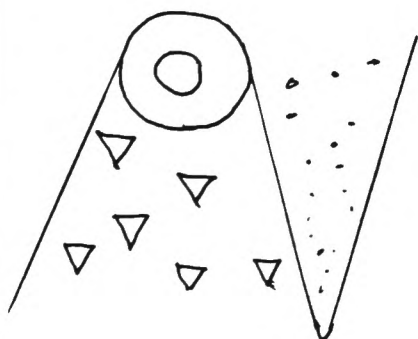
Agaalu



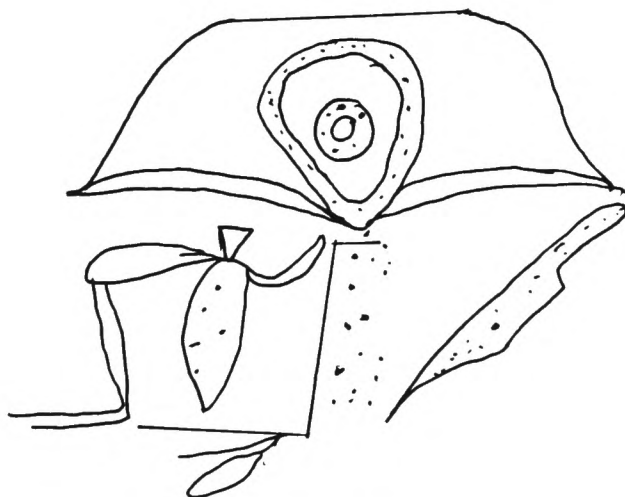
Ihe egwu



Azu



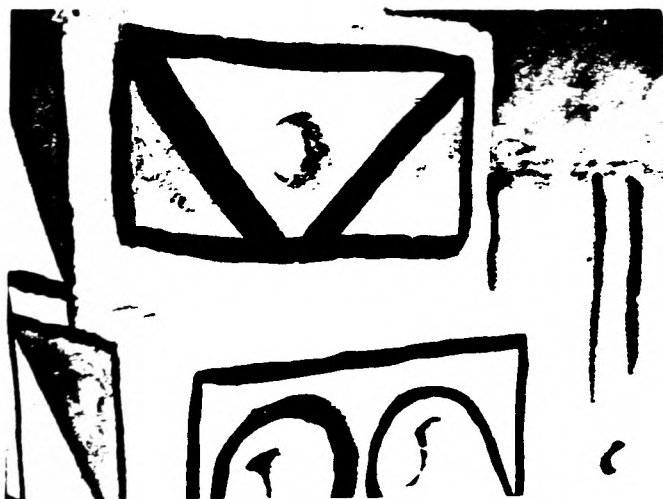
Uju Onwa



Nguri azu na azu

Geometrical Motifs popular in Nri.

Illustration 53



Details.

Geometrical Motifs used on Mbari.

Most of these types of motifs are freely derived from nature, but no attempt is made to copy nature exactly. Neither proportion nor the law of perspective is observed. The rules followed by Igbo decorators are those dictated by other aesthetic impulses, especially the desire to make intricate or expressive patterns. Representations are often of one view and no attempt is made to create an illusion of the third dimension. The drawings of a human being (ills. 43 & 44), for example, show a great distortion of human proportion. The trunks are often too dwarfish for the limbs given to them. Sometimes there is an attempt to represent all the details such as toes, fingers, and even eyebrows. In some cases, representations are descriptive and simple, for example, a masquerader dancing, or a man walking with a dog.

The derivation of these motifs from objects reinforces the expressional values of this art. It signifies an innate aesthetic drive of the Igbo and an attempt to express this by expressing the world around them.

As is the case with traditional buildings, this indigenous architectural decoration is fast disappearing. This is partly the consequence of its impermanence and the harsh climatic conditions of Igboland. Observation shows that most of the painted decorations are applied 0.45-0.50m above the ground level to avoid damage by ground water. However, the effect of such measures aimed at prolonging the life span of the decorated surface has been minimal. The climatic effects, coupled with the action of restless termites, rapidly obliterate artistic creations on the walls. Survival is not helped by the impermanent nature of the materials used for decoration. The paints are neither indelible nor water-proof. As a result, if mural drawings and relief work are to last, the process of decoration must be repeated at least three times within the year. This means that the design is continually being replaced as fading or erasure of one brings replacement with a yet finer one. Thus there is an emphasis on the evolution of new ideas and

patterns rather than the renovation or maintenance of the older ones. This attitude of the Igbo towards their art is exemplified by the treatment meted out to the mbari temples. Once one of these temples is completed and seen by all, it is left to collapse and disappear.

This attitude is found not only in Igbo architecture but also elsewhere. For example, according to Afolabi Ojo, the destruction of a Yoruba palace, besides causing the Yoruba King no anxiety, was usually seen as an opportunity for the builders to explore further architectural and artistic styles.¹⁴ On the other hand, this makes any attempt to delve into the historical origin and development of this art a difficult one. Lack of continuous attention to early products and the dearth of records have both compounded this difficulty so that the origin of the art of house decoration in Igboland and its development through the years are subject to much speculation.

Neather has suggested that both the uli and geometrical motifs might have had some supernatural significance in the past. Their origin might, therefore, have been to do with their use on the body, and later on doors and walls, perhaps to symbolise some protective apparel for the bearer or occupants of such houses.¹⁵ This is supported by the fact that in some areas of Igboland, namely Owerri and Umuahia, highly decorated architectural structures are erected in times of calamity or in anticipation of calamity to appease some alusi.¹⁶ But this is, however, not always the case. Basden, for instance, after lengthy inquiries, wrote:

In no single instance, after repeated inquiries, has an answer in the affirmative been vouchsafed that these drawings have any significance attached to them. Some of the marks are merely the handiwork of children who happen to find a piece of chalk! On either side of the doorway, blots and

splashes of dirty grey colour are quite commonly seen. These do have significance; they are the stains left by 'medicines' daubed on walls. They represent the Ibo idea of the 'bunch of hyssop' or the sprinkling of 'holy water' .¹⁷

So, if the magico-religious explanation is accepted in its entirety, traditional house decoration is reduced to a mere functional activity resulting from fear of the unknown. This clearly portrays an attempt to fit traditional Igbo house decoration into an established pattern of western ideas about arts in traditional African society, which maintain that generally in Africa art is functional. The work of Fillipetti and Trotereau expresses this school of thought at the present time, although Africa is not specifically singled out in their work.¹⁸ This view implies that the Igbo have no natural aesthetic drive, but, as Fathy Hassan points out: "No people anywhere is entirely devoid of artistic creativeness. However repressed by circumstances, this creativeness will always show through somewhere".¹⁹ So, if house decoration in Igboland does possess certain utilitarian qualities, it is nevertheless very improbable that its origin and raison d'etre are only utilitarian. From what was said earlier about the character of the Igbo, and their love for their homes, it is more likely that the origin of house decoration in Igboland was purely the result of a natural aesthetic desire innate in the Igbo. The urge to decorate is fundamental in human beings. Lapidus, for instance, wrote: "This, then, I believe is the most elementary human emotion: the desire, the love, the need for adornment".²⁰ Carlyle also described aesthetic drive as the first spiritual want of man.²¹ It is not limited to a particular group but is applicable to all mankind. In the evolution of house decoration in Igboland, therefore, the aesthetic drive is primary while the functional aspect is secondary.

Igbo society admires and encourages the achievement of

reputable status and the means of doing this is not restricted. That a reputable status could be achieved in Igbo society by aesthetic means is attested by the fact that after the completion of either an mbari or okwu wall, people from neighbouring villages are usually invited to come and witness what has been accomplished. Furthermore, the fact that the art of house decoration is largely seen as the woman's share of house building is equally suggestive of its origin in aesthetic instincts, women being more conscious of beauty for its own sake than for its symbolic value. In this connection, Basden wrote:

The village belles are not unversed in the art of coquetry. They take particular pains to attract the attention of eligible young men, and do not hesitate to advertise their personal charm. Cleverly drawn free-hand designs are traced over the body from head to foot, and an extra care is exercised in the plaiting and adornment of the hair. On gala days every available ornament is brought into requisition; strings of beads of a particular kind worn round the neck and waist, bracelets of ivory or cowrie shells and leg ornaments.²²

From this it can immediately be inferred that Igbo women, who naturally pay attention to self beautification, will extend this aesthetic taste to their houses and compound walls, using it to project the image of their homes in society. It is not surprising, therefore, that motifs used on the body are generally adopted for the decoration of the compound.

As regards the origin of the patterns in use, the similarity between uli motifs and certain natural objects is striking. Ill. 45h for instance, might have been inspired by an attempt to represent a flower, while ill. 47a might be a representation of certain wild berries growing in Igboland.

The loss of proportion conforms with the Igbo method of artistic representation. Also having developed a key element, a pattern can be produced following a local rule known to the decorator. Furthermore, according to Marc Olivier, certain basic signs are inborn in man and such inborn signs have been used by man to express himself and the world around him. These signs include the dot, the wave, the cross, the triangle, the square, the circle and the spiral.²³ These basic signs are prominent in Igbo house decoration. Their use by the Igbo can therefore be seen as a manifestation of an instinct which is natural to all human beings.

Each traditional house decorator in Igboland may have favourite patterns, but there are no laws or rules barring either the perfection of older patterns or the invention of new ones. Igbo house decoration, therefore, offers a wide scope for imagination for the creation of forms and the representation of objects. Cole, for instance, notes that no two mbari temples are alike. Each new one offers an opportunity for improvements on existing ones. It is therefore filled in with new figures and new patterns of decoration.²⁴ Such an open system, which provides infinite opportunity, must have originated from an attempt by the Igbo to use their aesthetic taste to project the image of their homes in society. While neither entirely negating the possibility of the relationship between itchi ritual marks and geometrical patterns carved on Igbo doors, nor the possibility of diffusion by commerce or inter-marriage, it is most likely that most of the patterns used by the Igbo are indigenous. Their origin is tied to the Igbo's aesthetic taste, their desire to express the world around them, and the need to use this to project the status of their homes in society.

Considering the stage of development of the Igbo art of house decoration by the early twentieth century, when sketchy written accounts started to appear, and relating

this to the general evolution and development of architecture in Igboland, it is probable that the art of house decoration is not much younger than the art of building itself.

Regarding mural decoration as practised by the Igbo, observation shows that each motif is usually outlined with fine lines and then filled with solid flat colours. An ability to express by creating forms representing natural objects, and a recognition of the equal importance of the negative and positive areas in a pattern, seem to be among the significant characteristics of this art.

Observation further shows that Igbo house decorators use motifs sparingly. A few motifs can be deployed strategically to serve as the only picture on a large area. This has the effect of evoking the emotional rhythm of space - motif - space - motif.

The pigments in use are few, but portray the Igbo love for bright colours. This is similarly made manifest in their choice of clothing fabrics. Any gathering, be it a festivity or other social occasion, presents a beautiful scene of brightly coloured garments worn by women. Denyer has suggested that such love for bright colours might have been induced by the heavy overcast sky which is characteristic of the rain forest region.²⁵ To this may be added the subdued light caused by shadows cast by numerous towering trees growing all around. The Igbo's use of bright colours for mural decoration has the effect of transforming a building from the familiar monotonous earth colour to an airy, cheerful, and inviting structure. This is most evident from the numerous mbari temples and the okwu wall where long stretches of walls are decorated with brightly coloured paintings of scenes from everyday life. These scenes are visible from some distance, and help to emphasise the form and solidity of the walls. Aesthetic emotion evoked by these mural decorative themes does not depend on a full

understanding of the motifs used alone. The brightness of the colours, and the rhythm and graceful movement of the curves are some of the qualities that evoke aesthetic emotion in a beholder.

An important attribute of Igbo house decoration that is also worthy of mention here is spontaneity.²⁶ Most Igbo house decorators are always capable of putting down quickly the various elements of the picture without any mistakes. Recalling his experience, Murray, a colonial worker who once invited a number of Igbo girls to reproduce some of their painting patterns wrote:

They were given no instruction except to be asked to draw one of their body designs on the sheet of paper given them. They had not been to school. They handled their instruments in the way that the old artists of Europe and Asia handled theirs, and they did no erasing. It should be noted with what skill they filled up the paper and the excellent spacing of their designs.²⁷

In a similar manner in house decoration, the Igbo also work freely and assuredly picking their themes from an inexhaustible vocabulary of motifs. Nowhere have they displayed their ability to innovate and to integrate an old idea and a new one as they have done in their traditional house decorations. This is apparent from their use of even foreign articles, such as plates and bottle tops, and new themes such as the coming of the Europeans and their colonial activities, to express their aesthetic taste. In Igbo architectural decoration, the final product is often addressed to a crowd to pass their judgement or share in the aesthetic pleasure it offers. As noted by Udechukwu, a painted compound wall is for the whole community to see. This is in accord with their social norms and ethics which encourages community sharing and criticism.

In modern times, traditional Igbo architectural decoration is disappearing. Uli body painting, which gave inspiration to most of the patterns used, is hardly practised anywhere in Igboland today. So-called modern buildings are often finished with a thin cement screed and left bare or coated with imported paints, both of which present a very dull and monotonous appearance by comparison.

REFERENCES

1. M. Lapidus, 'A Quest for Emotion in Architecture', Journal of the American Institute of Architects, 36, no 5 (1961), 55-60.
2. M. Trowell, African Design, second edition (London, 1965), p.19.
3. P.A. Talbot, 'Note on Ibo Houses', Man, 79-80 (1916), 129.
4. E.R. Chadwick, 'Wall Decorations of Ibo Houses', Nigerian Field, 6, no 3 (1937), 134-5.
5. G.T. Basden, Niger Ibos, first published in 1938, new impression (London, 1966), p.317.
6. Talbot referred to this method as 'mosaic'. His discussion was, however, limited to the use of plates and coweries, see P.A. Talbot, op. cit.
7. P.A. Talbot, op. cit.
8. G.T. Basden, op. cit. (1966), p.324.
9. G.I. Jones, 'Ohaffia Obu Houses', Nigerian Field, 6, no 4 (1937), 169-171.
10. G.T. Basden, op. cit. (1966), p.317.
11. G.T. Basden, op. cit. (1966), p.329.
12. A.S. Arnot, 'Art and Industry in Aro Chuku', Nigeria, no 12 (1937), 10-13.
13. Itchi scarification marks are facial scars left by cuts

on the face. The cuts are made in the form of parallel lines to cover the whole face. Itchi is borne by members of a particular ritual society in the Nri area of Northern Igboland. See C.N. Neather, 'An Interpretation of Igbo Carved Doors', African Arts, 15, no 1 (November 1981), 49-55.

14. G.J.A. Ojo, Yoruba Palaces (London, 1966), p.62.
15. C.N. Neather, op. cit.
16. K.C. Murray, 'The Okwu Wall near Umuahia', Nigeria, no 27 (1947), 19-24.

H.M. Cole, 'Mbaria is a Dance', African Arts, 2, no 4 (1960), 42-51, 79.

G.I. Jones, 'Mbari Houses', Nigerian Field, 6, no 2 (1937), 77-9.
17. G.T. Basden, op. cit. (1966), p.317.
18. H. Fillipetti and I. Trotereau, 'Symboles et pratiques rituelles dans la maison paysanne traditionnelle', editions Levrault (Paris, 1978): quoted by R.J. Lawrence, 'The Interpretation of Vernacular Architecture', Vernacular Architecture, 14 (1983), 19-28.
19. F. Hassan, Architecture for the Poor, (London, 1973), p.41.
20. M. Lapidus, op. cit.
21. E. Lewis, The Romance of Textiles (New York, 1953), p.5.
22. G.T. Basden, Among the Ibos of Nigeria (London, 1921), p.72.

23. M. Olivier, Psychology of the House, translated from French by J. Wood (London, 1977), p.32.
24. H.M. Cole, op. cit.
25. S. Denyer, African Traditional Architecture (London, 1978), p.117.
26. O. Udechukwu, 'Uli and Li: Aspects of Igbo and Chinese Drawing and Painting', Nigeria Magazine, nos 134-5 (1981), 40-9.
27. K.C. Murray, 'Body Painting from Umuahia', Nigerian Teacher, 1, no 4 (1935), 3-4.

CHAPTER SEVEN

TRADITIONAL DOMESTIC IGBO ARCHITECTURE

The Village Group, Villages, and Wards

Many traditional settlements in West Africa had developed into magnificent towns and cities before the coming of the Europeans. Mediaeval Timbuktu and Djene, for example, were described by early European visitors and explorers as well-established cities of great commercial, educational and religious importance.¹ Similarly, the ancient cities of Kano and Katsina in Hausaland, Ife and Katagun in Yorubaland, and Benin in Benin Kingdom were at one time or another important commercial cities pre-dating the era of European over-rule in West Africa.

Whereas those cities and towns flourished as urban formations, many other traditional settlements maintained a strong rural character. Some scholars, for example, Reuben Udo, have misinterpreted this as absence of social organisation, but this was not so.² The Igbo of Nigeria, for instance, quite unlike their Hausa, Yoruba and Benin counterparts, never built cities and never lived in large urban formations. Instead, they lived in villages and many of their traditional settlements still maintain a strong rural character.

A typical traditional Igbo residential layout consists of a cluster of autonomous villages formed loosely around a common centre. Such a cluster is generally referred to as a village group, that is to say, what is called a township in England. This formed the largest territorial organisation known to the Igbo before the European era in the land. Its origin is usually attributed to a remote ancestor from whom all the members of the group descended. In some cases, the origin is attributed to a group of ancestors who mutually

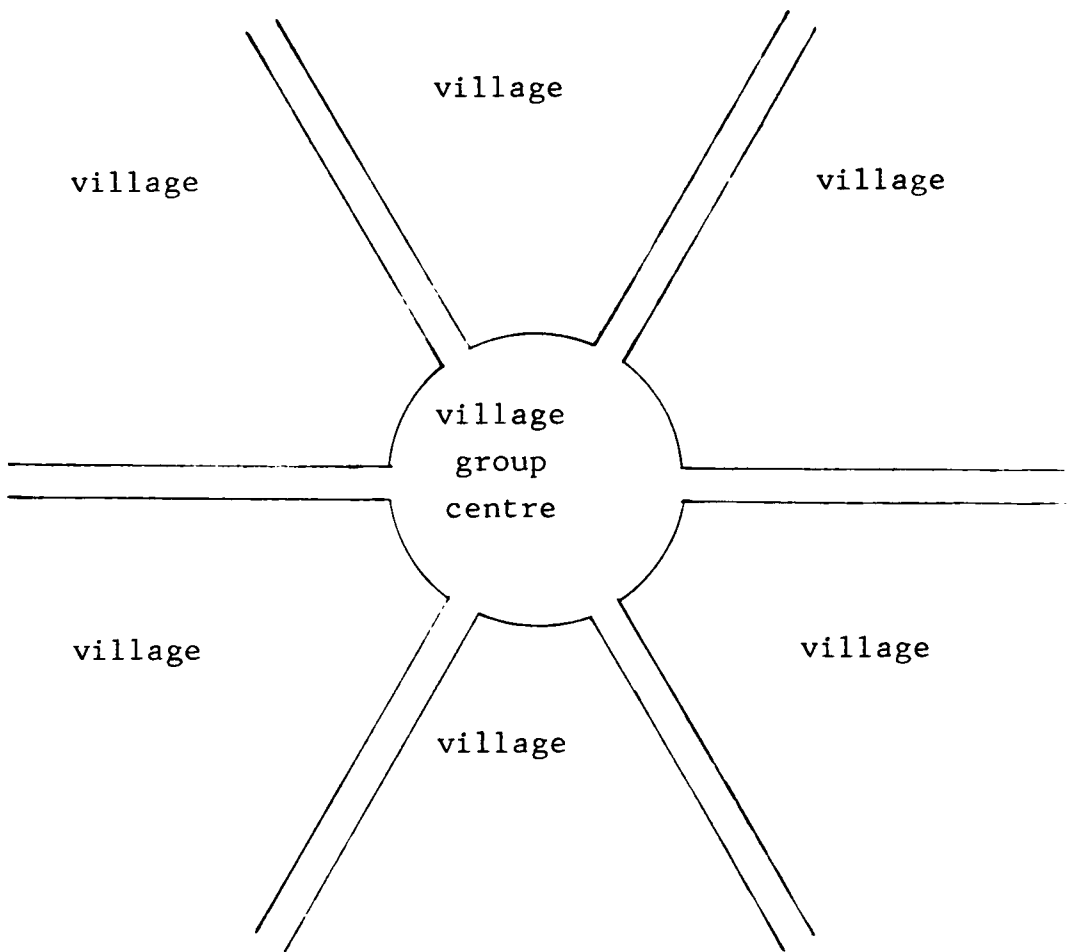
agreed to live together or even to immigrants who converged on the location of the village group. The latter is common among the Igbo living in the border areas of Igboland.³ The term 'village group' is therefore used here to denote an agglomeration of villages which shares a common territory, finds a common identity in the claim of a common remote ancestor, and thus exists as a polity. This term, used in this sense, has not been generally accepted. Obi, for instance, prefers to call such a polity a town instead of a village group.⁴

The number of villages that make up a village group may be as few as four, as is the case with Awkunanaw village group in northern Igboland, or as many as twenty and even more, as in Afikpo village group.⁵ These villages usually form a cluster about a common central space, the village group centre. This characteristic clustered formation of the village group (ill. 54) is always concentric, with each village in the cluster occupying a specific position about the periphery of the common centre and directing its land-exploiting activities away from the centre. Thus, the village residential area immediately surrounds the centre. The land beyond this is used as farm and woodland. In this way, expansion of the individual villages is possible with minimum friction within the whole village group territory.

The name of the village group may be derived from the assumed name of its founder, or from a strategic geographical feature of its location. Awkunanaw means 'of four relatives', for instance, and denotes a village group founded by four relatives. Similarly, Mba Ise means 'of five clans', Umuofia 'children of the forest', and Enugu Ukwu 'top of the big hill'. In the same manner, the villages that make up a village group may bear the names of their supposed ancestors, or names reflecting their geographical locations.

The sketch map of Uzuakoli village group layout, made by Jones in the 1940s, is very expressive of the traditional

Illustration 54



Pattern of Layout of an Igbo Village Group.

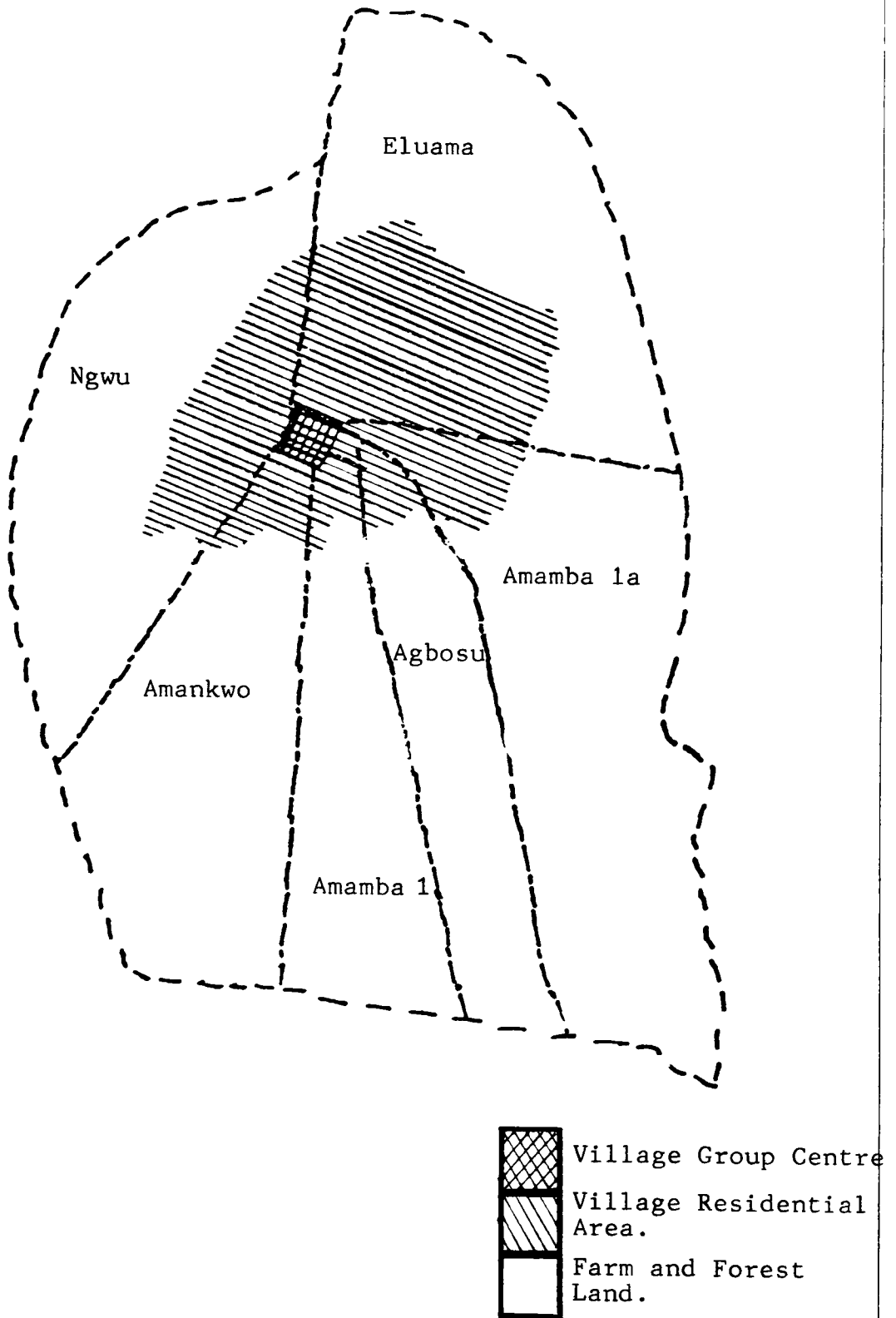
layout under discussion. As shown in ill. 55, the village group consists primarily of five villages, Amamba, Agbosu, Amankwo, Ngwu, and Eluma. Amamba 1a is an offshoot of Amamba 1. The village group centre, shaded in cross hatching, forms the hub of the surrounding villages. The residential area of the village group is shaded in single hatching while the area serving as farm and forest land is unshaded.

This is an ideal example of a traditional Igbo village group layout, but often all sorts of modifications may be observed owing to vagaries of terrain and political considerations.

Concentric layouts are also known to have been adopted elsewhere in West Africa. The traditional towns of the Yoruba of Nigeria are also concentric in form. At the centre are the Oba's palace and the market square. These two spatial elements form the focus of the layout and other residential units surround them.⁶ Here it is, however, very important to point out that whereas Yoruba towns thus formed were characteristically urban, the Igbo village groups were formed by autonomous villages which were purely rural in character, and the resultant village groups or township remained rural too.

In the layout of an Igbo village group, the centre of the village group forms the core of the layout and serves for religious, social and economic purposes. It normally consists of a cleared space under trees which is used as the village group meeting place and market. Shrines of the village group, ndi ichie and alusi, the village group assembly hall and club houses are also usually located there.⁷ The immediate territories of the individual villages serve as a residential area, and the land beyond the residential area is used as farm and forest land. So, in general terms, such a layout may be said to consist of three distinct parts, the central core, the villages around it, and the farm and forest land beyond.

Illustration 55



Layout of Uzuakoli Village Group.

(after Jones, 1949).

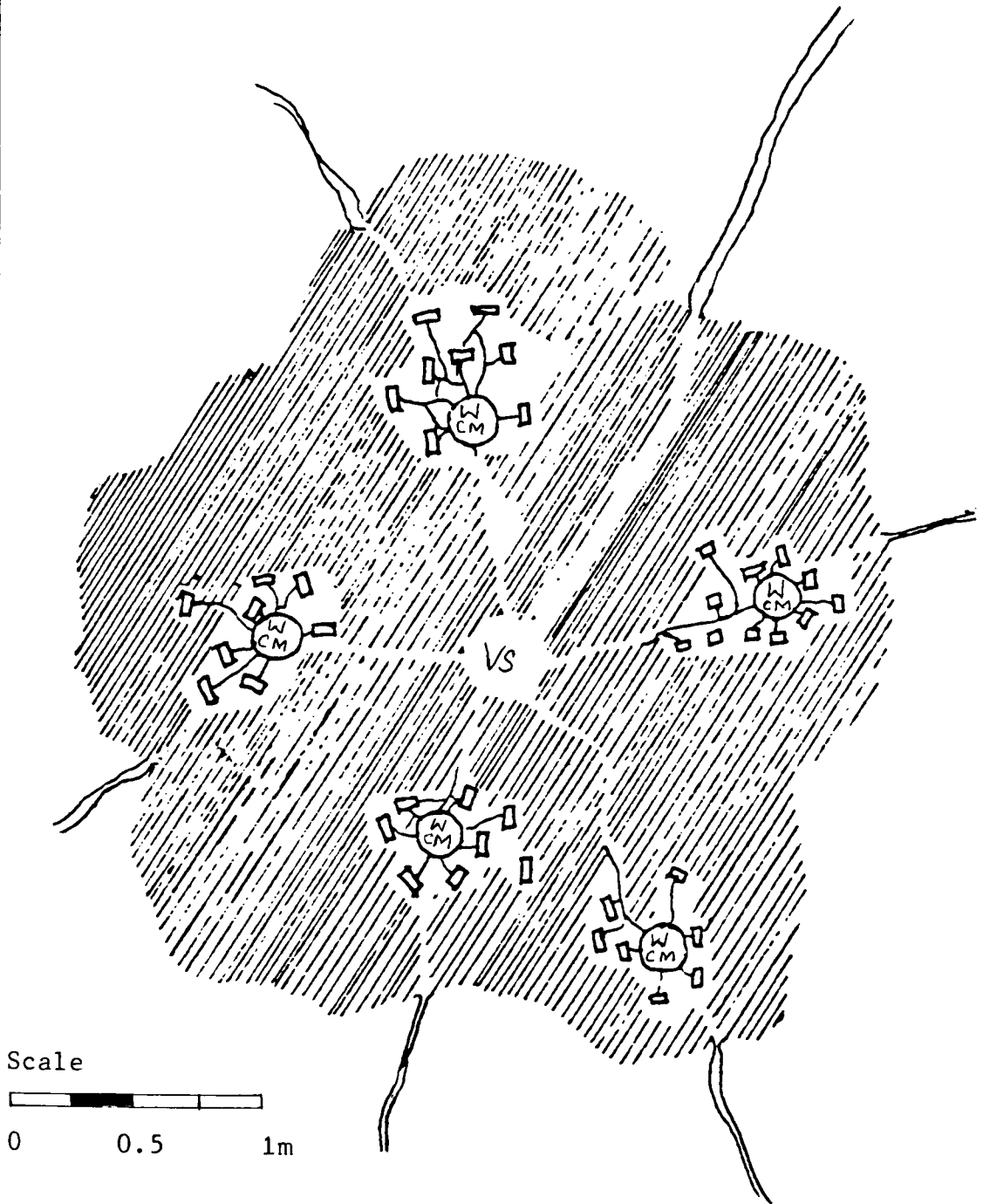
From the village group centre, major pathways radiate outwards leading to village squares of the individual villages that make up the whole village group. The layout of the individual villages is, in some aspects, similar to that of the village group. For instance, the concentric formation is again adopted (ill. 56), this time with wards clustering around the village square.⁸ Each village square is a small replica of the village group centre. It also consists of a cleared area under trees, and forms the village meeting and market place, if a market exists in the village. Similar to the village group centre, it contains the village ndi ichie and alusi shrines, and assembly and club houses.

As is the case with the village group, the village can also be considered to consist primarily of three distinct areas, the village square, the wards, and the farmland which lies beyond it. Each village is separated from the other by either bush or forest. The built-up area of a large village may cover 8 - 13 sq km and the perimeter of such a village may be up to 12 km. However, with variations, owing to land forms, this distance varies greatly from one village to another.

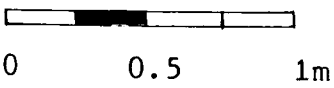
Minor pathways lead from the village square to smaller meeting places belonging to the different wards that make up the village. These smaller meeting places will be referred to as 'ward commons' in this thesis, following the terminology of Othenberg.⁹ The ward common is also a cleared area, usually containing a rest house, where people that live in the ward can meet and discuss issues. Children may also play on the open space of the ward common during moonlit nights.

A typical ward (ill. 57) consists of a number of compounds. The compounds may be as few as one, especially in the Cross River areas of Igboland where giant compounds are found, for example, in Afikpo village group.¹⁰ They may also

Illustration 56



Scale



- | |
|----|
| VS |
|----|

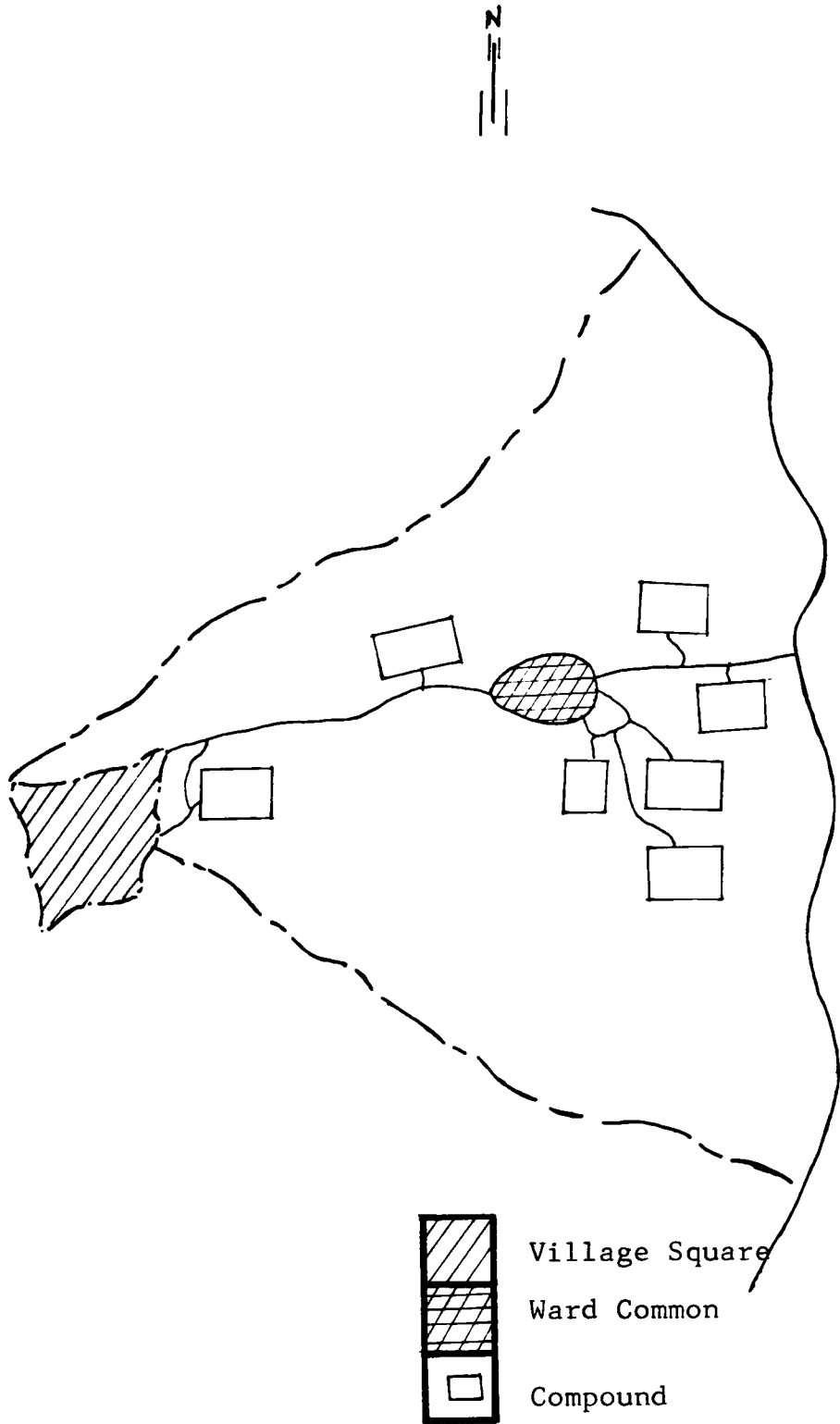
 Village Square
- | |
|---------|
| W
CM |
|---------|

 Ward Common
- | |
|---|
| D |
|---|

 Compound

Village Layout.

Illustration 57



Umu Aram Ward of Umune Ngwa Village

in Nsukka Village Group.

(after Shelton, 1971).

be more than a hundred, as is often the case in the Igbo heartland. Wards may be designated under the name of umu, children of. For instance, Umu Aram stands for a ward occupied mainly by descendents of Aram.

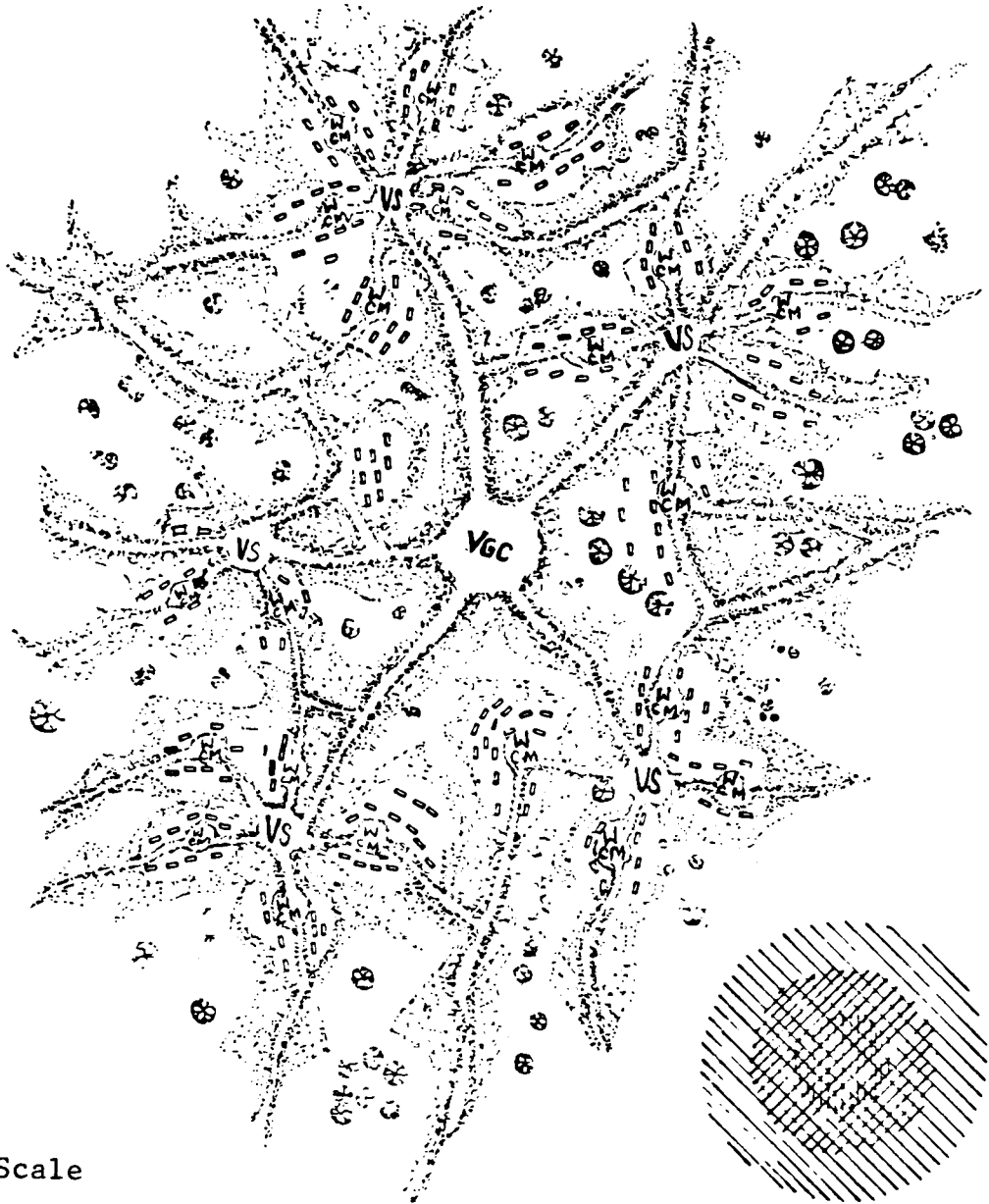
Each ward is normally separated from the other by bushes or gardens, but at present, under the crowded conditions in the Igbo heartland, wards may be separated only by pathways. Individual compounds that make up a ward are connected by minor pathways radiating from the ward common and continuing beyond the residential area to the farm and forest land. The compounds forming a ward may be grouped to face the ward common, may cluster around it, or be arranged along the pathway that leads from the village square to the ward common and beyond.

The three distinct areas, characteristic of both the village group and village layouts, are also discernible in the ward layout. The ward common forms a core, although it may not always be surrounded by the compounds. But in line with what was observed in the former layouts, the compounds are usually surrounded by gardens. As is the case with the village group centre and village square, each ward common also serves as the ritual and social core of the ward.

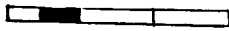
Starting with the minimal elements in the layout, namely the compound, the discussion so far can be summarised as follows: compounds are clustered around a common to form a ward; a number of wards are also clustered around a village square to form a village, while a number of villages arranged in a similar manner around a common centre form a village group or township (ill. 58). Each of the units in the hierarchy of the layout formation tends to concentricity, and in each, three distinct areas; a core, the residential area and an economic area, are discernible. All the spatial elements, the compounds, the ward commons, the village squares, and the village group centres are connected by a network of pathways. A buffer zone of

Illustration 58

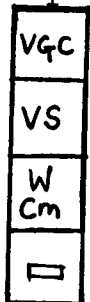
Traditional Igbo Village Group Layout.



Scale



0 1 2 3m



Village Group Centre

Village Square

Ward Common

Compound

Legend



Village Group Centre

Village Residential Area.

Farm and Forest Land.

gardens, bush or forest normally separates one spatial element from another and equally, a village group from the farmland. The buffer area may stretch for up to a distance of 11 km, or more especially between the residential area and the farmland and in all cases could subsequently be used up for the expansion of the residential area. The total area of a village group may be 40 sq. km. or more.

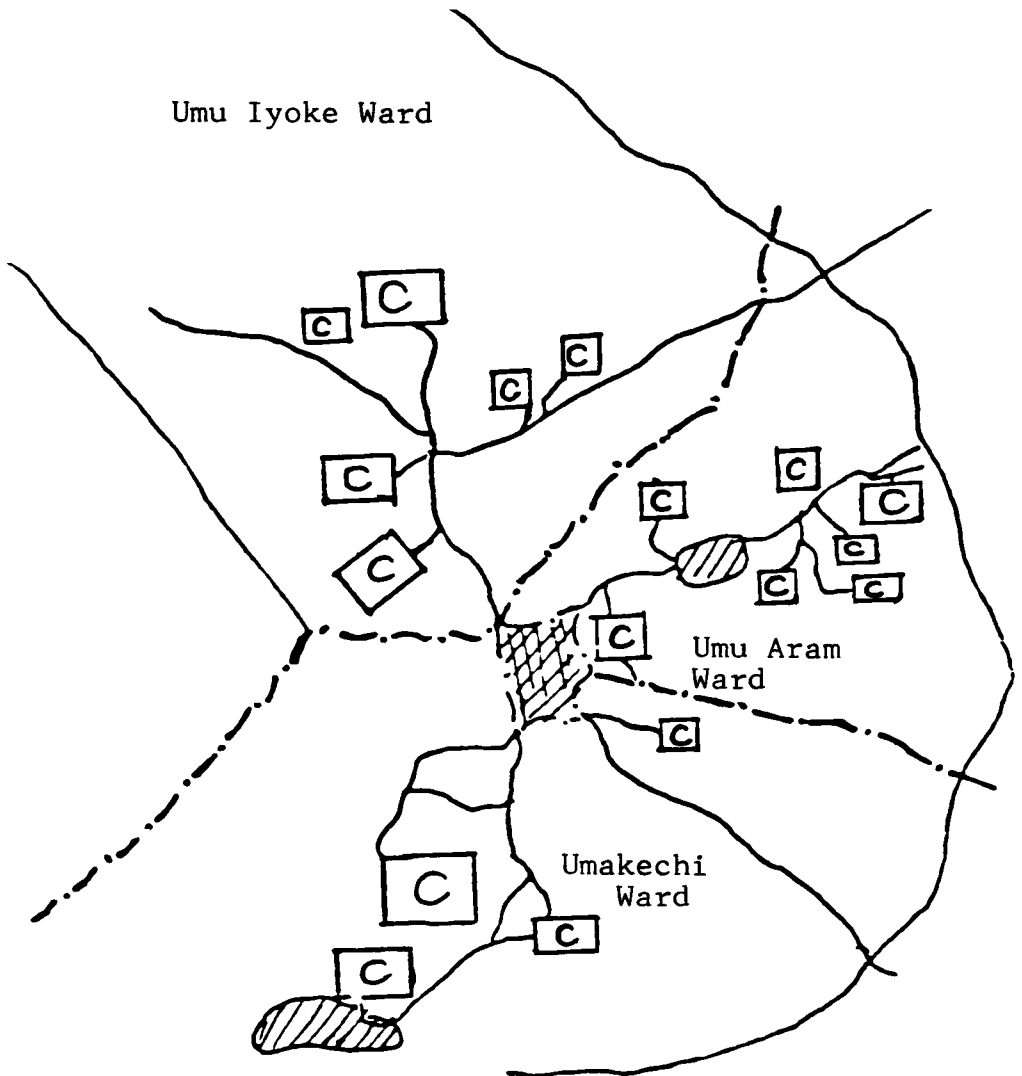
Ill. 59 is a sketch map of the layout of the village of Umunne Ngwa in Nsukka. The village consists of three wards formed around the village square, cross-hatched in the diagram. Here, the wards are made up of various numbers of compounds. Umu Iyoke ward, for instance, consists of six compounds while Umu Aram ward consists of seven. Two of the three wards have their own ward commons. The absence of a third ward common may be explained by the fact that Umu Iyoke ward is the eldest of the three wards and therefore has claims to the village square. As a result, the village square serves also as its own ward common.

This pattern of spatial layout is the ideal or original settlement form. Such a pattern is, however, prone to all sorts of distortions owing to geographical and sociological factors such as unequal rates of population growth in the individual villages, the land tenure system, migration within and without the territory of the village group, the needs for defence and the consequences of slave raids. Around Owerri and Nsukka, for instance, defence and the local economy are known to have induced the formation of completely walled-up villages which are unusual in traditional Igbo architecture.¹¹ In some cases, the modifications may be such that the original form of layout can hardly be seen. A typical example of this is the layout of Afikpo village group (ill. 60).

Afikpo is one of the village groups in the eastern border of Igboland. As we have seen in Chapter Two, the topography of this area is difficult, consisting of uplands

Illustration 59

Umune Ngwa Village in Nsukka.



Legend



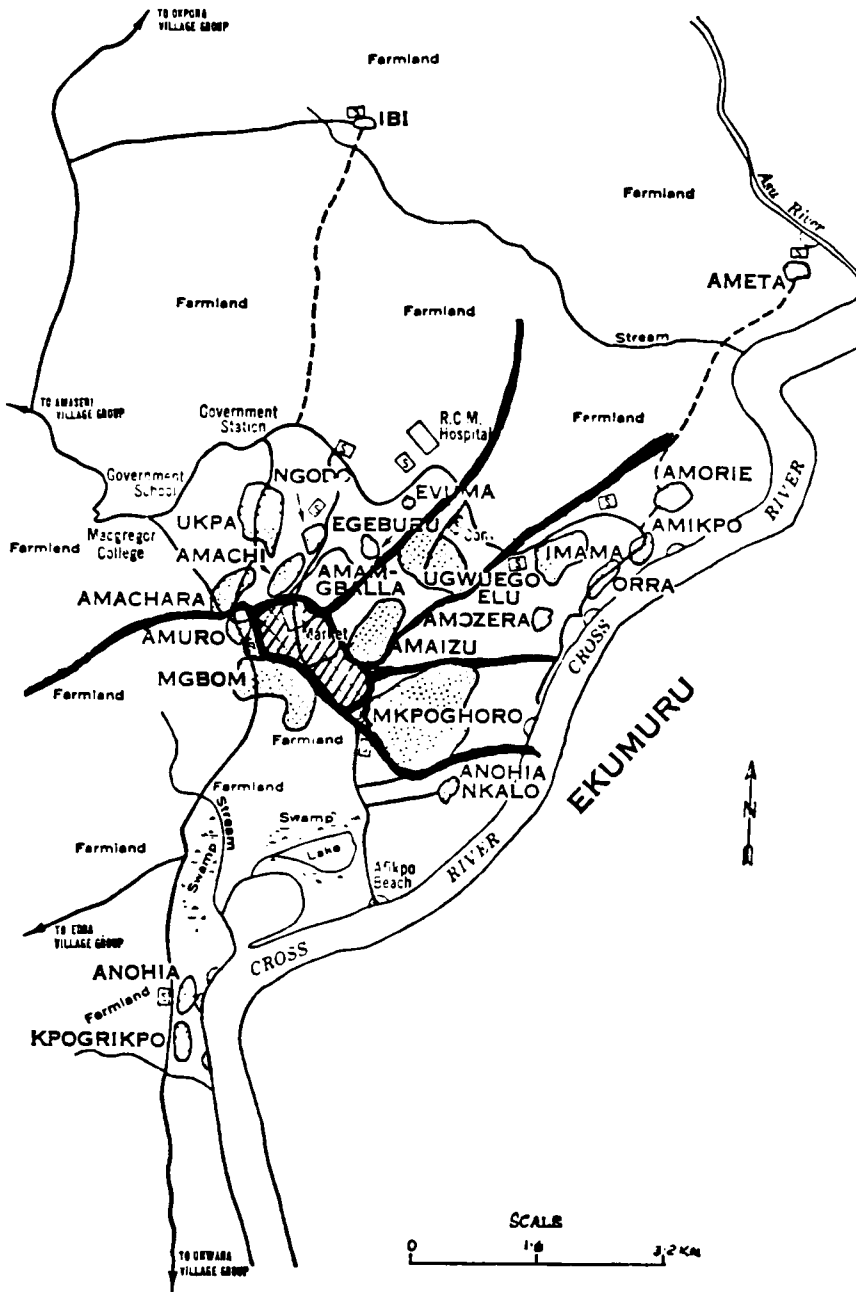
Village Square

Ward Common

Compound

(after Shelton, 1971).

Illustration 60
Layout of Afikpo Village Group



Legend



Village Group Centre

Village

Line Demarcating Related Villages.

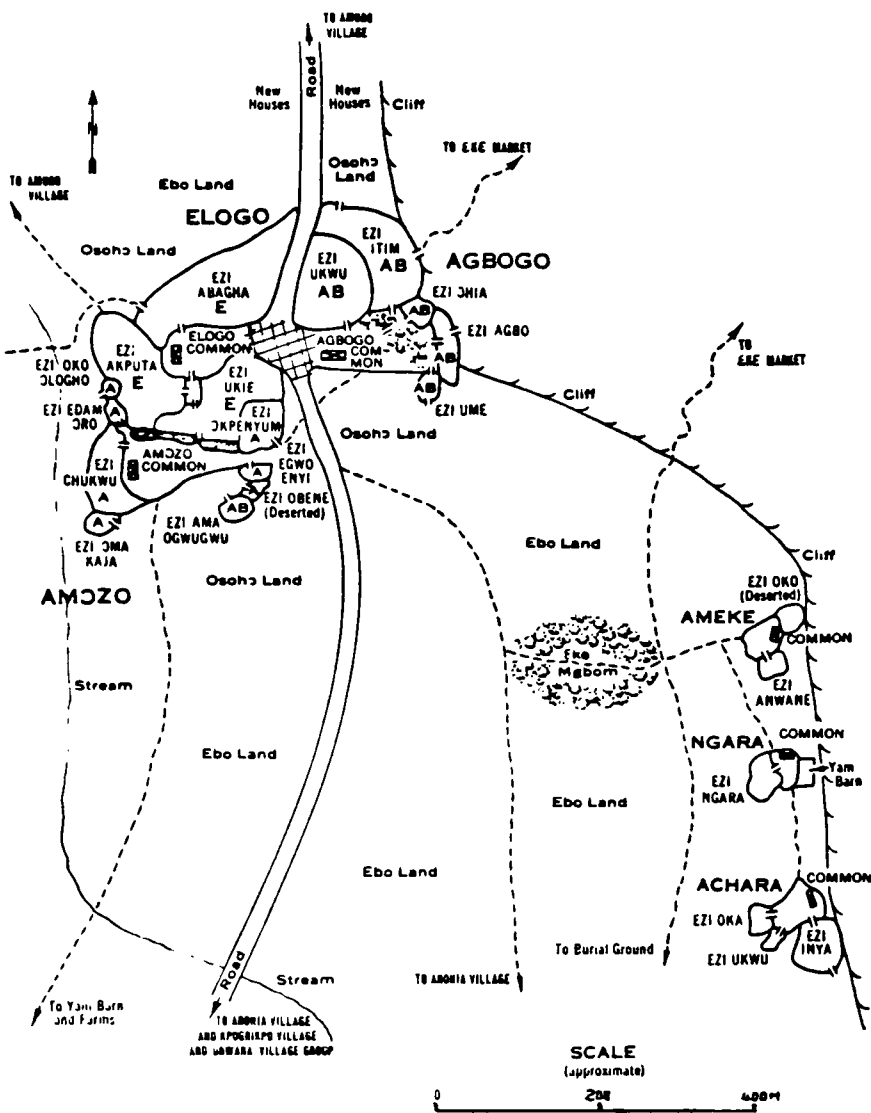
(after Ottenberg, 1968).




and escarpments. The village group consisted originally of five villages, most of which were unrelated, but by the time Ottenberg was collecting his anthropological data there in the 1960s, the number of villages in the group had risen to twenty-two.¹² Some of the new villages are offshoots of the older ones, and form satellite villages within the village group territory. Others came into existence through emigration from other village groups in that area. The unrelated nature of the five core villages is underlined by their claims of different ancestors. Each lays claim to an ancestor who moved in from the Aro, Ikwo, Enugu, Okigwi, or Owerri areas of Igboland. Although this claim of divergent origin did not destroy the basic cluster formation, some of the normal features of the village group centre are missing. For instance, the village group has no collective ndi ichie or alusi shrines and, if it were not for the central market a common meeting place would have been absent too. On the other hand, members of individual villages claim common ancestors and the village layout follows the traditional pattern.

The village of Mgbom (ill. 61), for example, is one of the largest villages in the group. It consists of three main wards, Agbogo, Elogo and Amozo wards, which all together contain twenty-two compounds. The village square, shaded in the illustration is also the ward common of the oldest ward, Agbogo ward, and is centrally located. This forms the heart of the community, where most of the major village rituals are held and villagers discuss village affairs. Each of the other wards also has its own ward common. The living quarters are located in the compounds which are built around ward commons. Beyond the residences and their surrounding gardens, lie the farm and forest land.

This pattern of spatial organisation of the residential territory is by no means entirely restricted to the Igbo. Nadel, for instance, observed that Nupe towns, ezi, consist of:

Illustration 61



-  Village Square
-  Ward Common
-  Compound Entrance

Mgbom Village in Afikpo Village Group.
(after Ottenberg, 1971).

... clusters of compounds scattered comfortably over an area, each 'cluster' consisting of a number of walled compounds, 'houses' in native terminology, and forming what the Nupe call an efu or ward. These village wards are separated by stretches of open land, spacious cultivated fields, studded with clumps of trees ... Each efu has its own name, derived either from a topographical peculiarity, e.g. Takogi, meaning 'the one below', or kpacinefu, 'the river bank efu', or from a sociological feature, namely, the rank or profession of the people living in the efu ...¹³

A Nupe Ezi, quite unlike an Igbo village is, however, usually encircled by a wall. A similar pattern of residential layout is also observed among the Gisu of Uganda. According to La Fontaine, villages consisting of several neighbourhoods are also grouped to form village clusters.¹⁴

These similarities, as can be seen, are more morphological than sociological or functional. For the centres, squares, and commons which are vital in the Igbo residential layout and their significance as the focus of socio-cultural activities are lacking in both the Nupe and Gisu layouts.

The Compound and its Elements¹⁵

The compound, or mbara ezi, is the traditional basic dwelling unit of domestic Igbo architecture. This is because it is normally occupied by the basic social group, the nuclear family.

Igbo compounds are usually located amidst gardens where vegetables and other crops are grown. Some compounds also

incorporate gardens within them. These gardens are purely for economic purposes, producing vegetables, crops, and produce for both the home and the market. However, architecturally, they also enhance the general appearance of a traditional settlement.

The tradition of locating compounds within domestic gardens is also known among other peoples. For example, the Lela of Upper Volta live in giant compounds surrounded by cultivated fields. As is the case with the Igbo, this pattern of layout finds a meaning in the economic life of the compound inmates.¹⁶

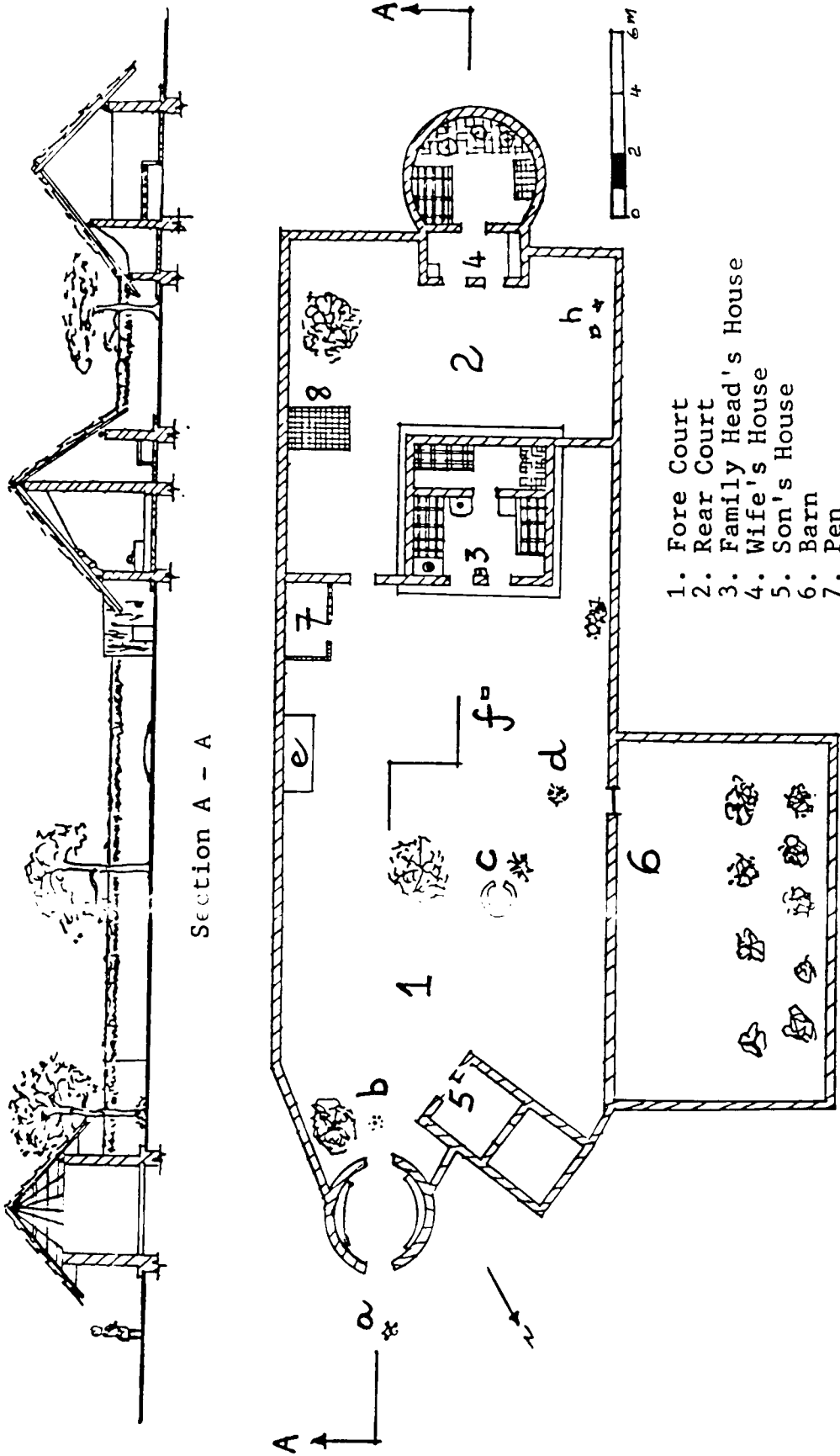
Most Igbo compounds are rectangular or square, but oval, circular, semicircular, composite, and even amorphous compounds may occasionally be found. This is because these forms are largely dictated by the form of the plot inherited by a prospective compound owner, the particular traditional form customarily used in an area, and other factors such as defence.¹⁷

The sizes of compounds also vary but again may depend on the size of the inherited plots, and the numerical strength of the occupants. The compound of Mazi Aro Ukwu (ill. 62) occupies a total area of 372 sq m and accommodates five inmates. This is regarded as a small compound.

A traditional compound always has a cleared space (ill. 63) in front of it, from which pathways lead to the ward common and to other compounds. In the cleared space is usually located the shrine of the compound's tutelary alusi, egbo, egya, or mmuo, which is believed to guard the compound inmates against evil spiritual forces. The shrine may be protected from the weather by a small shelter.

These are some of the general features of Igbo compounds. There are, however, other minor variations in the layout of different compounds. These variations are best

Illustration 62. Compound of Mazi Aro Ukwu in Akegbe.

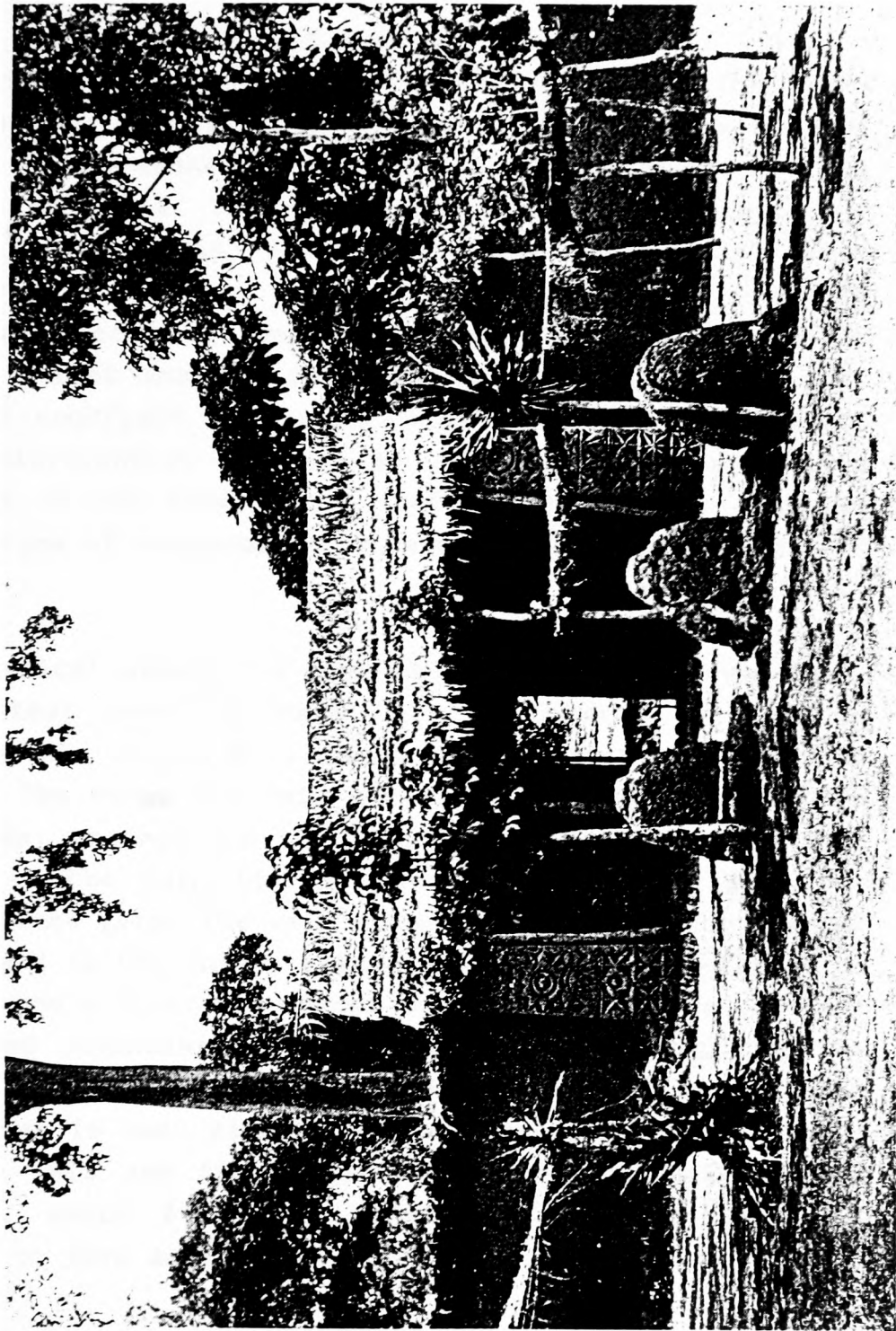


1. Fore Court
2. Rear Court
3. Family Head's House
4. Wife's House
5. Son's House
6. Barn
7. Pen
8. Outside Cooking Area

a-h as explained in the text.

Illustration 63.

Entrance to a Traditional Compound (note the shrines in the foreground; after Basden, 1921).



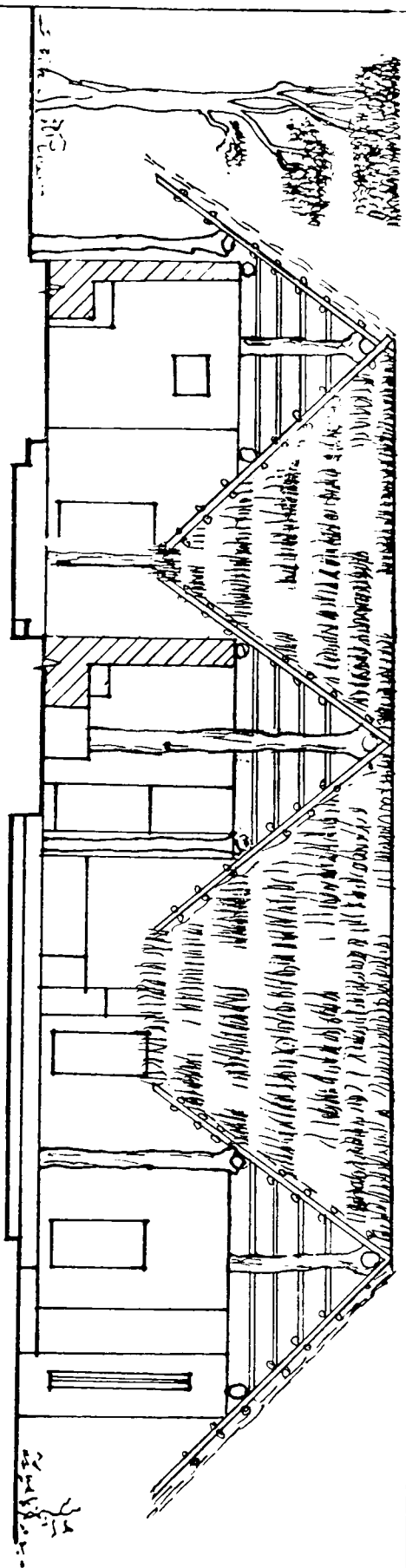
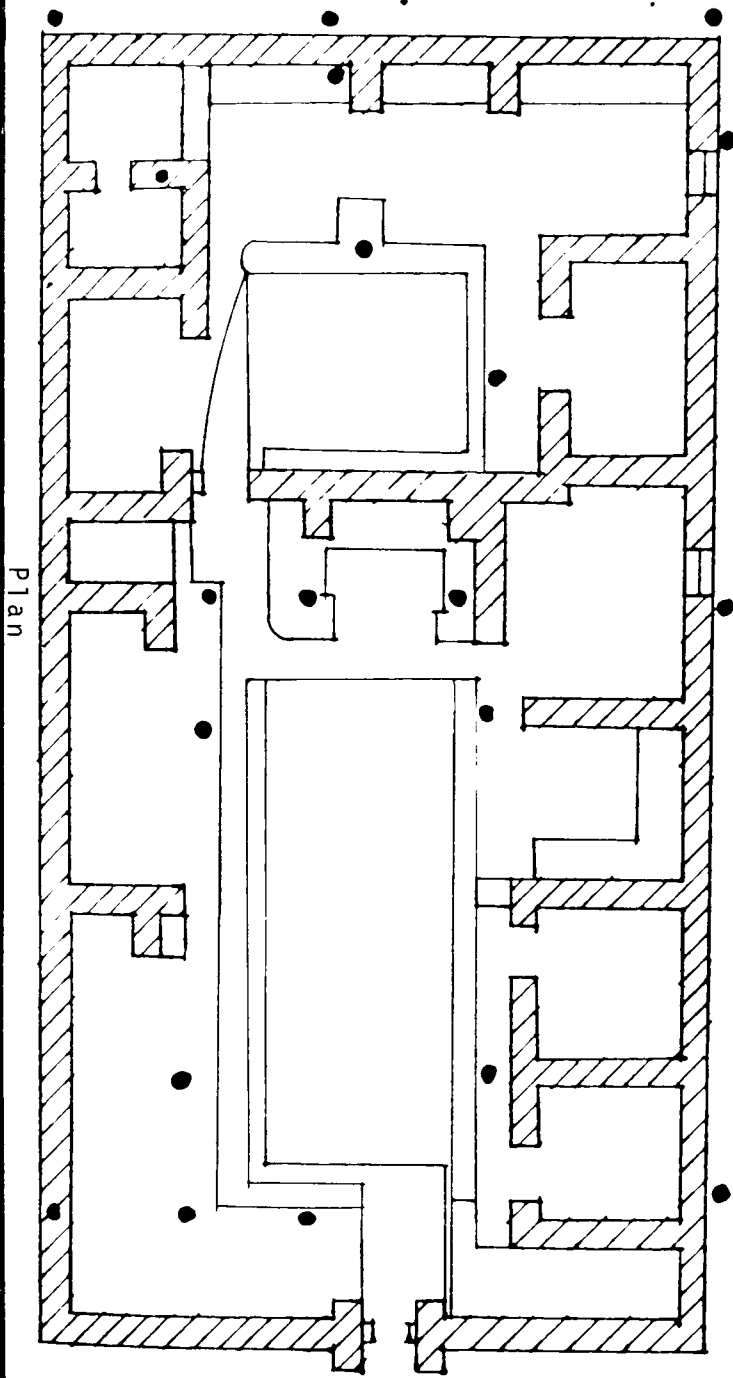
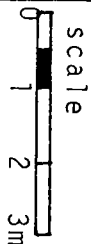
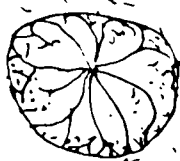
demonstrated by considering the three main types that are known throughout Igboland, the impluvium type, the giant type, and the Igbo heartland type.

The impluvium type of compound has its rooms arranged around one or more internal rectangular courtyards. When more than one courtyard is present, they are connected by passages in the manner of the classical Roman house with its sequence of atria. The rooms open inwards into continuous rectangular verandahs, 0.5m - 1m higher than the floor of the courtyard. In most cases, the verandahs are covered by roofs supported by a peristyle of columns which may be of mud with relief ornament or carved timber pillars. When more than one courtyard is present, the sequence of courtyards form a hierarchical progression culminating in the private apartment of the head of the family. Other common features of this type of compound are highly polished mud couches and shrines.

A typical example of the impluvium compound type (ill. 64) is that owned by Mazi Ugbo in Umuaroli village in Onitsha. This compound is among the oldest of its type in Onitsha. The rooms are laid out around two rectangular open courtyards, or impluvia. Both courtyards are connected by a doorway in the main living accommodation which faces the main entrance gate. The main entrance gate is in the form of a porch and is the only architectural feature of interest on the compound's front elevation. Both impluvia are surrounded by covered verandahs, the roofs of which are supported by massive, well-moulded mud and timber pillars, and timber pillars set in mud. Alcoves and mud couches are incorporated into the wall and floor structure. The back wall of the verandah, which faces the compound's main entrance, is recessed to form an altar.

This type of compound is prominent in the western and riverine areas of Igboland, but it is not entirely restricted to these areas. A few, for instance, are also

Illustration 64



Compound of Mazi Ugbo in Onitsha,
Impluvium Compound.

found in the Cross River area of the land in Abam, near Bende. It is generally believed that the Igbo took this type of compound from the Benis, who themselves are suspected of having got it from either the Portuguese or the Yoruba. Basden noted:

At Onitsha the compounds resemble those in vogue in Yoruba Country, a fact which serves as an additional argument in support of the tradition that the chief inhabitants of that town are of Benin origin.¹⁸

This assertion finds more support in the apparent predominance of this type of compound in those areas of Igboland that came under Benin influence at some time before AD 1300.

The similarities between the Benin type itself and the classical Roman houses have prompted suspicions of possible Roman sources which reached West Africa by way of Egypt. The resemblance is all the more remarkable, for, just as it occurs in Roman houses, in the centre of the roof of each courtyard is a hole which serves to admit light and air, while in the floor is the sunken impluvium with outlets to carry away rain water. However, the internal courtyard system is a typical Mediterranean feature, and its adoption in Benin's traditional architecture could more plausibly be due to Portuguese influence stemming from the more recent Portuguese link with the Yoruba and Benis, which started about the sixteenth century.¹⁹

The giant compound type is typical of the eastern and south-eastern parts of Igboland. As its name suggests, it is an enlarged compound, housing a number of minimal segments of an umunna. In form, a giant compound may be circular, oval, or even amorphous.

A typical example of an oval giant compound is the Ndi

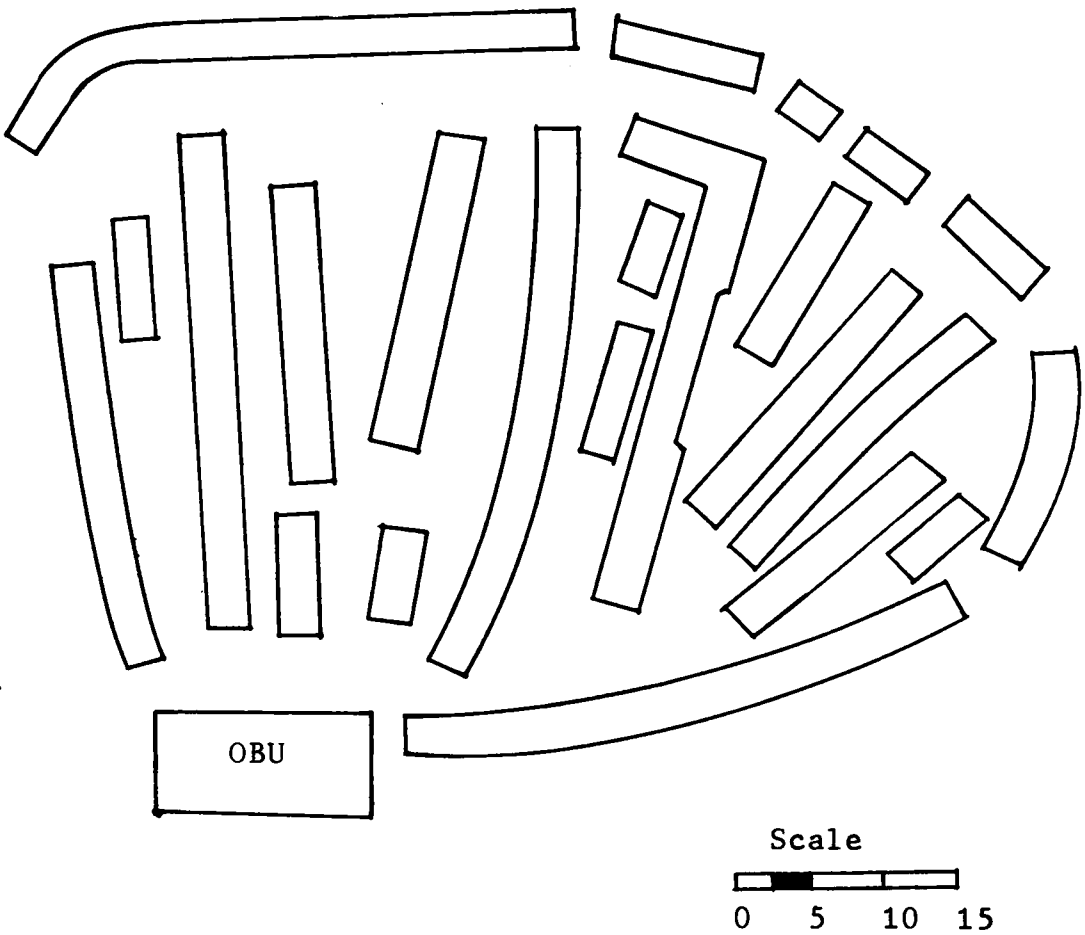
Aja compound in Ohaffia (ill. 65). The compound consists of a number of houses, some of which are closely joined together to form a type of perimeter wall enclosing a courtyard roughly oval in shape. A special house known as obu forms the main entrance to the compound. In addition to serving as the entrance porch, the obu also has social and religious significance. It serves as a general meeting place for all the families in the compound, a place for entertainment during weddings, and a leisure shelter for the aged, the infirm, and nursing mothers, and it sometimes serves people practising all sorts of crafts.

Inside the enclosed courtyard, more houses are erected, their rooms arranged to form long narrow blocks. These long narrow houses are laid out fan-like, radiating from a small piazza or plaza in front of the obu. This spatial order thus emphasises the obu as the focal point for the compounds external-internal communication and social activities. In the layout of the houses, the husbands' and wives' houses are not necessarily adjacent. They are usually arranged in parallel rows to face each other.

It is generally believed that the formation of this type of compound was induced by socio-political factors. Among the eastern and south-eastern Igbo, the Abam were very war-like during the days of slave raids, and were often hired by the Aro as mercenaries to raid other Igbo in these areas and beyond. Ndi Aja and other giant compounds were, therefore, designed in the form of war camps with the advantages of quick mobilization and restricted access to their interior parts.

The compound of Umu Ogbonna in Ututu, another Cross River village group, is a typical example of a circular giant compound. The layout is similar to the one described above, except that a circular courtyard is enclosed by the outer ring of houses instead of an oval one. But as in the former, no compound wall is involved. The outer ring here is

Illustration 65



Block Plan of Ndi Aja Compound in Ohaffia.

Oval Giant Compound.

(Jos Museum)

formed by women's houses, while men build theirs inside this outer ring. The houses in the courtyard, unlike those found in the oval giant compounds, are not in continuous long rows, but free standing and each has several rooms.

The type of giant compound found in Afikpo is amorphous in shape. Each is called ezi, followed by the name of the man who established it. Ezi Akputa (ill. 66) is a good example of a giant compound without a definite shape and is typical of that part of Igboland.

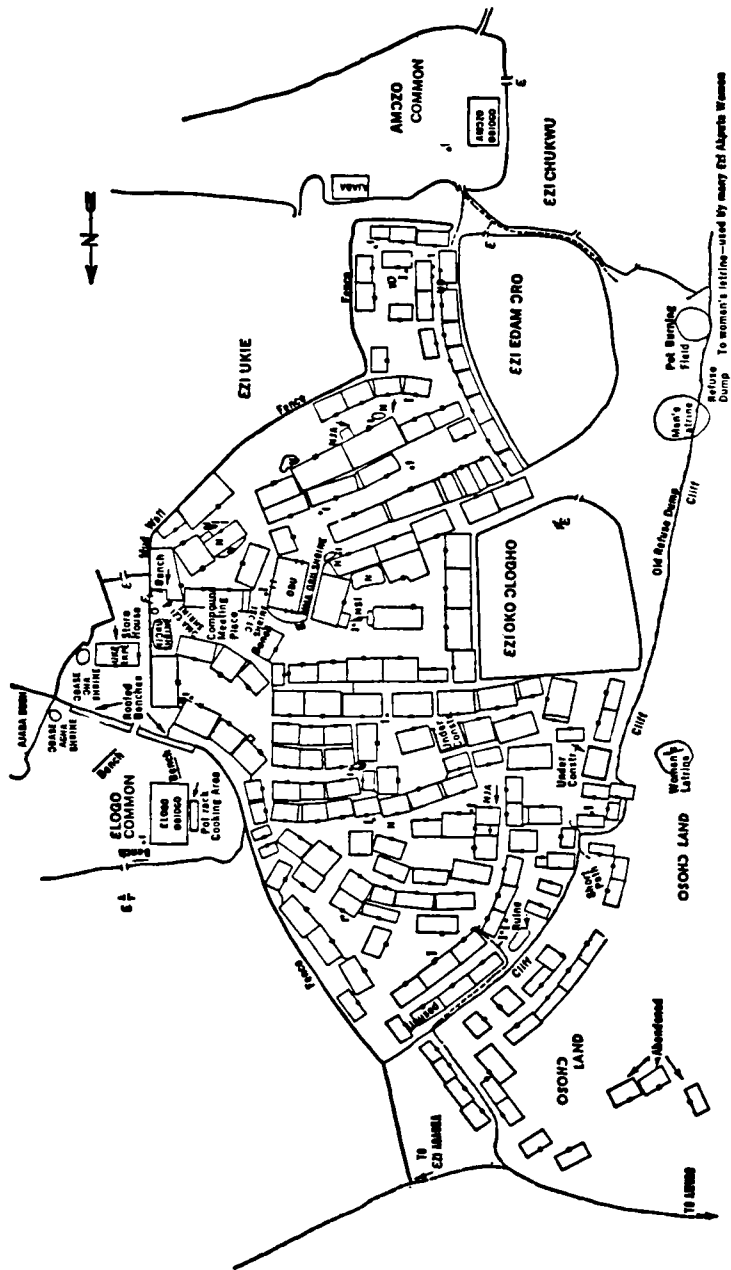
This compound is separated from other compounds, its ward common, and unused residential land, by a mud, wood and bamboo fence. The fence does not necessarily encircle the compound but obscures the full view of the internal part of the compound from the ward common. Most of the houses within the compound are again built to form long rows radiating from the main compound gate, some in parallel arrangement, and others across, but all are separated from one another by either narrow alley-ways or winding pathways. The entrance to the compound is through a narrow roofed porch with a protective amulet dangling down from its roof. Just beyond the gate, inside the compound, is the ndi ichie shrine of the lineage founder, known as mma obu. Near this, is a small cleared area used for public meetings and celebrations. Inside the compound, there is a separate house for each man and for each woman and her young sons and unmarried daughters.

The rear of the compound is not clearly demarcated and opens onto a bush groveland called oso-ho, which serves as an expansion territory. On this territory are also located small gardens, a garbage dump, latrines, and a place for firing pots. From that area too, pathways lead to the farmland and to a stream.²⁰

The third type of compound found in traditional domestic Igbo architecture is identified with the northern,

Illustration 66

Ezi Akputa Compound in Afikpo,
an Amorphous Compound.



(after Ottenberg, 1971).

central and southern parts of Igboland. This type consists of a number of houses on a plot of land encircled by a wall, having one main entrance gate (ill. 67). Unlike the impluvium type, the houses in this type of compound are usually detached from one another, and unlike the giant type, it houses only a single family, a blood-related group forming a member of a minimal lineage segment of umunna.

The elements that make up this type of compound include the compound wall, gates, courtyards, shrines, houses for the head of the family, his grown-up sons, his barn, latrines and bath houses. Occasionally, water catch pits and wells, pens for cattle, and chicken coops are also located in such a compound.

Some early accounts imply a specific pattern of arrangement or location of these elements in this type of compound. My field work, however, confirms that in as much as the ranking in Igbo social structure is reflected in the ordering of these compound elements, ranking is not always achieved by cardinal locations of the houses. For example, the subordinate position of a wife in Igbo society is not always reflected by positioning her house behind her husband's, but may at times be reflected by it not facing the main entrance gate of the compound.

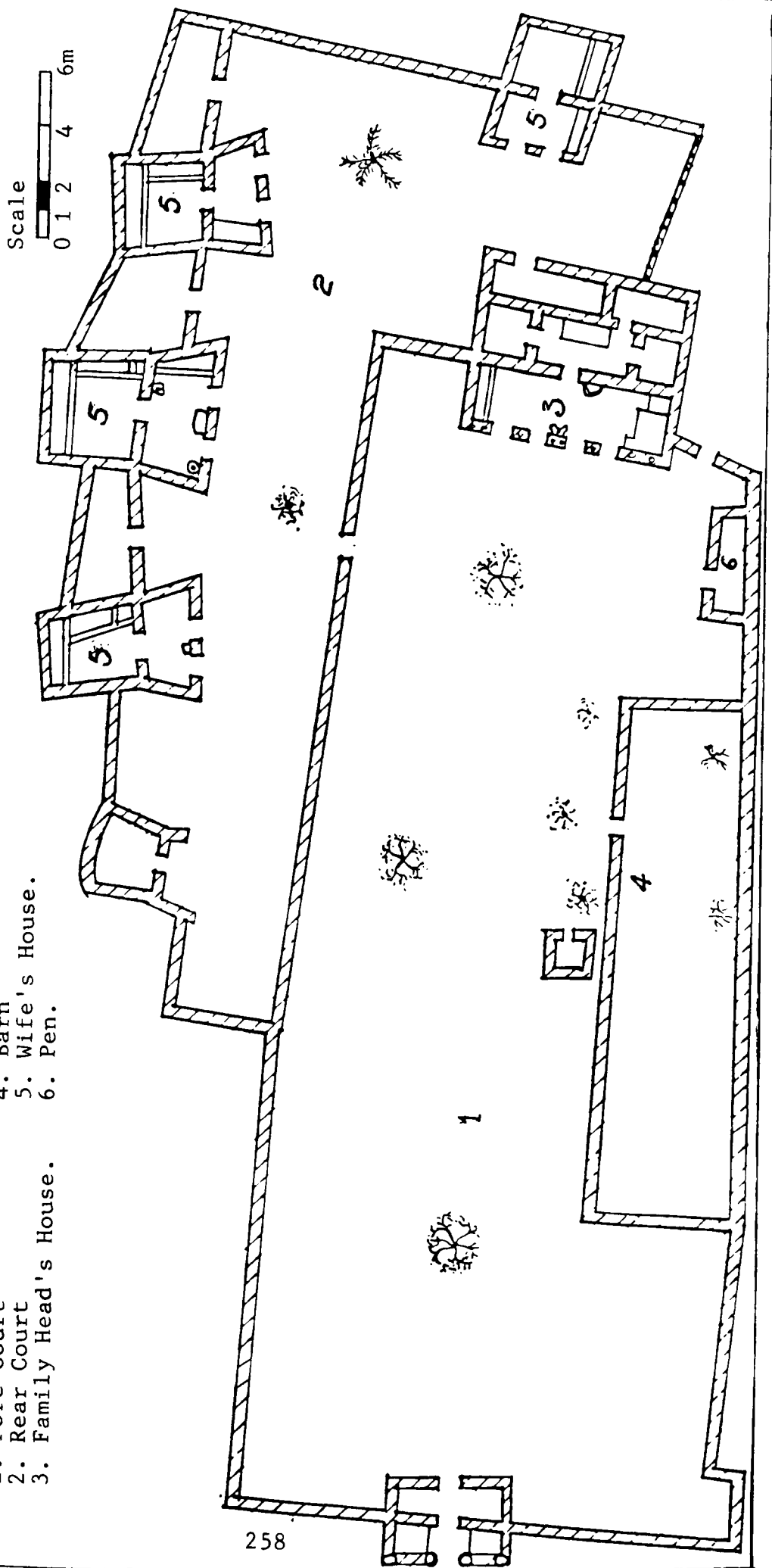
Mazi Aro Ukwu's compound in Akegbe Ugwu near Enugu (ill. 62) is another example of this Igbo heartland type. It is enclosed by a perimeter wall. Its most important features include the compound gate, a number of shrines, the barn, the house of Mazi Aro Ukwu, the house of his first son, who is as yet unmarried, and that of his wife.

The entrance gate, ofu obodo, is a circular porch. In front of the compound gate is egya, a shrine dedicated to the tutelary spirit of the compound. Immediately beyond the gate is anyanwu.

Illustration 67

Compound of Chief Arum Ogbodo in Akwuke (Jos Museum).

- 1. Fore Court
- 2. Rear Court
- 3. Family Head's House.
- 4. Barn
- 5. Wife's House.
- 6. Pen.



On entry into the compound, close to the gate but on the right, is the house of his first son. Next, 8m from the gate and again to the right of the compound's longitudinal axis, is yet another shrine, ofili. Further to the right of this and built into the compound wall is Mazi Aro Ukwu's barn. The barn covers an area of 84 sq m and so is considered large for the compound. This is indicative of Mazi Aro Ukwu's ability and success as a farmer. In front of the barn is yet another shrine, njoku.

His own house is 18.5m away from the compound gate and faces it. His house and two latitudinal walls adjoining to it divide the compound courtyard into fore and rear parts. A single passage way connects both courtyards.

In the rear part are located his wife's house, an external cooking area, and other shrines. Other features of the compound include Mazi Aro Ukwu's father's grave, and an animal pen.

It appears that the presence of the impluvium compound type predominantly in west Igboland reinforces the supposition that the western part of Igboland came under the domination of the Benis at some time in the past. The architecture and some other aspects of the material culture of the conquering Benis must have been accepted by the Igbo as a mark of prestige. This is similar to the change that has been noticed in Igbo architecture since colonial days. European architecture has also been accepted in society as a mark of prestige. In the case of Benin, those Igbo adopted much of their pattern of social organisation from the Benis including their monarchical system of government. Furthermore, the building materials used by both the Igbo and the Benis are the same and the Benin compound type could also comfortably accommodate the Igbo traditional family. It is therefore not difficult to see why it was easy for those Igbo to adopt the Benin compound type.

Perhaps an important point deriving from this is that the threat of European architecture in Igboland is real. Traditional Igbo architecture faces total obliteration as an aftermath of colonisation, and the superimposition of European architecture on Igbo settlements.

The occasional occurrence of the impluvium compound type in towns like Abam and Arochuku in the Cross River area of the land, which never came under Benin influence, can be explained by cultural contact.²¹ Aro Chukwu was a big commercial and religious centre in the days of the slave trade. Its sons were known to have spread throughout Igboland as emissaries of their renowned oracle. Such emissaries returned home once in a while bringing visitors to the oracle and new ideas too. They, therefore, must have been able to see and learn much, in terms of local traditions, from other Igbo. Once this style got to Aro Chuku, it was easily copied by other Cross River Igbo, like the Abam.

Another significant point is the possibility that the giant compound is a development from the traditional compound of the Igbo heartland. Such a development must have resulted primarily from military needs and secondly from the topography of the Cross River area. This possibility is further reinforced by the fact that the part of Igboland where the giant compounds are found is of relatively recent occupation by the Igbo. Moreover, in other parts of Igboland, the needs of defence also led to the formation of settlements that are circular and entirely walled up. These settlements are, in a way, an expanded version of the giant compound. The tightly knit nature arising from the grouping of many houses together, creates a spatial intimacy. "Such intimacy", says Prussin, "generates a sense of security, perhaps of permanence and certainly a feeling of stability and cohesiveness".²²

In addition to this, some striking similarities in the

Igbo heartland type and the giant compounds cannot just be passed by as mere coincidence. For instance, the giant compound is still occupied by related groups, though enlarged. Also the reception house of the Igbo heartland type, obu, which is normally thought of as belonging solely to the head of the family, has to be enlarged in the giant compound to accommodate more than one head of a family. As is the case in the Igbo heartland type, women still have their separate houses in the giant compound, and numerous shrines are equally present here. The difficult topography contributed to making the compound layout compact. On the other hand, this pattern of compound layout made the quick mobilization of its occupants easy in the face of any attack. Not only that, it also made for easy defence as any predator, once inside, is defenceless, because he could be watched and attacked from any of the surrounding houses.

This development of the heartland type of compound into the giant type also suggests that traditional Igbo architecture may still be capable of development and adaptation to suit new situations. The giant compound worked because, while trying to solve the problems posed by their environment and time by developing an enlarged compound, the Cross River Igbo did not violate the basic principles of the Igbo heartland type.

The heartland type of compound, from which the giant compound is supposed to have developed, is therefore considered here as the prototype of the traditional compound. The various elements that make it up are further discussed in detail to cover the significant variations that are possible.

The Compound Elements

The Gates: mgbo ezi, ofu obodo, onu ofu.

The main gate, ofu obodo, mgbo ezi or onu ofu of the

compound, forms an important communication link between the village and the internal part of the compound. There are usually more gates in the compound wall, but those other gates are regarded as emergency exits and not equal in importance to the main gate.

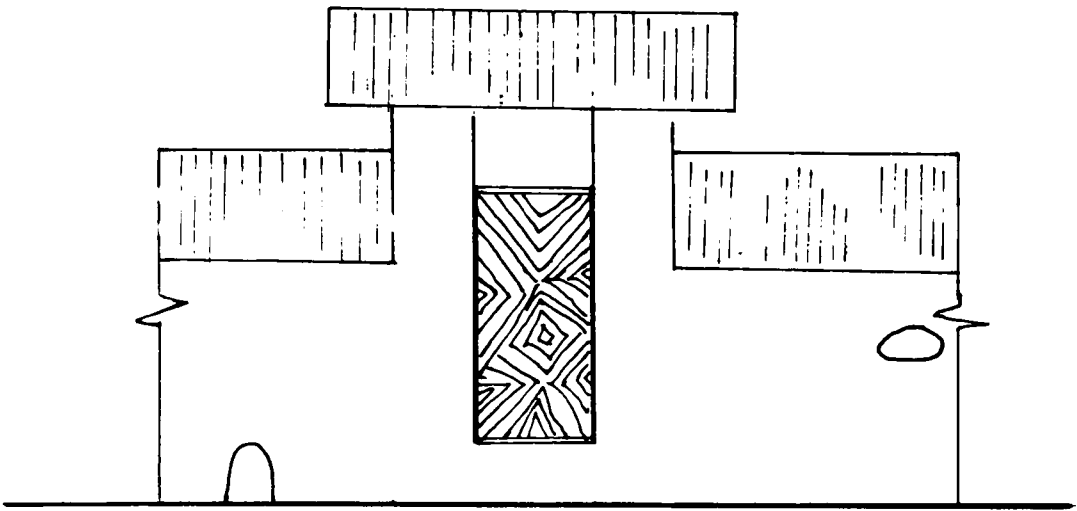
The main gate is built into the compound wall and normally assumes a more imposing form than any other structure in front of the compound.

Structurally, main gates may vary from simple to elaborate types. An early twentieth-century missionary, Basden, gave the following description of a simple main gate:

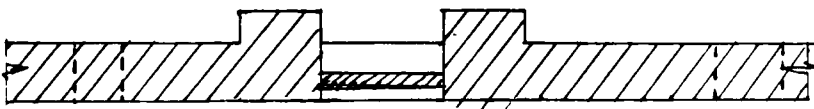
The entrance is an aperture fitted with a door which can be secured inside by means of a bar²³ passed between shackles fixed in the door post ...

In Njikoka, for example, the main gate (ill. 68) is an extension of the compound wall built higher than the rest of the wall by about 0.5m, and roofed. On the other hand, in Nkanu, Awgu and Isiuzo, the main gate is more structurally developed and takes the form of an entrance porch which may serve as the compound's ante-chamber. In most cases, the porch (ills. 70 & 71) is composed of two verandah-like chambers, separated by a wall that is a continuation of the compound wall. One of these chambers faces the internal part of the compound, while the other faces the outside. Both of the chambers are linked by a large wooden door. Another less common variation is found in the compound of Mazi Aro Ukwu (ill. 62). It is circular in form and consists of only one chamber. Access into the compound is by two doorways facing one another, but only the external doorway has a door hung on it. Both variants contain mud couches on which people may rest outside the compound and watch what is going on in the

Illustration 68

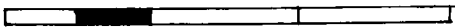


Front Elevation.



Plan.

Scale



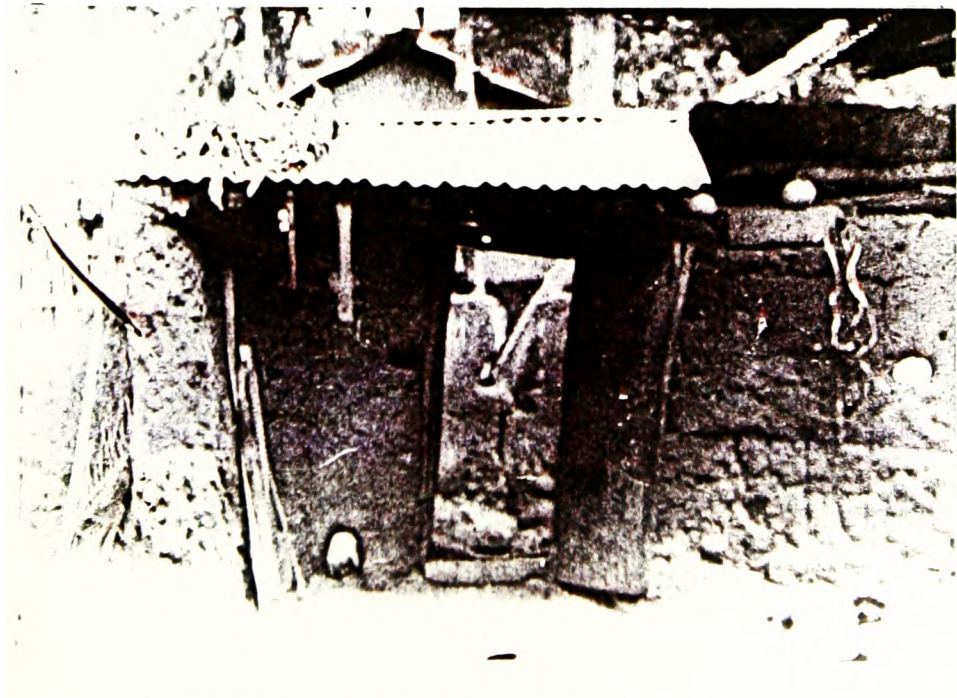
0 1 2 3m

Mazi Eyisi's Compound Main Gate in Nneni Njikoka.

Illustration 69
Simple Main Gates.



a. Simple Main Gate in Awkunanaw.



b. Simple Main Gate in Njikoka.

Illustration 70
More Structurally Developed Main Gates,
in Awkunanaw.

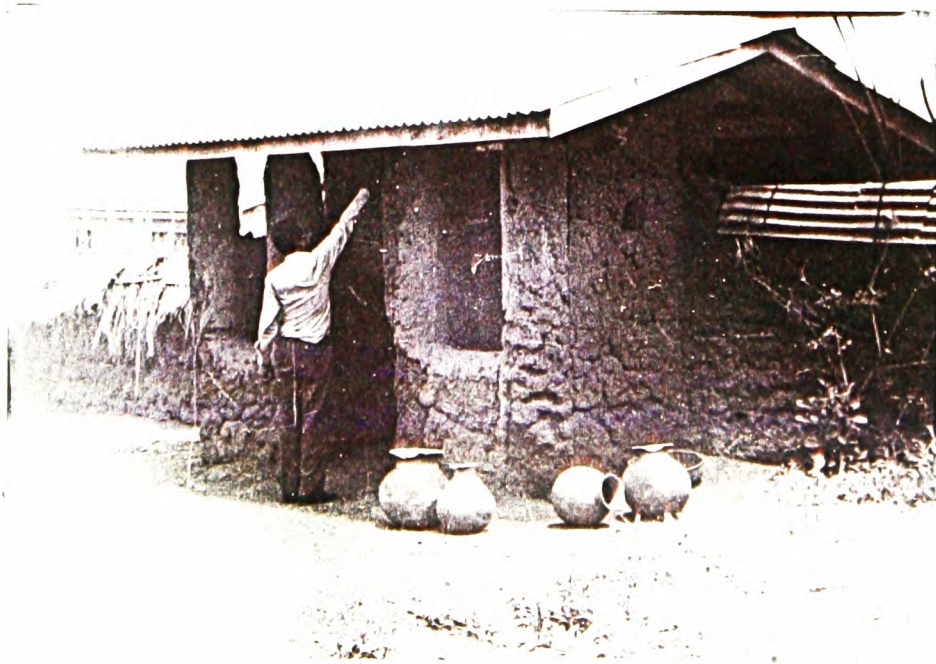
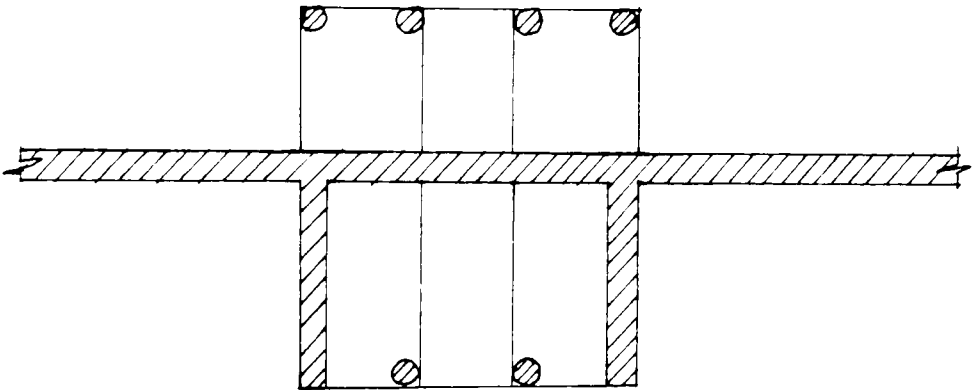
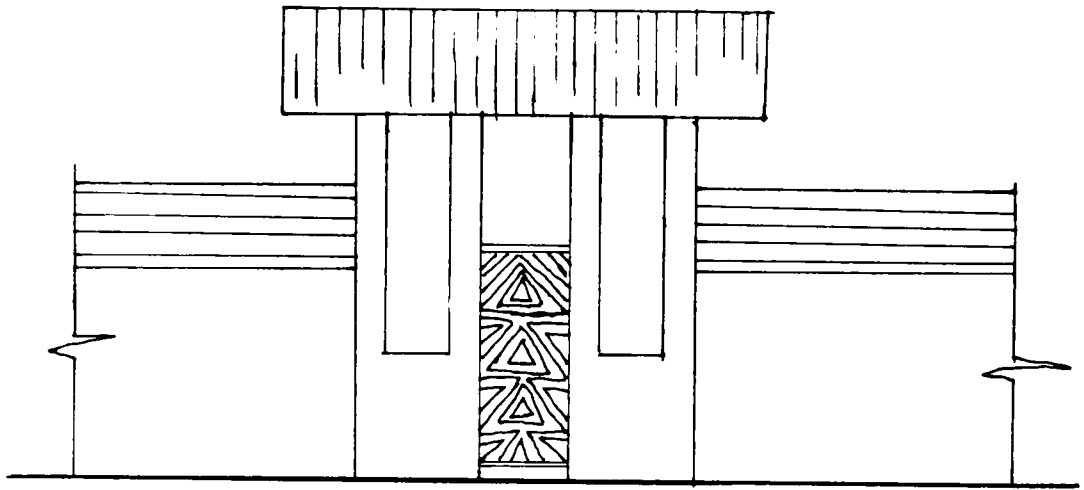
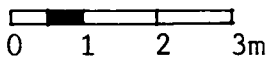


Illustration 71



Scale



Mazi Ogbe's Compound Main Gate.

ward and ward common.

In all cases, however, great importance is attached to the architectural meaning of the main gate. Besides its function as the main link between the village and the internal part of the compound, it also announces to its beholders or to a visitor the social status of the compound inmates, their aesthetic taste, and their ability to give their home a dignified place in society.

Although traditionally all Igbo gates are fitted with wooden doors, the doors themselves vary in decorative details and significance. Among the Awka Igbo, for example, membership and members' rank in the renowned ozo title society (see Appendix Three), are all indicated by the type of carved wooden door hung on the main compound gate of a family. Among the Ukehe Igbo, the main gate is used to confirm ownership of the compound itself. A new inheritor of a compound is expected to demolish the former compound gate and build his own. Until this is done, the compound is not yet regarded as his.

The absence of gates in some traditional compounds today is a regrettable departure from the old tradition. This is partly owing to the high financial cost of the traditional gates, and partly owing to the modern craze for European architecture. As a result of the huge amount of money a traditional carved door attracts today, not everybody can afford to hang one on his main gate, and even those who can afford it, consider it more prestigious to install European types.

The Wall

The compound wall, or owho, ngwulu (ill. 72) defines the physical boundary of a compound. The height of the wall ranges between 1.5 - 2.5m. It is usually covered with palm fronds or grass, to protect it from the rains. In some

Illustration 72

Compound Walls.



compounds, some of the houses are built into the compound wall as is the case in Mazi Aro Ukwu's compound (ill. 62). In other cases, the houses are built free of the compound wall. Also, in some areas of Igboland, for instance Ogidi, the compound wall is extended to enclose the surrounding garden.

The compound wall is primarily for restrictive or protective purposes, to keep cattle in and predators out. The former aim is confirmed by the fact that in Igboland, cattle are locked up in the compounds while crops are still growing in the surrounding gardens. The latter is similarly confirmed by gun holes found in old compound walls (ill. 68). Through such holes, the compound occupants defended themselves when under siege.

In addition to these purposes, however, the compound wall is expressive of the individualistic character of the Igbo. In this respect it strictly defines what is public, that is the village territory outside the compound, and what is private, the internal part of the compound. It further helps to reinforce the Igbo concept of home, that segregated part of their universe, where everything is in order. The compound wall also makes it possible for activities to be carried out in the open with a feeling of being inside the home.

Normally a number of apertures are made at the base of the wall to drain the compound of water and allow domestic animals to venture out and back after harvest (ill. 68). These holes are barred up with wooden rails while crops are growing in the surrounding gardens.

The compound wall was usually elaborately decorated in various styles in the past. About this, Basden wrote: "On the face of the front walls, rude drawings of fantastic figures may sometimes be observed; perhaps simply a series of strokes, or possibly rough outlines representing

crocodiles and other strange creatures".²⁴

As is the case with the use of the traditional compound gate, there is also a lapse in the use of the compound wall in traditional domestic Igbo architecture today. This is not unconnected with the current craze to adopt free-standing country house styles of the Europeans and the collapse of traditional communal building practice which never involved money in the past. Money is required at every stage of building today, and, for the poor, this means that only the most important structures, in terms of function, are erected.

The Courtyard: mbara ezi

The compound wall, the gates, and sometimes the houses are arranged to enclose a courtyard, mbara ezi, in which all other structures in the compound are located. Three main types of courtyard systems, resulting from different arrangements of compound elements, are common in Igbo architecture.

The first is the type that exists in an impluvium compound, in which rooms are built consecutively around a rectangular wall to enclose a rectangular open space (ill. 64). This arrangement may be duplicated to form a multiple courtyard compound.

Another type of courtyard system is found in the giant compounds of the Cross River area of Igboland. This consists of an oval, circular, semi-circular, or amorphous space enclosed by a single row of rectangular houses either joined end to end, or by a wall (ills. 65 & 66). This type resulted from difficult topography and an extreme need for defence in those areas in the wake of inter-village group wars and slave raids.

The third is the type that exists in the Igbo heartland

compound type. It consists of a central space enclosed by the gates, compound wall, or wall and buildings. Because this appears to be the prototype traditional courtyard system in domestic Igbo architecture, more attention will be paid to it.

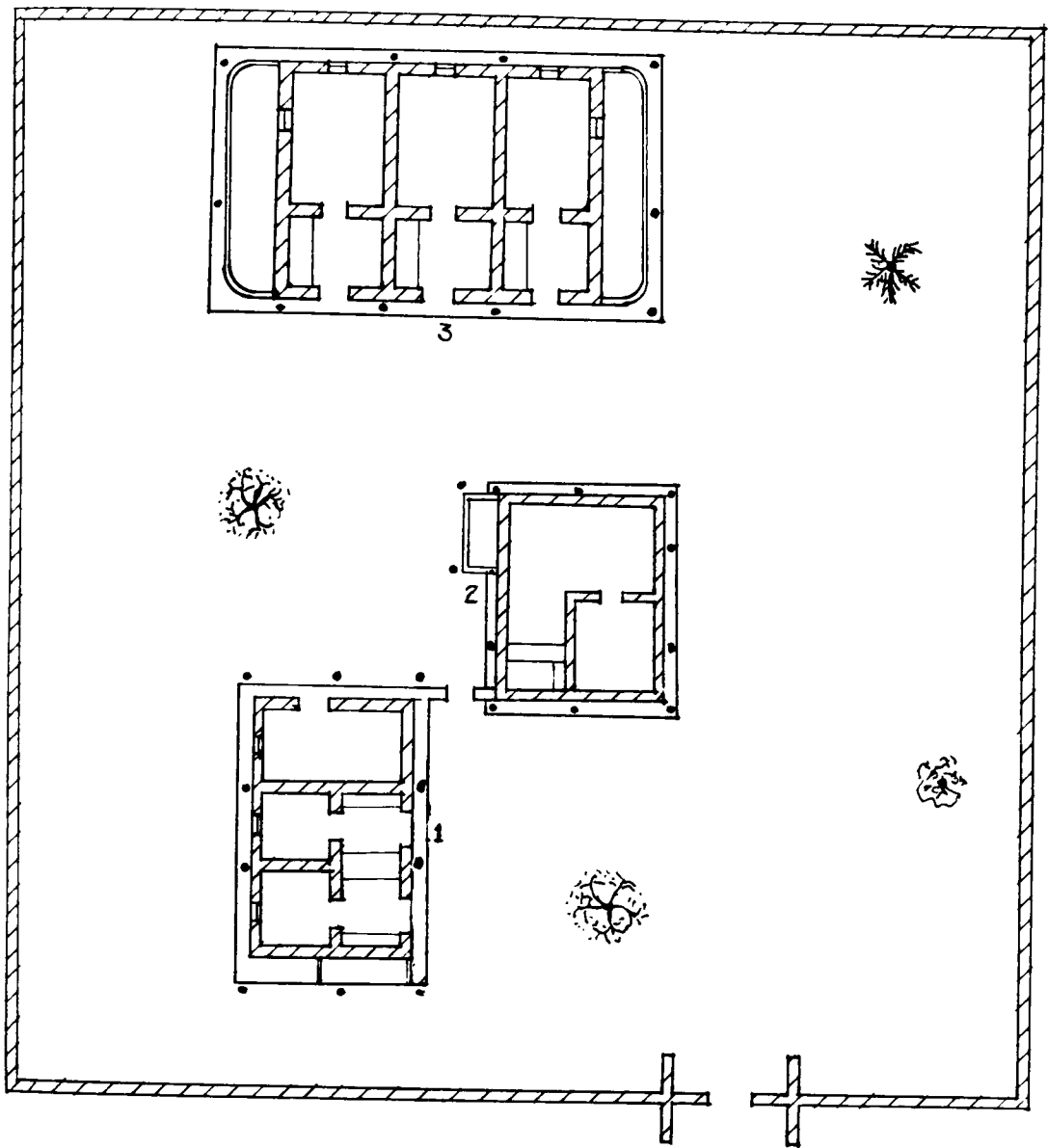
This type of courtyard may exist as a unicellular entity (ills. 73-5), in which there is a total absence of internal physical partitions. It may also be partitioned into two or more smaller units, as in illustrations 76-78. In the latter case, it forms a multicellular courtyard possessing a fore part, lhu ezi, which is immediately facing the compound main gate, and a rear part, okwu or azu-uno, which is behind the forecourt.

The whole compound is regarded as a private domain, but when the courtyard is partitioned, the rear court forms a more private or domestic area while the forecourt serves as a communal arena for the family's ritual and social activities. Should a visitor arrive, he announces his presence at the gate and may not be taken further than the forecourt.

Within the forecourt are located the houses of the head of the family, those of his grown-up sons, the family's reception house, the barn, the cattle pens, and most of the shrines in the compound.

The houses of his wives, his sons' wives, their kitchens, the family's toilet facilities, domestic articles and utensils, such as water pots and women's objects of worship, are located in the rear court. Both courts are usually connected by doorways. Partitioning the courtyard is an age-old tradition known even in ancient Assyrian, Greek and Roman houses. The masculine and feminine or social and domestic characters of the fore and rear courts respectively are equally as old.²⁵ The construction of individually free-standing houses in the compound minimises the spread of

Illustration 73

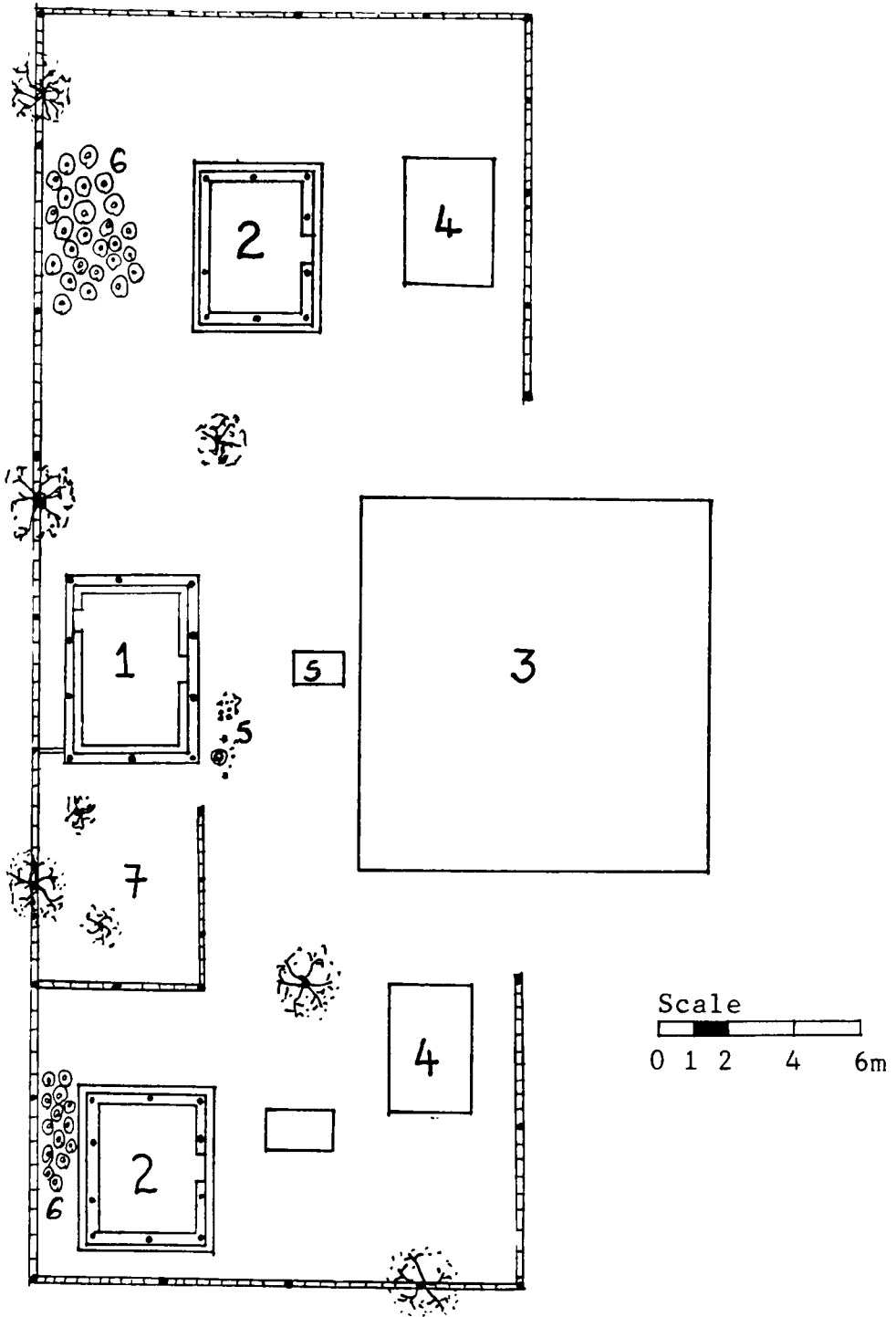


Scale
0 1 2 4 6m

1. Family Head's House
2. His Wife's House.
3. House for Other Members of the Family.

Compound of Mazi Igwesi in Nri, Single Court Compound.

Illustration 74

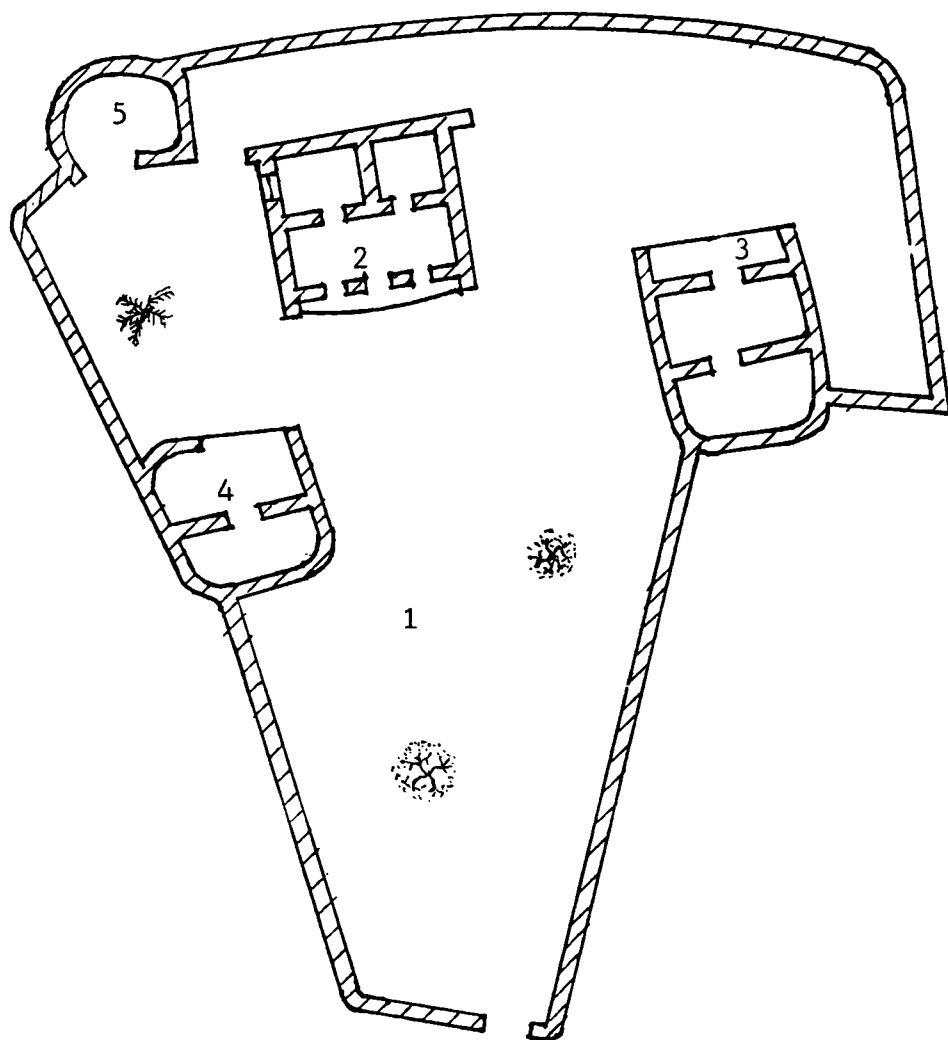


1. Family Head's House
2. Wife's House
3. Son's Neo-Vernacular House
4. Outside Kitchen
5. Shrine
6. Water Pots
7. Barn

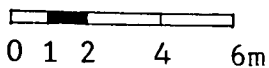
Compound of Mazi Ayogu in Enugu Ezike,
Single Court Compound.

Illustration 75

Compound of Mazi Nwaozo Ude in Ngwo,
Single Court Compound.



Scale

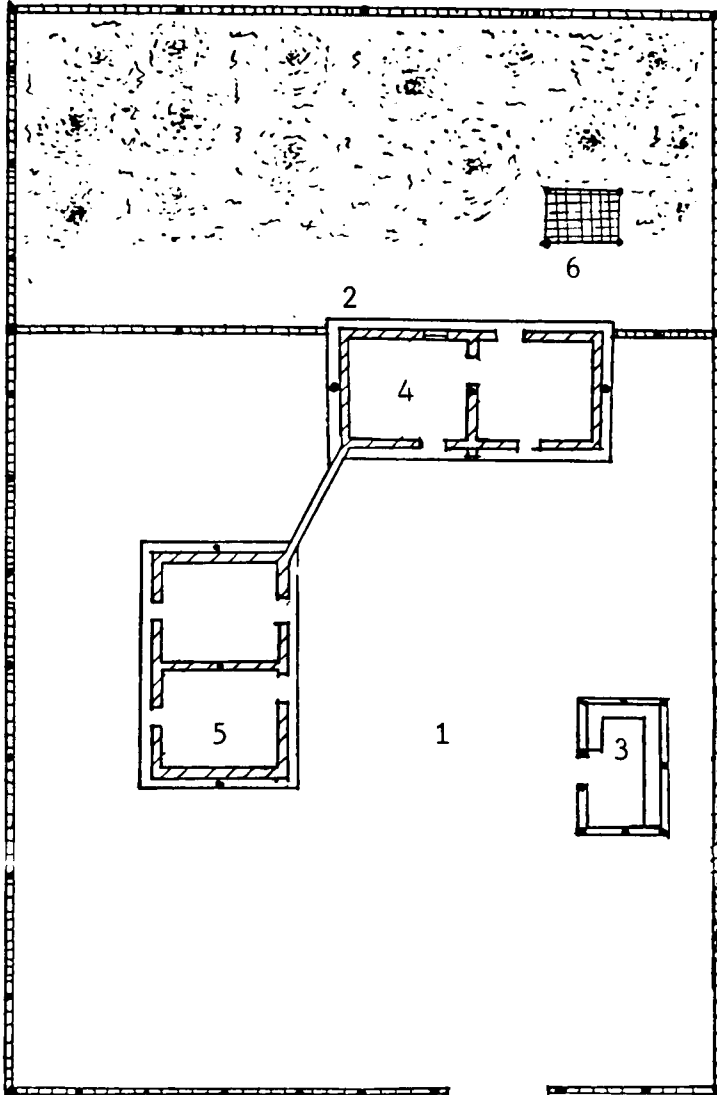


1. Courtyard.
2. Family Head's House.
3. Wife's House.
4. Son's House.
5. Enclosure for Bathing.

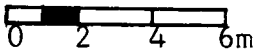
(Jos Museum).

Illustration 76

Compound of Mazi Uwakwe in Akabo, Double Court Compound.



Scale

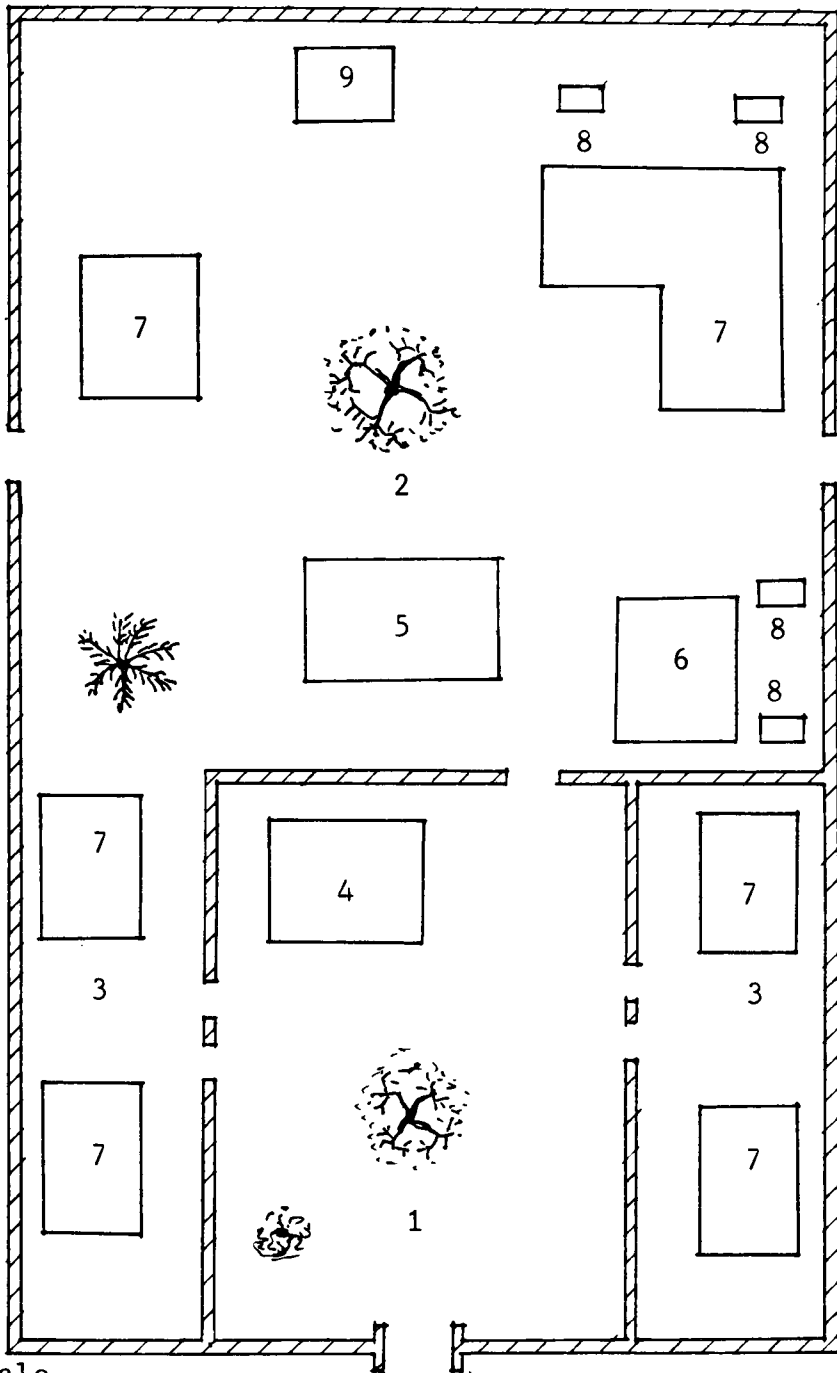


- 1. Fore Court
- 2. Rear Court
- 3. Obuma

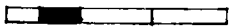
- 4. Family Head's House
- 5. Son's and Wife's House.
- 6. Outside Kitchen.
- 7. Garden.

Illustration 77

Block Plan of the Compound of Mazi Ewuzie in Ozubulu,
Multiple Court Compound.



Scale

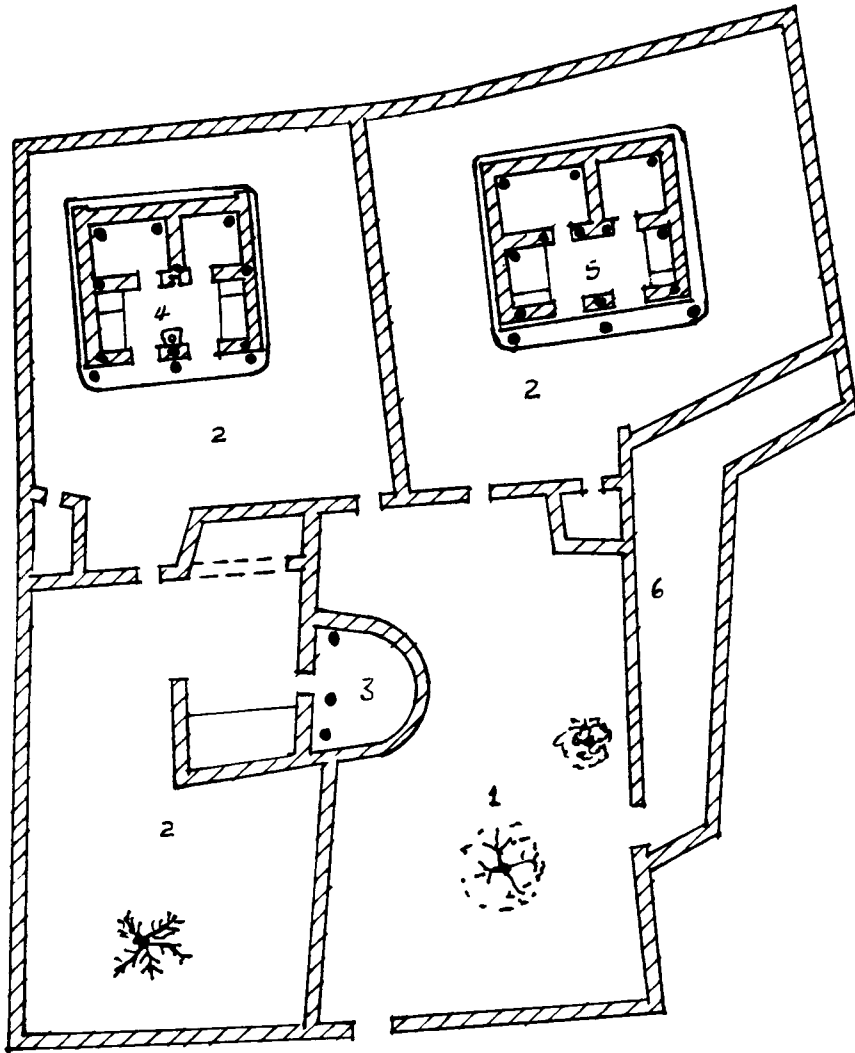


0 1 2 4 6m

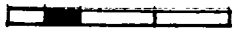
1. Fore Court
2. Rear Court
3. Other Court.
4. Family Head's obu
5. Family Head's House
6. First Wife's House
7. Other Members of the Family
8. Kitchen
9. Toilet

Illustration 78

Compound of Mazi Nwokorie Nwasa in Nanka,
Multiple Court Compound.



Scale



0 1 2 4 6m

1. Fore Court
2. Other Court
3. Family Head's Obu House.
4. His Inner House
5. His Wife's House
6. Barns

fire, both within the compound and in the village. Should one house catch fire, the rest may be defended while the one on fire burns itself out.

The courtyard system used in traditional Igbo architecture offers a number of advantages. It plays a significant role in the domestic life of the Igbo, offering a place for different social and domestic activities throughout the greater part of the year. In addition to forming the main nucleus around which all the compound elements are organised, it serves as a territory linking the vocational and domestic life of the Igbo. For the greater part of the year, it serves as an outdoor living area, providing a place for work and other domestic and social activities. Meetings could be held there, children can play there, and domestic animals can wander about there too. Preparing and eating food, resting and many other social activities involving many people are possible in the courtyard. The courtyard system also makes it possible for undesirable reptiles and rodents to be seen well before they get near the houses, and so can either be killed or chased away before they find shelter in any of the houses. On the other hand, if they gain entry, their tracks can be recognised on the surface of the ground and a search of the premises conducted in good time. Furthermore, small children are always in sight of their mothers or elders, and if some small household effect is dropped outside, it can easily be found. Moreover, by partitioning the courtyard into fore and rear sections, a sensitive visitor or guest will immediately recognise the area of the compound which is open to strangers and which is strictly for domestic and private use. The courtyard arrangement also gives the compound inmates the advantage of seeing whoever has entered without the person knowing from where he is being watched.

The area of the courtyard is limited only by such factors as the size of inherited land, the personal choice of the compound owner, and the status of the owner in

society. Of greater interest perhaps, is the fact that the ratio of built to unbuilt area in the compound is always in the region of 1:2, 1:3 or sometimes higher.

Planting within the Compound

Trees and shrubs are common features of Igbo compounds. They are usually planted both within and without the compound. Palms, coconut, ogilisi, ogbu, oboko, uke, oha, ichikele, ube and paw-paw are among the commonest trees and shrubs found. Some of them are purely for domestic or economic purposes, providing edible fruits and vegetables, while others have religious significance, serving as shrines to the pantheon of alusi known in Igbo religion. In addition to these, the trees provide shade and shelter from the scorching sun during the day and in the evening. They, therefore, form focal points for social and domestic activities in the compound. This is evident from the chairs and other furniture for relaxation made of stones or tree-trunks usually arranged under these trees.

Some of the trees, especially the large ones, shelter the roofs of the houses in the compound from excessive heat, and provide resting places for domestic animals when not used by people. These trees also improve the air circulation pattern in the compound, as they are capable of obstructing and redirecting even high winds.

The presence of trees in the compound nevertheless has some disadvantages. For instance, falling leaves, flowers, fruits and little branches can quickly turn the courtyard into a dirty arena, if not constantly cleared. Similarly, a branch or even a whole tree may fall during a heavy rain or tornado, thus constituting a danger for the compound inmates. Trees in the compound may also harbour undesirable insects, reptiles and rodents.

With European contact, some trees which were originally

not known in Igboland became significant features of the traditional compound. These include mango, guava, cashew and umbrella trees. This is another aspect in which the traditional Igbo architecture has been enriched by articles of material culture borrowed from other people.

The Shrines

Besides the shrine of the tutelary alusi located in front of the compound main gate, there are usually numerous other shrines and objects of worship located within the courtyard. The names given to these shrines and objects of worship vary a lot throughout Igboland. Popular among them are anyanwu, ana or ala or aniobi, omumu or odudo, njoku or ufiejioku, agbala or mmuo or emokini or nsidienye, egya or agwu, and chi or okike.

They are all supposed to perform one beneficial spiritual function or another, and in different parts of Igboland their locations within the compound vary. A typical example of these objects, their functions and locations in the compound, is shown in Mazi Aro Ukwu's compound (ill. 62).

Egya (a) is dedicated to the compound's tutelary alusi. It is supposed to protect the compound and its inmates from all evil metaphysical forces. Its location is in front of the compound main gate. In Mazi Aro Ukwu's compound, it is represented by a long palm midrib, fixed to the ground and surrounded by stones and small inverted pieces of earthenware.

Anyanwu (b) is the shrine dedicated to Chineke, the author of light and knowledge. In this compound it is represented by a heap of clay surrounded by metallic objects and a long wooden pole, to which is tied a piece of white cloth.

Ofili (c) is located towards the gate but to the right of it. It is dedicated to the alusi of peace. In this compound it is sheltered by a small round hut.

Njoku (d) is for the alusi responsible for the growth of the yam. It is symbolised by an ogilisi tree planted in front of the barn.

Most Igbo also bury their dead in their compounds, especially when death has occurred in a socially approved manner. A dead man may be buried inside his own house or outside the house, but within the courtyard. The grave forms an object of worship and receives sacrifices and libations. In Ukwu's compound, the dead father of the present compound owner is buried on the spot marked (e).

Aniobi (f), is the sign of home and a physical sign of the consent of the ana or ala for the use of that piece of land as a home. In this compound it is marked by a stone and located in front of Mazi Aro Ukwu's house, just 3m away from it.

Odudo (g) is in the form of a big clay bowl surrounded by other smaller ones. All of them are arranged at the foot of an oboko tree. It is for the alusi which ensures the posterity of both humans and animals that live in the compound. The big bowl is filled with water every morning for all domestic animals in the compound, especially when they are locked in during the crop-growing seasons. In this compound it is located to the left of the house of the head of the family.

Okike (h) is the shrine of the procreative alusi. It is in the form of an inverted clay bowl surrounded by stones. A man and his wife each has an okike. In this compound, it is the only shrine located in the rear courtyard.

In other compounds, there may be slight variations in the nomenclature and locations of these shrines, but generally most of them are located in the fore courtyard. Each of them receives sacrifices and the areas around them are usually littered with feathers of fowls sacrificed to them. Within the compound, such areas carry an air of sacredness and are thus respected. Children are not allowed to destroy or disturb them.

The House of the Head of the Family

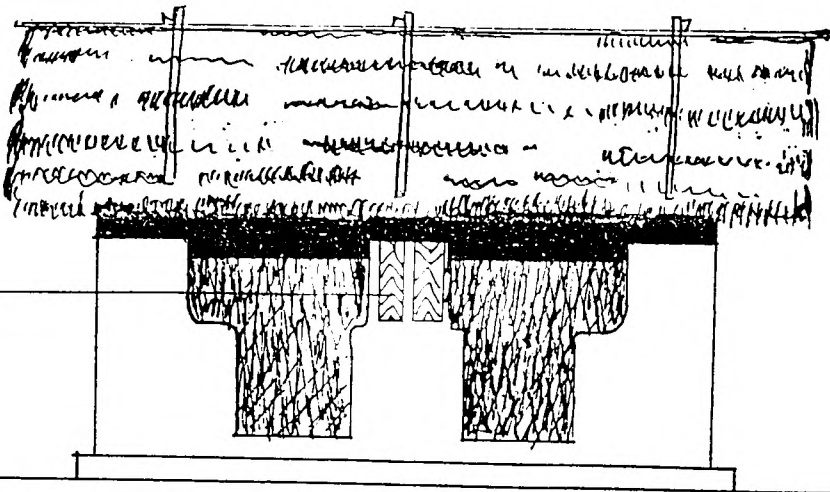
The status of the head of an Igbo family rests on the fact that he is the man who either established or inherited the compound in which the family lives. He normally has one or more houses in the compound for himself.

In Asaba, Njikoka, Enugu Ezike, Ikeduru and Ikwerrri, the head of the family has two houses. One of them, ogwa, obi, obu, obu echichi, obu ushue, obuma or obiri, is used as his or the family's reception house. In Njikoka for example, the obu (ills. 79 & 80) is a part of the man's domestic complex where he stays, passes his leisure, receives visitors, and ritually communicates with his ancestors. It is a rectangular house, usually measuring between 1 x 3 sq m and 4 x 9 sq m and located about the centre of the fore court, facing the compound main gate.²⁶ Unlike the other houses in the compound, the walls of the obu in Njikoka stop beneath the wall-plate.

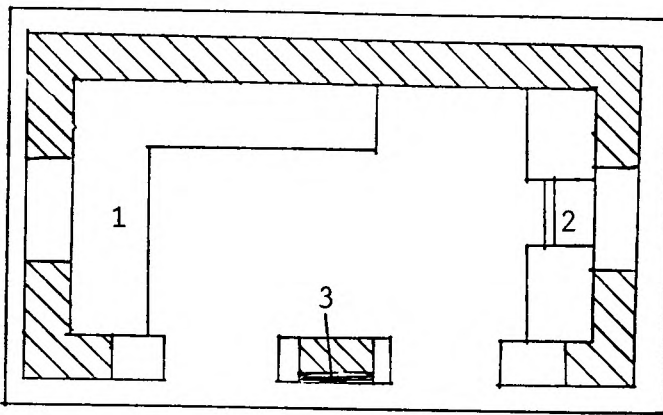
Inside the obu, there is normally a raised mud platform either at the centre of its longer side or at one end of the shorter sides. This mud platform is used as an ancestral altar, iru ndi ichie. On the altar are usually placed various objects related to ancestral cults. Also in the obu are some personal belongings of the family head, such as ritual objects, ikenga and ofu, animal skulls, status objects such as special carved wooden panels (ill. 81), which are an insignia of ozo society, and his working

Illustration 79

Obu House in Ozubulu.

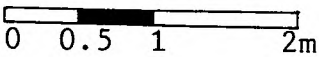


Front Elevation.

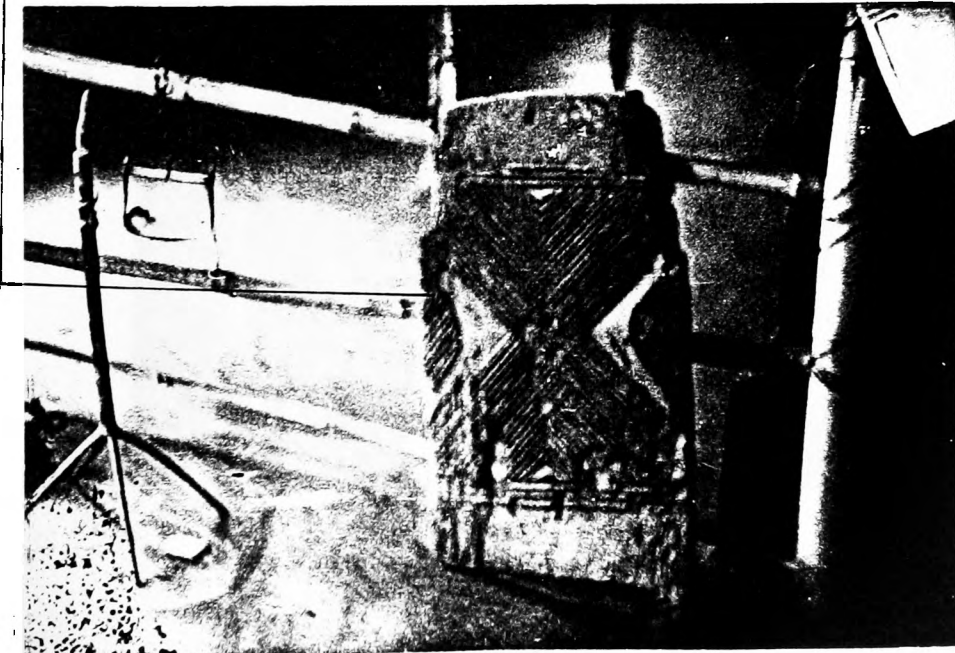


- 1. Mud Seat
- 2. Shrine
- 3. Carved Panel

Scale



Plan



Carved Panel

Illustration 80

Obu House under Reconstruction in Nneni Njikoka

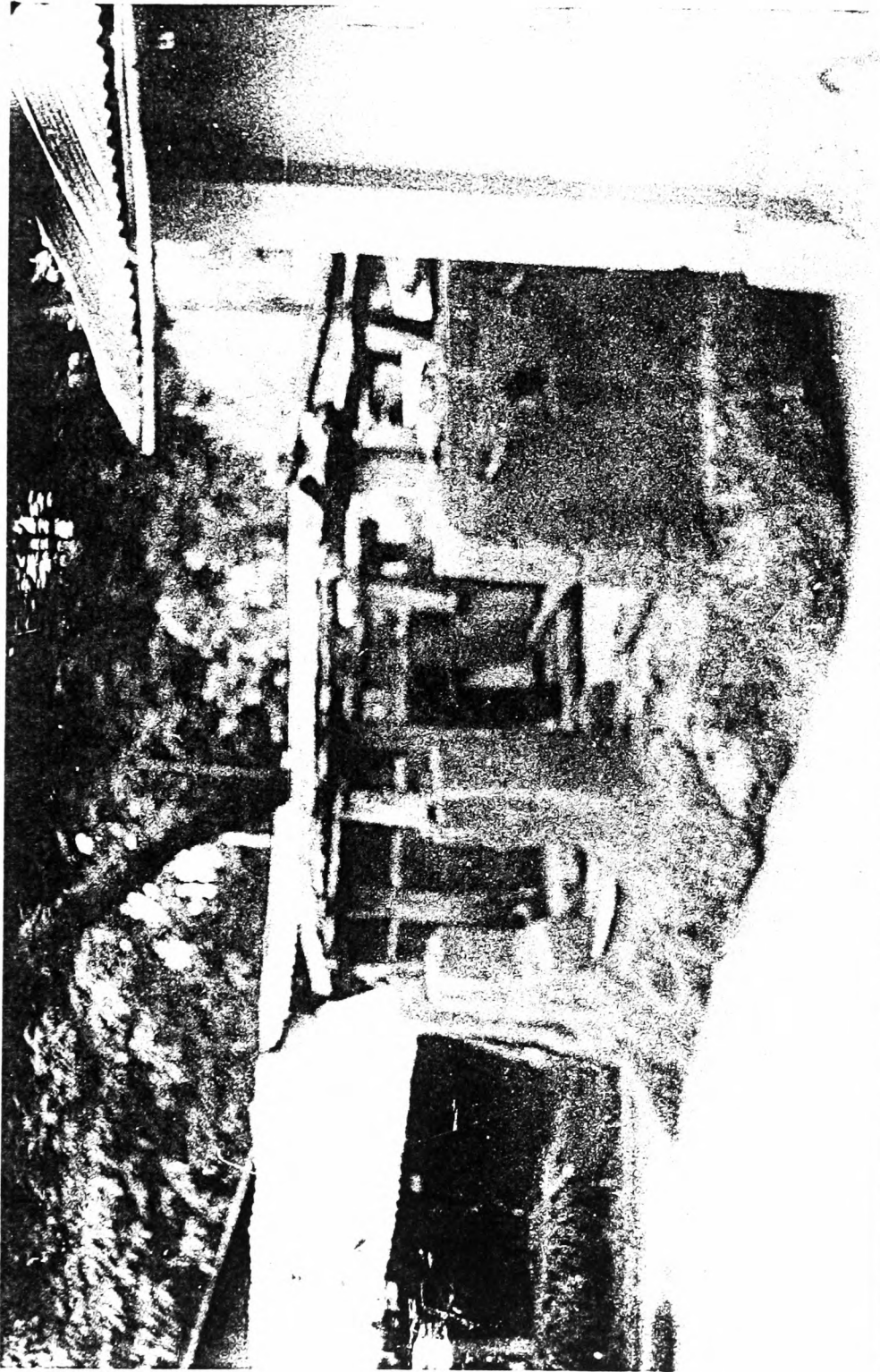


Illustration 81



Traditional Carved Panels, Pillars and Doors.

implements such as hoes and matchets.²⁷ Carved stools and goat skins spread on built-in couches serve as seats in the obu. The area where the obu is located is regarded as the public section of the compound.

The head of the family's other house, which is for sleeping and storage, the houses of his wives, and those of the wives of his grown-up sons, are located either behind the obu in the rear court or separately beside it. The sleeping house usually consists of one or two inner and one outer room. The outer room may be more of a verandah (ills. 82 - 86)

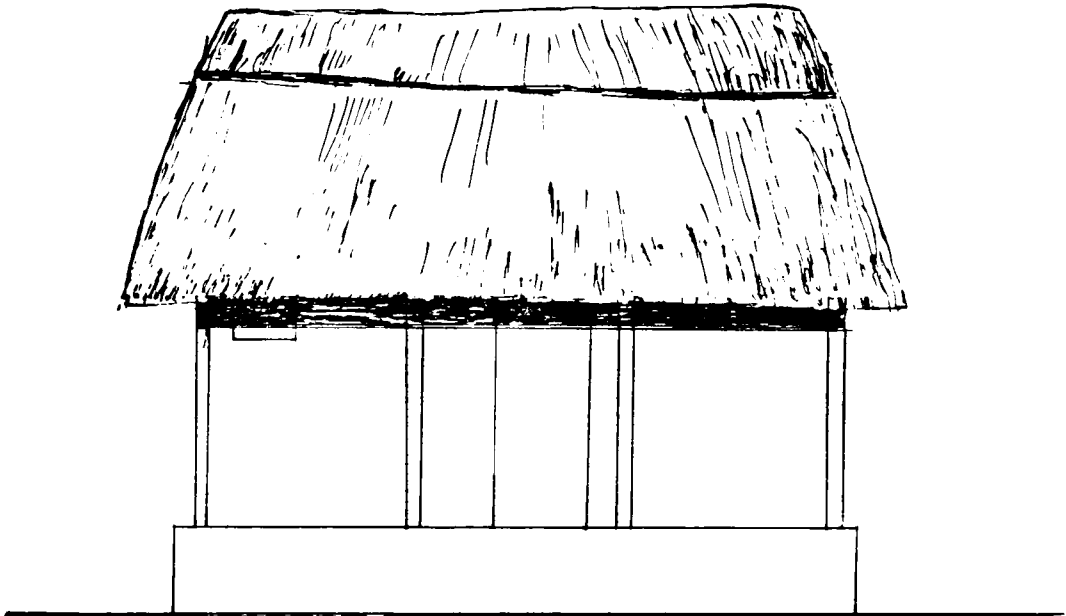
In Owerri, Enugu Ezike, Ukehe and Ikwerrri, a similar reception house exists in each compound, but they are not as elaborate as obu (ills. 87 & 88). In these latter areas the courtyards are not usually partitioned and the reception house is located near the compound main gate. Furthermore, unlike the obu, which is strongly identified with the head of the family, this latter reception house is frequently used by all the members of the family.

In the Cross River area of Igboland, where giant compounds are built, the obu has a wider meaning and function. In Ohaffia, for instance, the obu could be used as a reception house, but it is located outside the compound and has a more expanded cultural and ritual use than a domestic one. The expanded cultural significance of the obu in this area is a consequence of the enlarged nature of the compound. Here, instead of a single head of a group forming a member of the minimal segment of the umunna, there are several such heads. In Afikpo, another Cross River village group, houses similar to the Ohaffia obu houses are known as ulo ogo.

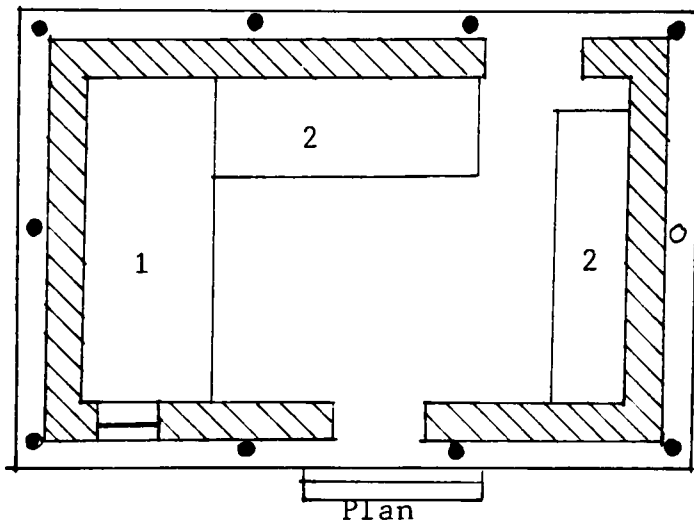
Having a special reception house in the compound is not a general practice throughout Igboland. In Nkanu, for example, there are no such buildings in the compound, but in

Illustration 82

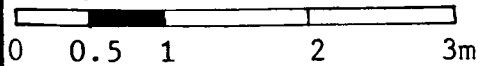
Mazi Oyeke's Inner House in Enugu Ezike.



Front Elevation.

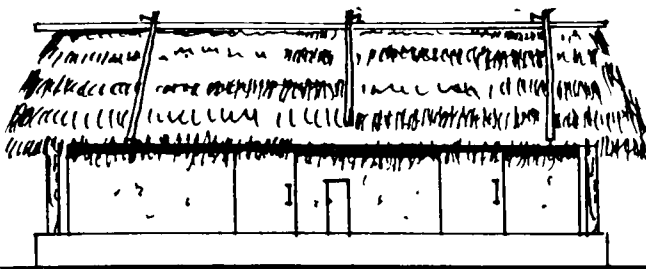


Scale

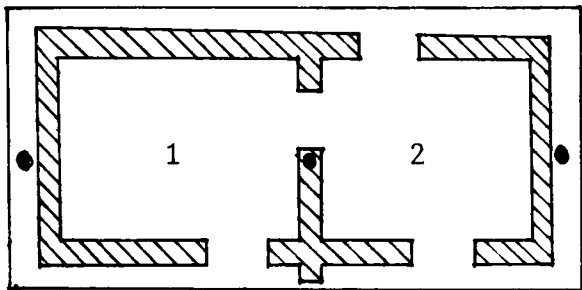


- 1. Built-in Couch
- 2. Built-in Mud Seat

Illustration 83

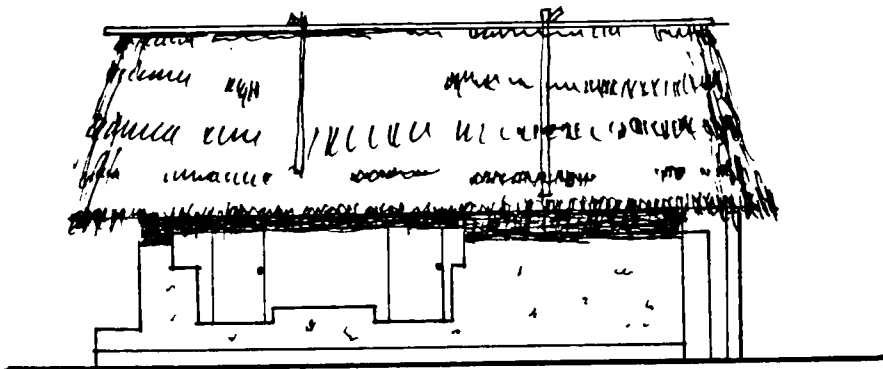


Front Elevation

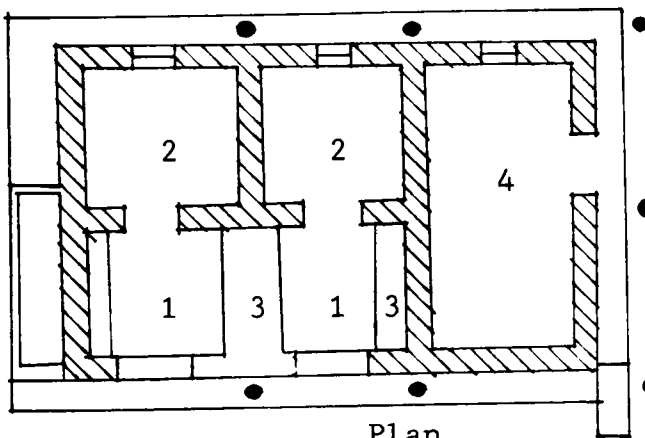


Man's House in Akabo.

Plan



Front Elevation

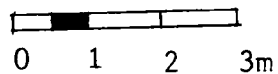


Man's House in Nri.

- 1. Living Room
- 2. Sleeping and Storage Room
- 3. Mud Seat
- 4. Guest Room

Plan

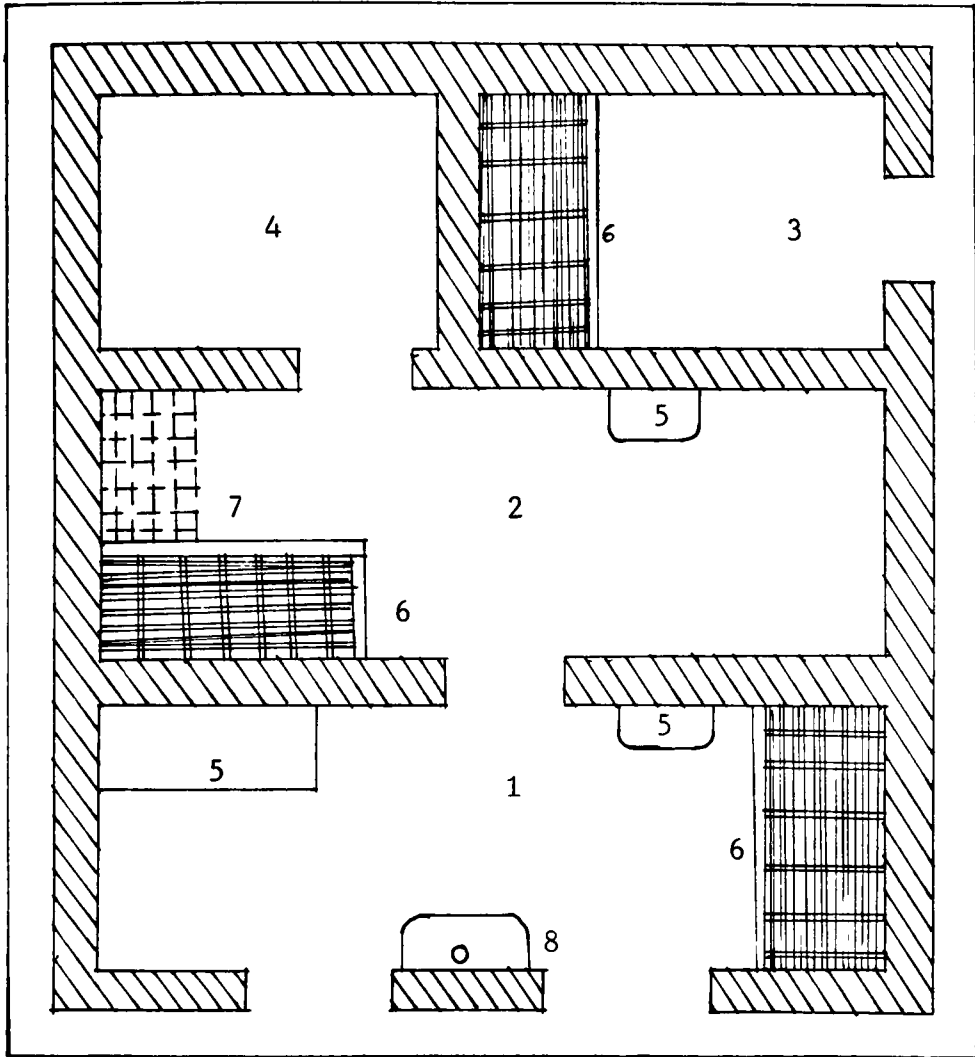
Scale



Men's Houses in Akabo and Nri.

Illustration 84

Mazi Ogbonnaya Ani's House in Akegbe.



1. Living Area
2. Sleeping and Storage Room
3. Guest Room
4. Animal Pen or ndrrme
5. Mud Seat
6. Bed
7. Overhead Scaffolding for Storage
8. Position for Kola Nuts

Scale

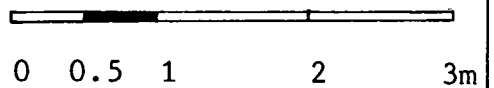
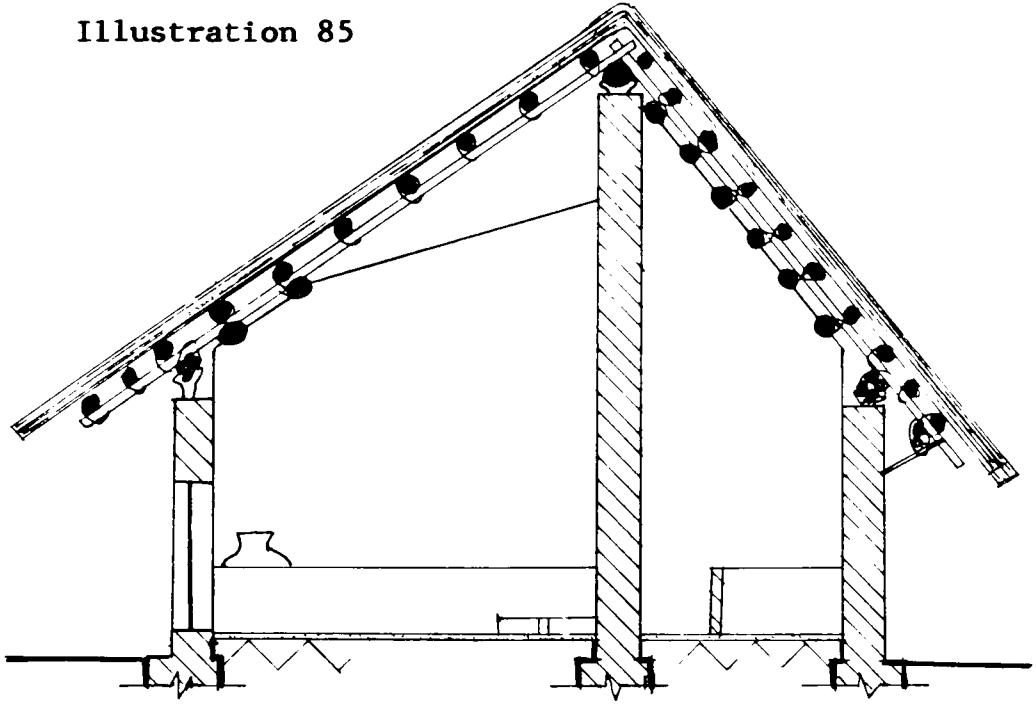
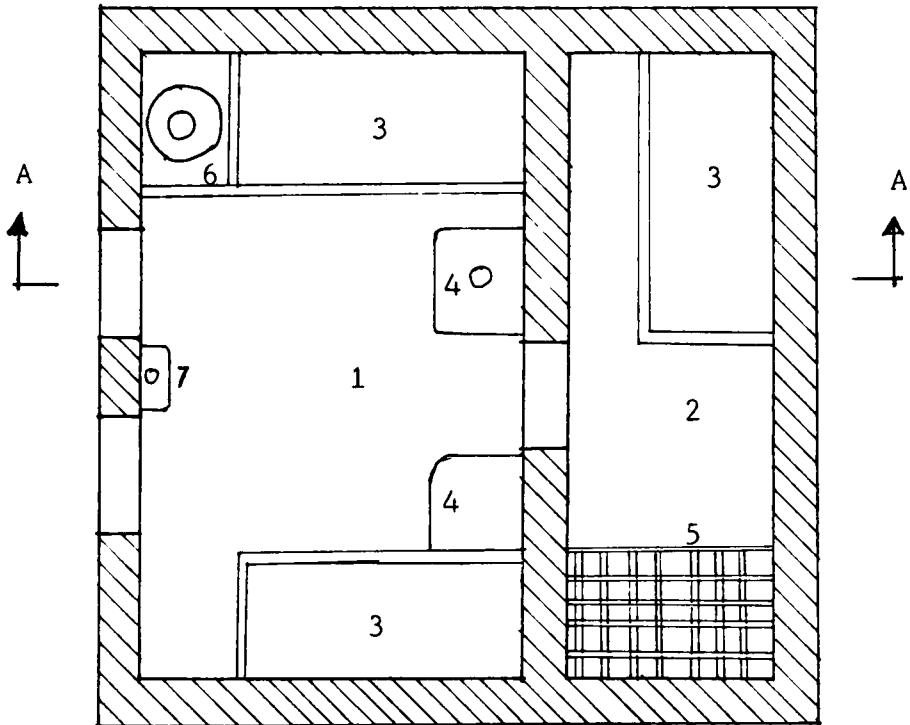


Illustration 85



Section A - A



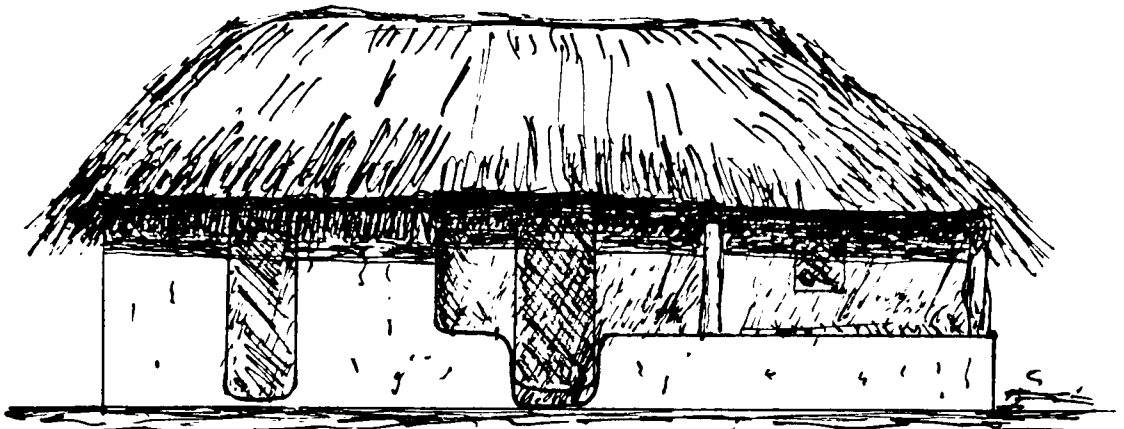
Plan

Scale

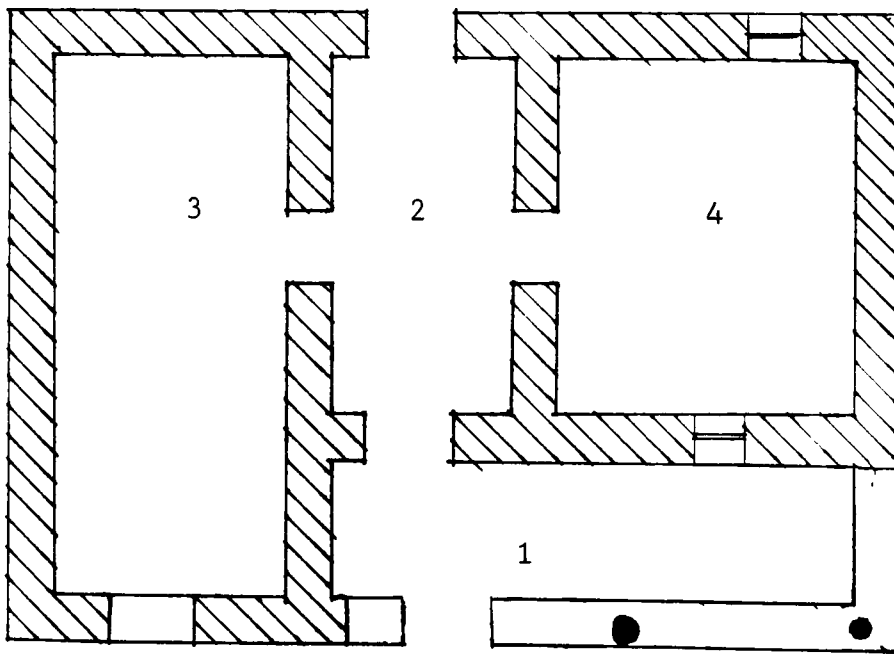
1. Living Area
2. Sleeping and Storage Room
3. Bed
4. Seat
5. Overhead Scaffolding
6. Pot
7. Position for Kola Nuts

**Mazi Aro Ukwu's
House
in Akegbe.**

Illustration 86

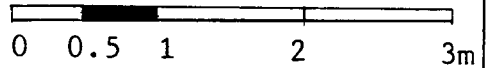


Front Elevation



Plan

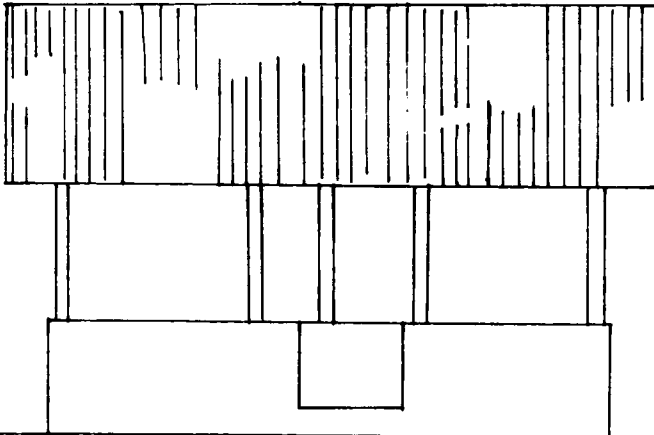
Scale



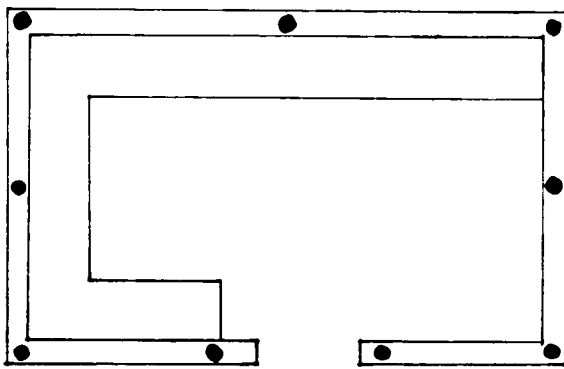
- 1. Verandah
- 2. Corridor
- 3. Living Room.
- 4. Sleeping and Storage Room

Man's House in Uguwoaba.

Illustration 87

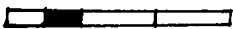


Front Elevation



Plan

Scale



0 1 2 3m

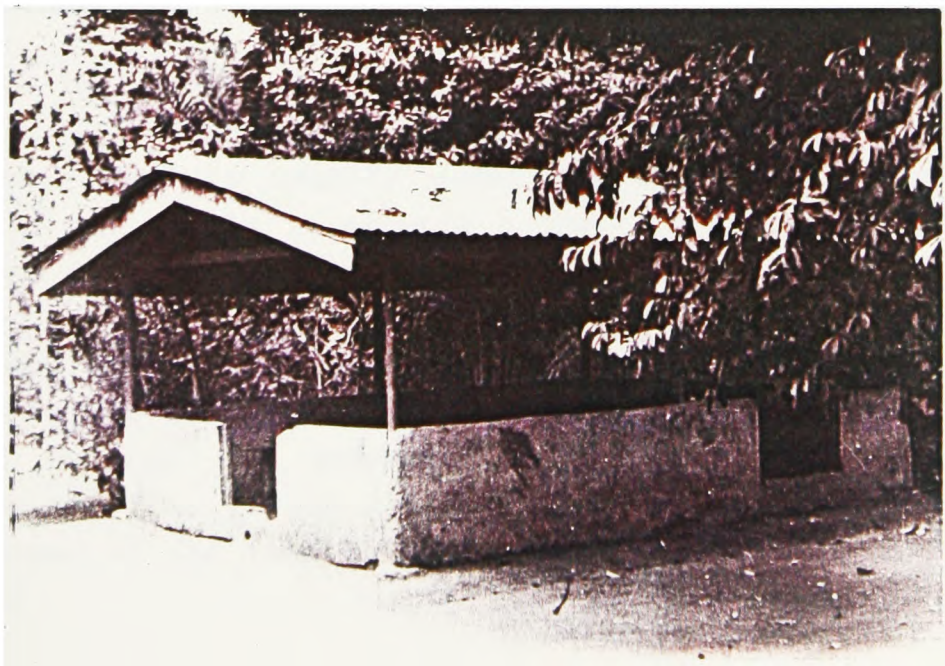
Neo-Vernacular Obuma in Akabo.

Illustration 88

Obuma Houses in Akabo.



a. Traditional Obuma



b. Neo-Vernacular Obuma

these areas, the compound main gate assumes a more elaborate form (ills. 62, 67, 70). It is often used for leisure and sometimes for visitors. Also in such areas, the house of the head of the family is built to accept visitors (ill. 85). Such a house is similarly rectangular in shape. In a double court compound, it is located in the fore court, ihu ezi, and always faces the compound main gate. As is the case in the compound of Mazi Ogbonnaya in Akegbe Ugwu (ill. 84), there are a reception area, sleeping rooms, which also serve as stores, and a little room for cattle. Some of his ritual objects such as ofo and ogwu are kept in the reception area. The furniture there includes built-in mud couches and seats, and special built-in positions for storing kola nuts. In one of the sleeping rooms, there is scaffolding where he stores his boxes and valuables.

The houses for the grown-up sons of the head of the family are usually less elaborate. They are located towards the gate, but not facing it (ill. 62). Each consists of a verandah and an inner room. The verandah is used as a living area and similarly contains mud couches. The inner room is used as a bedroom and the main furniture of this bedroom is also a mud couch or raphia bamboo bed.

The Barn

The barn, oba, is a very important element of the compound. It is considered as the property of the head of the family, and is usually under his control. Each adult member of the family is allotted a space in it to store his harvested crops.

Among the Cross River Igbo, such as the Afikpo Igbo who live in giant compounds, barns are owned collectively and located outside the compounds, but within the village territory.²⁸ This is not typical of other Igbo, as in all other areas of the land barns are always located inside the compound.

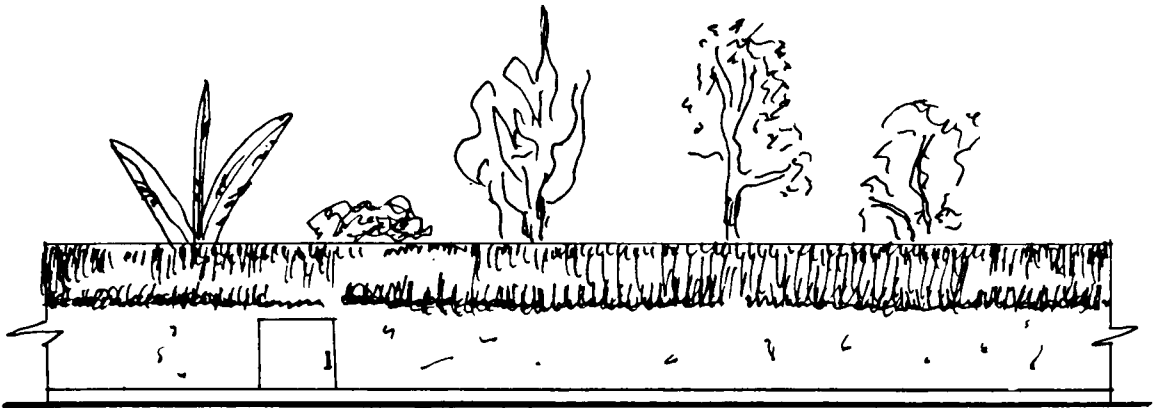
The size of the barn varies, but to a great extent depends on the farming capabilities of the head of the family. A successful farmer may have a barn occupying twice the area of Mazi Aro Ukwu's barn, which is 84 sq m. On the other hand, a man who is more actively engaged in other trades such as wood carving and iron work, may have a much smaller barn. In the various compounds I surveyed, the barns are differently located, but most of them are located near the house of the head of the family. Most of them are also rectangular, and are built into the compound walls.

As shown in ill. 62, 67, 74 and 78, a typical Igbo barn consists of three walls adjoining a part of the compound wall, to enclose a rectangular space without a roof. The absence of a roof is indicative of the need for ventilation to save the crops from rot. The internal arrangements (ill. 89) consist of a number of surviving trees, such as ogilisi, ogbu and ichikele, planted in rows. Poles of bamboo or palm frond mid-ribs are tied horizontally at intervals to each row of these plants to form the framework for stacking yams. Spaces are left on the ground for depositing other crops such as coco yam, and for the construction of scaffolding for other crops which might rot if deposited on the ground. Cultivation of grain is minimal in Igboland, so granaries are rare. Grain for the next planting season may often be seen hanging from its stalks over the kitchen scaffoldings, or stored on a tree in the compound in a bag woven from straw or ata grass. The barn is always locked against domestic animals.

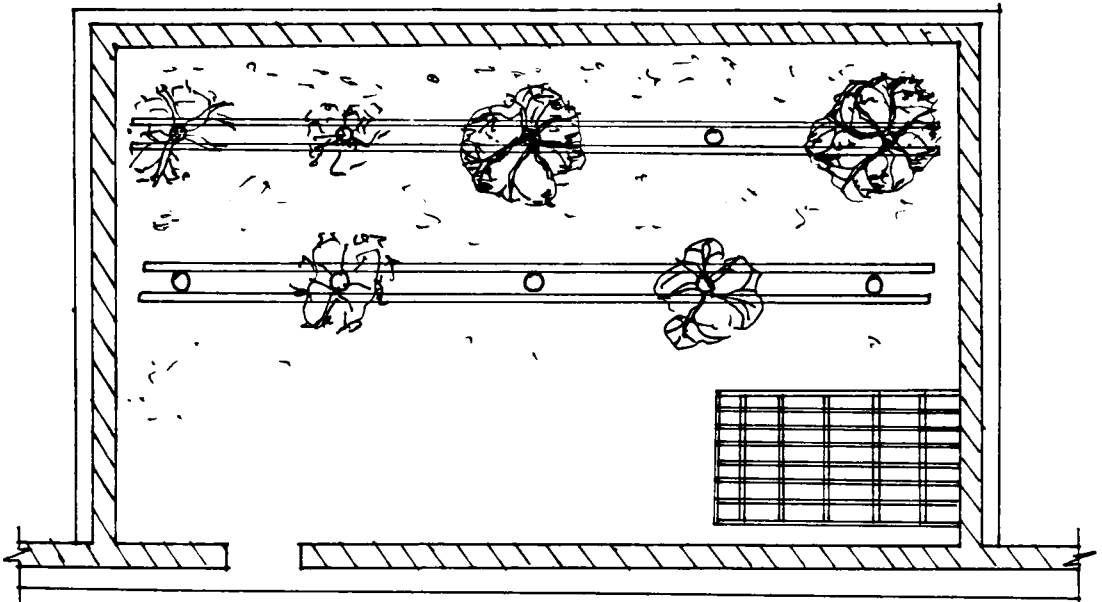
The Woman's House

The woman's house in Igboland (ills. 90-96) may be round, square, rectangular, or have a composite form. In a multiple court compound it is normally located in the rear court. In a single courtyard compound it may be located behind, or to the left or right of the house of the head of

Illustration 89

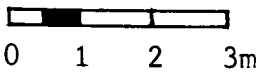


Front Elevation



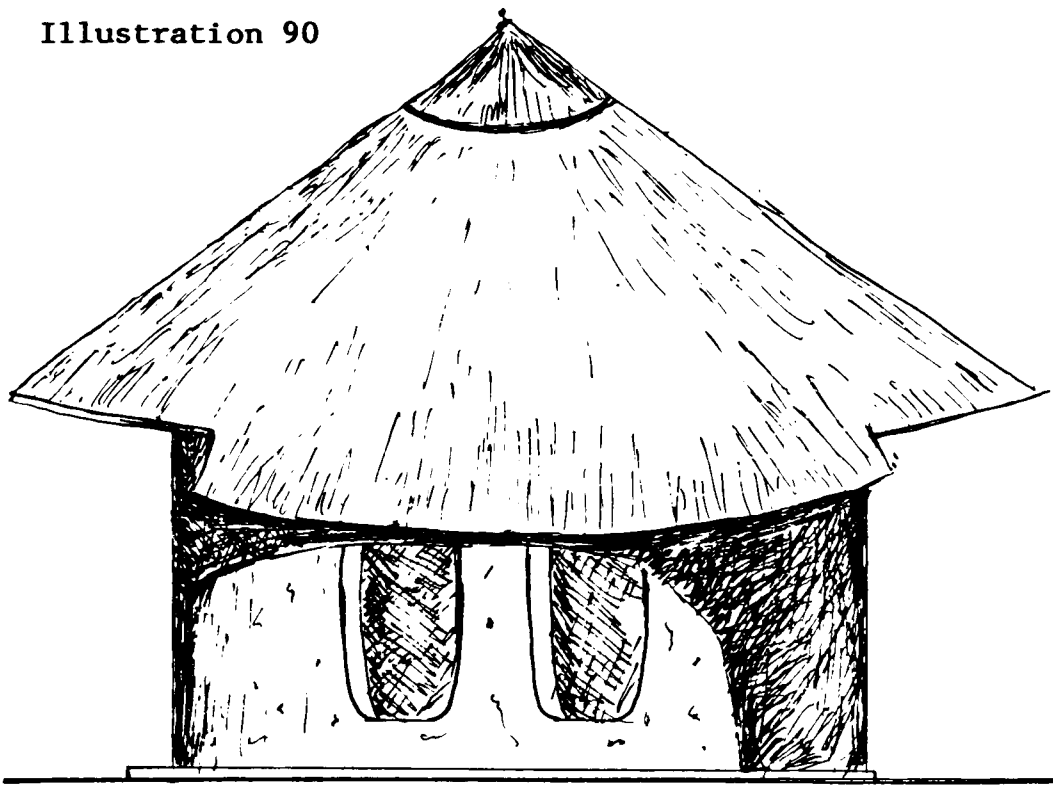
Plan

Scale



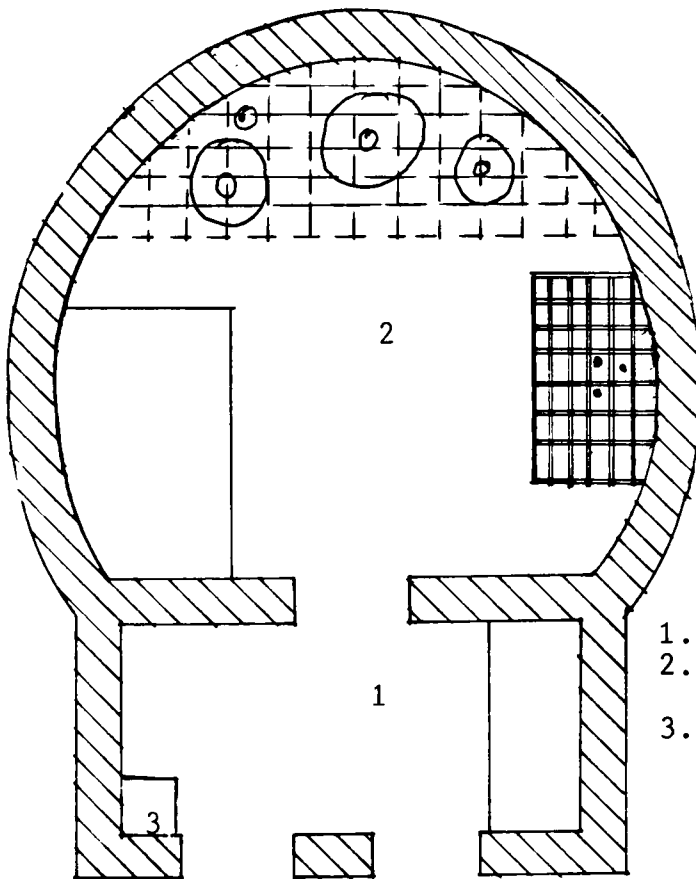
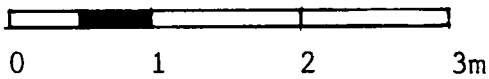
Traditional Igbo Barn

Illustration 90



Front Elevation

Scale

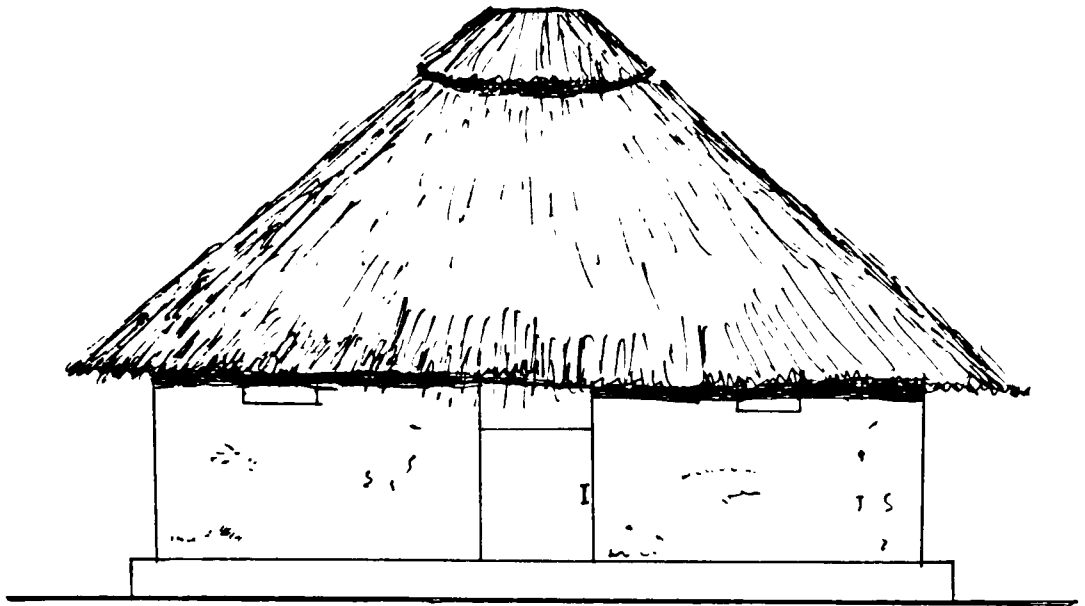


- 1. Living Area
- 2. Sleeping and Cooking Area
- 3. Chicken Coop

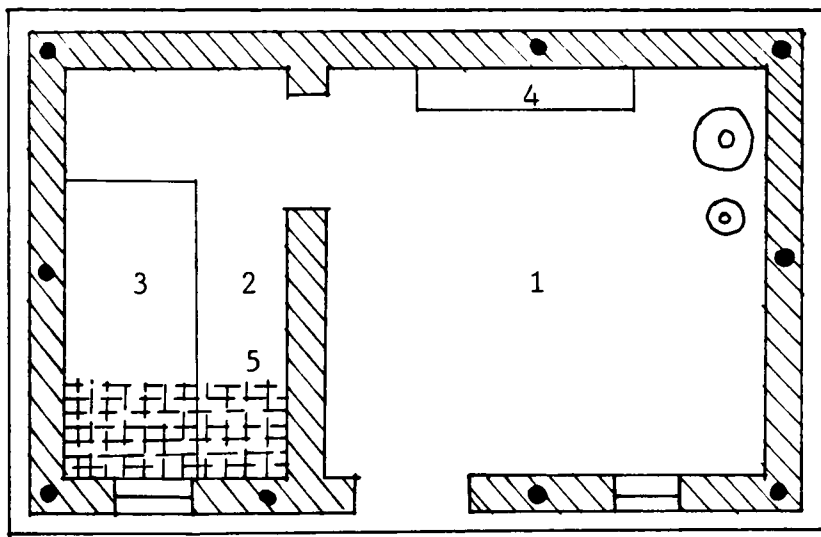
Plan

Woman's House in Akegbe.

Illustration 91

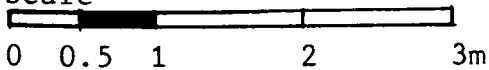


Elevation



Plan

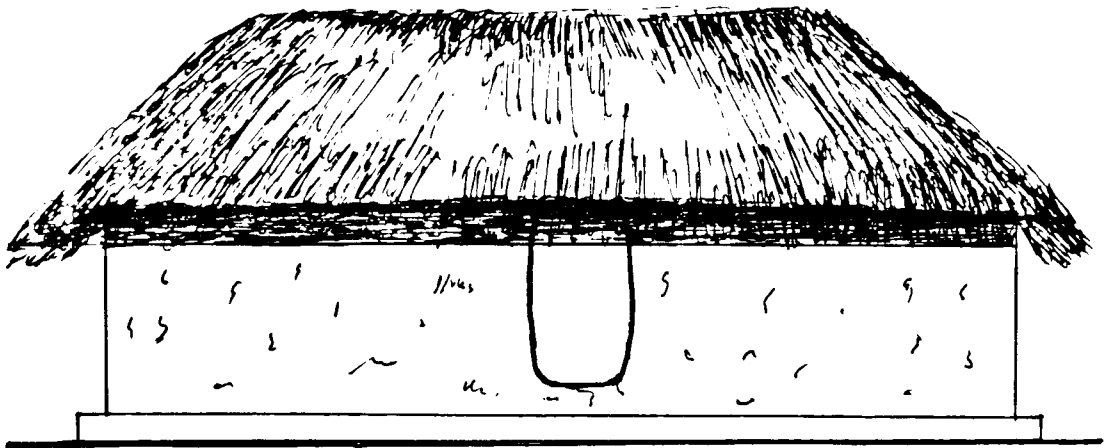
Scale



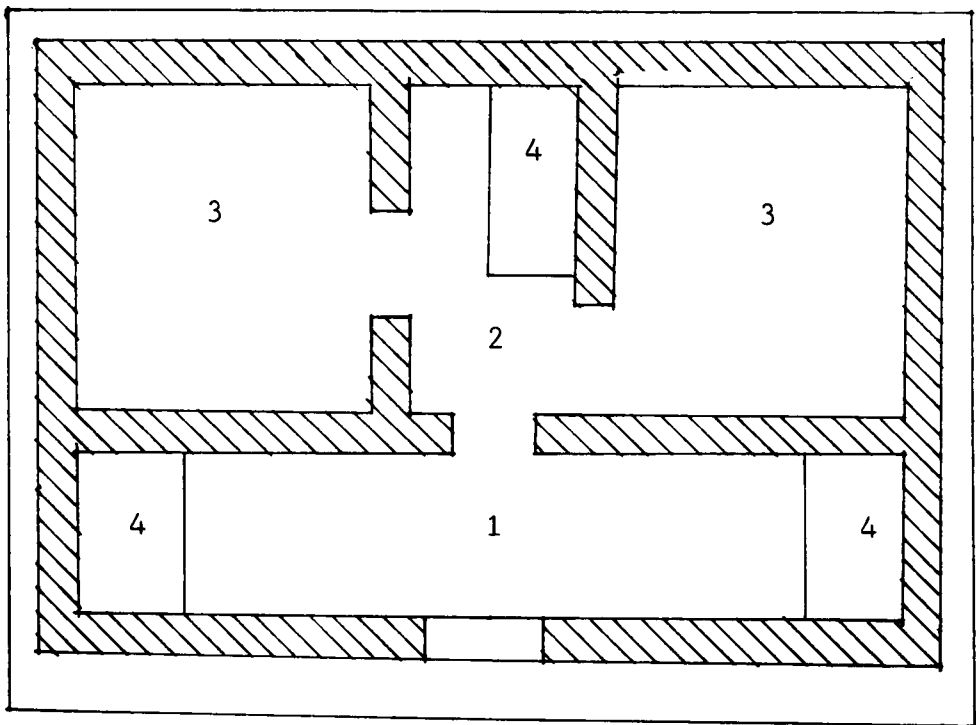
- 1. Living Room
- 2. Sleeping and Storage Room
- 3. Bed
- 4. Seat
- 5. Overhead Scaffolding for Storage

Woman's House in Enugu Ezike.

Illustration 92

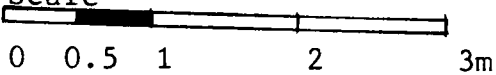


Front Elevation



Plan

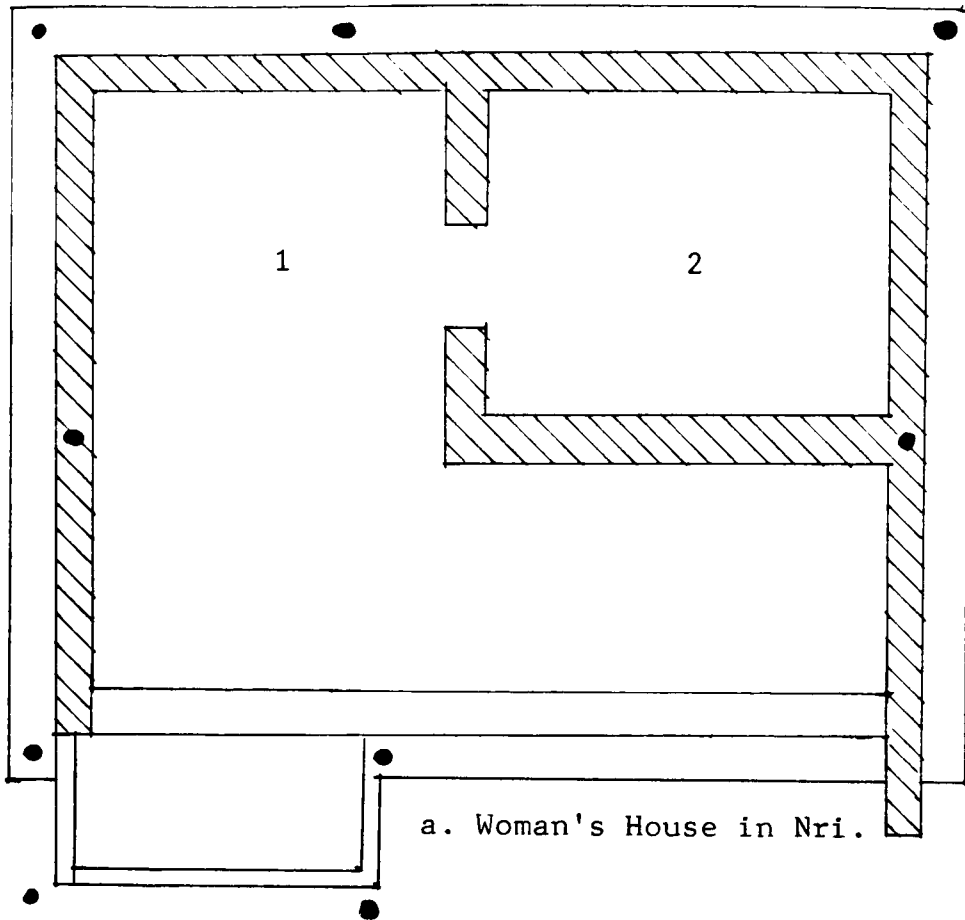
Scale



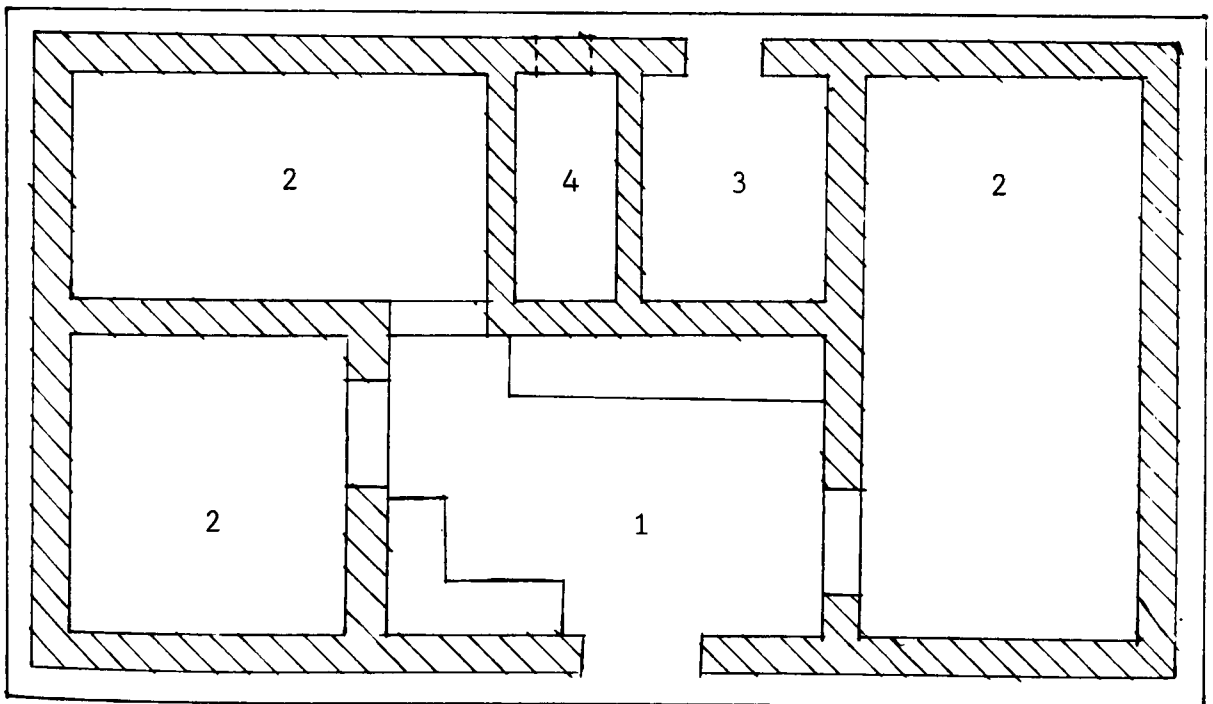
- 1. Living Area
- 2. Corridor
- 3. Sleeping and Storage Room
- 4. Couch

House Shared by Man, Wife and Children
in Obinagu Awkunanaw.

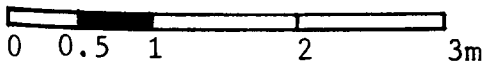
Illustration 93



b. Woman's House in Ozubulu.

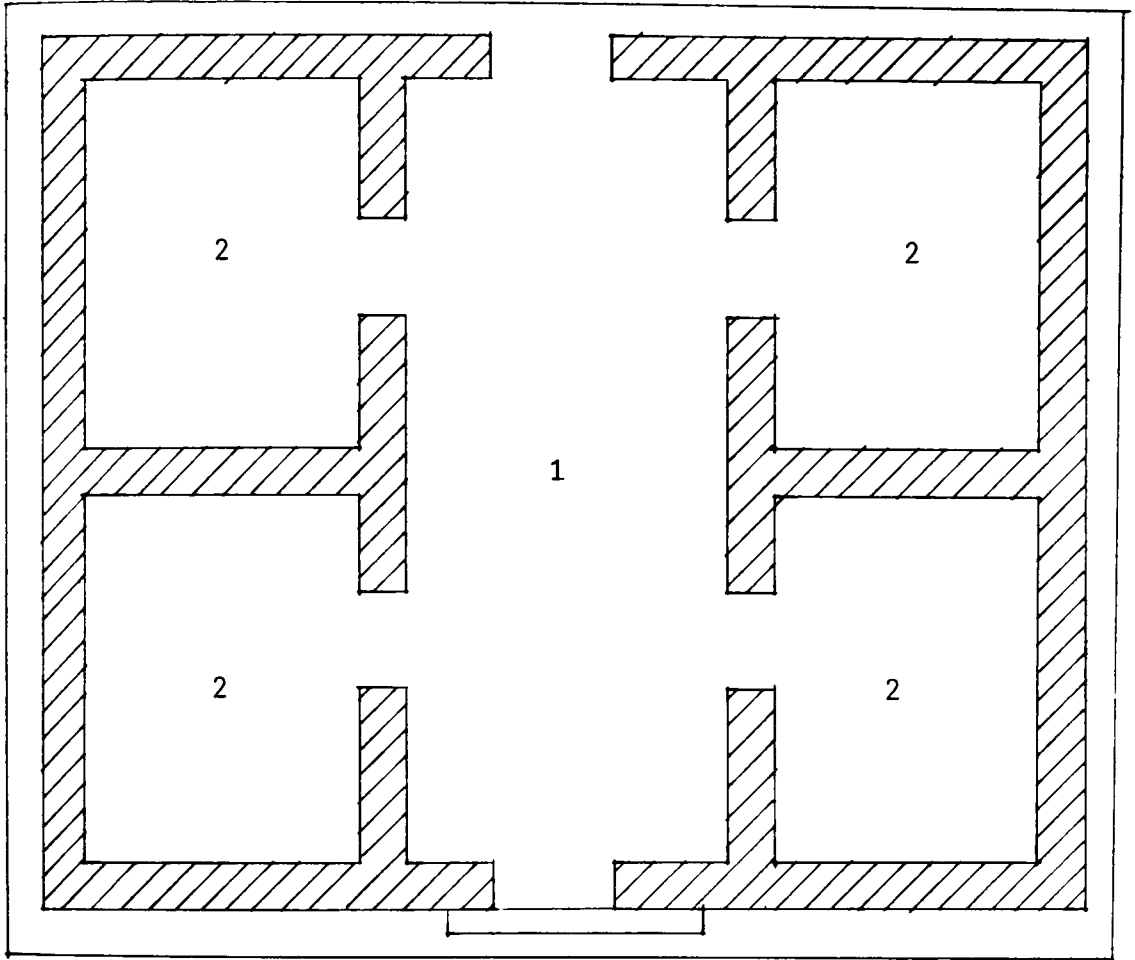


Scale

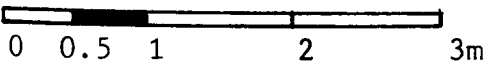


- 1. Living Area
- 2. Sleeping and Storage Room
- 3. Pen
- 4. Chicken Coop

Illustration 94
Woman's House in Awtanchara.

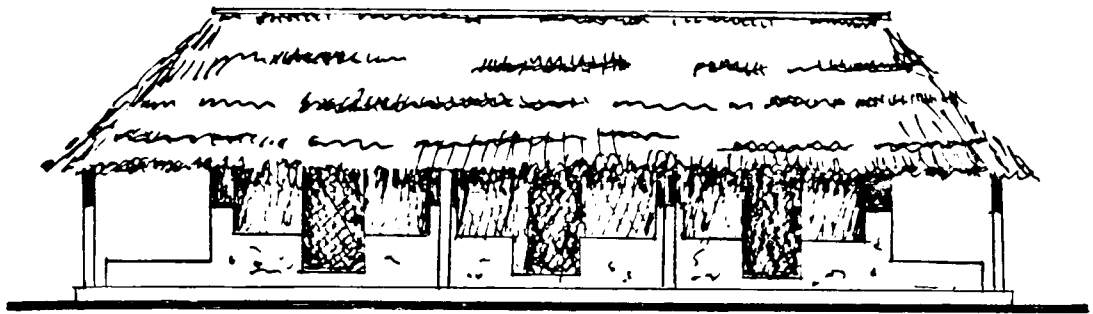


Scale

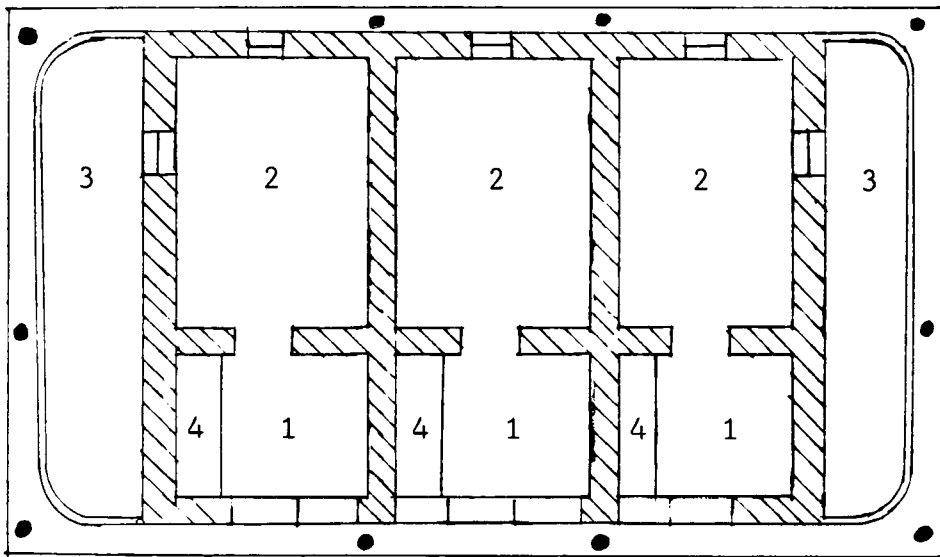


- 1. Living Area
- 2. Sleeping and Storage Room.

Illustration 95

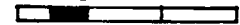


Front Elevation



Plan

Scale

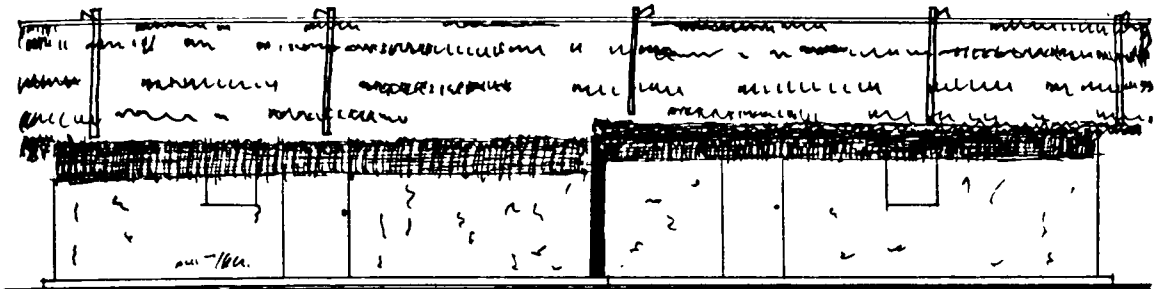


0 1 2 3m

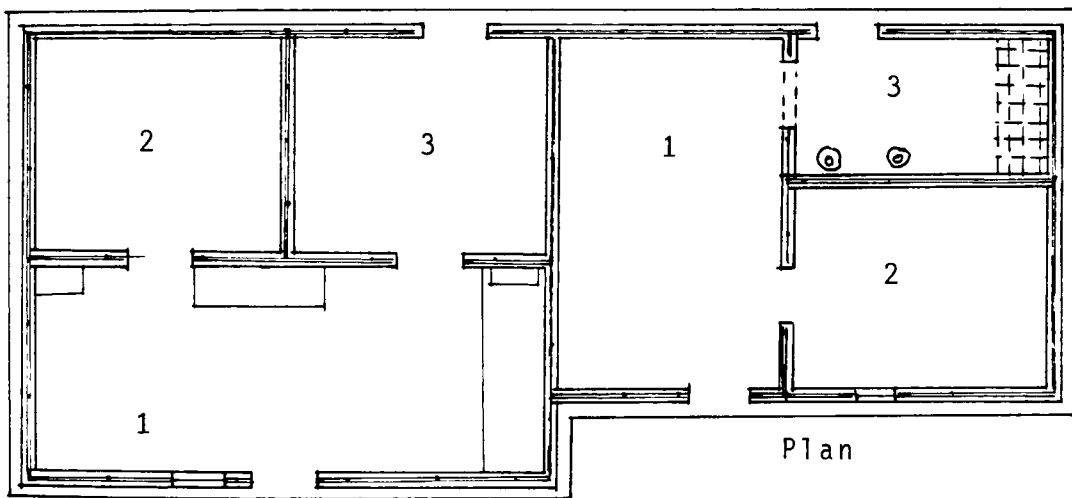
- 1. Living Area
- 2. Sleeping and Storage Room
- 3. Shed for Animals
- 4. Mud Seat

House Occupied by other Members of the Family
in Mazi Igwesi's Compound in Nri.

Illustration 96a

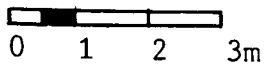


Front Elevation



Plan

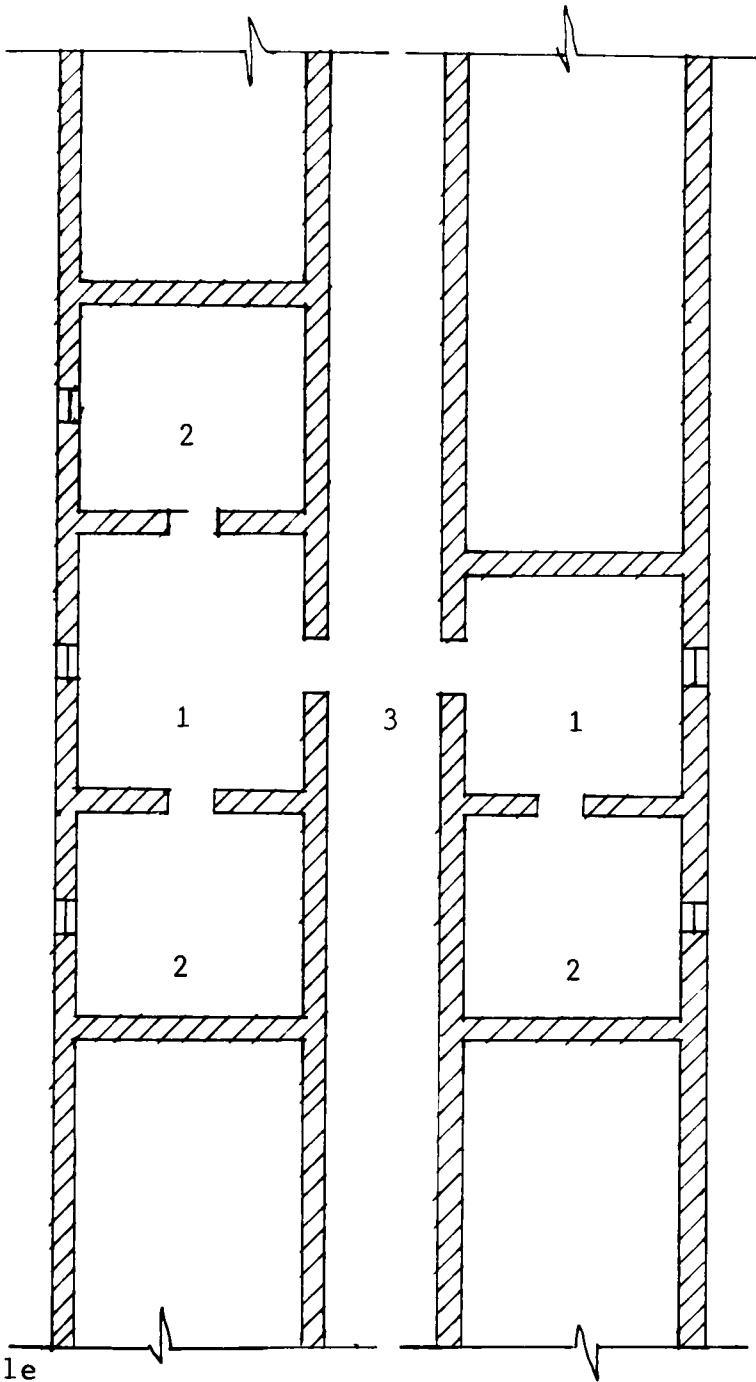
Scale



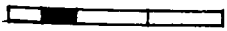
- 1. Living Area
- 2. Sleeping Room
- 3. Cooking and Storage

House Shared by Two Women in Ututu.

Illustration 96b



Scale



0 1 2 3m

- 1. Living Room
- 2. Sleeping and Storage Room
- 3. Pathway

Linear Multi-Cellular Houses in Ohaffia.
(after Nsugbe, 1974).

the family, but it is seldom located to face the compound's main gate directly. It generally consists of a verandah and one or two inner rooms. The verandah is used as a living area while the inner rooms serve as sleeping areas and a store for the woman and her young children. The inner rooms contain sleeping couches, pots, cooking utensils, and the woman's more precious belongings. The verandah may also contain her idols, mud couches, and low stools for sleeping and sitting, coops for her chickens, other cooking utensils such as a mortar and pestle, and her working implements. In the rainy season, the cooking area may be transferred either to the verandah or to one of the inner rooms.

The Kitchen

The kitchens are better described as cooking areas because they are not special houses or rooms meant for cooking. Traditionally, meals are prepared and consumed daily as there is no known efficient method of storing cooked food in Igboland.

Each married woman normally has two cooking areas in the compound. One is located inside her house and the other outside. The inside cooking area is more of a fireplace as, in addition to being used for cooking, it is also used to warm the house during the harmattan season, to drive away insects, and also to dry the roofing materials which may otherwise become damp and rot away unnoticed. It consists of three stones arranged to form a tripod, or two stones arranged near a wall with the wall forming the third member of the tripod. Often, above the tripod is a scaffolding arrangement, uko, for storing cooking utensils and desiccating some food. This cooking place inside a woman's house is used mainly during the rainy seasons, or generally whenever it rains. With the internal cooking area, the only means of escape for the smoke is either through the roof covering or through the air gap between the roof and the wall. This is immediately noticed as the walls and the under

side of the roof are severely blackened by soot.

The main features of the cooking-place located outside the woman's house are similarly a tripod consisting of three stones and a rectangular scaffolding suspended about 1.5m above the tripod by four forked posts. Occasionally, an iron tripod made by a local blacksmith is used instead of the stones. This type of tripod consists of a circular metal band supported about 0.10m above the ground by three metal legs. Cooking is done under the scaffolding while food items that need to be dried are spread on top of it. The external cooking-place is used mostly during the dry season. The important thing about the cooking-place's location in the compound seems to be availability of space, proximity to the house of the user, and good accessibility. So it could be located in front, behind, or by any of the sides of the user's house, provided that all or at least some of the conditions mentioned above are met with.

The Pens and Coops

Cattle are not kept by everyone in Igboland, but those who do keep cattle and chickens always have some form of housing for them. Sheds are built for the animals in the compound where they shelter in the day. Alternatively, they shelter under trees. At night, they are driven into a small hut built for them in the compound or a special room, ndrrme, in the house of the head of the family (ill. 21).

The practice of sharing the house with cattle at night has, however, lapsed in recent times. Today it has become more conventional to build a special pen for the cattle in the rear court. Sharing the house with animals was practised world-wide in the past. In England, for instance, long-houses were built for man and cattle until the eighteenth century, when the tradition lapsed.

Chicken coops are usually built into the woman's house

(ill. 90). In other cases, chickens are allowed to roost under mud couches.

Sanitation

Toilet facilities are not compulsory elements of the compound throughout Igboland, but the use of latrines and bathing houses is a very old tradition in some parts. In Afikpo and Bende, for example, each compound has separate latrines for men and women located behind it. "Also, among the Ika Igbo", noted Talbot in 1926, "as a rule, adults have latrines within or near the compound".²⁹

A typical traditional latrine consists of a deep pit covered on top with only a small hole left open. A small house is built around the pit for privacy. Similar simple enclosures are built at one corner of the rear courtyards and used as bath-houses.

Latrines and bath-houses were available in few of the compounds I surveyed during the field work. In others, latrines were dug a little distance away from the compound for the use of all the compound inmates. In this latter case, inquiries revealed that the compound inmates bathed at night time in the compound or in the streams.

Some points that follow from these discussions need further analysis. The elevations of African traditional buildings, for instance, are generally considered as being very rudimentary and lacking in individuality. Consequently, discussions involving traditional African architecture rarely touch on this issue. The elevations of Igbo houses, though simple in terms of architectural composition, can not be entirely described as lacking in individuality. This is immediately clear when their different variations and elaborate decorations are considered. In almost all cases,

the elevations are simply the product of projecting walls directly from the plan, but even the patterns of the openings on the walls and the placement of some structural members of the houses produce a unique effect and create individuality in their elevations. Observation, however, shows that more emphasis is always laid on the front elevation while other elevations receive less. On the whole, there are three main types of elevations. The simplest and probably the oldest type involves a blank front wall pierced by a single doorway (ills. 82 & 91). This is very common in rectangular or circular houses with only one single room. This type is close to the eleventh-century houses in England shown in the Bayeux Tapestry. It is very rudimentary, but provides a large area for wall painting and decoration in Igbo architecture.

Closely related to this is the type involving yet again a blank wall, but one pierced by a number of doorways (ills. 79, 83a, 90 & 96a). There are usually two doors, except in areas such as Ohaffia and Nnekede where single-room houses that extend in linear directions are used. By the use of more than one doorway, a sense of symmetry and rhythm is created. The symmetry is created by each doorway counterbalancing the other, while the rhythm arises from the alternation of wall and doorway. When the eaves-beam is supported on posts, the posts help to break the wall area into smaller and more aesthetically appealing vertical strips. This type of elevation is predominantly used in houses with more than one room.

The third type results when the foremost cellular member of a house is a verandah. In this type, use is made of dwarf walls, again divided into strips by entrance openings (ills. 83b, 86 and 95). At the level of the dwarf wall, a rhythm involving solid wall and open space is created while further up, vertical poles that support the eaves-beam break the monotony of the would-be continuous space just behind them. The height of the dwarf walls varies

from 0.5m to about 0.15m below the wall plate. They are usually elaborately decorated.

In all these three types of elevations, windows are often few, but window openings and doorways are shaped to add to the general aesthetics of the elevations. The shapes commonly adopted for doors are either straight (ill. 82) or curved (ill. 90).

Similarly, the plans of the Igbo houses are simple. They generally come under three main classes depending on whether they have one cell, two cells, or a larger number of cells or rooms.

One-cell plans, being the simplest, may be the derivation of all the others. On the other hand, it may be argued that they are no more than multicellular reductions, but this is very unlikely. Unicellular houses also existed in Europe during their formative stages in the Middle Ages. In the Igbo case, it is possible that those remaining today are a link between us and the earliest and most primitive type of house in Igboland. In those areas of the land where this plan type survives to the present, it is primarily used as a bedroom and store. A separate structure usually serves for receiving visitors and carrying out domestic activities.

Two-cell plans consist of an inner and outer room, or two adjacent rooms. This type is seen as a development of the one-cell type. The inner room is usually a private area, serving as a bedroom and for storage, while the outer one serves as a reception and living room. In most cases, this outer room is simply a verandah. The position of the outer room relative to the inner one may vary, being at the front, the side, or the back. What seems to influence this location is the availability of shade.

The multicellular types are varied. The simplest variation is a lineal extension of the two-cell unit type,

which is known among the Ohaffia and Nnekede Igbo. It consists of a single-room plan which grows linearly with the addition of more cell units at both ends (ill. 96b). Two or three cells may belong to one person, the central cell serving as the living area, while others serve as bedrooms and stores. Also in this group is the corridor type (ills. 86 & 92) in which a verandah leads to a corridor with rooms on both sides of it. There is also the type shown in illustration 94, in which a verandah or living room gives access to a number of rooms arranged consecutively. In this type, in addition to separate rooms used for sleeping, living and storage, at least one is reserved for animals and another for visitors. This type is very common in Nkanu.

REFERENCES

1. R.W. Hull, African Cities and Towns before the European Conquest (New York, 1976), p.xiii.
2. R.K. Udo, Geographical Regions of Nigeria (London, 1970), p.5.
3. A.J. Shelton, The Igbo-Igala Borderland (Albany, 1971), pp.29-49.
4. S.N. Chinwuba Obi, The Ibo Law of Property (London, 1963), p.11.
5. S. Ottenberg, Leadership and Authority in an African Society (Washington, 1971), p.32.
6. J.M. Vlach, 'Affecting Architecture of the Yoruba', African Arts, 10, no 1 (1976), 48-53.
7. By club houses here are meant houses used by groups of people belonging to secret societies. Membership of such societies is usually restricted to men who meet certain conditions. Club houses in Igboland include ulo ekpe, ulo ikoro, and otobo.
8. The word 'ward' is used here after Jones and Ottenberg to denote a part of a village layout consisting of a number of compounds occupied by a minimal lineage segment of umunna.
9. S. Ottenberg, op. cit., p.33.
10. The term 'giant compound' is used here to refer to unusually large compounds found in some parts of the eastern and north-eastern Igboland.

11. C.C. Aniakor, 'Space and Concept in the Architectural Planning of an Igbo Village: Nekede example', Nigeria Magazine nos 130-1 (1980), 27-40.
12. S. Ottenberg, op. cit., p.32.
13. S.F. Nadel, A Black Byzantium: The Kingdom of Nupe Nigeria, first published in 1942, third impression (London, 1951), p.34.
14. J.S. La Fontaine, 'The Gisu of Uganda', in Ethnographic Survey of Africa (London, 1959), p.30.
15. By the term 'compound element' is meant all that make up the compound, gates, walls, courtyards, houses, shrines, pens and trees.
16. J.P. Bourdier and T.T. Minh-ha, 'The Architecture of a Lela Compound', African Arts, 16, no 1 (1982), 68-72.
17. The need to form a tightly packed defensible unit has led to the formation of giant circular, oval and amorphous compounds in the Cross River area of Igboland. See P.O. Nugsbe, Ohaffia, A Matrilineal Ibo People (Oxford, 1974), pp.49-50.
18. G.T. Basden, Among the Ibos of Nigeria (London, 1921), p.50.
19. U. Kultermann, New Directions in African Architecture (New York, 1969), p.15.
20. S. Ottenberg, Double Descent in an African Society, first published in 1968, reprinted (Washington, 1970), pp.25-9.
21. The compound of Chief Ochu Kalu in Ndi Okereke Abam, near Bende, measured and documented by Professor

Dmachowski, for example, is a typical impluvium compound in the Cross River area of Igboland. See Z.R. Dnachowski, unpublished notes held in Jos Museum (Jos, Nigeria).

22. L. Prussin, Architecture in Northern Ghana (Los Angeles, 1969), p.42.
23. G.T. Basden, Niger Ibos, first published in 1938, new impression (London, 1966), p.152.
24. G.T. Basden, op. cit., (1921), p.169.
25. A.I. Merport, Organizatsia Letnih Pomeshenii djilisha V' Stranah S'suhim i djarkim climatom (Moskva, 1973), p.5.
26. Much of the information on the obu house used here was obtained from the records in Odinani Museum, Nri.
27. The special carved wooden panels are neither door nor window sashes. They are displayed as trophies in the obu of some titled men to show off their achievements in the ozo title society. Traditionally, people who are non members of that society are not expected to acquire or display them. See Appendix Three.
28. S. Ottenberg, op. cit. (1971), p.37.
29. P.A. Talbot, The Peoples of Southern Nigeria, 4 vols, (London, 1926), III, pp.889-890.

PART THREE

**Analysis of the Traditional Setting
and Domestic Architecture.**

CHAPTER EIGHT

ASPECTS OF ENVIRONMENTAL INFLUENCE AND RESPONSES

Responses to the Physical Environment

As has been shown in Chapter Two, the physical geography of Igboland has imposed serious limitations on traditional Igbo architecture. This phenomenon is not typical of Igbo architecture alone, for it is well known that primitive, traditional or vernacular architecture is usually highly expressive of both physical and sociological conditions prevailing in the environment concerned. In this respect, Rapoport notes that:

These houses are not individual solutions but group solutions representative of a culture and its response to the characteristics of a region - its general climate and micro-climate, typical material and topography.¹

Expressing a similar view about English vernacular architecture, Alec Clifton-Taylor maintained that the various materials available in England imposed architectural forms which are appropriate to the character of these materials.² Although his assertion has been viewed with much scepticism in some quarters, it is generally accepted that traditional architecture all over the world has evolved through a system of selection from different possible architectural solutions by responding to both environmental limitations and social needs. It is, therefore, important to explain to what extent the physical geography of Igboland has been instrumental in the evolution and development of its traditional architecture. According to Anson, this is necessary for the rediscovery of "the true relationship between environment and habitat", and that "between habitat and material", both of which have been grossly overlooked

and violated in recent years in Igboland.³

The different materials used on the roof of traditional Igbo houses are expressive of its three different vegetal zones. For instance, less raphia palms grow in the northern part of Igboland, and grass is therefore predominantly used as the external roof cover, while timber and oil palm mid-ribs are used in the structural part of the roof. On the other hand, raphia palms grow in abundance in the South, so raphia mats and mid-ribs are used there instead.

The roof of the Igbo house itself is like a huge water-proof umbrella, sloping steeply to shed the torrential rain. Every major architectural structure is roofed, and its steep pitch ensures immediate run-off of rainwater. Besides sloping steeply, the roof has wide overhangs, its eaves projecting far beyond the walls to keep rainwater off them. Furthermore, Igbo houses are usually built on plinths, and in areas with a history of flooding such as Atani and Oguta, the plinths are of unusual heights. These features of traditional Igbo architecture have been dictated by the characteristic torrential rainfall of the land.

Traditional Igbo architecture also remarkably portrays the effort of the Igbo to respond to the problems posed by heat and glare. An ideal situation, in the hot-humid climatic condition of the land, calls for the building volume to be kept small, plans to be compact, while kitchens and similar sources of heat should be isolated from the main living and resting areas. Orientation should also be such that direct sun rays neither strike the walls nor penetrate inside the houses. Houses should be orientated towards the prevailing breeze and openings should be of minimal size.

As can be observed from the preceding chapter, separate kitchens, detached from the houses, are used especially during the hot seasons. Openings are also few and of minimum dimensions. At a glance, however, it will appear as though

Igbo builders give little or no thought to orientation, but field work reveals that the Igbo seldom orientate their buildings towards the East or West. In this respect, the guiding object is always the existing road. Everybody orientates his compound towards the road, but in such a way that direct sun rays will not enter the main buildings in the compound. Response to the problem of heat and glare is also seen in the design of the roof, the walls and the plan of the houses. The roof is opaque to solar radiation and possesses a minimum mass to avoid heat build-up and subsequent radiation to the internal part of the house. This has been achieved by covering it externally with materials that are light and poor conductors of heat. The form of construction used on it also enables it to be ventilated by allowing the passage of air. These qualities make for minimum accumulation of heat during the day and rapid cooling after sunset. Gardens laid out around the compound and the trees planted within and without them provide shade and protection from the sun. Furthermore, the use of mud as the main walling material assures a very slow rate of heat-flow from outside to inside by conduction. Condensation is avoided by the ability of the roof to breathe. The low and wide overhanging eaves, forming canopies and sheltering verandahs, are again useful as they protect the walls from solar heat and the internal parts of the house from glare during the day while at the same time allowing ventilation. Although traditional roofs demand frequent repair, houses with such roofs respond better to the climatic conditions than those of tin. Basden pointed out that:

Houses built by natives of local materials for occupation by Europeans are not to be despised, and those who have had experience of them often prefer them to the corrugated iron roofed type.⁴

Traditional Igbo architecture also exhibits a significant response to the problem of high relative humidity. Comfortable conditions can be maintained in a

place like Igboland, where the temperature and relative humidity are high, if the body is able to get rid of the excess heat by sweating and if the sweat evaporates into the surrounding air. This process, however, depends on the vapour pressure between the skin surface and the ambient air. High relative humidity slows it and only air-flow can enhance the evaporative process. Moreover, as there is only little diurnal temperature difference, buildings cannot cool off quickly by radiating heat to the surroundings. So the predominance of high relative humidity necessitates correspondingly high air velocity to cool the buildings and increase the efficiency of sweat evaporation. This prevents discomfort resulting from moisture on the skin and clothes. The ideal situation under such conditions is a spread-out layout and houses that allow maximum cross ventilation.

The emphasis on the promotion of air-flow is seen in several aspects of traditional Igbo architecture. From our earlier discussions, it is apparent that openness is a fundamental theme running throughout the hierarchy of the traditional layout. This is in keeping with the ideal layout in the hot humid climatic zone. Nevertheless, small and compact layouts also exist, but such layouts are only in response to other environmental constraints. They are mostly characteristic of areas with difficult topography such as Bende, Uzuakoli and Ohaffia, and the swampy areas of the coastal plain, where there is little dry land. Even then, such compact layouts are made up of narrow winding pathways which facilitate air circulation.

Perhaps the most effective means by which the Igbo have responded to the problems of high humidity and heat is the compound spatial ordering itself. The design of the compound, as we shall see, is not only related to the improvement of the internal environment of the houses in it, but also to the creation of comfortable conditions in the external spaces between and around the buildings. Furthermore, each compound is made up of closed, semi-

closed, and open spaces. The semi-closed and open spaces serve as well-ventilated and valuable alternatives when indoor conditions are uncomfortable.

However, not all the three types of compounds found in Igboland can be claimed to respond effectively to the climate of the land. The impluvium compound type, for instance, is a poor solution in the hot-humid climatic zone. This is primarily because it tends to cause the air inside it to stagnate and does not promote high air movement which is a prerogative for maintaining a comfortable condition in this climatic zone. Daniel Dunham, using the example of the Moorish house in the hot-dry region of North Africa, has demonstrated how this type of compound acts as a temperature regulator in a hot-dry climate which is characterised by high diurnal temperatures.⁵ The days are usually very hot and the nights very cold. Unlike the hot humid zones, high air velocity is not absolutely necessary here for comfortable conditions. In the Moorish example, the courtyard is small and open only to the sky. It is thus shaded from direct solar rays on all but one side during the greater part of the day. The earth beneath the courtyard also receives heat by radiation from the parts of the building surrounding it and thus acts like a heat sink. So the compound remains relatively cool even on hot days. During cold nights, the house cools down partly by radiating heat to the surroundings. Cooled air also sinks to the lower region of the courtyard and flows into the surrounding rooms, withdrawing heat from their interior walls and the floor. The heat thus withdrawn ameliorates the coldness of the night in the courtyard. In this way, a relatively cooler atmosphere is maintained during the day and a warmer one at night. This is possible because of the high diurnal temperature change which characterises the climate of the hot-dry zones. It does not bring much relief in the hot-humid climate of Igboland. So, given that the impluvium compound type reached Igboland through Benin, its use can be seen as an instance of the precedence of sociological

factors over environmental ones in determining house form.

Nevertheless, if the impluvium compound type is meant to regulate temperature where there is a large diurnal change, the prototype Igbo compound is aimed at facilitating air circulation and ventilation in the compound. In essence, this type of compound is comparable to a box with its lid removed, exposing the contents which in this case are the detached houses within. In the event of a breeze or air flow, the staggered location of the houses can induce zones of local high and low air pressure in the compound. This makes for effective air-flow of ventilating air from one part of the compound to another. So, air, once inside, is temporarily trapped and channelled around the whole courtyard, thus ventilating the buildings within. The compound wall, though not very high, is high enough to protect some parts of the houses from direct solar rays by putting them in the shade during the greater part of the day. At night, the open-lid box nature of the compound enables it to lose heat quickly to the atmosphere and the surroundings by convection and radiation. Life in the prototype Igbo compound can, therefore, best be imagined as life in a large open-air house where the coolness and breezy atmosphere are in delightful contrast to the inhospitable heat and high relative humidity of the surroundings. This openness of the compound design is, however, liable to create problems with privacy, though this is counterbalanced by the compound wall, which gives one a feeling of being inside once within the compound.

In the areas towards the coast, where relative humidity is exceptionally high, and in other areas with difficult topography such as Ohaffia, houses are mostly shallow and one room across to increase air circulation. Although Igbo houses often lack opposing window openings to facilitate cross ventilation, the absence of a ceiling, and the lack of an air-tight roof, all make for better ventilation. Throughout Igboland, rectangular forms predominate over

circular ones. This is because they are better suited to the exploitation of cross breezes.

The method of construction by which the frame of the house and the roof are erected first on timber posts before filling in the walls, is similarly a response to the climate, in this case a need to build during the rainy season. This method of construction is well known in areas with a long history of water scarcity during the dry season. The method is designed to enable the wet mud walls to be protected by the roof while they dry.

The predominance of the wattle-and-daub method of wall construction in the south, instead of either the load-bearing or composite structure, is also caused by the need for thin, breathing walls, which suit the heat and very high humidity experienced there.

The problem of dust, which is a real menace during the harmattan, is countered by limiting the number and sizes of openings in the house. The trees also shade the houses from dust. For the cold that accompanies the harmattan, the built-in mud couches are specially adapted for open hearth fires, as mentioned earlier. In upland areas such as Udi, Nsukka and Enugu Ezike, where nights are relatively colder, especially during this season, houses are unusually small. This apparently is in an attempt to keep the building volume to a minimum, so that night fires can warm it efficiently.

In these ways, traditional domestic architecture holds many clues to the solution of architectural problems in Igboland today. Unfortunately, these indigenous solutions are grossly neglected in present times.

Cultural Influences

Introduction

In the preceding discussion, traditional Igbo

architecture has been examined in the light of the physical environment of Igboland. Occasional mention was also made of a few cultural factors, but their implications were not fully analysed. By analysing the physical environment only, traditional Igbo architecture appears, therefore, as no more than mere shelter contrived mainly in response to the environmental limitations of Igboland. Nevertheless, "Architecture is also an aspect of culture which mediates between man and his environment" writes Walter Goldschmidt: "It, therefore, has an ecological, as well as a social and cultural significance".⁶ By distinction, the architecture of any people, in addition to being an expression of the people's response to the limitations of their physical environment, is usually highly influenced by socio-cultural factors prevailing in their society, their attitude, values and beliefs. On this point, Rapoport again wrote:

Given a certain climate, the availability of certain materials, and the constraints and the capability of a given level of technology, what finally decides the form of a dwelling, and moulds the spaces and their relationships, is [not physical constraints, but] the vision that people have of the ideal life. The environment sought reflects many socio-cultural forces, including religious beliefs, family and clan structures, social organisation, way of gaining livelihood and social relations between individuals.⁷

Levi-Strauss has also suggested that the spatial form observed in the settlement of a traditional society can be almost a disguise for the real social structure that exists in the society.⁸ In a similar manner, Fred Egan showed how the social system of the Western Pueblo is reflected in its architecture. Griaule and Dieterlan tell how architecture expresses the cosmological views of the Dogon culture of Mali, while Hall explains how architecture reveals man's

inner view of social relationships. Furthermore, according to Snyder, Sadalla and Stea, "The success of a built environment apparently depends upon the degree of consonance between that environment and traditional cultural prescriptions and proscriptions".⁹

It seems therefore that among the different peoples of the world, socio-cultural characteristics influence their architecture to a great extent, and explain the existence and development of architecture in any traditional setting. In the Igbo context, the residential setting is not just a group of physical structures contrived to shelter people from the elements only. In addition to serving this purpose, it is also a physical manifestation of a combination of socio-cultural factors embodying Igbo cosmology and religion, ethics and social structure, traditional economy and domestic life style, and other characteristics of the Igbo society.

Aspects of Influence from Igbo World-View and Religion

Among other scholars, Eliade and Levi-Strauss have pointed out that man perceives his habitat as a reflection of the cosmic order. Hence, the dwelling serves both to protect and to express a collective image or vision.¹⁰ Some other scholars, such as Paul Oliver, have illustrated how myth and ritual are the mechanism used in ceremonies related to the building construction processes, and how these create meanings in the habitat.¹¹ Frequently, also, it is myth and ritual which specify the rules governing the axis, orientation, and boundaries of man-made structures.

To pursue these ideas further, it is suggested that certain unique features of the traditional architecture of each of the different peoples of the world partly derive from their various world views and religions. This is not entirely restricted to primitive or traditional architecture. In recent times, for instance, Hayden, by

analysing the architecture of the Shakers of the United States, showed the enormous impact which the religious and spiritual beliefs of a people can have on their architecture.¹² This is particularly true in traditional Igbo architecture, to the extent that some of its features are incomprehensible and inexplicable unless seen as an attempt by the Igbo to realise the ideals defined by their world-view. As in other cultures, the realisation of these ideals has compelled the Igbo to work in conformity with certain dictates of their world-view and religion.

It has already been shown that the Igbo world-view and religion provide them with a pre-determined ideal order, and with a meaning for the basic properties of the universe and for the basic characteristics of all human experience and relations. It was also implied that their world-view presents a setting in which everything originates from one common source, Chineke, who resides in eluigwe. From eluigwe, extension moves in every direction beyond the physical world, uwa, into the invisible world, ala mmuo, filled with ndi ichie, mmuo, and various kinds of alusi. The physical society is set within the context of a three-worldly Universe with Chineke at the centre as the fons et origo. The residential setting, building process, and even life in the residential area after construction work has been completed, have to be tailored to fit into the framework of this world-view.

In the first place, the Igbo religion explains the series of rituals and ceremonies performed before, during, and after building construction. Their world-view gives meaning to the peculiar morphology of the residential layout. The centrality of Chineke as the fons et origo is conceptually realised in the physical universe by the constant claim of a common mythical ancestor by all the members of a village group. This gives them a point of origin in their physical universe. Through him, everybody in the community identifies with and is related to all others.

For the concrete environment to fit into the framework of their world-view, the need for a physical symbolic focus mundi is obvious. Such a physical centre must make it possible for all the members of the community to reaffirm their corporateness. It must, in addition, form a point from which the residential setting tends to radiate, and a point through which each structure in the residential setting can be identified and related to the whole. As a result, just as their belief in a common ancestor forms the conceptual tie that holds them together, the village group centre forms the central core of the village group layout. This central core is, therefore, conceptually and symbolically a cosmological centre of origin and physically the centre of their universe.

The need for such a centre in an architectural setting is by no means unique to the Igbo. In recent years, this need has been emphasised as a common and very significant feature of architecture. The ancient Greeks placed the 'navel' of the world, omphalos, in Delphi, while the Romans considered their capitol as caput mundi. For the Moslems, the Ka'aba is still the centre of the world.¹³ Prussin has also noted that the physical representation of centres, signifying 'a point of origin' and the centre of the universe, is a common feature of the architecture of sedentary farmers in West African savannah.¹⁴ Schulz went further: "This need [for such a centre] is so strong that man since remote times has thought of the whole world as being centralised".¹⁵ In yet another person's view: "It is the point where he [man] acquires position as a thinking being in space, the point where he 'lingers' and 'lives' in the space".¹⁶

In Igbo architecture, this idea that the central core is expressive of a conceptual centre of origin and the physical centre of the universe, is further reinforced by the continuing presence there of ancestral shrines and that of ala, the earth-being force. Ancestral shrines physically

reinforce their claim of a common ancestor. Ala is the central supporter of all lives. Throughout the hierarchy of the residential territory, the village, the ward and the compound, central cores, which are replicas of the village group centre, form foci. Around them are grouped other architectural elements. Each also forms an area where members of a particular residential unit reaffirm their affinity and group corporateness through rituals, socio-cultural and economic activities. The centre in traditional Igbo architecture, therefore, is as central in their physical universe as Chineke is central in their world-view and common ancestors are central in their myth of origin.

Each of the elementary units of their residential setting, the village, the ward and the compound, in the same manner as the largest unit, the village group, shows further influences of the three-world concept of their universe, which accommodates Chineke, alusi, ndi ichie, nmadu and ihe ekere eke. Furthermore, their effort to maintain the ever-needed dynamic balance between these three worlds, as defined by their world-view, is also prominently reflected in their domestic architecture. These are all made manifest in the pantheon of shrines and sacred architectural spaces that abound throughout the hierarchy of the residential territory.

Vlach has suggested that a person's ideal universe is realised in the architecture of his home or compound.¹⁷ In traditional Igbo architecture this is most likely, especially when the similarity between the compound and other spatial units of the residential territory in terms of their ordering pattern is noticed. The compounds share some spatial ordering features with these other units as it also primarily consists of a core, the courtyard, a residential area, the house, and an economic area, which is the garden. The constant occurrence of these elements in a particular ordered pattern throughout the whole hierarchy of the residential territory is suggestive of an unconscious drive

towards the realisation of a physical layout which is consonant with a certain ideal order. It can be seen as an attempt at each level of the residential layout to reflect the conceptual cosmological order of their universe. In line with Vlach's suggestion, therefore, the Igbo compound can rightly be considered as a microcosm of the Igbo's ideal universe. The compound, seen in this light, serves to illustrate further the influences of the Igbo world-view and religion on Igbo architecture. Its reflection of the three-world concept, and the pervasive attempt to maintain the cosmological balance, are also discernible in its architecture.

The compound, once established, is expected to last and be inherited perpetually. Only discord with the cosmic forces by committing abominations, alu n'echi ezi n'uno, or social calamity can bring it to an end. It does not belong to the living, mmadu, alone. It belongs to and accommodates the attributes of Chineke, mmadu, ndi ichie, alusi, mmuo and ihe ekere eke. Chineke, the fons et origo, is represented in the forecourt by his manifestation, anyanwu. In the same way, shrines, statues, and statuettes, meant to reinforce the presence of different alusi, are located in many parts of the compound, as we have seen. The graves of dead ancestors also keep in being the idea that the ancestors are ever present and watching and even partaking in most activities that go on in the compound. All these are expressive of the Igbo attempt to reflect their concept of the three worlds that make up their ideal universe, which accommodates god, spirits, force-beings, and humans, and to maintain a cosmological balance of all the forces involved.

The spatial order of the ward, the village, and the village group, show similar influences. Each has its own centre of origin, its numerous shrines and sacred spaces, all emphasising the Igbos' effort to realise concretely the ideals defined by their world-view and religion.

Influence of Social Structure and Organisation

The design of houses and the layout of the different parts of the residential territory of traditional Igbo architecture conform also to certain norms, which derive from Igbo social structure and organisation. Similar social factors have been used by many scholars to explain certain characteristic issues of primitive, traditional, and vernacular architecture elsewhere. Levi-Strauss, for instance, has used the social structure of the Bororo of South America to explain the spatial layout of their settlements.¹⁸ Rapoport, using such social factors as basic needs, family, position of women, privacy and social intercourse, explained how socio-cultural factors are paramount in the determination of form in vernacular architecture.¹⁹ Totchemann similarly noted that in every case, traditional architecture mirrors the structure and way of life of the people concerned.²⁰ In Igbo architecture, these socio-cultural factors find expression in both large and small residential units.

As we have seen in Chapter Two, Igbo socio-political organisation is characterised by a highly diffused system of power sharing. This has meant an absence of a central authority which in the past could have held the teeming population within a defendable territory and commanded mass labour. This absence of a central authority accounts for the absence of palaces, cities, and city walls, in Igboland. Scholars such as Hull have also used it to explain away the characteristic, loose, clustered formation of Igbo village groups.²¹ But the absence of a central authority, however, fails to account fully for this, especially when it is realised that among some other people the presence of a centralised government has not always induced the formation of cities and towns. For instance, although the east African kingdom of Bunyoro had become highly centralised by the late eighteenth century, their settlements remained small and rural in character.²² Moreover, even in those areas of

At the individual village group, village, and ward levels, the hierarchy that exists in their social structure and organisation is strongly reflected in the spatial ordering of these entities. Just as the concept of a common ancestor forms a starting point in the hierarchy of their social structure, the physical central core forms the hub around which the spatial units are structured. Within the social structural framework, each level of umunna lays claim to a common ancestor. In spatial terms, each of such levels of umunna is similarly identified with a particular unit in the general layout. Also, throughout the layout, the claims of common ancestors are synonymous with the multiple central cores involved. The members of each level of umunna reaffirm their affinity in their own central core through communal, socio-cultural, and ritual activities. In the general spatial layout therefore, each spatial unit, the village, ward, and compound, is expressive of a particular level in the hierarchy of Igbo socio-political structure and organisation.

Using the basic unit of Igbo social structure and organisation, the nuclear family and its domain, the compound as an example, it is quite possible to establish the influence of even minor details of social structure and organisation on traditional Igbo domestic architecture. Adeyemi pointed out the suitability of the basic unit, the family, as a model on issues like this, thus: "African traditional culture finds its full expression and is symbolised in the traditional family".²⁴ In traditional Igbo architecture, details of social structure and organisation find expression in themes like the home or the compound as a symbol of social identity. Traditionally, the nuclear family which is the basic unit of social structure and organisation, resides in a compound which is correspondingly the basic unit of domestic architecture. There is, however, an exception, and that is found among some Cross River Igbo who live in giant compounds which accommodate all the

members of a particular level of umunna. This is typical of Ohaffia, Ututu and Afikpo Igbo, and, as has been explained, it arose from the need for defence.

Generally, and especially among the Nkanu Igbo, the compound is referred to as be, meaning 'home'. Thus, be Nnaji Ude means the home of Nnaji Ude, that is a compound established by Nnaji Ude. All the members of such a compound are referred to as ndi be Nnaji Ude, meaning people from Nnaji Ude's home. Implicitly, outside the compound the members of a particular family are actually primarily identified by their home and by the founder of their family. Similarly, each Igbo finds his personal identity in his home. Each member of a family, therefore, strives to improve the physical condition of his home and to upgrade its image and social status in society, as, without the home as a point of reference and return, life becomes a perpetual and aimless, wandering affair. The emphasis that is laid on family ethics, house construction and decoration, is aimed at enhancing a better identity through the home. The compound, therefore, forms the physical manifestation of the Igbo concept of home. On the other hand, the concept of home conveys the Igbo perception, meaning, and value of domestic architecture. So, as discussed earlier, it could be said that the Igbo conceptualise 'home' as one of the most fundamental necessities in life. To them, it is a microcosmic realisation of their ideal universe with which each is primarily identified as an individual, and that is also his most peaceful resting place, dead or alive. A person without a home is inconceivable in Igbo philosophy. This is because such a person is comparable with the spirit of the man who led a bad life and died a bad death, and therefore wanders in perpetual aimlessness, as he is not acceptable anywhere. The value attached to home is exemplified by the fact that to banish an Igbo from his home is one of the greatest punishments in society.²⁵

As can be seen, the status of the compound's head in

the family hierarchy is reflected by the primacy of his house, its size and prominent location, its complexity of design and function, and its structural and architectural execution. His house is built to evoke respect and so stands out to emphasise his importance in the family. Women and children go there only to perform one duty or another. It is supposed to befit the social reputation of the head and the family he heads. In the same way, the houses of other male members of the family follow his own closely, in all these respects similarly reflecting their status in the family hierarchy.

On the other hand, the subordinate position of the wives, and in fact all female members of the family, is also reflected in size. Their houses are usually smaller than those of the males, and their location is often behind that of the head of the family. In a multiple courtyard compound, they are partitioned away from the forecourts, less elaborate in decoration and furnishing, and in use, serve also as kitchens and stores. Such houses are, therefore, usually cluttered with domestic utensils and blackened by soot. Under normal circumstances, a woman may have no house in her parents' compound. While unmarried, she lives with her mother and, after marriage, with her husband. A divorced or widowed sister or daughter may, however, have a house built for her, but in the same fashion as her mother's. Thus, even the spatial order of the compound strictly reflects family structure and organisation.

Rank and social status also influence the architecture of the compound. The compound of a rich or titled man can easily be identified by its enormous size, elaborate wall decorations, and impressive carved doors. Among the Awka Igbo, for instance, the reception house or obu of a titled man is often decorated with special carved wooden panels (ill. 81).

The family unit that occupies a compound exists as an

economic entity. Here again, the head of the family is in direct control of the family enterprise, be it farming, trading, carving, or iron working.

The ward and the village, which are higher than the compound in the hierarchy of the village group spatial layout, are similarly occupied by segments of the umunna social structure, which are higher than the nuclear family. On these levels, social structure and organisation may also influence the location of primary amenities in the village group. For instance, the primacy of the oldest ward or village may be signified by their proximity to the ward common or village square respectively. In some cases, as seen in the Umune Ngwa and Afikpo examples, the oldest ward or village in a village group may have more claims to the village square or village group centre, as the first descendants of their respective common ancestors.

Also within the village group, village, and ward territories, the different social institutions that enforce order and enhance collectivity again influence traditional architecture. Their influence is primarily seen in the form of special buildings erected for the purpose of conducting activities connected with these institutions. Assembly halls and houses for secret societies are very common architectural features in Igbo villages. These houses are erected in the centre of the village group, or in the village square. In Afugiri, for example, ulo ama, ulo ikoro, and ihummuo are among such buildings. In Ohaffia and Bende, obu and ulo ekpe are common.

Wars and, later, slave raids were frequent in Igboland before colonisation. The northern fringes of Igboland were repeatedly invaded by the aggressive Igala kingdom. The use of Abam and Edda mercenaries by the Aro had a terrorising grip on the people. There was, therefore, a need for houses and settlements that would facilitate defence. The Cross River giant compounds have already been mentioned as having

been laid out in the form of war camps. This is not the only influence that the problem of defence had on traditional Igbo architecture. In Nnekede, for instance, compounds are arranged in circles so that their outer walls form a continuous outer screen. In Nsukka, some villages were encircled with walls for defensive purposes. This is a feature very rare in traditional Igbo architecture, and emphasises how severe the situation that called for it was. Perhaps the most significant influence of war and defence on traditional Igbo architecture is seen in uno nkpo in Awka, where fortified buildings of two or more storeys were used as look-out towers. (See Appendix Two).

Traditional domestic Igbo architecture has therefore evolved not only in response to geographical limitations, but also to social structure and organisation.

Influence of Domestic Activities and Life Style on traditional Igbo Architecture

The discussion about traditional Igbo society with respect to ethics, daily routine, and manner of living in Chapter Three, portrayed the Igbo being ruled by strong morals, having a segregated pattern of activity organisation, and showing much love to be outdoors within the natural environment. These qualities are also strongly reflected in their traditional architecture.

Aspects of the Igbo's strong morals, in addition to their being expressed in the respect accorded to the different houses in the compound, are further emphasised by the respect accorded to a visitor. It is binding that a guest, or even a casual visitor, be politely attended to. 'Bata nodu ani', 'Come in, sit down', always follows the initial greetings, no matter who the visitor may be. Such a person is, however, not expected to take undue advantage of the hospitality by getting further than is expected of him. The compound's spatial order does not, therefore, allow an

abrupt entrance into any private area. A guest has to pass the ante-room, ofu, obu, obuma, and traverse the open courtyard before he gains access to any living room. The obu, obuma or ofu serves the purpose of extending a befitting welcome to any visitor, and if there is no need, the visitor may not go further.

The Igbo have a saying, 'Ihe ayi bu ihe ayi ma nke akam bu nke akam', meaning 'our thing is our thing, but mine is mine'. This derives from their individualistic character, and here emphasis is always laid on mine and my own. The influence of this on traditional architecture is the coexistence of a public and private domain even within the compound. The public domain, the courtyard, provides for group participation. On the other hand, the private domain provides for an unregulated privacy for every member of the family. The compound architecture is, therefore, aimed at providing an unregulated privacy for the head of the family, his wives, and grown-up children. This includes a place for their private idols and stores. So the ideal situation, as their traditional architecture shows, is to create spaces that are functionally independent of one another, but at the same time belonging to the same entity. The detached buildings in the same compound seem best suited for this. The buildings serve as the independent spaces for private affairs while the compound courtyard, in addition to holding the individual houses together in the same unit, serves also as a public arena.

In essence, the Igbo compound gives an impression of an open-air house which is designed to assure privacy for each member of the family and permit different activities of their daily routine to be conducted simultaneously by all the members without inconveniencing one another.

The segregation seen in their domestic activities is also reflected in the spaces meant for such activities. For instance, traditionally, meals are never taken together or

at the same place by all the members of the family, although everybody eats approximately at the same time. The Igbo believe that 'Nwata ga akwo aka tu pu o soro okenye rie ihe', that is that to belong to a mature circle, one has to possess qualities of maturity. In the family, it implies segregated dining areas or the absence of a common dining room. The dining area of the head of the family is usually in his house. He has little or nothing to do with the kitchen and must not be menaced by the fumes and smoke coming from there. This would have been the case if the kitchen were adjacent to his dining area. As small children are closer to their mothers, traditionally the woman's house is adapted to accommodate the children with the provision of suitable furniture for eating and sleeping.

The courtyard that is always present in the compound design is also of prime importance. In addition to the functions listed above, it constitutes the core of Igbo domestic architecture. Besides its symbolic value, its functional importance is emphasised by the Igbo desire to carry out their activities within what feels like a natural environment. Western architecture, and technological achievements have succeeded in making life within the house almost independent of natural climatic change outside. The Igbo, on the other hand, have never seen nature as some kind of enemy that should be fought and mastered. This is demonstrated by the part played by the natural environment in the provision and preparation of building materials. Building materials are acquired freely from nature. Both rain-water and solar heat are also required for the preparation of these materials. Whenever there is a choice about where to carry out activities that can be conducted indoors or out of doors, the Igbo readily choose out of doors. Consequently, the effort made by traditional builders is not to isolate nature or the elements entirely or to use natural forces for self-advantage, but to co-operate with nature. They live with nature and not in isolation. To the

Igbo, it is a sign of mourning for any one to carry out his activities shut up in a house. They also believe that only evil men shut themselves up in their houses during the day. Such men dare not come out lest they risk looking up into heaven and being punished for their obnoxious activities. Besides economic or domestic reasons, this love for the natural environment explains further why Igbo compounds are located amidst gardens and trees. In some Igbo houses, window openings have no sashes, but only wooden rails, thus allowing cool breezes, humidity, draught and noise to penetrate into every corner of the interior. As a result, even in towns, the Igbo are less disturbed by noise than the average European. This, however, does not imply that the Igbo themselves are noisy in their homes because, although the compounds consist of detached houses, everybody exercises self-control. As a matter of fact, all activities within the compounds are conducted with a degree of mutual regard and respect among the members of the family.

The activities carried out in Igbo houses also influence the height of the houses. Inside the house, most activities, with the exception of sleeping, are conducted sitting down. The furniture in the houses is lower than that used in the West. As a result, the eye level when sitting on the low mud couch is the only interior architectural point of orientation in domestic Igbo architecture. Consequently, Igbo houses, and some other structures, such as the scaffolding above the cooking place, are usually not as high as in western houses. This, in a way, explains why some Igbo houses appeared so low to early European travellers.

The traditional early morning ablution is almost ritualistic and, therefore, has necessitated water being kept either at one corner of the compound or under the eaves of individual houses, where every member of the family goes first thing in the morning.

The kola ceremony takes place several times a day and

also has called for a special place where the kola nuts may be kept and reached by the head of the family as often as necessary. This space is created in the sitting room (ill. 85).

The compound is designed to accommodate a number of generations. Old people are therefore never banished to separate homes, but treated with due respect and affection until death. At death, they are buried in the compound as they are expected to remain nearby in death as in life.

The two choices of the place to bathe, either in a stream or in the compound, make bathrooms only optional features of Igbo compounds. The same thing applies to latrines. If, however, these conveniences exist in a compound, they are used by all the compound inmates.

The Inter-Relationship between Traditional Igbo Domestic Architecture and Igbo Life-Style

There exists a mutual relationship between the life style of a people and their traditional architecture, so that one influences the other and in turn is influenced itself. Bakema, for instance, wrote: "First, man creates environments, then, environment in its turn influences man".²⁶ Winston Churchill had the same thing in mind when he asserted, "We shape our buildings and afterwards our buildings shape us".²⁷ In the case of traditional Igbo architecture, its effect on their life style is mainly in the form of trimming it to conform to the traditional pattern.

The different shrines found in the compounds and within the village group territory, for example, reinforce the effect Igbo cosmology and religion have on their lives. The shrines in a way enhance the realisation of the conceptual universe occupied by Chineke, alusi, ndi ichie and mmuo, and ihe ekere eke. Each Igbo, therefore, has to weigh his

activities with his fellow men and relationships with the invisible and try to keep them within the traditional norms. The presence of the incorporeal is so much felt that most Igbo on passing the shrines of their alusi, voice out their greetings and exaltations to them as though they have just met the alusi themselves.

It could be argued that the unregulated individual privacy that the domestic architecture offers may encourage a solitary life and therefore promote secrecy and vice. In the same manner, their individualistic character is susceptible of promoting false pride and jealousy. These are, however, outweighed by the ideals in their world-view and their deep religious nature. Their world-view and religion have more effect on their lives and do not condone vice. There is always a close family relationship and, from childhood, each person is tutored to keep the ethics of society. Contrary to what could be argued, therefore, these conditions which are encouraged by their traditional domestic architecture, promote the development of individual personality and the all-round self-confidence for which the Igbo is known.

The importance attached to the home, or be nnam by the Igbo, is also very significant. No matter where they are, they always have it as their primary objective to improve the architecture of their homes and elevate their families' status in society. The towns, most of which were established during the colonial period, are more or less hunting grounds or workshops where money is to be earned for the improvement of their home compounds and the welfare of their families. Thus, many Igbo, working and living abroad, send money regularly home to improve the physical outlook of their compounds, and help less able members of their families. For those who have come of age, but have not established a compound, nothing is given more priority than establishing one.

The traditional domestic architecture discussed here is

meant to offer two choices of place where certain activities can be carried out, either indoors or out of doors. But inside the house, fixed furniture restricts the available flexible space in the rooms. This is further limited by low head room, especially for activities that entail standing. These make the rooms less functionally flexible and restrict the activities that are possible inside the house. So the Igbo, therefore, readily prefer conducting most domestic activities out of doors. This, in a way, reinforces their love for their out-of-door life and work. Even today, in the towns, a good number of Igbo still prefer sleeping in their courtyards or on their balconies, especially during those seasons when it gets very hot and humid inside concrete houses. Consequently, the Igbo feel most comfortable with small rooms and large out-door spaces. Horizontal expansion of spaces, which permits out-of-door living and working, is preferred to vertical expansion.

Furthermore, limited activities inside the house call for less furniture than is found in an average western family house, and much of the furniture the Igbo use is multipurpose. For example, couches may be used as seats as well as beds. The mat can be used inside the house as well as outside for sitting and lying down. Igbo women prefer sitting on very low furniture for domestic chores. This sharply contrasts with the practice in Europe, where most domestic chores, for instance cooking, are done standing. This European habit has now affected Nigeria, because of the height of the cookers and kitchen tables in European-type flats in the towns.

REFERENCES

1. A. Rapoport, House Form and Culture (Englewood Cliffs, 1969), p.87.
2. A. Clifton-Taylor, The Pattern of English Building (London, 1972), p.22.
3. P.G. Anson, 'Architecture without Architects', Landscape, 12, no 2 (1962), 18.
4. G.T. Basden, Among the Ibos of Nigeria (London, 1921), p.168.
5. D. Dunham, 'The Courtyard House as a Temperature Regulator', New Scientist (8 September 1960), 663-6.
6. W. Goldschmidt, Foreword to L. Prussin's, Architecture in Northern Ghana (Los Angeles, 1969), p.VIII.
7. A. Rapoport, op. cit., p.47.
8. C. Levi-Strauss, Structural Anthropology, translated from French by C. Jacobson and B.G. Schoepf (London, 1963), pp.132-165.
9. P.Z. Snyder, K.E. Sadalla and D. Stea, 'Socio-Cultural Modification and User's Needs in Navajo Housing', Journal of Architectural Research, 5 (December 1976), 4-9.
10. M. Eliade, The Sacred and the Profane (New York, 1959).
11. Shelter, Sign and Symbol, edited by P. Oliver (London, 1975), pp.7-37.
12. D. Hayden, Seven American Utopias: The Architecture of Communitarian Socialism 1790-1975 (London, 1976),

13. C. Norberg-Schulz, Existence, Space and Architecture (New York, 1971), p.19.
 14. L. Prussin, 'Fulani-Hausa Architecture', African Arts, 10, no 1 (1976), 8-19.
 15. C. Norberg-Schulz, op. cit., p.18.
 16. O.F. Bollnow, Mensch Und Raum (Stuttgart, 1963), p.58.
 17. J.M. Vlach, 'Affecting Architecture of the Yoruba', African Arts, 10, no 1 (1976), 48-53.
 18. C. Levi-Strauss, op. cit., pp.141-147.
 19. A. Rapoport, op. cit., pp.61-8.
 20. W. Tochtermann, 'Architecture without Architects', UNESCO Courier, 28 (February 1975), 4-13.
 21. R.W. Hull, African Cities and Towns before the European Conquest (New York, 1976), pp.24-5.
 22. R.W. Hull, op. cit., p.2.
 23. D. Powell, Mss, 484/44/1919, The Divisional Officer in Okigwi to the District Officer in Owerri: 29th April 1919.
- M.A. Onwuejeogwu, 'The Igbo Culture Area', in Igbo Language and Culture, edited by F.C. Ogbalu et al. (Ibadan, 1975), pp.1-10.
- A.E. Kitson, 'Southern Nigeria', Geographical Journal, 41, no 1 (1913), 16-38.
- G.I. Jones, 'Dual Organisation in Igbo Social

Structure', Africa, 19, no 2 (1949), 150-6.

24. E.A. Adeyemi, 'Changing Traditional Culture and Modern Architecture', fourth in the series of 1975/76 session, University Public Lecture Series (Zaria, 1976).
25. Such a punishment can only be handed down to an Igbo who has committed a great abomination as in the tragic story of Okonkwo who accidentally killed a boy during a burial ceremony. He had to go into exile from his home town for seven years. See Chinua Achebe, Things Fall Apart (London, 1958).
26. Team 10, 'The Role of the Architect in Community Building', in Human Identity in the Urban Environment, edited by G. Bell and J. Tyrwhitt (London, 1972), p.182-3.
27. Ibid., p.183.

CHAPTER NINE

EVOLUTION AND PRINCIPLES

The Evolution and Development of Architecture in Igboland

A Hypothetical Reconstruction

The reconstruction of the possible origin of architecture in Igboland is vital, because it forms the necessary starting point in time for any discussion that concerns the history and the development of this architecture through the centuries. In the recent past, a noteworthy attempt has been made by Aniakor to establish, at least, a sequence of the development of its major forms. However, his arguments appear to be inconsistent with already established facts in Igbo studies. Consequently some of his conclusions are very improbable.¹ But his attempt highlights the difficulties that impede any effort to establish a clear idea of the earliest shelter in Igboland, or to reconstruct its pattern of development over the years. These impediments include the fact that although oral tradition has been used with some success in other areas of Igbo studies, it fails here completely.² During the field work, I discovered that the question of the origin of most things is generally answered by the Igbo through Chineke. One elder in Enugu Ezike, for example, told me that, O bu Chineke kere mmadu kuziere ya iko ji na iru ulo, which means that the Igbo Supreme God created man and taught him how to cultivate yam and build his dwellings. In addition to this difficulty, the transient nature of traditional Igbo building materials, the climate of Igboland, and various destructive agents, such as the termites that abound there, have inhibited the survival of either buildings or any other evidence that could illuminate the dwellings of the earliest Igbo. Igbo buildings if left unmaintained for even a year crumble and disappear with little or no trace. Even when the

buildings are maintained, their life span is never long enough to demonstrate a line of development. The oldest building I surveyed during my fieldwork was Mazi Ogbonnaya Ani's house in Awkunanaw, which was built in the 1920s. I was able to fix this date because the house was said to have been built long before the slaves in that area went to live separately in the farmland, and this incident took place in the 1930s. Traditional buildings as old as this are very rare in Igboland today. So, generally, fifty or sixty years seems to be the maximum life span of traditional Igbo buildings, a span that was, for instance, typical of houses in England in the Middle Ages.

Archaeological evidence has proved very useful in filling some vital gaps in similar reconstructions in England and elsewhere, but this has not been the case in Igboland. For although archaeological excavations have been carried out in some parts of the land, they have not yielded enough direct evidence which would enable an accurate reconstruction to be made. Between 1959 and 1964, for instance, Shaw unearthed Igbo-Ukwu, a civilization that flourished in Igboland in the ninth and tenth centuries under a sacerdotal monarch, which has been identified with the finest bronze work ever discovered in Nigeria.³ A quadrangular burial chamber was among the finds unearthed. Aniakor has used the form of the burial chamber as hard evidence to support a claim for the primacy of the quadrangular form in Igbo architecture.⁴ With much respect for his views, I submit that the form of this burial chamber only suggests the antiquity of the quadrangular form in Igbo architecture, but not its primacy. More recent archaeological excavations in the Afikpo area by Hartle has provided the earliest known evidence of occupation of the land. The evidence, crudely worked stone implements, was recovered from a cave and dates back to the neolithic period. It is, however, most unlikely that it was left by the ancestors of the Igbo. This is because about that date, the occupation of the land by the ancestors of the Igbo was

still limited to the northern part of the present Igboland. The eastern part of Igboland, where the evidence was found, came under occupation by the Igbo much later. This is obvious from the pattern of Igbo dispersal discussed in Chapter Three. The evidence, therefore, only suggests that some parts of the present Igboland were under occupation by other peoples when the first Igbo arrived. But in relation to the quest of establishing the earliest form of dwelling in Igboland and its pattern of development, it adds little that is illuminating.

Another excavation, at a site in the Nsukka campus of the University of Nigeria, yielded the earliest known pottery sherds found in the land, dated by C14 analysis to 2,555BC \pm 130, that is to say the late neolithic period.⁵ The area of this excavation is in the northern fringes of Igboland and not far from a primary core area of settlement as suggested by Onwuejeogwu.⁶ The most significant point about this find is that clay vessels, much like those found on the site, are still used by the Igbo who live in that area today. This evidence can be interpreted as showing that the pottery is likely to have been left by the ancestors of the present Igbo. Although no direct evidence of shelter was found, the presence of pottery sherds suggests the need for storage, which in turn implies a knowledge of food production and a sedentary pattern of life. It further suggests the antiquity of the knowledge of the qualities of clay and by extension, the possibility that it was employed in house building by the Igbo as early as that.

Further archaeological works in Enugu-Ukwu, at the Nwankwo site in Bende, and at Ogrugru, have uncovered stonework, post-holes dated AD 805 \pm 95 by C14 analysis, and a series of forts with ditches and circular walls dated as late as the eighteenth and nineteenth centuries respectively. Both the stonework and the post-holes demonstrate the former presence of structure, while the forts suggest either defensive settlements or corrals used

by the Igalas for slaves who were to be shipped down the River Niger to Onitsha. As further support for his thesis of the primacy of the quadrangular form in Igboland, Aniakor again heavily relied on the evidence from the Nwankwo site.⁷ But given the immensely long period that elapsed between the date of the Nwankwo site and the date of the pottery sherds at Nsukka, that is over three thousand years, any continuity of the quadrangular building form is likely to be coincidental. On the whole, therefore, this latest evidence is too recent to be very useful in this quest. It does, though, show that rectangular forms have been used for a millenium at least. This lack of direct archaeological evidence is further compounded by the lengthy period that has elapsed when there was a total absence of recorded history in Igboland. The earliest accounts of Igboland were made during the period of European exploration and missionary activities in West Africa, which dates back to the eighteenth and nineteenth centuries. Even then, these early accounts are too sketchy to be useful in the reconstruction of the evolution and development of traditional Igbo architecture.

Today, three architectural forms, the circle, the oval and the quadrangle, are prominently used in traditional Igbo architecture. In his thesis, Aniakor has proposed a sequence of their development in which he asserted the primacy of the quadrangular form. His basis for this assertion includes the antiquity of the quadrangular form in Igboland in view of the AD 805 finds, its persistence in the primary area of settlement, and its predominance today throughout the land. He explained the presence of the circular and oval house forms in the land as a stylistic interaction between the predominantly circular house types of the savannah region and the quadrangular house types of the rain forest. According to him:

The continuous existence of the circular form in the Cross River area of Igboland can only be seen

as a survival of an older local tradition which preceded Igbo presence in the river basin.⁸

While the antiquity of quadrangular form in Igboland cannot be disputed, the long time difference between the earliest known date of its use in AD 805 and the date of 2,555 BC \pm 130 for the pottery sherds, makes it impossible to substantiate his claim of the primacy of this form in Igbo architecture. Such an assertion would also have been considered too wild even in places like England, where it has predominated for two thousand years. He also overlooked the presence of other forms in and around the primary settlement area. For instance, Ezinifite is a town not far from this area which has a very old tradition of using circular and oval forms in its buildings.

Regarding the claims that the circular and oval forms have evolved as stylistic interaction between the circular house form of the savannah and quadrangular house types of the rain forest, it has been pointed out above that in the dim past, the whole of Igboland was rain forest. Even if other settlers lived in the Cross River basin before the Igbo, their shelter forms would probably have been influenced by the same rain forest conditions that influenced early Igbo shelters.

On the whole, Aniakor neither gave reasons why the quadrangular form should precede the circular and oval forms in Igbo architecture, nor did he even attempt a tentative reconstruction of how it evolved. Moreover, considering the technological capability of the earliest Igbo in Igboland, he overlooked the technical complexity of the quadrangular form in architectural terms. Although it is notionally possible that either the circular or quadrangular form could precede the other, depending on cultural and environmental conditions of a particular place, Aniakor's sequence of development of these forms in Igbo architecture is not logically substantiated, and therefore proves unreliable in

this attempt to reconstruct the evolution and eventual development of traditional Igbo architecture.⁹

The possibility of the introduction of some or all these primary forms found today in Igbo architecture from elsewhere should also be considered. Some scholars, for instance, have argued that the quadrangular form reached West Africa from the Romans, who brought it to North Africa.¹⁰ Others still argue that it became popular in West Africa following European contact. But a recent archaeological excavation has revealed an Iron Age village of flat roofed quadrangular structures which flourished on an escarpment overlooking the White Volta River.¹¹ The antiquity of this evidence may suggest independent evolution of the quadrangular form in various parts of West Africa. This could well be the case in Igboland, but it is still arguable that it reached here by diffusion from outside. This later view becomes even more plausible given that by the ninth century, the Igbo were able to acquire beads whose origin has been traced to India and Venice. Moreover, it is now believed that Igboland was not as isolated as originally presumed. There was much coming and going to and from Igboland. In addition to this, many Igbo today claim their origin from neighbouring tribes. Although this claim is not true, as we have seen earlier, the likelihood of one or some of these forms reaching the land from these neighbours is still valid. As an example, Onitsha and some other riverine Igbo claim their origin from Benin and although historians do not believe this to be true, the Onitsha Igbo have adopted a form of architecture which is similar to the Benis'. The presence of Benin traditional architecture in that part of Igboland may, therefore, suggest that the Igbo borrowed not only the impluvium type of compound from the Benis, but also the quadrangular form on which the compound is based. This is, however, very unlikely, because the earliest yet known quadrangular structure in Igboland, the Nwankwo excavation in Bende, which can be considered as a later stage in the development of the quadrangular

structure, is older than the Benis' presence in their present homeland. So, even though the impluvium compound type was borrowed from the Benis, it seems that the quadrangular form was already known to the Igbo before any possible influence from them.

Similarly, the possibility that the Igbo might have borrowed their forms of architecture from either other neighbours or much more distant people within the last millenium, seems unlikely. This is because long-distance river transport was not developed in Igboland in the past, and animals like horses and camels, that could have facilitated long journeys, were never used by them. Their external communication could, therefore, not have taken them much further than their immediate neighbouring tribal lands. It follows then, that the beads which originated from India and Venice must have got to Igboland through their northern neighbours, who traded across the Sahara Desert. These neighbours of the Igbo, especially the Hausa, still sell beads in Igboland today. Regarding traditional architecture, all these northern neighbours of the Igbo built only circular houses until the imposition of the Islamic religion in the early nineteenth century.¹² So, if the Igbo did copy their architectural forms, it would have been the circular form and not the quadrangular form. But the antiquity of Igbo presence in their present homeland suggests that most of these other neighbours arrived in their own present homelands later, when house building by the Igbo would already have been in an advanced stage. On the other hand, even given the chance that some of them had already occupied their present homeland before the Igbo, the level of development of the shelters of such earlier neighbours would have been as rudimentary as that of the Igbo. In this case too, there would not have been much the Igbo would copy. It is, therefore, very unlikely that the Igbo could have copied any of the primary forms used in their architecture from either their neighbouring tribes or other foreigners. This absence of strong evidence of an external source, reinforced

by the survival of the circular, oval and quadrangular forms, especially within the Igbo heartland, is very suggestive of independent evolution and development of these forms.

However, in view of the difficulties arising from the lack of solid evidence, the methodology adopted in this reconstruction will rely heavily on historical and environmental factors. Similar methods have often been used by architectural historians in the theoretical reconstruction of the emergence of artificial shelter in other parts of the world.¹³ This method borrows much from the fact that even with animals and the earliest hominids, necessity is believed to have induced invention, and man has continually adjusted or changed his shelter to suit his changing needs. By considering man's obvious needs and his efforts to meet them at the various stages of his evolutionary development, it has been possible to pin the need for a permanent shelter to a particular stage. In such a logical analysis of the consequences of man's actions to satisfy his needs, it is often suggested that the contrivance of the earliest permanent shelter has had to do with the evolution of agriculture and food production.¹⁴

Until that happened, man's pattern of existence was nomadic, and during the nomadic stage, he needed no permanent home. Changes followed when the benefits of agriculture were discovered. From then onwards, early man's nomadic life was restricted. Practising the cultivation of plants implies a more sedentary life, since the cultivator has to wait from the time of planting to the time of harvesting the food crops. It implies the production of enough food, some of which has to be stored to feed the cultivator until the next harvesting season. In addition to that, enough seed for sowing has to be saved for the next planting season. With agriculture, therefore, man's needs and life changed radically, and one of the significant changes at that stage must have been the construction of

permanent dwellings. In places where archaeology can find the evidence, for instance in England after about 4000 BC, this always seems to be the case.

On applying this methodology to the evolution and development of architecture in Igboland, a uniform evolutionary pattern for all hominids is assumed, and that the earliest Igbo ancestors were not much different in their ways of reasoning and behaviour from this general pattern. These assumptions notwithstanding, the methodology poses a number of questions when applied to the Igbo and their society. In the first place, it implies that this attempt to build a clear picture of the earliest shelter in the land, and its eventual development, must go back to the earliest period of food production by the Igbo. Secondly, as it has already been pointed out that the Igbo moved into their present homeland from elsewhere, it is necessary to know whether those first Igbo were already practising agriculture and therefore leading a sedentary life before their arrival in their present homeland. Thirdly, it is necessary to know if any such prior knowledge of shelter construction was influenced by that of any other earlier settlers in Igboland. Answers to these questions would enable us to establish whether traditional Igbo architecture, in its early stages, was a result of a modification of the original form of shelter the Igbo knew in their former homeland, changed to suit the rain forest environment, or an interaction between their earliest forms and those forms belonging to earlier settlers in their new home land.

In the historical reconstruction of the origin and dispersal of the Igbo, it was suggested that the Niger-Benue confluence, which is outside their present rain forest homeland, was their original home. It was also suggested that the break up of their ancestral linguistic group occurred about six thousand years ago, and that their entry into the rain forest followed sometime later.¹⁵ This date has not been accepted by all, but even so, by about 4000 BC

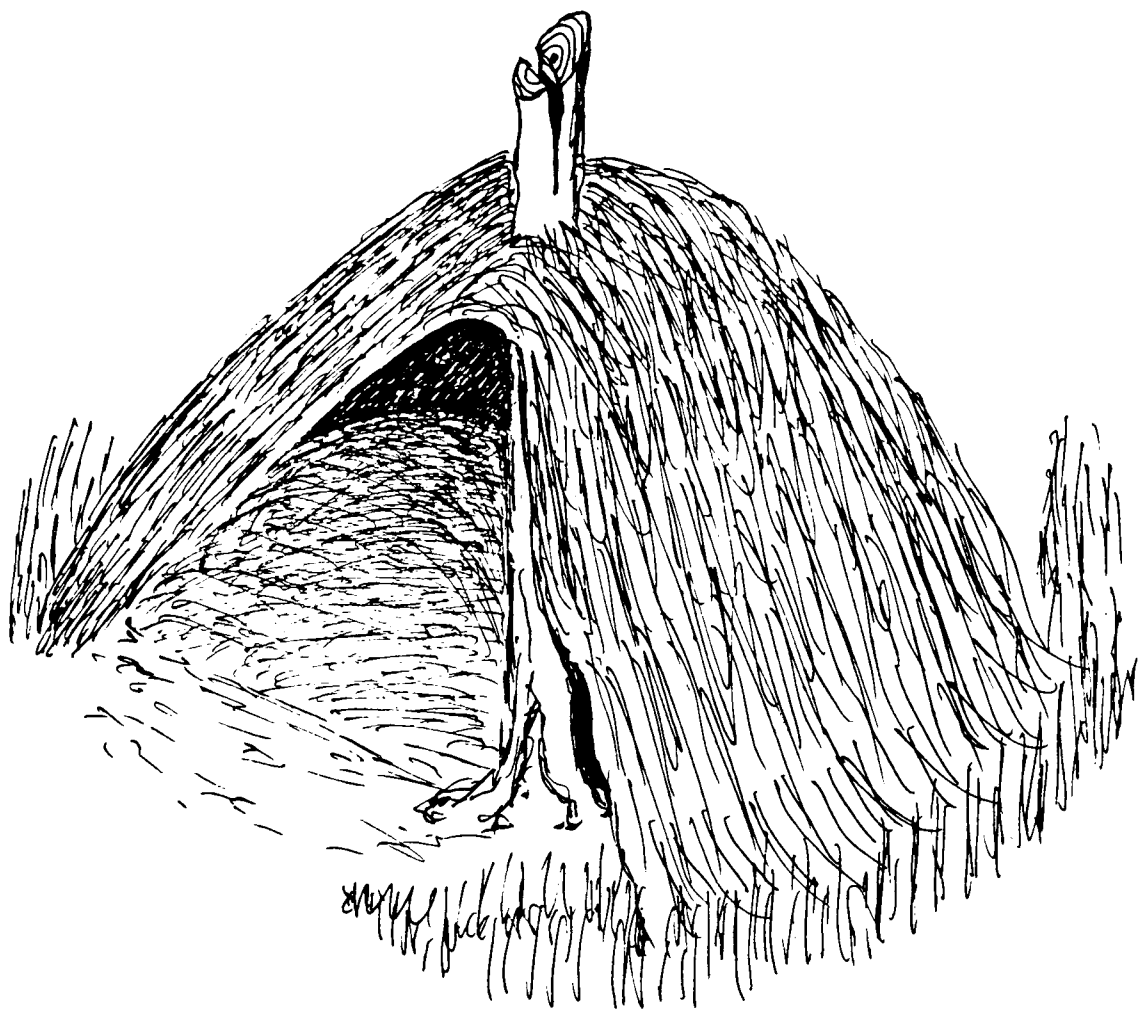
the transition to agriculture had taken place in that part of West Africa, just as it had, incidentally, in England.¹⁶ Within that period, many species of yam, rice and kola nuts were domesticated in areas including the Niger-Benue confluence part of Nigeria, from where the Igbos' ancestors were supposed to have come. Furthermore, Karmon and others, who have researched into the origin and dispersal of the Igbo, have all indicated that they were in fact leading a sedentary type of life outside their present homeland after separation from their ancestral stock.¹⁷ Karmon even went further, to suggest that it was the need for more land for their agricultural activities, owing to a rise in population, that forced the earliest Igbo to encroach into the rain forest.¹⁸ He believed that the most likely occupants of the rain forest, prior to the entry of the Igbo, were the Ibibio, the Ijaw, and the Ekoi.¹⁹ To add to this, one of the present primary areas of Igbo settlement, suggested by Onwuejeogwu, still lies partly outside the northern fringes of Igboland.²⁰ Moreover, the pressure of population which, Karmon suggested, had forced the early Igbo to invade the rain forest, could only have been possible during a food-producing stage of their development, when there was enough to eat outside the disease-bearing, insect-infested rain forest area. From this evidence, it may be inferred that before entering the rain forest, the transition from a nomadic to a sedentary pattern of life would have already taken place, and the practice of agriculture would already have been known. It is, therefore, plausible enough to suggest that by then they would already be building their earliest permanent shelters. These must have been purely functional, and serving for sleeping, eating and storage, while the entire settlement could have been tribal in character.

The exact form of this earliest permanent dwelling is subject to much speculation. But it is, however, reasonable to assume that the immediate needs of those earliest Igbo, the local environmental conditions, their technological

capabilities, and observation of natural forms, all played crucial roles in determining it. Their primary needs must have included shelter and storage. Their original homeland, the Niger-Benue confluence, by that time already had savannah climatic characteristics with long dry and short rainy seasons, producing much grass and few trees. At this early sedentary stage, their building technology, if any, must have been at a most rudimentary level. In view of all this, any resulting shelter must have been very simple, and requiring little time and energy to build. It is, however, still possible that the shelter could have assumed any form, but on the basis of commodiousness, technological simplicity, inherent stability, and availability of materials, the primacy of the quadrangular form is more unlikely. This is because, unlike the circular form, it often involves the use of posts, ridge and beams, and possesses four corners. The correct resolution of the constructional details of these elements could have proved very complex for the level of technological advancement of Igbo ancestors at this stage. So, an artificial shelter, roughly in the form of a cone, could have been the first to evolve.

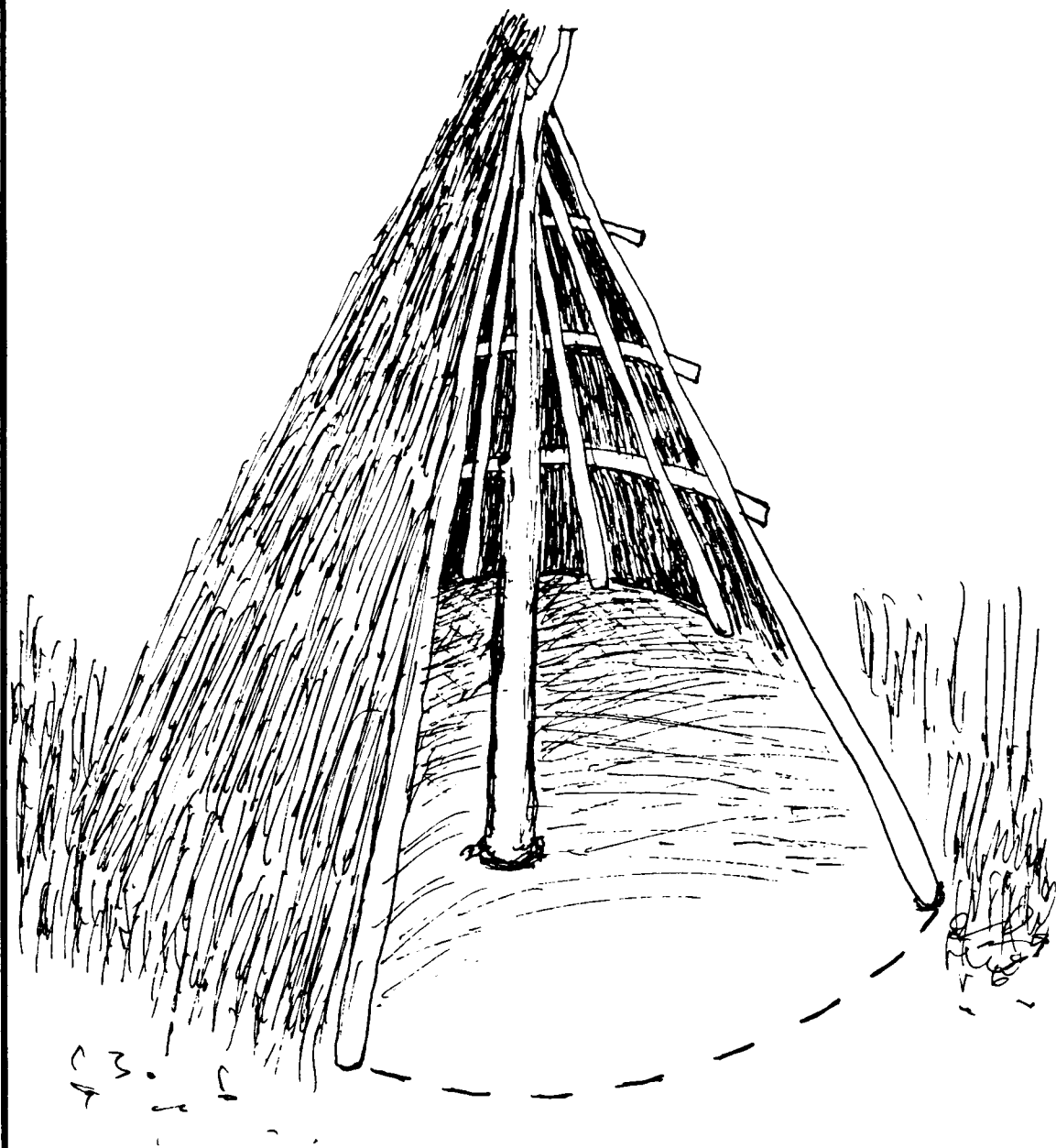
At the earliest stage, it might possibly have consisted of a framework of sticks and twigs, arranged with one of their ends converging around a tree stump or any other natural feature, while their other ends were spread out to form the base of a cone (ill. 97). Grass, which is abundant in the savannah, or leaves, could have been used as external cover of such a shelter. As time went on, the central tree stump must have given way to a central post (ill. 98), which also eventually disappeared as the technology of shelter building continued to develop. This supposition of the primacy of a circular form is further strengthened by the fact that other members of the Kwa linguistic sub-group, such as the Nupe and Gwari, who have remained in the area of their ancestral homeland, still retain the circular form of building. The antiquity of the Igbo entry into the rain

Illustration 97



Possible Earliest Shelter
Contrived by Igbo Ancestors.

Illustration 98

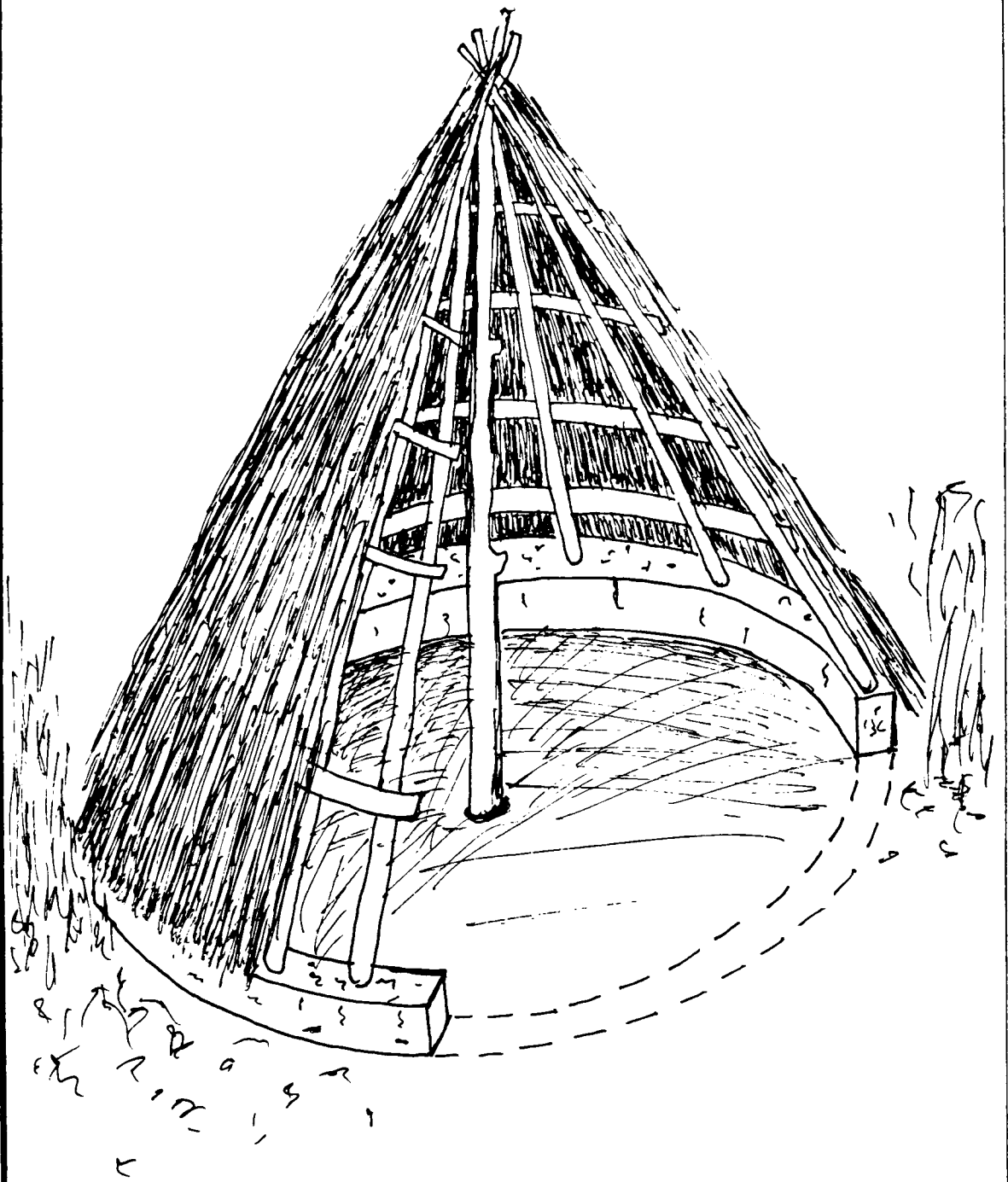


Further Development of
the Earliest Shelter.

forest suggests that they took this knowledge of shelter-building with them, when it was at a most primitive level. Similarly, although the finds in the Afikpo excavation would seem to confirm the presence of earlier occupants of Igboland, the finds were made in a cave, and no evidence of any other shelter was discovered. It therefore seems reasonable to suppose that the shelters of those earlier people, if they had any, would equally have been at the same most primitive stage as those of the invading Igbo. Consequently, they would not have had any significant influence on those of the new Igbo settlers.

With time, this rudimentary form of shelter saw significant developments, because of the changing needs of the first Igbo. For instance, the drastic effect of the rain forest environment on their building materials, such as grass, leaves, sticks and twigs, the vulnerability of these materials to termites and other destructive insects of the rain forest, and the inability of this earliest form of shelter to offer adequate protection from rain and frequent floods, must have induced experimentation with mud. This supposed antiquity of the use of mud is in order, bearing in mind that by the middle of the third millenium BC pots were already in use in the land by the Igbo.

At the earliest stage, it might have been possible that, to prevent the inside of the shelter from flooding after rains, only the lower part of the shelter was constructed of mud, while the upper part still retained the wooden skeletal framework and thatch (ill. 99). This might explain how a structural system involving a wooden skeletal framework in traditional Igbo construction first evolved. It is most probably the case, given that by then the whole of Igboland was a rain forest area and that today, this structural system is more effective, and therefore predominantly used in the part of Igboland that still experiences strong rain-forest climatic conditions.



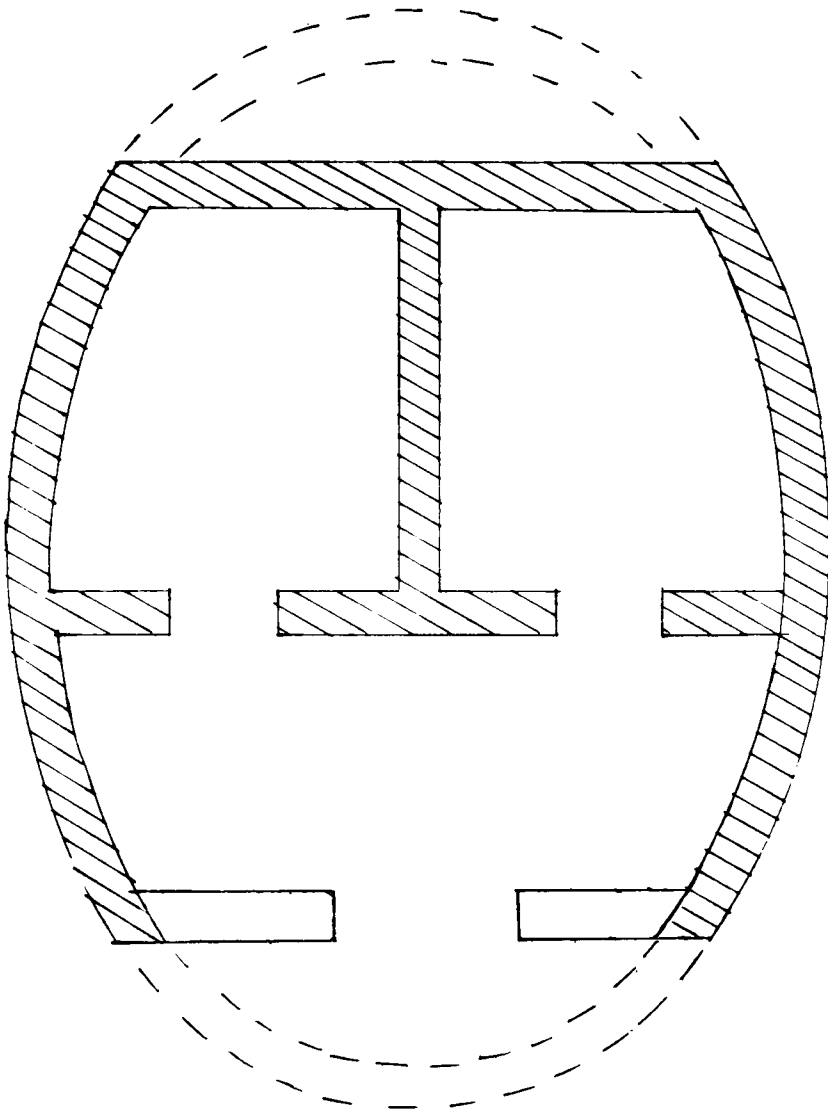
Possible Earliest Use of Mud in House Building
by Igbo Ancestors.

From these deductions it can be inferred that the circular house with conical roof found predominantly in the northern part of the land today, evolved from this rudimentary shelter and is therefore a reminder of the oldest form of shelter known to the Igbo. Its relegation to women, in those parts of Igboland today, may be a way of emphasising their subordinate position in the family. On the other hand, the man, the lord of the house, takes the new and prestigious quadrangular form.

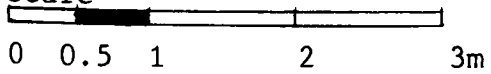
With further development of agriculture, especially in the domestication of animals, further increase in population, and the continuing effects of the rain forest climate, this early form of shelter became very inadequate and an inconvenience.²¹ So, it had to undergo remarkable changes. For example, the tradition of sharing the dwelling with domestic animals, which has lapsed in Igboland today, might have arisen very early to protect domestic animals from wild animals, especially at night. This is also an old tradition in various other cultures. In mediaeval Ireland, Wales and parts of England and France, people shared their dwellings with domestic animals.²² Accommodating these animals, even at night only, demanded their separation from the humans. Moreover, the use of the earliest circular one-roomed type of shelter implied that only one activity could go on in the hut at a time. There was, therefore, the need for further sub-division of the shelter. But circular huts have inherent problems of not being easily sub-divided into rooms. This might have led to the elongation of the original circular form, thus evolving an oval form. With the oval form, sub-dividing the shelter space was easier and this initiated a move towards the quadrangular form. With time, near straight lines were adopted at the end of the oval, as many surviving buildings in Igboland show (ill. 100). Later still, for convenience, both curved sides of the oval assumed straight lines to form a quadrangular form.

In these developments, it is implied that all the

Illustration 100



Scale



Near-Oval House Plan in Ezinifite
near Awka.

structural features of the Igbo house also developed to keep up with the changes in their forms. For example, it is implied that the roof ridge started developing with the oval form, and reached its ultimate development in the evolution of the quadrangular house. It follows, therefore, that the circular, the oval, and the quadrangular houses found today in the Igbo heartland, are significant reminders of the important stages in the evolution of the house form in the land. This hypothesis may not be accepted by all, because elsewhere, for instance in England for about two thousand years, each family used a group of huts, each hut being used as a single room in the earliest stages of the evolution of English architecture. But the fact remains that domestic animals are better protected in the same house as the owner. Subdivided circular huts are also known to have existed in England too, and this may point to the fact that partitioning a hut is easier and more convenient than building and using several. But at some stage, the problems of partitioning a circular hut, and the difficulties involved in using a partitioned one, could have been instrumental to the use of an elongated circular form, the oval.

Evidence of the earliest socio-political formation among the Igbo is also scanty, but the stateless nature of Igbo traditional society, which later emerged, implies that it developed from an agricultural economy, where land was the main source of livelihood.

According to Horton a social system such as the Igbo's, must have developed from one that was possible where there was a steadily expanding population, a steady accessible supply of land, and little or no problem of defence.²³ These conditions might have been possible when the early Igbo came into the rain forest, in view of the fact that the supposed earlier occupants, the Ijaw, the Ibibio and the Ekoi, are today even more fragmented than the Igbo and so could not hinder the Igbos' expansion into their land holding.

At that early stage of evolution of society, the kin groupings must have been the all-important unit of obligation and organisation, and not a territorial unit or village as such. As a result, internal differentiation did not develop. Emphasis was rather laid on 'Mine' and equality, and the only leadership that could have arisen was religious, especially in connection with the purification of land for agricultural purposes.

Because of the emphasis on 'Mine' at this stage of their social development, and the need to keep domestic animals out of their gardens, the dwelling became more clearly defined by being encircled with a fence, and later a wall. With this, all the important features of the traditional domestic Igbo architecture fell into their places, and the fully fledged compound emerged.

In summary, the absence of solid evidence and the consequential reliance on logical conclusions emphasise the difficulties which impede this reconstruction. It follows then that not much can be said with any certainty concerning the earliest Igbo architecture. This framework is, therefore, hypothetical, and may be subject to modifications if new and more relevant evidence eventually emerges of Igbo society and architecture in the dim past.

However, from the very scanty evidence available it would appear that the earliest Igbo came into the rain forest with a rudimentary knowledge of shelter construction. At the time of their entry, they built very primitive conical shelters of sticks, twigs, grass and leaves. The knowledge of the use of mud is relatively old, and with mud, the round hut with conical thatched roof evolved. At the earliest stages, mud walls would have had some wooden reinforcements. Later, owing to changing needs and environmental conditions, the oval form was developed from the round form, and lastly the quadrangular form followed

from the oval.

Relying on the archaeological evidence from Igbo-Ukwu and the surviving social patterns in Igboland, it seems obvious that under the impact of agriculture and religion, the earliest sedentary Igbo formation underwent a change which was reflected in the organisation of their earliest dwellings.²⁴ Families still lived together, but wives' dwellings became separated from husbands' because of religious taboos associated with women, and the subordinate position they assumed in the family.²⁵ The compound wall probably was introduced to reinforce the emphasis on personal identity, ensure security, and limits on the liberty of domestic animals, especially those that could destroy plants in the gardens. With its introduction, the traditional domestic Igbo architecture seemed to have attained its full-fledged development. This sequence of development also supports the earlier view in this thesis, that the impluvium compound type is intrusive in traditional Igbo architecture.

Although no dates have been given for the individual events in this reconstruction of the evolution and early development of domestic Igbo architecture, the antiquity of Igbo settlement in the rain forest would suggest that by 500 BC \pm 500, the probable date of the earliest movement from the primary area of settlement, the main characteristic features of traditional Igbo architecture had evolved.²⁶ This is most likely because the Igbo-Ukwu finds dated AD 805 show that by the period of the Viking raids in Europe, the Igbo were already involved in metal working, and this is generally regarded as a characteristic of a high culture. A titled man or priest interred with as much wealth as was found in the burial chambers of Ezira, could not obviously have been living in anything so primitive as caves or small round huts.²⁷ It is, therefore, logical to assert that by the ninth century, traditional Igbo architecture had attained a peak in its development.

Some Basic Principles of Spatial Ordering in Traditional Igbo Architecture

Order in space has remained a dominant theme in architecture for a very long time. Even as far back as the first century AD when Vitruvius wrote his Ten Books on Architecture, order headed the list of the basic principles he discussed.²⁸ In recent years, architecture itself is always discussed in the context of order and space. In Gottman's view, for example, it is the art of space, while according to Rapoport, it can be described as any construction that deliberately changes the physical environment according to some ordering schemata.²⁹ This context has, however, been largely ignored when the built environment of any African traditional society is discussed.

As has been implied earlier in this thesis, the built environment of Africa was largely misinterpreted and therefore not appreciated by early European travellers and missionaries. The scale of this misinterpretation was such that it was inconceivable to associate traditional African buildings with any architectural principle, especially one that had to do with order in space. In recent years, however, it has been demonstrated that this view is mistaken. Rapoport, for instance, further writes: "We speak of different order, rather than order as opposed to its lack".³⁰ The chaos which was implied by early description of the built environment in Africa is, therefore, an illusion resulting from ignorance.

Recent studies show that the understanding of space and order vary greatly between cultures.³¹ To understand these two themes in the architecture of African societies entails an understanding of the social fabric of these societies. This is because to the Africans, order in space, as seen in the physical world, is a realisation of one that exists a priori. Themes similar to this are also known to underlie

traditional and vernacular architecture elsewhere. In fact, it is conception a priori that Socrates meant when he said that the city without is built on the city within. It is often this particular theme that provides a theoretical base through which spatial order in the man-built environment in Africa is realised. It follows, therefore, that an understanding of order in Igbo architecture entails viewing the pragmatic order discussed so far in the Igbo cultural context. In Prussin's view, this approach is crucial, because the physical and technological environments provide only the raw material and the method with which to build. It is the cultural environment that provides the framework for ordering and restructuring the natural environment into a man-made one.³² Still expressing the same view, Vlach noted that among the Yoruba: "The construction of a building involves the implementation of an architectural philosophy as well as the rendering of an architectural form".³³ This also applies to traditional Igbo architecture, which must be thus considered in terms of dual constitution. On the one hand, there are elements of physically measurable reality ordered in space and time. On the other, there is a philosophical principle whose abstract meanings are realised in the physical ordering. The principle itself borrows from the Igbo conception of space and ideal order. It therefore becomes apparent that the basic principles of spatial ordering in Igbo architecture should emanate from the Igbo world-view, which embodies their concept of space and that of the ideal order. This theme is fundamental to spatial ordering in Igbo architecture as it is elsewhere. Geertz, for instance, wrote that a people's world-view is their picture of the way things are in actuality, their concept of nature and of self or society. According to him, it contains their most comprehensive ideas of order and provides them with a system of stored meaning.³⁴ It is, therefore, on the basis of their world-view that a people direct their efforts towards imposing a meaning and order on an otherwise chaotic material world. Everything, and particularly the artificial

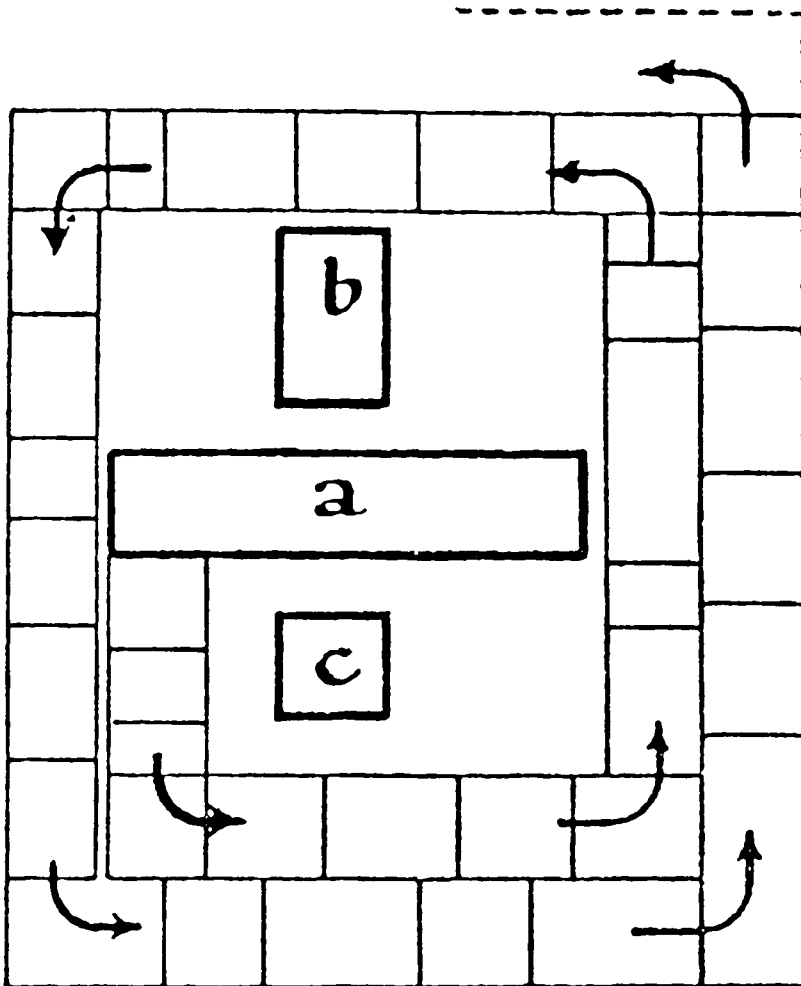
environment, must then be structured to conform to the order defined by their world-view. This is how Guidoni expressed the same view in the settlements of most West African peoples:

The system of construction, the method of settlement, and the basic building types ... have been completely re-experienced, reinterpreted, and joined indissolubly with the general complex of myths and economy. Dwellings, fields, and villages are all viewed as entities pulsating with vitality and participating in the life of the cosmos.³⁵

As example, the basis of the spatial ordering of the residential layout of the Dogon of Mali is the Dogon world-view and concept of creation. According to these concepts, the world developed in the form of a spiral, emanating from a centre formed by three ritual fields that relate to their three ancestors.³⁶ To them, therefore, the ideal order is a spiral. This supplies a theoretical basis which guides the ordering of their physical environment. Three villages representing the three primordial ancestors form the centre of this environment, while the fields are arranged spiralling around the villages (ill. 101). The villages themselves are laid out in the form of a man lying on his back. Parts of the human body, which are related to the position of the villages spatial units, symbolise cosmological elements.

Similarly, the layout of a Yoruba city derives from a philosophical concept expressing a continuum from the sacred to the political realm of existence. A typical Yoruba city is circular in form with the royal palace and the city market located in the centre. This derives from the fact that the Oba, the King, is held as the mythological descendant of the Yoruba high god, Oduduwa, and is therefore divine. The centre of the city thus forms a focus for

Illustration 101



Dogon Theoretical Layout of Cultivated Land
Spiralling Around the Three Original Fields,
a, b, c.

(after Griaule, M. and Dieterlen, G. 1963).



political, religious and economic activities. Both examples point to the fact that the concrete environment is ordered in accordance with a conceptually defined, theoretical basis, which, although not written down, nevertheless is strictly followed.

Order in space in traditional Igbo architecture also follows this general pattern. It has been already shown that the Igbo world-view implies a notion of space, which is an entity starting at a centre of origin and extending continuously and infinitely in all directions. In practice, before the 'pax Britannica', and the definition of tribal boundaries in Nigeria, the village group centre formed a defined core around which the village group territory was conceptualised as a continuity, expanding indefinitely into the invisible world of spirits, ala mmuo.

Additionally, the space thus defined is variously articulated to accommodate all things, man, spirit, being-forces, and even the attributes of the Igbo Supreme God, Chineke. This explains why different spaces are meant for different things and activities, and, therefore, evoke different feelings and reactions. Thus, if the general spatial order of the village group is considered, it is possible to discern a communal space, the village group centre, a residential space, the villages, and an economic space, that is the forest and farm land. In the same way, if a single component of the village group is considered, say the compound, it is also possible to talk of a communal space, that is the fore court, sacred spaces, the shrines, and private spaces, the rear courtyard and the individual houses in it.

Within the residential territory, the space thus defined is not chaotically ordered, but follows an order defined in their world-view. Their world-view, as we have seen, defines an order in which Chineke is central as a source of origin and everything revolves around him and can

be defined relative to him. Thus, three basic concepts are crucial so far. These basic concepts, continuity of space, variety in the articulation of space, and concentricity of the ideal order, form the fundamental theoretical framework of order in Igbo spatial organisation.

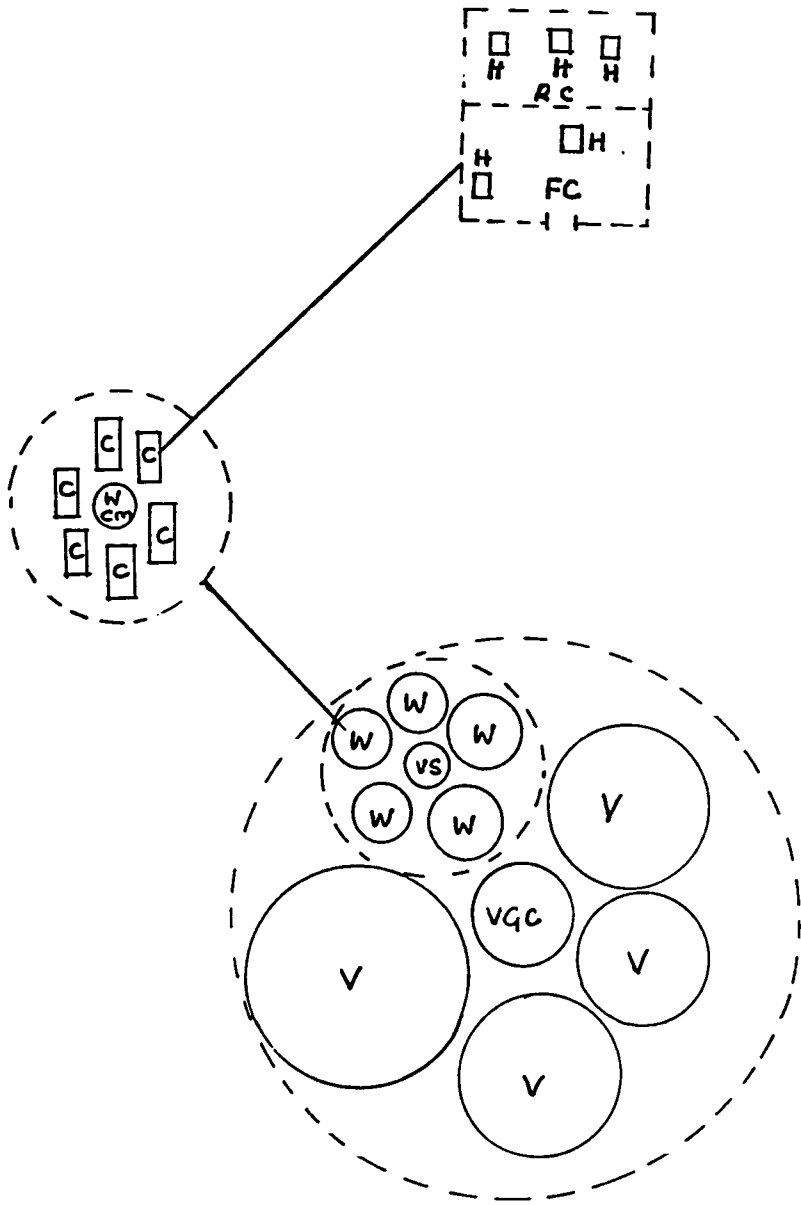
Their concept of continuity of space explains why the spatial order that exists in traditional Igbo architecture is a good example of 'continuity in space organisation' at several levels. Thus, at any particular level, village group, village, ward or compound, there always seems to be a continuum from a former level as one finds a particular pattern being repeated (ill. 102). The arrival at a particular point of the layout, therefore, only increases one's curiosity about whether there are more stages, just like a person opening a Russian doll or matrioska.³⁷

Their concept of varied articulation of objects in space implies the restriction of certain activities to certain areas and times within the residential territory. Thus, in addition to different spaces being meant for the conduct of different activities, at a particular time, one part of the residential territory is always more active than the rest. This inequality in the distribution of activity with respect to place and time creates spatial tension in terms of the use of space. This in turn initiates a continuous flow of space relative to the flow of activity in the residential territory. So, contrary to some earlier ideas which assumed that all Africans treat space as a static entity, the Igbo do not.³⁸ Space flows in Igbo architecture.

The third concept, concentricity, derives from their concept of the ideal order in which Chineke is central, and everything emanates from him and is ordered around him. Bringing these three concepts together, it appears that to the Igbo, space is a continuous entity, variously articulated to conform with a cosmic concentric pattern, in

Illustration 102

Continuity in the Ordering of the Residential Layout.



- VGC Village Group Centre
- V Village
- VS Village Square
- W Ward
- WCM Ward Common
- C Compound
- FC Fore Court
- RC Rear Court
- H House

which everything is ordered relative to a point of origin in the centre.

In the past, the resultant spatial ordering system could simply have been classified as primitive and therefore overlooked. But in recent years it has been possible to classify all spatial formations by considering them as a syntactic process in space, which can be defined relative to certain rules.³⁹ Seen in this way, the Igbo spatial ordering system belongs to a group whose evolution is subject to a local rule, whereby at any stage of its evolution, each spatial element forms a part of an aggregate that contains or encloses its core element. A spatial process which is subject to this local rule generates a compound in which other spatial elements surround a courtyard at the lowest level. At the highest level, the village group is formed by the aggregation of villages and farm and forest land around the village group centre. Thus, depending on the level being considered, the core element may be the village group centre, the village square, the ward common, or the compound's front courtyard. Other elements are, then, those that make up the residential and economic areas.

The general form of the layout thus generated may be centralised or clustered, and, in theory, the spatial layout of the Igbo village group may convey an impression of a centralised pattern. But, in practice, it lacks compactness and geometrical regularity, which are common characteristics of centralised spatial organisation. It is, therefore, a clustered formation. One inherent weakness of this type of formation is a monotonous duplication of spatial elements that have similar functions and share similar traits, for instance the village group centre, squares and commons. But this weakness is offset by the great need of such spaces by the Igbo for socio-cultural activities.

Within the resulting clustered formation, the ordering of spatial elements has to be consistent with the concepts

of heterogeneous and concentric articulation of space. So similar spatial elements are arranged to form a specific ring around the central core. As we have seen in Chapter Seven, in the general spatial order of the village group layout, new villages form around the village group centre and are encompassed by the farm and forest land (ill. 103). The spatial order of the village itself is achieved by a similar process, this time with wards around a village square, the wards themselves being surrounded by farm land and gardens. This particular pattern of ordering spatial elements is a theme reflected in all the levels of the village group layout.

A closer examination shows that this ordering pattern produces a zoning system consisting of a central area encompassed concentrically by other zones. It follows then that the Igbo concept of concentricity of the ideal order, reinforced by that of varied articulation of the continuous space, made possible the evolution of a zoning pattern, by which everything is ordered throughout the village group territory.

On a broad base, three main zones, ordered in a concentric formation, are always discernible in the traditional architectural layout. These zones are; the central zone or core, a dwelling or domestic zone, and an economic or occupational zone. The central core forms the communal or public zone, which serves a socio-cultural function. At the different levels of the layout hierarchy, this zone is formed by the village group centre, the village squares, the ward commons, and the compound fore court. This zone is encompassed by a dwelling zone, which is similarly formed by the villages, the wards, the compounds, and the houses. Finally, the dwelling zone is encompassed by the economic or occupational zone formed at different levels by the forest land, the farm land, and the gardens (ill. 104). Each of the three zones thus formed is separated from its immediate neighbouring zone by a buffer zone, which serves

Illustration 103
Resultant Concentric Ordering Pattern
of Igbo Residential Layout.

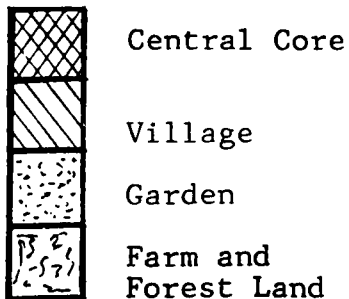
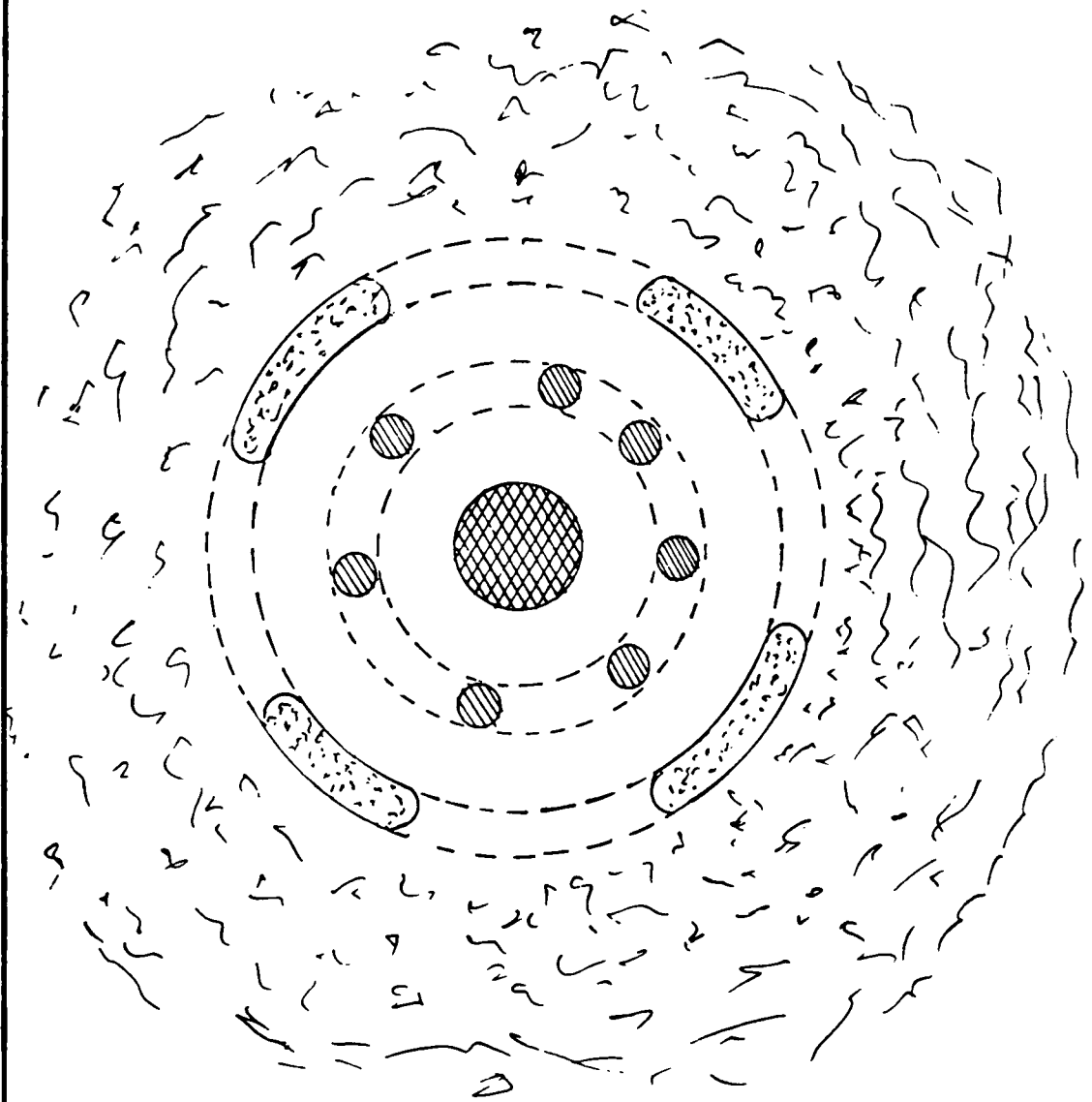
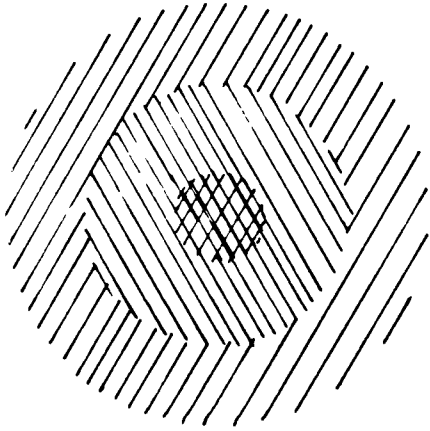


Illustration 104



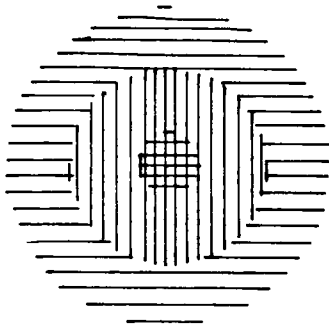
Village Group Level



Village Group Centre

Residential Zone

Farm and Forest Land



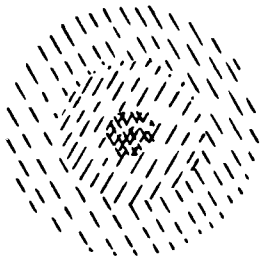
Village Level



Village Square

Wards

Farm land



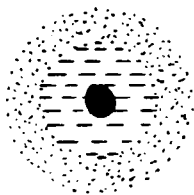
Ward Level



Ward Common

Compounds

Gardens



Compound Level



Compound Fore Court

Houses

Gardens

The Zoning Pattern that Exists at all Levels
of the Residential Layout's Hierarchy.

as a transition area between any two that are adjacent.

The interrelationship between the three zones is created by the different activities of the dwellers. The actual domestic life takes place in the dwelling zone, from where daily activities spread outwards into the economic zone, and frequently to the central core for socio-cultural activities.

Further analysis shows that each of these three zones is spatially ordered to emphasise the promotion of socio-cultural interaction, privacy and domestic activities, or economic activity in Igbo society. Consequently, the spatial order in each zone is slightly different from that of others. Generally, however, all the different local spatial orders derive from the Igbo world-view, their social structure, and their economic systems.

For example, the promotion of maximum socio-cultural interaction forms the dominant theme in the central core. But the theoretical basis of socio-cultural interaction derives from Igbo world-view and social structure and organisation. In this zone, therefore, the local order strictly emphasises their world-view and social structure and organisation. Following this, at all levels of the layout, the spatial elements of this zone are mostly those elements that promote collectiveness and facilitate socio-cultural interaction. Thus, the presence of the universal source of origin, the all-powerful interaction involving the cosmological forces, and the dominance of the male and of age in the social structure, are vividly expressed in the spatial ordering of this zone by the use of shrines, secret societies and club houses, and assembly halls.

Similarly, privacy, private ownership and domestic activities form the dominant themes for the organisation of the residential zone. Each recognisable unit of the society, the nuclear family, the lineage, and umunna, occupies a

separate place, and the ordering here emphasises a tendency towards 'Mine', as opposed to 'Ours'. In the same way, it can be demonstrated that economic activities are much more emphasised in the ordering of the economic zone, but the social structure which is the basis of Igbo land tenure also supplies the theoretical framework for the spatial order here.

Although each zone emphasises one of these three themes, socio-cultural interaction, privacy, and economic activity, each also reflects the three themes to varying degrees. The residential zone, for instance, is ordered to be the most private of the three zones, but if the compound is considered as a separate entity, the degree of privacy there will be seen to increase from the compound gate to the courtyards, and to the interiors of the individual houses in the rear courtyard. These form the most intimate part of the residential setting. This implies that here the socio-cultural interaction is most intensive in the central core, that is the fore courtyard. Similarly, economic activities are most intensive in the surrounding gardens, and minimal in either the fore courtyard or inside the individual houses within the compound.

A general theme characterising all the three zones is that if each zone is considered in isolation throughout the hierarchy of the village group layout, it will be seen that each consists of a number of clearly articulated domains, arranged to reflect the hierarchical order observed in Igbo social structure and organisation. Thus, if the central core is considered, we have, in ascending order of the hierarchy involved, the courtyard, the ward common, the village square, and the village group centre. This would correspond to the nuclear family, the different scales of umunna, and the whole people in the confederated villages that make up the village group. The same thing applies to the residential and economic zones.

In addition, it will appear that privacy, socio-cultural interaction, and economic activities are reflected in each level of the zonal hierarchies in varying degrees. Using the different levels of residential zones as an example, although at each level it is more private than with the central core or the economic, the degree of privacy still varies here, from the lowest level of the hierarchy to the highest in a descending order. That is, from the residential zone of the compound to that of the village group. For instance, if the residential zones of two adjacent hierarchical levels are considered, say the compound and the ward, the houses which form the residential zone at the compound level are more private than the compounds which form the residential zone at the ward level. It can similarly be demonstrated that the intensity of social interaction and economic activities, on the other hand, increases as the levels of their zonal hierarchy increase. In all the mentioned zones, and throughout the hierarchical levels involved therefore, the degree of privacy increases from the highest to the lowest level.

From the discussions in Chapter Seven, it would appear that the Igbo make use of open, semi-open and closed spaces to reflect these different degrees of privacy, and social interaction involved at the various hierarchical levels of their spatial layout. Open spaces here include, un-built-up areas of the courtyards, commons, squares, and centres; semi-open spaces are verandahs, obu, obi, halls, and shaded spaces; while closed spaces refer to rooms. Furthermore, it would appear that the different degrees of privacy are conveyed by the nature of the space meant for a particular thing or activity to tend towards closure, with the highest degree of privacy being expressed by the closed interior of a house. On the other hand, the different intensities of social interaction are conveyed by the degree of openness of the space, and the most important expression of this is found in the open village group centre. At each level, the semi-closed space forms an intermediary which can serve both

extremes, depending on the situation. This suggests that sometimes insufficiency in either open or closed spaces can be compensated by excess in the semi-open space, without violating the relationship.

If the daily activities are considered relative to the nature of the space in which they occur throughout the year, it will be observed that as much as three quarters of the daily routine can be carried out in the open during seventy percent of the year. So in addition to the courtyard's positive response to the hot humid climate of Igboland, this explains why it bears such high ratios of 3:1 and 2:1 to the closed spaces in the compound.

In conclusion, it can be said that the order defined by the Igbo world-view and their cultural understanding of space, provides the general theoretical basis of the physical ordering system which exists in their traditional architecture. Their social structure and organisation, and their economic system, in addition to complementing their world-view, are instruments of realising the theoretically defined order.

It is of importance to emphasise that this spatial ordering system is natural in all aspects to the Igbo. It is interwoven with almost every aspect of their life and living pattern, and provides adequate spaces for all their activities. It therefore works, whereas any foreign ordering system which does not take into account the different events involved in Igbo society, and their manner of conduct, is bound to be problematic.

These latent, but delicate relationships, are, therefore, very crucial in domestic Igbo architecture, and must be maintained, as any violation leads to the creation of environments that are not conducive to the Igbo's well-being.

REFERENCES

1. C.C. Aniakor, 'Igbo Architecture: A Study of Forms, Functions, and Typology' (Unpublished doctoral dissertation, Indiana University, 1978).
2. Both A.E. Afigbo and M.A. Onwuejeogwu have used oral tradition successfully in their studies of the evolution and development of Igbo society. See A.E. Afigbo, 'Prolegomena to the Study of the Igbo-speaking Peoples of Nigeria', in Igbo Language and Culture, edited by F.C. Ogbalu et al. (Ibadan, 1975), pp.28-53. M.A. Onwuejeogwu, 'An Outline Account of the Dawn of Igbo Civilization in Igbo Culture Area', Odinani, 1, no 1 (1972), 15-41.
3. T. Shaw, Igbo Ukwu: An Account of Archaeological Discoveries in Eastern Nigeria (London, 1970).
4. C.C. Aniakor, op. cit., p.109.

D.D. Hartle, 'Archaeology in Eastern Nigeria', Nigeria Magazine no 93 (June 1967), 134-143.
5. Ibid.
6. The term 'primary core area of settlement' is used here after Onwuejeogwu to denote the area of earliest settlement by the Igbo in Igboland. See M.A. Onwuejeogwu, op. cit.
7. C.C. Aniakor, op. cit., p.109.
8. Ibid. p.121.
9. While it is often suggested that the circular form naturally precedes the quadrangular form in

architecture, Philip Maguire has demonstrated how the use of wind-breakers could have induced the development of the quadrangular form prior to the knowledge of a circular form. See P. Maguire, From Tree-Dwellings to New Towns (London, 1962), pp.1-4.

10. R.W. Hull, African Cities and Towns before the European Conquest (New York, 1976), p.55.
11. Ibid.
12. L. Prussin, 'Fulani-Hausa Architecture', African Arts, 10, no 1 (1976), 8-19.
13. In this reconstruction, the beginning of architecture has been co-related with the emergence of the earliest shelter in Igboland. This should not be construed to contradict to recent arguments that the earliest architectural endeavour had to do with man's attempts to restructure the natural environment which probably started much earlier than the construction of the first shelter. However, the lack of direct evidence to support this latter view dictates that the former approach be adopted in the case of Igboland. See A. Rapoport, 'Cultural Origin of Architecture', in Introduction to Architecture, edited by J.S. Snyder and A.J. Catanese (London, 1979), pp.1-20.
14. D.D. Hartle, 'Archaeology and the Reconstruction of African Cultural Heritage', in African Cultural Development, edited by O.U. Kalu (Enugu, 1980), pp.15-33.
15. R.G. Armstrong, 'The Development of Kingdoms in Negro Africa', Journal of the Historical Society of Nigeria, 2, no 4 (1960), 27-39.

R.G. Armstrong, 'Glottochronology and African

Linguistics', Journal of African History, 3, no 2 (1962), 283-290.

R.G. Armstrong, 'The Study of West African Linguistics: Prolegomena to the Study of the Idoma Concept of God', African Notes, 4 (1964), 11-17.

16. R.N. Henderson, The King in Every Man, (Yale, 1972), p.39.

T. Shaw, Nigeria: Its Archaeology and Early History (London, 1978), pp.65, 90.

D.D. Hartle, op. cit. (1980), pp.28, 33.

17. Y. Karmon, A Geography of Settlement in Eastern Nigeria (Jerusalem, 1966), p.28.

M.A. Onwuejeogwu, op. cit. (1972), 15-41.

18. Y. Karmon, op. cit., p.28.

19. Ibid.

20. M.A. Onwuejeogwu, op. cit. (1972), pp.15-41.

21. D.D. Hartle, op. cit. (1980), p.28.

22. A. Gailey, Vernacular Architecture of Northern Ireland (London, 1985), pp.163 & 180.

23. R. Horton, 'Stateless Societies in the History of West Africa', in History of West Africa, edited by J.F.A. Ajayi, first published in 1971, second edition (London, 1976), pp.82-113.

24. T. Shaw, op. cit. (1970).

25. Traditionally, in the past, in some parts of northern Igboland wives were not supposed to sleep with their husbands in the same house during their monthly periods.
26. A.E. Afigbo, op. cit.
27. T. Shaw, op. cit. (1978), pp.111-118.
28. Vitruvius, Ten Books on Architecture, translated into English by M.H. Morgan, Dover edition (London, 1960), pp.13-16.
29. J. Gottmann, 'Locale and Architecture', Landscape, 7 (1957), 17-25.
- A. Rapoport, op. cit. (1979), p.9.
30. A. Rapoport, 'Culture and the Urban Order', in The City in Cultural Context, edited by J. Agnew et al. (London, 1984), pp.50-72.
31. M. Freeman, 'Ethnic Differences in the Way That We Perceive and Use Space', Journal of the American Institute of Architects (February 1977), 47-8.
32. L. Prussin, 'An Introduction to Traditional African Architecture', Journal of Architectural Historian Society, 33, no 3 (1974), 183-205.
33. J.M. Vlach, 'Affecting Architecture of the Yoruba' African Arts, 10, no 1 (1976), 48-53.
34. C. Geertz, The Interpretation of Cultures (New York, 1973), p.127.
35. E. Guidoni, Primitive Architecture, translated by R.E. Wolf, (New York, 1969), p.244.

36. M. Griaule and G. Dieterlen, 'The Dogon', in African Worlds, edited by D. Forde, first published in 1954, reprinted (London, 1963), pp.83-110.
37. Matrioshka is a Russian doll consisting of a number of similar statuettes of different sizes. All of them are arranged so that each is contained in one slightly bigger than it and the whole is finally contained by the largest of them all.
38. E.A. Gutkind, 'How Other Peoples Dwell and Build: Indigenous Houses of Africa', Architectural Design, 23, no 5 (1953), 121-4.
39. B. Hiller et al, 'Space Syntax', Environment and Planning 'B', 3 (1976), 147-185.

PART FOUR

**Current Architecture and Tradition:
Problems and Prospects**

CHAPTER TEN

CHANGE AND THE GENESIS OF CURRENT ARCHITECTURAL PROBLEMS

If the imperial apologists were to compile a dictionary of their own, in it, the word 'change' as applied to colonial peoples would be defined approvingly as progress, a dramatic and beneficial linear transition from a static and unproductive traditional culture to a dynamic and limitless modernism.

But to the myth-makers of colonial nationalism, the word connotes 'disruption', the process by which unsympathetic and uncomprehending imperialists shattered the idyllic and happy indigenous way of life of colonial peoples, substituting in its place, turmoil, instability, and uncertainty.¹

A.E. Afigbo

This quotation aptly expresses the different views held about the sweeping changes which occurred in Africa as a result of European contact with African Society. To the Europeans, who were the couriers of these changes, the changes were justified as progressive. But for many Africans, they disrupted many aspects of African culture and tradition, and therefore, were to have far-reaching consequences. In Igboland, contact with Europeans seriously threatened these indigenous traditions. How this happened, especially with reference to traditional Igbo architecture, can only be comprehended in the context of the events that led up to it.

European contact with the Igbo dates back to the seventeenth century, but these earliest contacts were restricted to trading, especially in slaves. The earliest Europeans found Igboland very difficult to penetrate,

because of its dense forests and the threats posed by insect-borne diseases, such as malaria and sleeping sickness. So, in the earliest stages of contact, trading activities were largely conducted through middle-men, and even then, concentrated mainly on the coastal and riverine areas of Igboland.² These commercial activities gave rise to some quasi-urban settlements, such as the town of Aboh, but these towns were still purely traditional in character.³ The earliest contact with the Europeans, therefore, had no major impact on traditional Igbo architecture. That, however, was bound to change.

Towards the end of the eighteenth century, the success of the British anti-slavery campaign made it possible for some freed slaves to return to Nigeria and Igboland. Some of these former slaves, especially those returning from Brazil, had acquired various skills in carpentry and masonry. They peddled their trades and built Brazilian-style houses in Lagos and Ibadan. This trend marked the beginning of imported architectural styles in Nigeria, and had a major impact on early nineteenth-century architecture in some parts, but its total impact on Igbo architecture was very insignificant.

The end of the slave trade in the mid nineteenth century created a more favourable ground for the development of other trades between the Europeans and West Africans generally. While commercial relationships between the Europeans and the Igbo flourished, they still remained confined to the coast.

By this time, Britain, as an industrialised nation, was already being challenged in world markets by other countries such as France, Germany, Belgium and America. For the British, therefore, there was a pressing need for alternative markets and sources of raw materials. To this end, means of improving British commercial interests in places like West Africa became a matter of major concern.

Explorations in West Africa and elsewhere, led by men like Mungo Park, Clapperton, Denham, the Lander brothers, and Barth, confirmed the main outlines of the geography of West Africa and revealed the source and outlet of the river Niger.⁴ These early explorers, however, never built houses during the course of their stay in any place. Their records show that when they settled in a place for any length of time, they lived in houses built by natives.⁵ Their activities, therefore, did not influence the traditional architectural setting in any significant way.

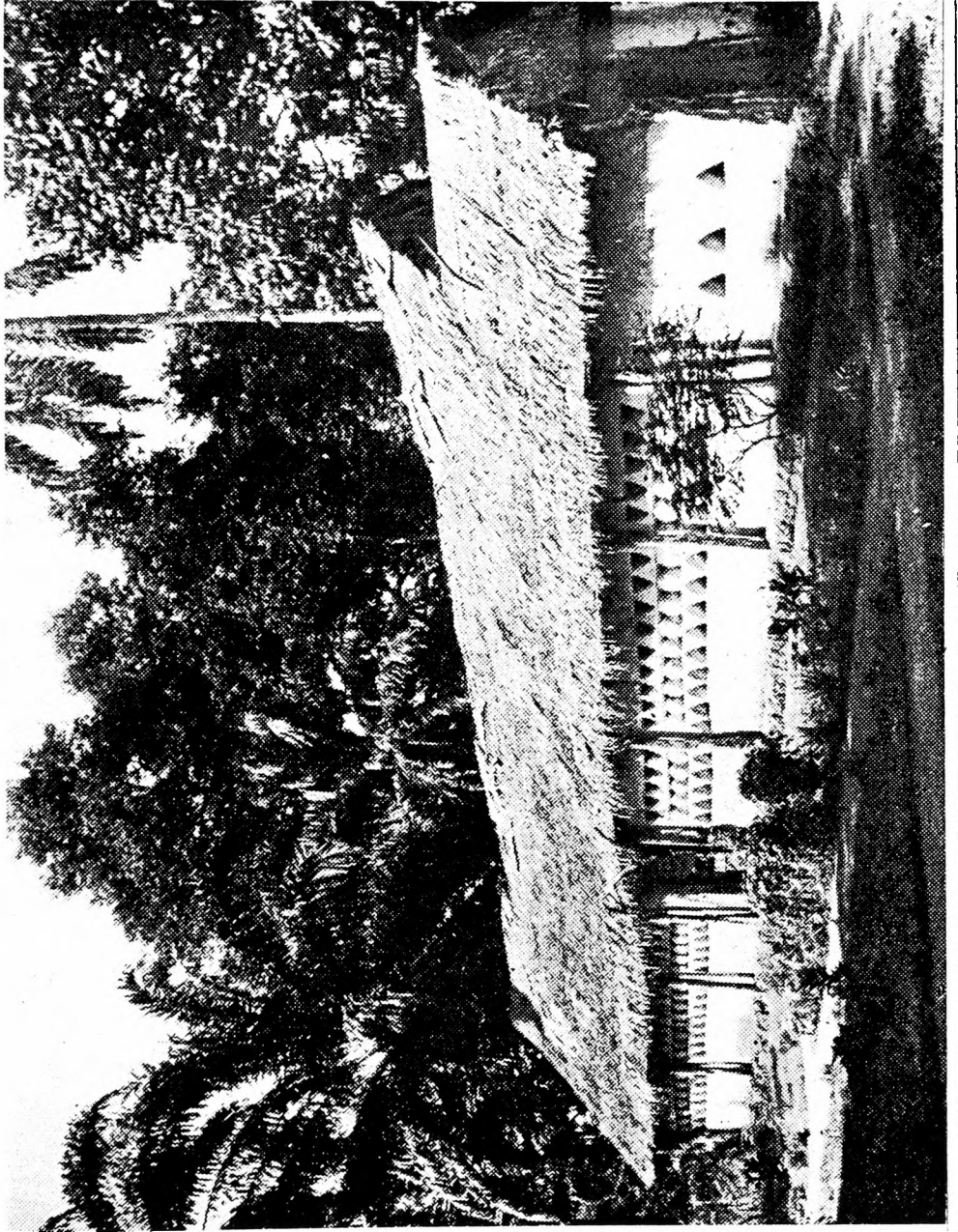
Nevertheless, the early explorations were soon backed up by missionary activities and it was during the period of missionary penetration that European-inspired building activities started in the interior of Igboland. At first, however, the missionaries lived in houses built by Igbo natives, until they had enough followers to help them build their mission houses. Even then, the earliest mission houses, schools, churches and quarters, were built with local materials and skills. They were, therefore, built in the traditional manner (ill. 105). An early missionary described the school house which her mission had built with Igbo natives in Onitsha in 1906, thus:

The roof is of palm leaves, the walls three feet high, are of bright red mud; between the roof and the top of the wall, is an open space through which a pleasant breeze blows. The seats are of mud, but a few wooden seats and desks are provided for the use of senior children. The room is divided into two parts by some white grass mats
...⁶

During this period of exploration and missionary work, Britain firmly established her trading activities along the West African coast, and was rapidly expanding her influence into the hinterland. By 1852 five British merchants had already set up business in Lagos and were soon joined by

Illustration 105

Early Church Built at Obiawma in the 1940s



others.⁷ Further explorations up the river Niger by Bakie made possible the establishment of more British trading posts along the banks of the river. Meanwhile, the missionaries extended their influence east and west of the river into the interior of Igboland. Although by that time factories and trading posts, built by the Europeans in their own style, were established in the trading areas of Igboland such as Onitsha and Arochuku, these too had no major impact on traditional Igbo architecture.

Free trading, however, required peace and political stability, and, to achieve this, the old colonial maxim that 'trade follows the flag', was enforced in Nigeria by the British government in 1900. By 1914, the whole area, hitherto known as the northern and southern Niger protectorate, became a British colony known as Nigeria.

In addition to being a source of raw materials, such as palm produce and forest materials, and also a market for British goods, Igboland became an important source of coal, and also served as an outlet to the sea. It was during this period that a major impact on the traditional architecture of the land was initiated. Beginning with the firm establishment of British rule in Nigeria and Igboland, an ever-increasing number of European buildings were superimposed upon the framework of traditional architecture. This left an indelible mark on modern Igbo towns and villages.

As we have seen in the preceding chapters, the Igbo had no urban traditions before the coming of the Europeans. They lived in villages and led purely rural lives. The social order that was enforced by sanctions and the influence of the family, the elders and patrilineages, their gods, and social institutions, did not foster the type of urban life-style that the colonists were familiar with. In traditional villages, an individual villager would at least be known by his family and lineage, if not by name. He

equally knew all in the community, and therefore could be reached at any time through the head of his family or lineage members. In short, theirs was a face-to-face community, and there was no question of living in the anonymity of individual existence, as can be seen in the towns today.

For the British colonists, this rural life style and setting would not facilitate the establishment of a colonial administrative framework, capable of implementing their commercial programme of exploitation. There was, therefore, a need to create urban enclaves for this purpose.

Among the steps taken to achieve this aim, was the adoption of a policy of re-planning some of the traditional village groups to become townships. This simply meant converting some traditional settings into ones as close as possible to the colonists' home setting, by superimposing typical European city plans on them. The towns of Aba and Umuahia are typical examples of such re-planned village groups. Other towns, such as Enugu and Port Harcourt, either developed around trading posts established by the Europeans, or sprang up on entirely virgin land. As was the case with the re-planned townships, their layouts were also based on European concepts.

Enugu, which was the capital of the then eastern group of provinces, is a good example of these European inspired urban enclaves in Igboland. The town was established in 1915 to serve as a camp for miners and other colonial workers, following the discovery of coal there in 1914. Its growth was accelerated by the construction of a railway line between it and a similar European inspired coastal town, Port Harcourt. In 1929, Enugu was made the capital of the eastern group of provinces, because, to the Europeans, it had a comparatively favourable climate. Port Harcourt itself was established and developed as a sea port and railway terminus because of its proximity to the sea and the

existence of a natural harbour there. It therefore served the colonists as a trading post, for the distribution of European goods, and the shipment of coal, produce, and other raw materials out of Igboland. The towns of Aba and Umuahia, as was mentioned earlier, were originally traditional settlements, which were transformed into administrative headquarters following the colonists' policy of re-planning.

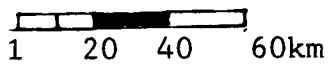
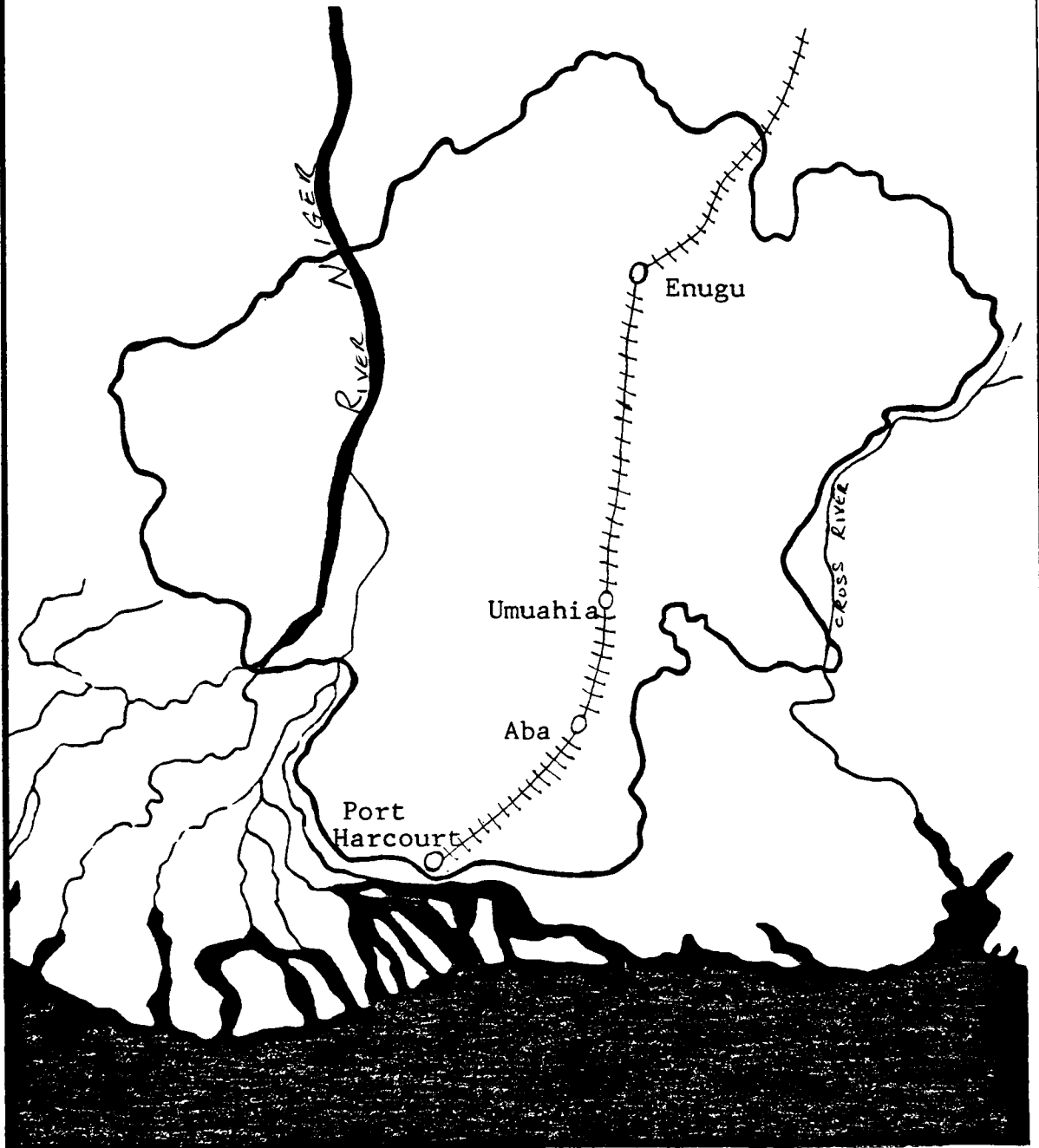
The railway line, linking Port Harcourt and Enugu (ill. 106), was laid to run across the length of Igboland. It passed through many traditional settlements. This opened up a wide area of the land to trade, and greatly facilitated communication. European companies, which hitherto were confined to the coast and the banks of the River Niger, now penetrated the interior of Igboland, building trading posts and depots. Many Igbo flocked to these trading posts to sell their produce and acquire European goods. Soon, some of the trading posts became townships, and they too were based on European ideas of planning.

This expansion of European commercial interests eventually led to the expansion of the colonial government through new specialised ministries and executive departments. In the towns the colonial government took over all the public service functions that traditionally had been provided by the community or kin-groups. Different ministries, including town planning authorities, were therefore needed. But again, the colonists, without any regard to indigenous institutions, established civil institutions, including urban planning and development ministries, akin to those known in Britain. These were meant to administer the development of all towns in Nigeria.

The reorganisation that was enforced following these new developments meddled seriously with the social fabric of Igbo society, and threatened some of the institutions of the traditional setting. To cite an example, the colonists adopted a policy by which they claimed sovereign right over

Illustration 106

The Railway Line through Igboland.



Railway Line.

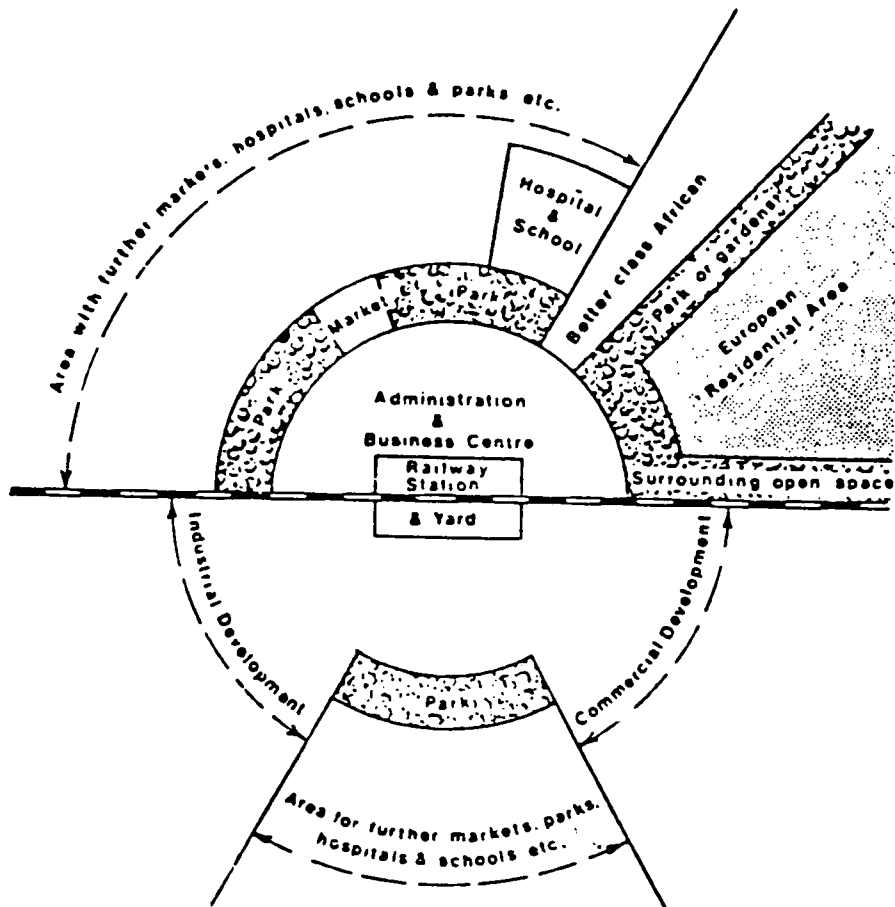
all land in Nigeria and Igboland.⁸ This was in sharp contrast to the traditional land tenure system, which operates on a social structural basis. Although this did not lead to a complete collapse of the traditional land tenure system, it nevertheless set an adverse precedent unknown to the Igbo before. It brought about individual ownership of land, the outright sale of land, and created the circumstances where a landless class could emerge in Igbo society.

Administrative and commercial legislation was similarly imported directly from Britain, in order to enhance the sweeping changes that would transform a so-called retarded traditional society into a civilised one. Environmental and building standards, including detailed municipal legislation, even such details as those governing the density of settlement, were also imported. Detailed construction standards were all similarly adopted from British practice. This was done without any reference to indigenous cultural and environmental traditions of the land. By so doing, a crucial transformation was initiated, in which the organisation of the pre-colonial Igbo settlements gave way to an alien one. At first, this practice was restricted to the towns, but, as time proved later, the rural areas have not escaped the consequences.

All the European-inspired towns were laid out with European patterns. The zoning system used in the general plans (ill. 107) took into consideration only a so-called better class of Africans, who were supposed to have adopted a way of life acceptable to the Europeans. In the same manner, the growth and all future developments of these towns were envisaged in a European pattern. Nothing of the traditional setting was considered. The alien zoning system was imposed, even though an indigenous one existed in the traditional layouts. On the whole, however, a system of zoning is not a new concept in architecture. For even as far back as the sixteenth century, Leonardo da Vinci proposed a

Illustration 107

Suggested Zoning System for the Planning
of Towns.



(after Evan, F.D. and Perier, G. 1939).

form of zoning in his plan for an ideal city, and suggested the separation of pedestrians, equestrians, vehicles and boats, on three different levels. The concept of zoning is also implicit in the slogan of Patrick Geddes, "Place, Folk, Work", which was later incorporated into the Athens Charter of the Congress Internationaux de l'Architecture Moderne (CIAM) in 1934. This charter describes the need for the separation of functions or zoning. It called for clear organisation of realms for work, dwelling, recreation and circulation.⁹ This means that every activity should have its particular place in a town. This principle of articulation is today accepted as a basic tenet of town planning. The argument is, therefore, not against zoning. It is that the colonists imposed a form of zoning which they believed was both the best, and suitable for all people and all cultures. This was done without any attempt to investigate whether there was already one existing in the traditional layouts. Time has proved their zoning pattern not to be the best, but too generalised and too rigid to accommodate various aspects of the Igbo way of life. For example, because of the use of the colonial zoning system, certain activities known to the Igbo are excluded, and others are placed either too near or too far from the residential zone. A good example is the violation of the general flow pattern of people and activities that exists in the traditional layout. Following the traditional pattern, people move inwards to the centre for cultural activities, and outwards beyond the residential zone for their economic activities. Other important elements of the towns, such as the markets, are fewer than would have been the case in the traditional settlements. They are also usually located either too close to, or too far from, the residential area.

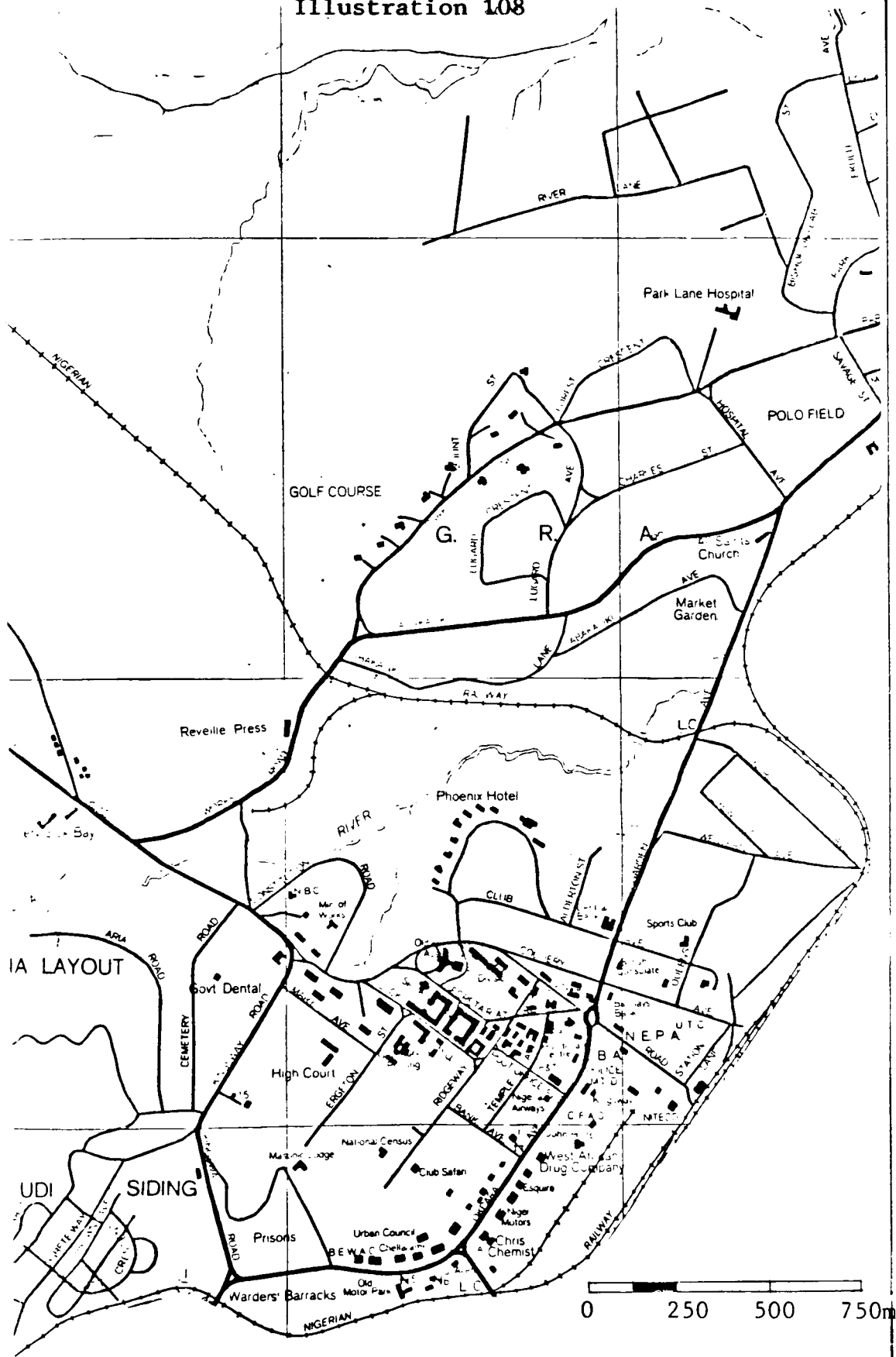
The layouts in these towns themselves were either based on the garden city plan and devoted to European residential areas, or based on a gridiron pattern and devoted to the native residential layouts. The towns, from the beginning, were, therefore, characterised by segregation.

As a rule, the European residential areas were segregated from the natives' areas and surrounded by an unbuilt zone, usually more than 400m wide. No native people, except bona-fide domestic servants, could live there. These European reservations, as they were known (ill. 108), were designed to contain clubs, race courses, polo fields, golf courses and parks. Building plots there were usually one or two acres in area, with servants' quarters in a detached block, screened away behind the main house by hedges and trees. The plots allowed for ample gardens and croquet, and even tennis lawns. Large, pretentious eighteenth- and nineteenth-century styled buildings of the English countryside (ill. 109), were typical of these reservations. Some of these houses had architectural details, like fireplaces, that were neither desirable, nor formal, in Igboland.

The houses were erected by European builders, also in complete disregard of local methods, experience, and climatic conditions. Their roofs, for instance, were of imported corrugated metal or asbestos sheets, while their walls were mostly of imported cement blocks, fired bricks or concrete. As a result of their experience in India, the colonists later introduced various modifications such as verandahs, overhanging eaves, raised plinths, and wide windows, which were mostly to satisfy climatic needs. The cultural and economic elements of the traditional architecture, were, of course, neglected.

The absence of the indigenous cultural dimension in the European residential areas may be justified on the grounds that the Europeans who occupied these parts of the town had a different cultural background, which they had to reflect in the houses they occupied. On the other hand, as the European reservations later turned out to be looked upon as a model to be emulated, the Igbo soon started building similar houses, and this greatly encouraged the neglect of

Illustration 108

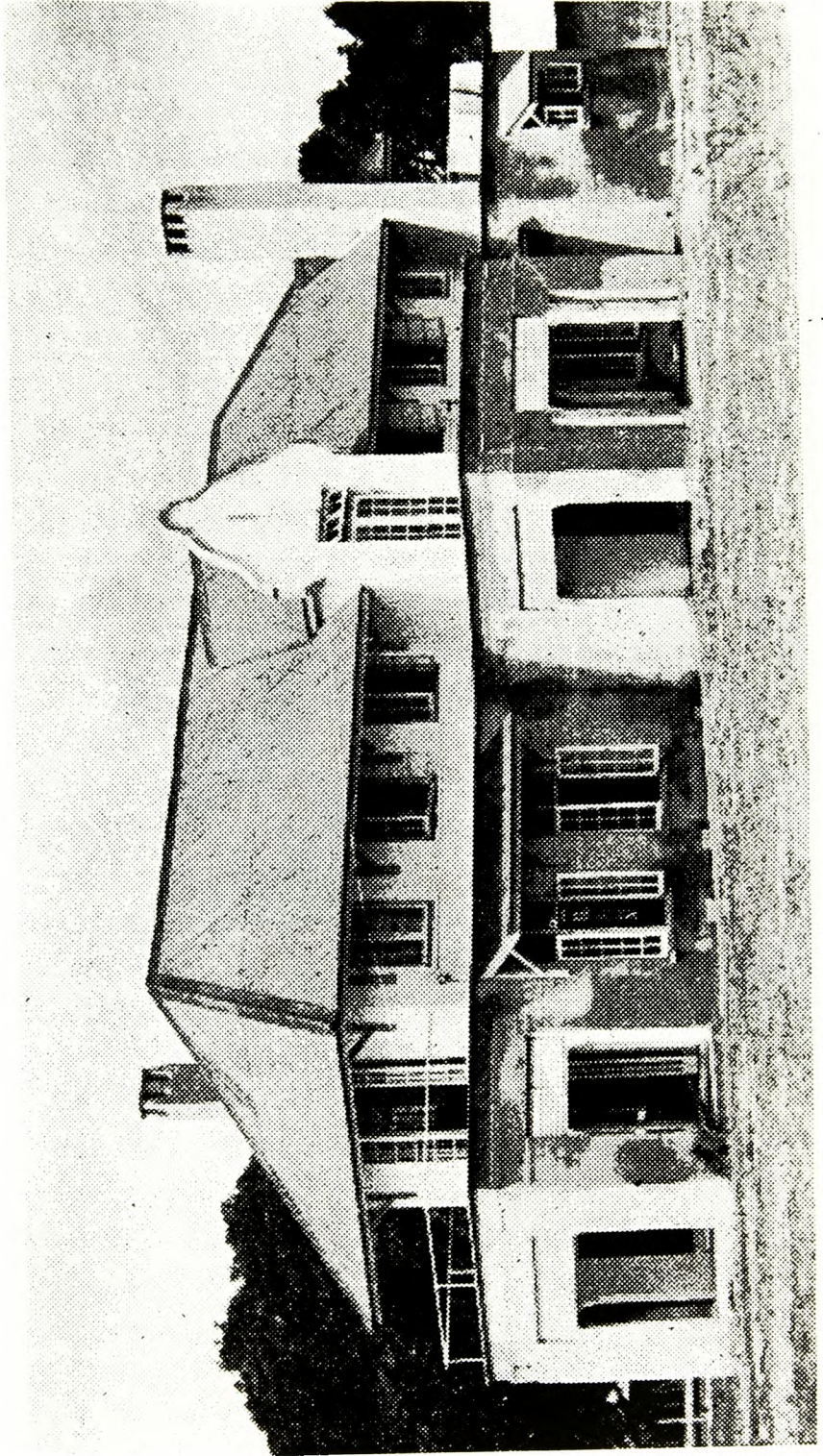


Pre-Independence Reservation Layout in Enugu.

(after Enugu Street Guide Map, 75)

Illustration 109

House Typical of the European Reservation Layouts in Enugu

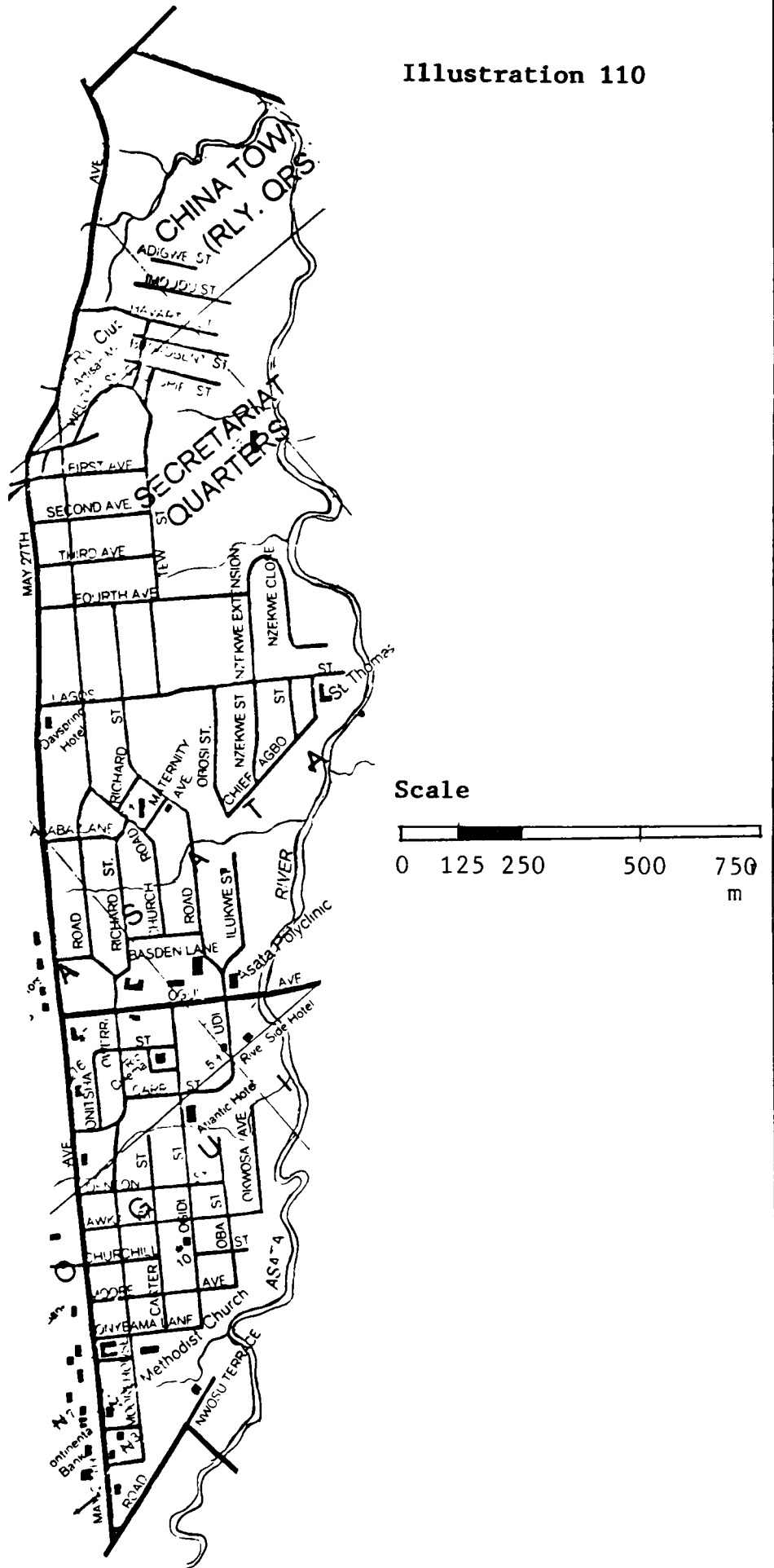


Igbo culture in their new houses. Moreover, when the European occupants left after independence, these reservations were occupied by Igbo, who had to adapt their indigenous ways of life to what these foreign houses would allow.

The non-European areas of the towns were set aside for native migrant miners, labourers, traders, and other people who were engaged in bona-fide activities for the colonial administration. These areas did not have the lavish landscaping of European reservations, nor had they any of the characteristics of traditional Igbo architecture. They were laid out in a basic gridiron pattern, with parallel streets intersecting other parallel streets at right angles (ill. 110). Standard plots of about 15 x 30m were adopted. No adequate arrangements were made for drainage or waste disposal in these areas. In fact, only very shallow and narrow open gutters (ill. 111) were dug on both sides of the road and just in front of the plots. These gutters either filled up with debris during the first rain, or held stagnant water which formed a breeding ground for mosquitoes. Bucket latrines were introduced to be cleared by night-soil men. Rubbish incinerators were also inadequate or entirely lacking. Imported designs (ill. 112), which had to fit into the plots in conformity with the imported building standards, were also adopted. Traditional materials were allowed at the earliest stage, but they too were later outlawed by the colonial authority (ill. 113).

Of course it can be argued here that similar practices and architecture were typical of towns all round the world, in those days. After all, what has been described above in the new Igbo towns was only a little worse than what obtained in European industrial towns of the late nineteenth and early twentieth centuries. On the other hand, it must be remembered that the new architecture was entirely alien to the Igbo. In the first place, these changes meant shattering the indigenous spatial order traditionally used in villages,

Illustration 110



Pre-Independence Non-Reservation Layout in Enugu.
(after Enugu Street Guide Map, 1975)

Illustration 111



a. Open Shallow Gutters in Front of Houses in the Non-Reservation Layout in Enugu.



b. Poor Drainage and Sanitation System in the Non-Reservation Layout in Enugu.

Illustration 112

Old Houses in the Non-Reservation Layout in Enugu

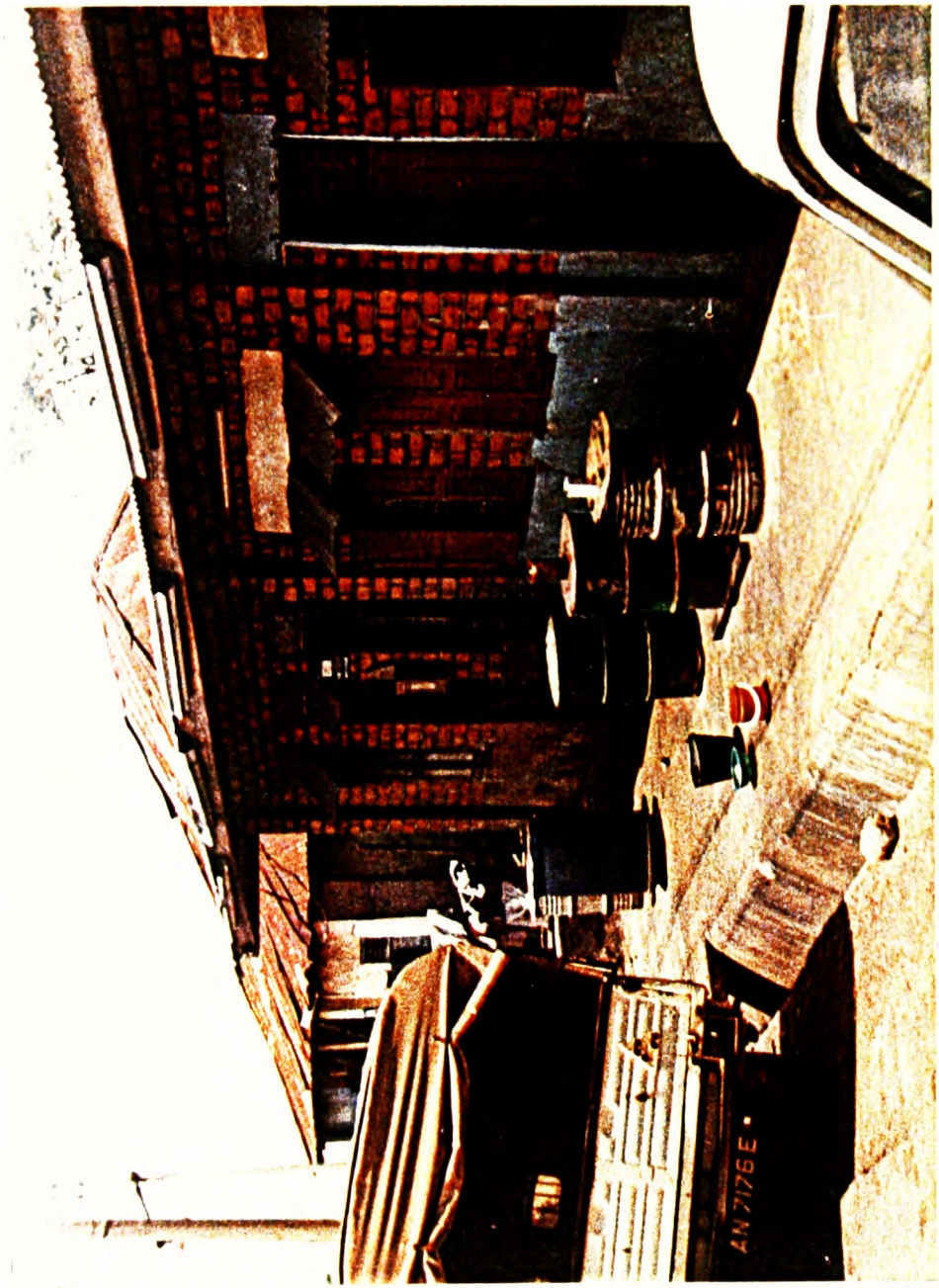
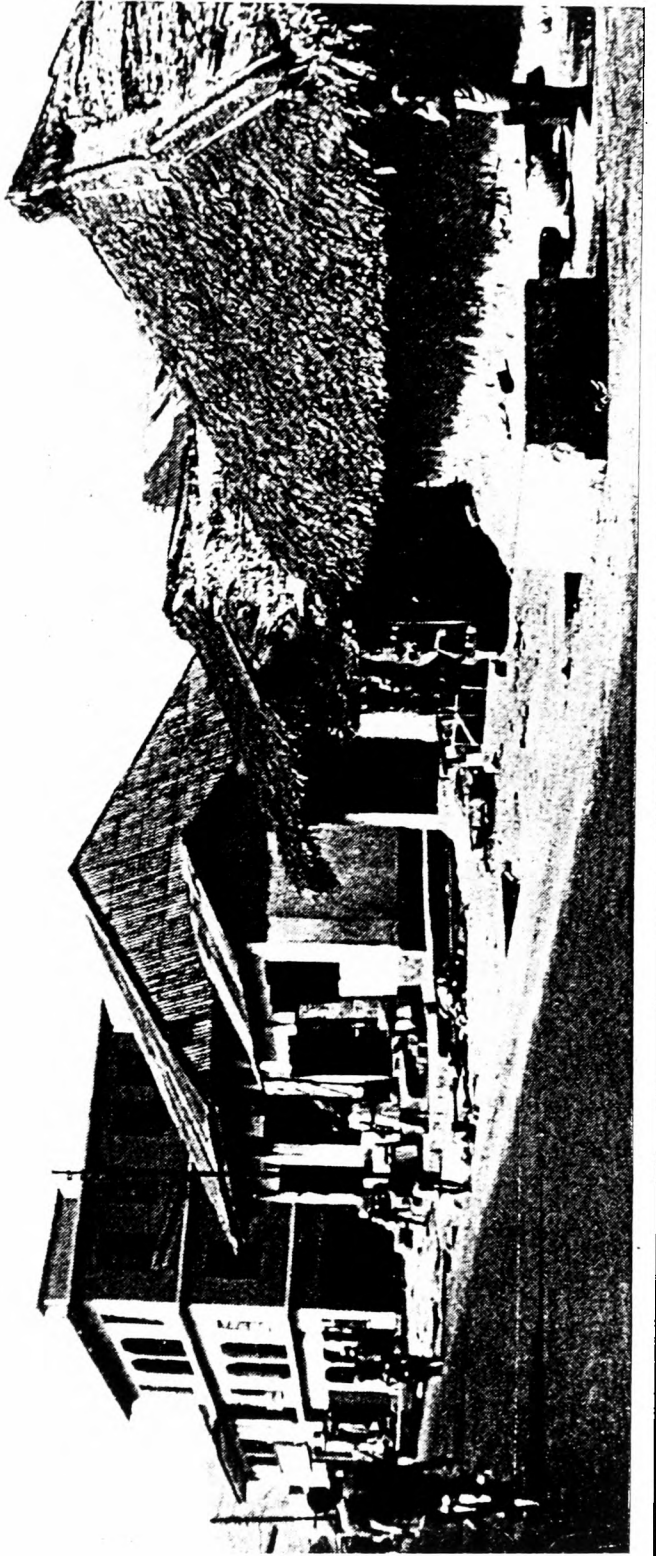


Illustration 113

Early Stages of Urban Development in the Non-Reservation Layout in Enugu
(after Karmon, 1966)



and replacing it with an alien gridiron. Karen Blixen has pointed out some inherent difficulties which are inevitable when people are deprived of a familiar spatial order, and another is forced on them. In her book, Out of Africa, she describes her attempts to lay out grids for African workers' houses on her ranch, and their refusal to follow these grids. They instead built their houses on the site following their own traditional spatial ordering pattern.¹⁰ So it was not easy for the Igbo to get used to this alien gridiron pattern. Moreover, when the colonists left, the Igbo could not make things better, having no experience of this new architecture. So the layouts continued to deteriorate.

According to Lord Lugard, the first Governor-General of Nigeria and the architect of segregated town layouts, they were aimed at safeguarding the health of the Europeans, but without interfering with the indigenous culture.¹¹ This was only a screen, because in reality, exploitation was the primary objective of colonialism. The colonists' policies were never aimed at absorbing the natives into the European fold, or exposing them fully to the benefits of science and technology. Indeed, the argument of safeguarding both the Europeans' health and African culture fails, when it is realised that in neighbouring French colonies, for instance Cameroun, both Europeans and Africans lived side by side on the same estates. This neither endangered the health of the Europeans, nor destroyed the culture of Cameroun.¹² Furthermore, Lugard's policies, far from not meddling with the traditional land tenure system of Igboland, in fact introduced elements of destabilization to it. The segregated layouts adopted by the colonists instead limited direct contact between the Igbo and the Europeans. As a result, the direct assimilation of European knowledge and technology, which the Igbo much admired, was reduced to the barest minimum.

Most of the earliest houses in the towns were built by the colonial Public Works Department (PWD). Some of these

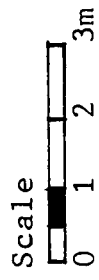
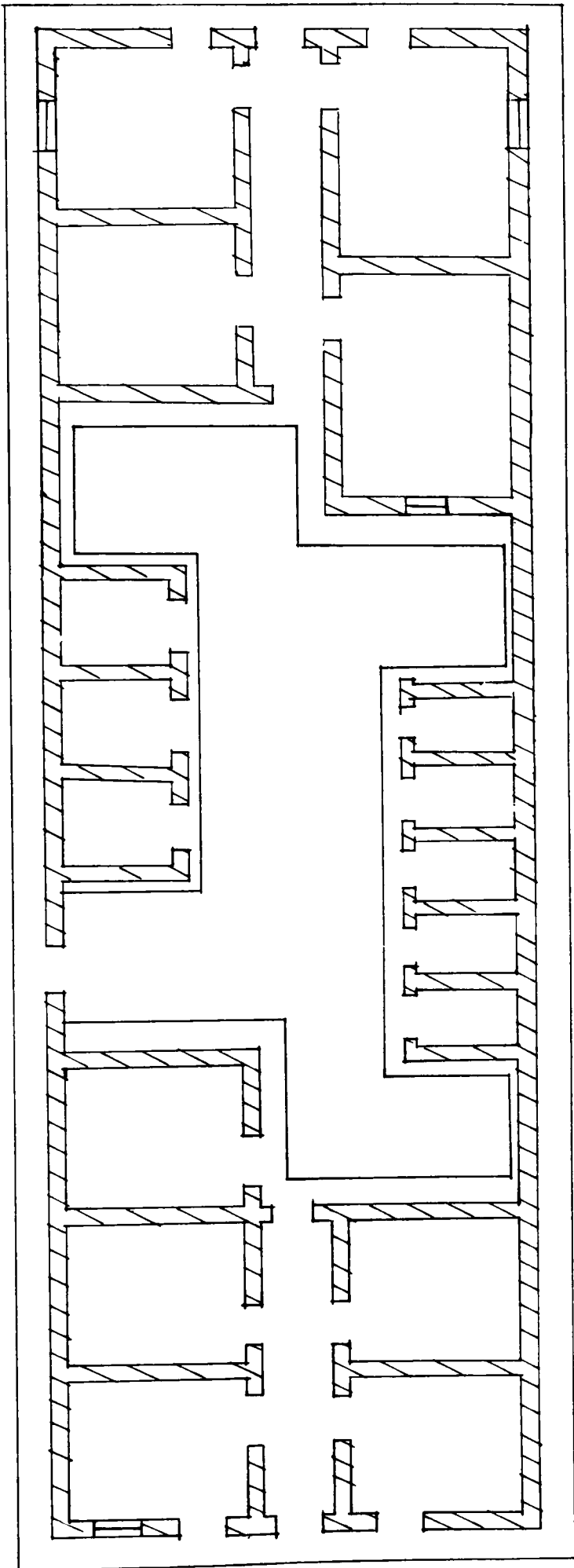
early buildings were meant to accommodate young recruits to the colonial service. Most of them were built of either fired bricks, cement blocks or concrete, and roofed with metal sheets. Their plans were also alien, as they did not reflect effectively the traditional needs of their Igbo occupants. Illustration 114 is one of the few variations of the plans for compounds built for miners' families in Enugu. This particular variant, as can be observed, is closer to the impluvium compound type than the purely traditional Igbo compound. Although it approximates to the type of compound found in West Igboland, originating from Benin influence, this type of compound was ill adapted to Igboland as far as the climate is concerned. Even then, in this adaptation, the courtyard, which is a key element, is drastically reduced. Furthermore, this compound is meant to accommodate a number of unrelated families, and that would never have been tolerated in traditional Igbo society.

These quarters were virtually free of rent, and were often furnished too; nevertheless, this was only a subtle way of disguising a significant departure from Igbo traditions of habitation. Indeed, it was then that the Igbo occupants of a house first started to have no say in the design and construction of their houses and the neighbourhood in which they might live.

In due course, some Igbo, who either worked with the Public Works Department or with the missionaries, acquired skills in carpentry and masonry. An early missionary in Igboland, who witnessed this early stage, wrote:

In the Ibo country, missions founded the first schools of carpentry in the eighteen-nineties. Before that time, the wood workers were not so numerous as the blacksmiths. Today, the positions are reversed. In the olden days, the woodworkers had not much scope ...¹³

Illustration 114



Early Residential Quarter for Miners in Enugu.

(after Foyle, M.A., 1959).

Some Igbo also soon learnt to build in conformity with the imported standards, and gradually, in the manner of their colonial masters, commercialised their newly learnt trades. This signalled the beginning of commercialisation of building activities in Igboland. Here was another marked departure from the traditional communal method of building. At first, building tradesmen were employed and paid for a single job only. Later, the contracting process whereby one person accepted a certain amount of money to erect a house for another person was adopted, thus introducing the concept of construction work executed by outside contractors. This was yet another departure from tradition.

With the commercialisation of the building trade, the house itself was commercialised. With this trend, a new class of urban landlords started to emerge. This class was made up of those who had enough money to build in the towns. Others, who could not afford to build their own houses in the towns, became tenants. This marked a crucial stage in the new development, because the Igbo from then onwards learnt to pay for accommodation, a practice until then unknown to them. Ever since then, migrants to the towns who have no rights to quarters or no relatives to accommodate them, have been preyed upon by this new class of urban landlord.

The argument so far may appear one sided and, therefore, an unfair representation of the colonial architectural activities in Igboland. After all, such impositions were then in vogue. What is more, even the City of London's " 'main street framework of today' ", wrote William Holford and Charles Holden, "was determined by the position of the Roman gates and the roads connecting them".¹⁴ Moreover, it must be remembered that the British are of different culture and had to operate in Igboland in a totally foreign environment. To add to these apparent constraints on the colonists, in those days, where architectural design was concerned, much emphasis was laid

on historical precedent. But in the colonists' views, there were no precedents worthy of their consideration. Therefore they ignored the traditional buildings of the land. Furthermore, as was mentioned earlier, it was not in any case colonial policy to encourage assimilation. But other colonists elsewhere thought and behaved differently. The French, for instance, adopted a policy of practical assimilation, and did not completely disregard local cultural traditions. So they came to accumulate valuable experience of their subjects. Through organisations like Societes Immobiliers and Bureau Central d'Etudes pour les Equipments d'Outre Mer, they conducted research into the traditional environments and buildings of some of their colonial subjects. They also experimented extensively in the indigenous ways of using traditional materials and skills. They were thus better equipped to provide for their subjects' dwellings that took into account the indigenous social and environmental conditions.¹⁵

The indiscriminate transplantation of alien architecture into Nigeria and the disregard for local tradition, which was the order of the day during colonial days, nevertheless attracted some criticism. In utter disapproval of these practices, Brinkworth in 1952 wrote:

As yet, however, there is little sign that those responsible for her [Nigerian] architectural future realise the importance of their present activities. All the buildings of any importance being put up in the country are designed by European architects. These men are largely uninterested in, or unaware of, local building forms and concerned, for the most part, only in complying to the contract specifications. Many of the buildings they construct are more suitable to the dry, sunny climate of North Africa than to the damp, humidity of much of Nigeria. And yet there is a tradition of architecture in Nigeria which

could form the basis for buildings expressive of the country's culture.¹⁶

In 1948, a Danish architect, Ole Hoeck was also invited to assess the emerging urban architecture in southern Nigeria. The summary of his remarks is as follows:

Most of the buildings in southern Nigeria which are outstanding in any way are built as copies of architecture from foreign countries. Some of these copies are good, some of them are very bad. To the latter type I regard the hundreds of houses of fairly well-to-do Africans built like suburban villas in England.¹⁷

Colonial building activities and the disruption they caused in Igbo society were not confined to the European inspired towns. In the rural areas of Igboland, the effects of change in the social setting and consequently on traditional architecture were also far reaching. Throughout Nigeria, the colonial and missionary attitude was infused with a sense of cultural superiority. The colonists' view was that Igbo culture was an anachronism that must be eradicated, and replaced with a better European one. Their hope was, therefore, that by introducing the so-called savages to European civilisation, they would raise them to a higher plane of existence. Missionaries who actually penetrated the interiors openly branded most traditional things as idolatrous and primitive. Converts were seriously pressed to abandon many traditional activities. On the other hand, European culture was portrayed as a higher stage of cultural development for all mankind, and the primitive Igbo could only profit from adopting it. The Igbo were, therefore, meant to look up to this European culture and accept it. The segregational town-planning policy adopted by the colonists in the towns further reinforced this concept, because it increases the prestige of the European reservations. As noted by Afigbo:

The nascent urban settler looked up to the European officers and their servants for examples whether with regard to the form of houses they put up, how they run their houses or even how they dressed for work or in ceremonial occasions.¹⁸

Most Igbo, especially those in the rural areas, were very sceptical about these new developments and often resisted them vehemently, but they also very much admired the Europeans' knowledge and achievements, especially what the Igbo saw as the Europeans' ability to manipulate the physical world with science.

We have seen too, that the Igbo are very individualistic, and their society highly egalitarian. Strong emphasis is laid on personal achievement, but the possibility of enhancing one's status and achieving prestige in society is open to virtually all individuals. Seniority in age may be an asset for leadership, but prestige, authority, and leadership can be achieved by sheer hard work. Achievements such as taking titles, accumulating wealth, marrying many wives and feeding many mouths were part of this. Before contact with the Europeans, these achievements were mainly attained through farming, trading, carving, and ironwork. But contact with Europeans and colonization diversified the avenues of achieving them, for instance by the provision of paid employment. It also became a mark of achievement and a way of gaining status in society to become an expert in European knowledge and other aspects of life. So, in a way, colonization, Christianity, and the establishment of schools and towns opened up new and attractive avenues of achieving their much desired authority, prestige, and leadership in society. This was widely expressed by educating children in schools, building European-type houses in the rural areas, and acquiring other items of European culture, such as clothing, and adopting European behaviour.

Group achievement, which is also stressed in Igbo culture, found new dimensions in European culture. Village groups, villages and wards, started competing with one another to build the first or best school in the European style, and to send their most brilliant sons to Europe to acquire European education and ways of life.

Furthermore, the high population density in Igboland and the new transport system encouraged migration to the new towns. Many Igbo went to the towns to seek employment and to acquire and peddle new skills, in order to achieve success. It is necessary to stress that the Igbo saw these changes only as alternative ways of achieving prestige, authority and leadership in society, and not necessarily as a means of escape from an anachronistic culture. However, this brought about new developments in many aspects of traditional society. Traditional arts, notably architecture and allied crafts and trades, such as carving and house decoration, have been on the decline ever since then.

Young men who worked in the towns, prominent traders, successful businessmen, and other professionals made money and were also influenced by new urban attitudes. They, therefore, started demanding and getting more say in society. Land, for instance, became private property and a commercial commodity that wealthy people could acquire. For individuals, it became prestigious in the villages to erect buildings similar to European buildings in the towns, using imported materials and enlisting the services of a local builder who had acquired the new skill. Foreign building materials like cement, corrugated metal and asbestos sheets, fibre board and imported paints also became a sign of prestige and achievement. Even the missionaries, who originally built in the traditional ways, started using foreign materials and skilled labour. Some of the traditional social buildings such as club houses and shrines remained untouched at first, but they too were bound to

yield to these changes in the end.

Thus, this trend of events, which started with early European contacts and greatly intensified during the colonial years, now forms the basis of the current architecture in Igboland and throughout Nigeria. Perhaps it is necessary to emphasise that the important issue here is not to discredit the colonial government. At the same time, no matter how innocent it may claim to be, its policies and activities concerning the built environment in Nigeria have proved very short-sighted and disastrous for the country. The discussion, will, therefore, further endeavour to point out some of these consequences as they effect the development of an architecture suitable for Igboland and Nigeria.

REFERENCES

1. A.E. Afigbo, 'Education, Urbanization and Social Change in Colonial Africa', in African Cultural Development, edited by O.U. Kalu (Enugu, 1980), p.129.
2. K.O. Dike, Trade and Politics in the Niger Delta 1830-1885 (Oxford, 1956), pp.28-9 & 30-41.
3. Ibid., pp.25-7.
4. M. Park, Travels in the Interior Districts of Africa ... in the year 1795-7 (Edinburgh, 1799).

H. Clapperton, Journal of a Second Expedition into the interior of Africa from the Bight of Benin to Soccatoo (London, 1829).

R.L. Lander, Journal of Travel from Kano to the Coast (London, 1829).

R.L. Lander and J. Lander, Journal of an Expedition to Explore the Course and Termination of Niger with a Narrative of a Voyage down the River to its Termination, 3 vols (London, 1832).

H. Barth, Travels and Discoveries in North and Central Africa 1849-55, 5 vols (London, 1857).
5. Ibid.
6. Miss Martin, 'A West African Day School', Western Equatorial Africa Diocesan Magazine (August 1905), 30.
7. A.D. King, The Bungalow: The Production of a Global Culture (London, 1984), p.196.

8. R.K. Udo, The Human Geography of Tropical Africa (London, 1982), pp.51-2.
9. S. Chermayeff and C. Alexander, Community and Privacy (New York, 1963), pp.118-9.
10. K. Blixen, Out of Africa (London, 1964).
11. F.D. Lugard, Revision of Instruction to Political Officers (London, 1919), p.405.
12. M.A. Foyle, The Development of West African Architecture (unpublished PhD dissertation, London University, 1959), p.164.
13. G.T. Basden, Niger Ibos, first published in 1938, new impression (London, 1966), p.322.
14. C.H. Holden and W.H. Holford, The City of London (London, 1950), pp.56, 106 & 231.
15. M.A. Foyle, op. cit., pp.165 & 172.
16. I. Brinkworth, 'Wanted - A New Architecture', West African Review, 30, no 382 (1959), 549-55.
17. O. Hoeck, 'Looking at Houses through the Eyes of an Architect', Nigeria Magazine, no 29 (1948), 233-245.
18. A.E. Afigbo, Ropes of Sand: Studies in Igbo History and Culture (Ibadan, 1981), p.344.

CHAPTER ELEVEN

CURRENT ARCHITECTURE IN IGBOLAND: A CRITICAL APPRAISAL

Introduction

They are sad, because when they say that their old ways had many things to offer that Western civilization has lost, they know with bitter certainty that they are right, and they know that these are the things that have made life worth living and living well.¹

Colin Turnbull

This, though only one persons' expression of the mood in various spheres of African society today, nevertheless carries the weight of truth where the current architecture of Igboland is concerned.

The years following Nigerian independence in 1960 have seen more architectural activity in Nigeria and Igboland than the colonial years. However, much of this has followed the principles laid down by the colonists. This persistent trend throughout the country was vividly recaptured by Adedeji, the former executive secretary of the United Nations Economic Mission for Africa:

Two decades after Nigerian independence, the prevailing economic, political and administrative functions of cities and their resultant impact on settlements is a strong legacy of the colonial era.²

The reason for this is not far fetched. At independence, there was much administrative continuity from

the colonial government. The Nigerian civil servants had been well groomed in the tenets of the British system. Some British civil servants even stayed behind to ensure a smooth transition. Even at present, the majority of the people that make up the nation's administrative cadre are still trained in Britain. So it is not surprising that the British experience is adopted as a model.

After independence, rapid industrialisation and development programmes were adopted as the most suitable way to provide jobs and feed the rising population. Most of the industrial establishments and important administrative headquarters were concentrated in the towns. Migration to these towns, therefore, increased. This, in turn, caused persistent housing problems. To solve them, those in authority often either continued with the inherited colonial solutions or turned to their former colonial masters, believing strongly that they would have all the right solutions. But experience shows today that the transplanted solutions fall far short of solving all the local problems. Instead, this attitude of transplanting solutions has helped to perpetuate the dogma of primitiveness with which many traditional things were identified during the colonial period. Today, this dogma has even been greatly enhanced by the gross misinterpretation and misrepresentation of traditional culture and art, which started during the missionary and colonial period. As a result of it, many aspects of traditional society have suffered a severe setback. The symbolic value of traditional art, and that includes architecture, has been under steady erosion, and with this erosion has come a significant depreciation in its communicative quality. On the other hand, the myth of Europeans' cultural superiority has continued to grow stronger. This further explains why European solutions are much sought after.

To illustrate the perpetuity of colonial institutions

in present times, let us consider the issue of land tenure first. The land policy imposed during the colonial days, in plain disregard of traditional tenure, has changed little in post-colonial Nigeria, especially in the towns. Igbo tenure, which is a decentralised system that ensured that everybody had enough land for farming and dwelling, has no place for a concentration of land in the hands of any single individual. Nevertheless, the Nigerian government continues with the imposed British system. The Land Tenure Decree, number 16, issued as recently as 29 March 1978, exemplifies the colonial nature of these policies:

All land in each state shall be held in trust and administered by the Military Governor of the State, for the use and benefit of all Nigerians. And the right of a member of the community to use land and enjoy its fruit is henceforth protected and preserved by the State or local government as the case may be.³

This may appear equitable, but in fact, it is simply a continuation of the colonial land policy, and in Igboland, its effect has been to consolidate the alienation of land, removing it from the traditional umunna tenure system to the jurisdiction of an administrator. As a result, land allocation favours the rich, and allows them to accumulate land. Today, in the towns, only those who can prove their wealth may be allocated a plot on which to build. Besides this, there are several other new developments which adversely affect the towns and the countryside of Igboland, as we shall see.

In the Towns

Urbanisation is a relatively new phenomenon to the Igbo, because they traditionally lived in villages and led a rural life before colonisation. So most Igbo towns were established by the colonists who also chose their sites.

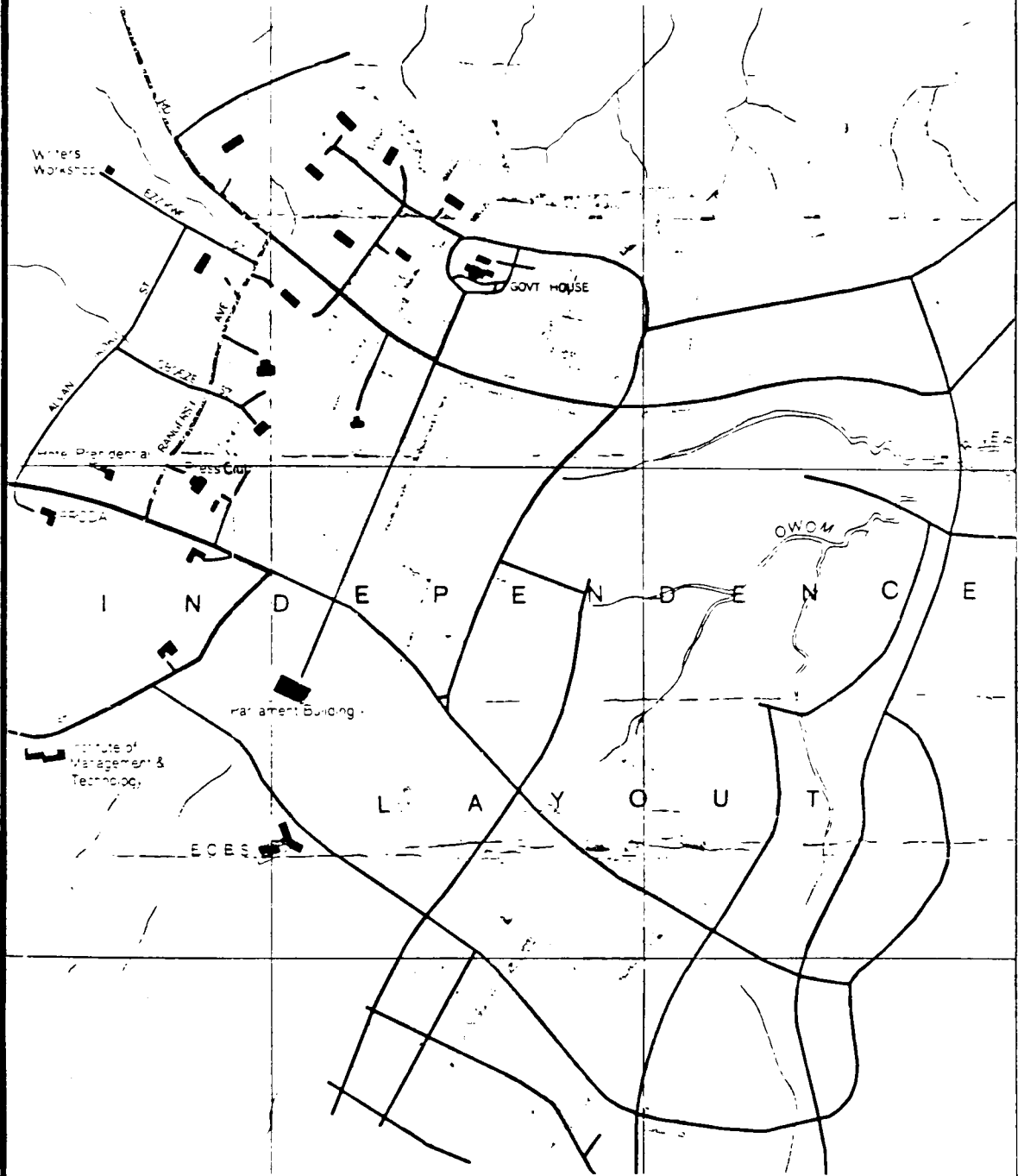
This choice was motivated by a desire to exploit the people rather than promote, or even protect, their interests.

Onitsha, for instance, existed as a village group before colonisation, but Onitsha town was established some distance away, segregated from the village group. This was purely to facilitate colonial commercial interests. It did not suit local farmers, because the site was on the rich alluvium by the bank of the river Niger. Similarly, some parts of the town of Enugu were built on hills which favour the growth of yams, the Igbo staple food, and in this case it was because the hills suited the European residents. Many Igbo were thus deprived of fertile land and the only means of livelihood known to them. But the suitability of a site for a town does not depend on the fertility of the land. These more fertile sites could, therefore, have been set aside for farming, had the colonists given any consideration to the interests of the farming population. They could surely have found other less fertile sites that would have suited them as well.

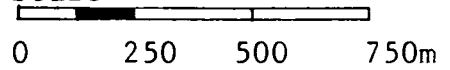
A general observation about these European-founded towns is that, unlike traditional settlements, there is little or no use of vegetation to ameliorate the effect of the hot glaring climate on buildings. Many parts of the towns are virtually desert-like, treeless, parkless, and therefore overburdened by dust and dirt.

On the general planning of the towns, the segregated zoning system, introduced by the colonists, not only has remained unchanged, but appears to have been accepted as a perfect model for modernisation. The only change since colonial days is in the nomenclature of the layouts. Today, the word 'government' has been substituted for the word 'European'. So the former European reservations are now government reservations. Not only have the colonial reservations changed little, but more reservations have been built (ills 115 & 116), based on the colonial principles.

Illustration 116



Scale



Post-Independence Government Reservation in Enugu.

(after Enugu Street Guide, 1975)

These new ones are today meant for top government officials, and successful businessmen, just as in the colonial era.

On the other hand, those areas formerly meant for the native workers have degenerated into slums, where rain water in shallow ruts and gutters often cut off access to houses. The use of night-soil men has been curbed, and replaced by the introduction of septic tanks and soak-away pits. But this still carries the danger of contaminating the water supply. Other domestic waste is dumped anywhere, even on the roads. Diseases like diarrhoea, dysentery, and malaria are rife here, because of the inadequacy of drainage and waste disposal systems. All this notwithstanding, post-colonial non-reservation layouts still maintain all the characteristics of their colonial predecessors. Here, the gridiron pattern with standard plots of 15 x 30m (ill. 117), is still adopted as a model for new layouts.

Colonisation brought about some social changes, such as the emergence of a new middle class of administrators and successful businessmen. This might justify the perpetuation of segregated planning, but it has the great disadvantage of emphasising the division between 'more privileged' and 'less privileged' classes of Igbo, an ugly concept which developed during the colonial days. In addition to this, by promoting a European way of life in these reservations, it ensures the continuity of the idea that European culture is still superior, even in the local context.

As for the gridiron pattern used in the non-reservation areas, its geometrical simplicity makes it an attractive choice. But in Igbo towns, it has proved to be inefficient, socially, environmentally, and economically. Here, the circulation system is determined by the dimensions of plots, and not by the need of circulation. Consequently, there are more roads in the layout than necessary or customary in the traditional layout, and so more land is used up. Land optimisation is a critical issue here, because the cost of

utilities, services, operations, and maintenance depend on it. More roads implies more utilities, which in turn means higher capital, running and maintenance costs. To add to this, in the absence of an adequate drainage system and poor maintenance, there is heavy erosion, particularly in the town of Enugu. Secondly, the gridiron pattern contrasts sharply with the traditional layout, which relates to the Igbo way of life. The gridiron in Igbo towns makes no allowance for any of those vital spatial elements characteristic of Igbo settlements. There is, for instance, a total absence of the continuity in space and the different buffer or transition zones of traditional layouts. Similarly, the different scales of open spaces and the network of markets and trading squares that are vital in the life of the Igbo have simply disappeared. But the Igbo still need all these spatial elements, even in their towns. This is because social habits do not change overnight. In fact, experience shows that social habits endure through generations, even in alien environments. So the absence of traditional spaces in the gridiron, places a heavy constraint on their life. Discussions, meetings, dances, and games, originally held in the traditional centres, squares and commons, are today usually held along streets in the towns. A new development is that large numbers of 'drinking parlours' have sprung up, but these hardly serve as an adequate substitute for the centres, squares and commons of the traditional layout. Another notable development is that today, marketing and trading cannot be confined to established markets, and so, in towns, all important roads and junctions are used as markets instead.

Perhaps it may appear improper to compare an urban setting with a rural one in this manner, but it must be remembered that about eighty per cent of the Igbo still live in rural areas. Moreover, about the same percentage of Igbo town-dwellers grew up in the countryside, and still maintain a strong rural background. So the fact remains that many of

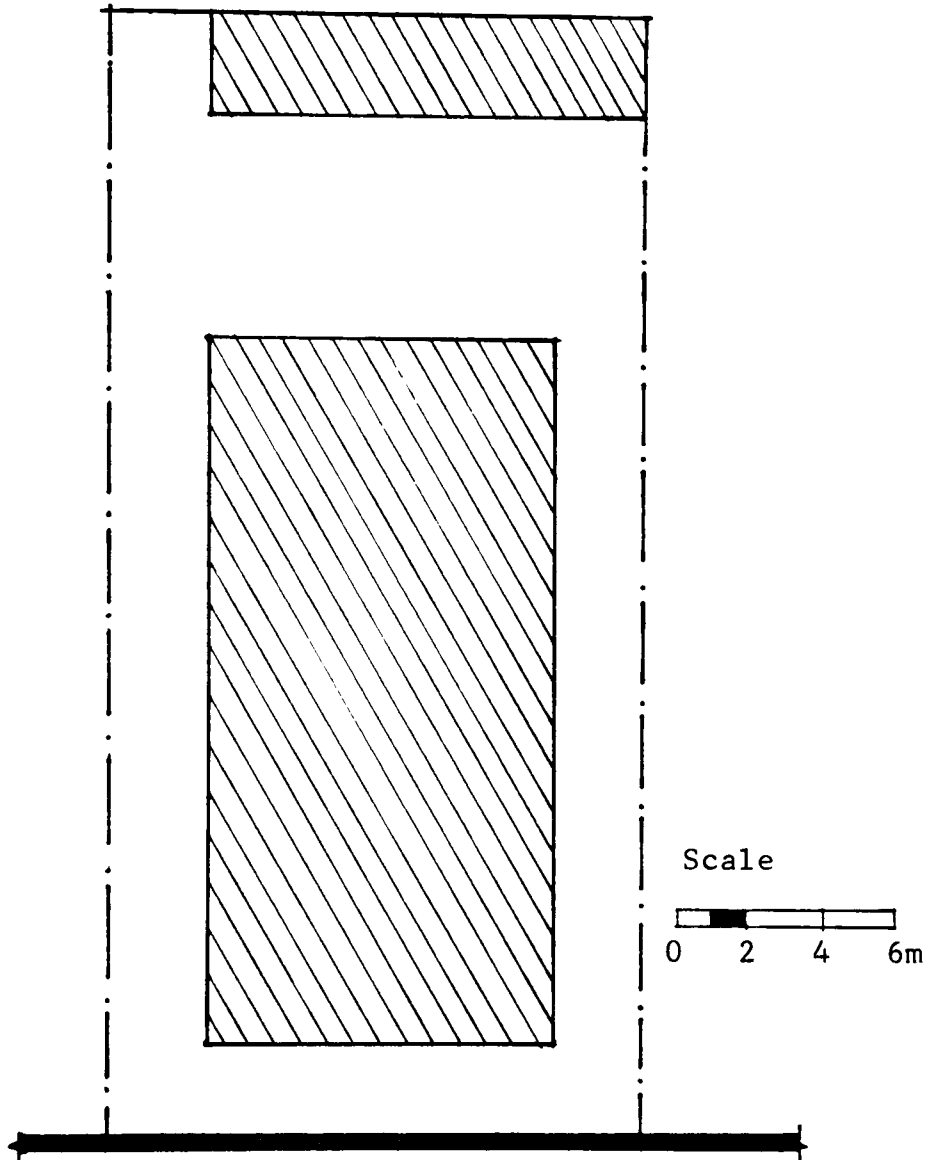
them try to follow a traditional life style in these European-inspired towns.


As for the individual plots in these gridiron layouts, the spatial order of those in earlier layouts appears, at first sight, to derive from the traditional compound. The plots are usually enclosed by a rectangular wall, and one or more free-standing houses are usually built inside the enclosure in the traditional fashion. However, this is a superficial conclusion. In the first place, these town-compounds are occupied by heterogeneous families. This means that a domestic unit traditionally meant for a single family group has been adopted by unrelated groups. Secondly, in the spatial ordering of these town-compounds, the front courtyard is non-existent. So the main house is located immediately at the plot entrance, just a few metres from the road (ill. 118). The compounds usually contain rear courtyards, but these are often drastically reduced in area and are no more than miniature replicas of those in traditional compounds. On the other hand, no attempt has been made to compensate this shortage of open spaces with semi-open spaces, as would have been the case in the traditional practice. So, the miniature courtyards do not function in a way suited to the Igbo.

The location of the main house immediately at the compound entrance means that instead of the gradual penetration of the residential domain, access into its core is usually abrupt. In consequence, domestic privacy is impaired. The miniature nature of the rear courtyard also greatly restricts all outdoor activities. Interaction within the domestic domain is therefore impaired. In these circumstances, for instance, children use the roads for their games. So on the whole, a similar absence of the traditional transition zones, continuity, and open spaces in the gridiron layouts constitute a major deficiency in the spatial ordering of the individual plots. Thus, the spatial ordering of the different parts of the layout, including

Illustration 118

Spatial Order of a Plot in the Non-Reservation
Layout in Enugu.



- .-. Plot Boundary
- Gutter
- Centre of Road
-  Built-up Area of Plot.

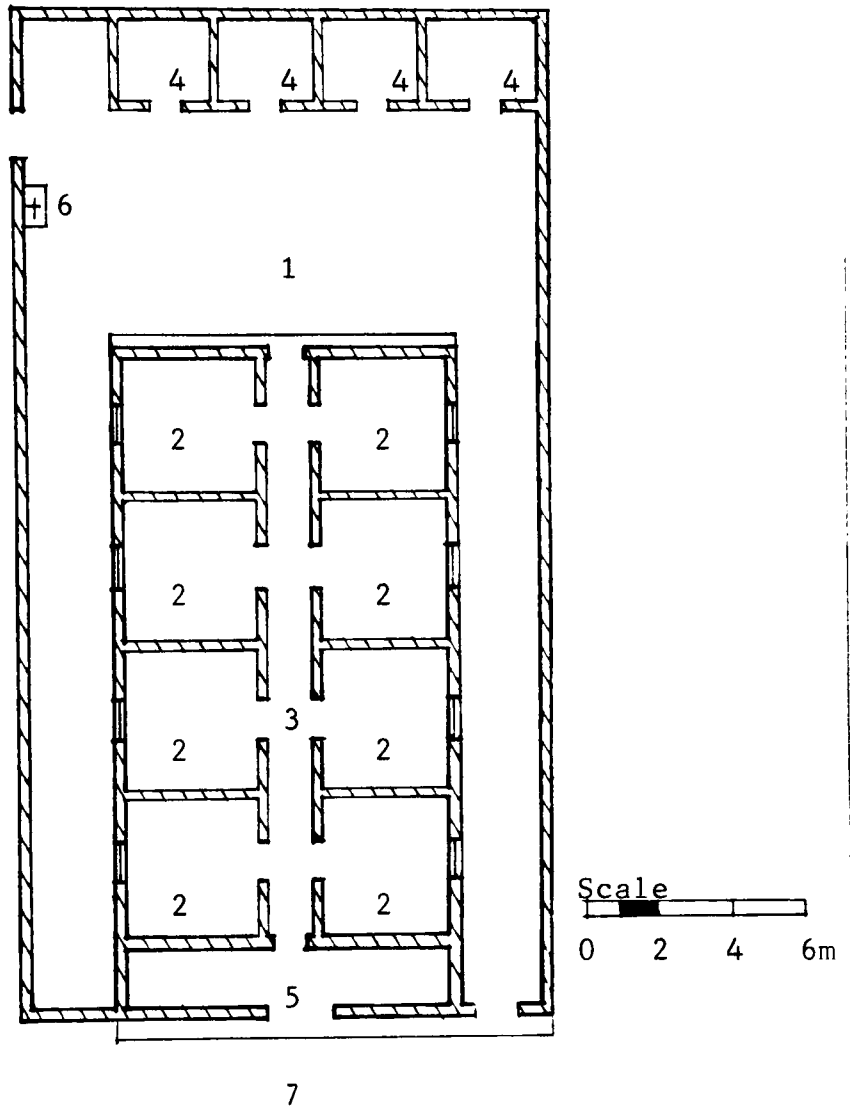
that of the compound, does not reflect the various degrees of social interaction and privacy the Igbo are accustomed to. The alien spatial ordering does not therefore provide the types of domains suitable for them.

The houses themselves, since the colonial days, show the increasing influence of western practice. The earlier types (ill. 119), though not successful, nevertheless still possess a few elements of traditional architecture. They were at least meant to promote a communal life style. The more modern ones, on the other hand, are very much more divorced from traditional practice. Many of them (ill. 120) are typical of European and American bungalows, flats or apartments, copied from journals and magazines. The few modifications to them only relate to the climate. Their plans (ill. 121) usually comprise a compact unit divided up into rooms for all kinds of domestic activities. As these designs are of foreign origin, the arrangement of their rooms or cellular units is never the same as those of traditional houses. They usually contain one living room, one dining area, some bedrooms, a kitchen and conveniences. The living room and the dining area are combined, and the kitchen placed adjacent to them. Few of them have reasonable verandahs. Features like large windows as opposed to the traditional small ones are common in these houses. The protagonists of tropical architecture maintain that large windows encourage ventilation but they forget that they also admit more heat and increase glare. To prevent the inevitable glare, heavy blinds are often used, but these bar ventilation. Moreover, they absorb heat in the day and radiate it into the interior of the house at night. So the original aim of encouraging ventilation, is, in the end, defeated, and the problems of heat and glare are aggravated.

The individual rooms in these houses encourage a sense of functional rigidity which again contrasts with the flexibility found in traditional houses. In the modern

Illustration 119

An Early Town Compound in the Non-Reservation Layout
in Enugu.



1. Courtyard
2. Living, Sleeping and Storage Room
3. Corridor
4. Kitchen, Toilet and Store
5. Verandah
6. Water Tap
7. Gutter

Illustration 120

Modern Apartment Buildings in Enugu.

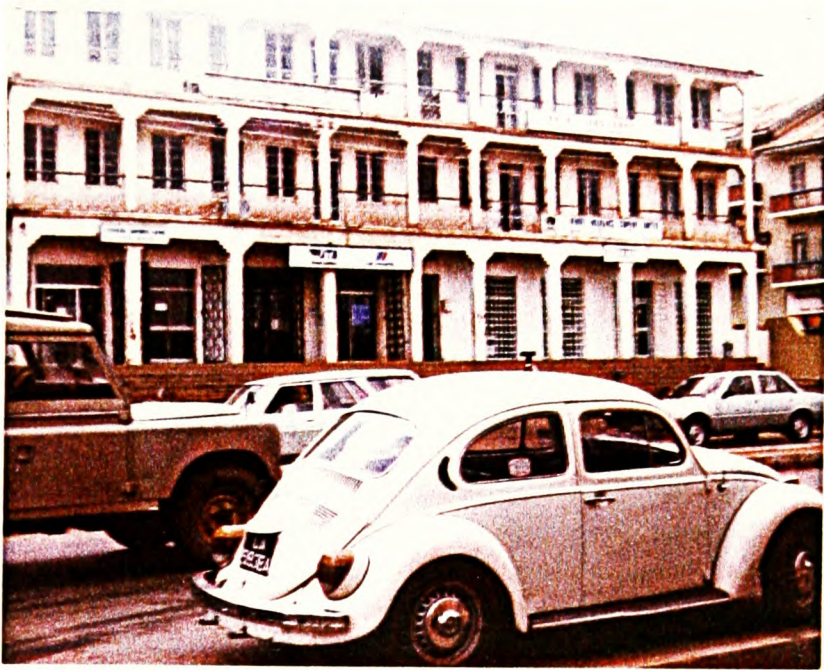
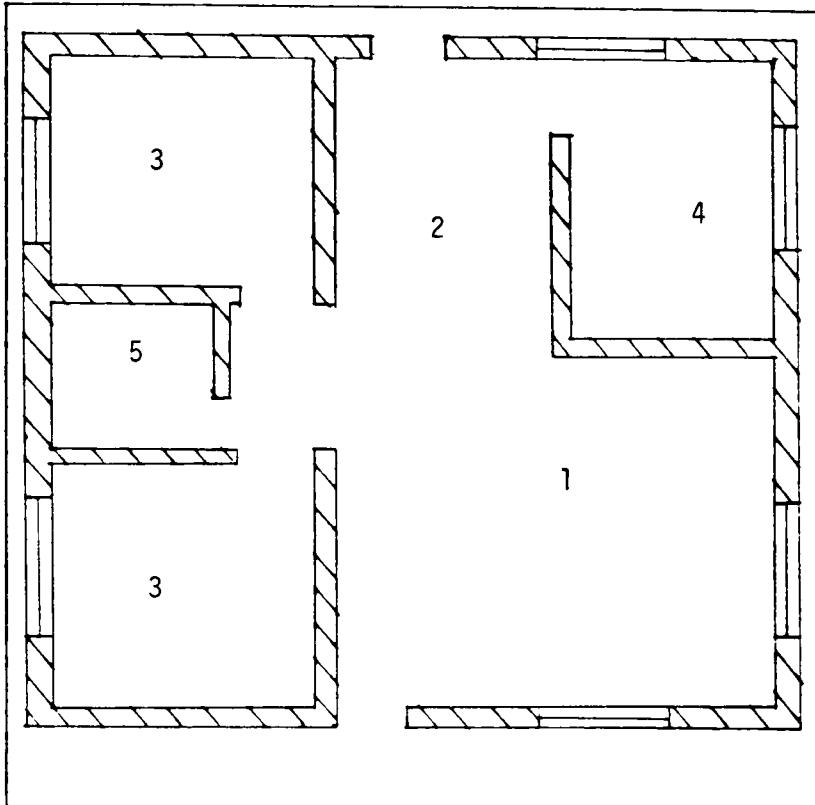
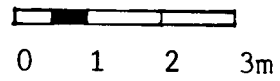


Illustration 121

A Typical Two-Bedroom Apartment in Enugu.



Scale



- 1. Living Room
- 2. Dining Area
- 3. Bed Room
- 4. Kitchen
- 5. Toilet

house, the bedroom is designed strictly for sleeping, whereas in the traditional house it often doubles as a store and a bedroom, just as it did in traditional mediaeval houses in England. Similarly, the typical single rigid living and dining space in these modern houses imposes constraints on domestic life because it does not permit the conduct of some activities that are still segregated in the Igbo family. For example, if a man is engaged in a private discussion with a colleague in the living room, and his wife's colleagues arrive, he can only abandon his discussion. This is because the Igbo still consider it very unethical to turn visitors away or ignore them, even if they arrive without warning. Similarly, the tradition of various members of the family dining separately has not lapsed. Providing a single rigid dining room, therefore, dictates that all the members of the family must dine there together or in turns. All these needs are fully accommodated in traditional Igbo architecture by providing flexible spaces for each member of the family's private and public needs.

The functional relationship of the different rooms in these modern houses, which often contradicts the existing domestic life pattern, also hampers both the physical and physiological well-being of their occupants. In illustration 121, the kitchen is so woefully placed that heat and smoke and fumes fill the living room whenever cooking is going on. Similarly, whenever the toilet is used, its smell filters into the flat. In essence, these designs are more suitable for European countries and European patterns of living. They fail to respond positively to the domestic and social way of life of the Igbo. As a result, the Igbo must alter their domestic life extensively. Where they fail to change their lives, as is often the case, the house undergoes extensive alteration to suit the old-established way of life. In the final analysis, structures that are alien to both the user and the designer emerge.

Like the general planning of the towns and the design

of the houses in them, the building materials most favoured today for construction work are foreign ones. Since the colonial days, traditional building materials have suffered increasing neglect, while the use of imported materials has been gradually stepped up. This has now turned into a massive importation of foreign building materials into Nigeria. A review carried out by the International Institute for Environment and Development (IIED) reported in 1981 that up to eighty percent of the building materials used in the major construction work were imported.⁴ A breakdown of foreign exchange expenditure on these importations showed that between 1970 and 1977 cement imports alone to Nigeria stood at about 20 million tons. Between 1974 and 1977, about 2 billion Naira (£1½ billion) was also spent on the importation of foreign building materials.⁵ Other foreign materials such as metal and asbestos sheets, iron rods, glass, fibre board, sanitary ware, finished doors and windows, and various decorative materials are now more favoured than traditional materials. Although there are now industries in the country producing some of these materials, their output is far short of meeting the demand. Importation is, therefore, seen as essential, but this undoubtedly causes enormous strain to the economy of the nation.

Undisputably, these imported materials have some admirable qualities, but not enough to justify their adoption on the scale described above. Cement, for instance, is stronger and more durable than the traditional mud. Similarly, the metal sheets used for roofing today are more durable and fire resistant than the traditional thatch. But both foreign materials are costly, and offer poor resistance to the flow of heat to the extent that often the air temperature inside the house rises uncomfortably above that outside. Their inability to resist heat causes the ubiquitous use of electric fans and air conditioners. These appliances, and the electricity generators they depend on, have their own inevitable problems. Meanwhile, these imported modern materials also require skilled labour for

installation and maintenance.

This current addiction to foreign architecture and building materials is an experience well known in other developing countries of the world. President Nyerere of Tanzania has often been quoted as having likened his countrymen's craze for imported building materials as a kind of mental paralysis.⁶ The failure of an imposed alien architecture in another developing country was well illustrated by Noui-Mehedi with an example of a peasant family in Algeria. The Algerian government has provided the family with a new home built of modern materials. But after a few months, the family could not withstand the inability of the house to protect them from the Algerian climate. It therefore fled to a traditional dwelling, while the so-called modern home was converted into an animal pen.⁷

The increasing use of imported materials in preference to traditional ones has signalled a similar use of imported building technology and skill in major construction work. It has been erroneously accepted that the acquisition and use of the latest western technology and techniques of construction is the best way of solving current architectural problems. So most of the methods adopted in major construction work in Igboland and throughout Nigeria today are taken from modern European practice and involve the use of imported technology and experts. In fact, major construction sites in Igboland today look very much like those in Europe. Large cranes (ill. 122), earth moving equipment, concrete mixers, other machinery and western experts are very common features of such sites. Traditional technology and experience are given no chance. Today, the advantages of western technology and skill make them attractive alternatives in the developing countries. These advantages include reduction of human labour and the execution of projects in relatively shorter periods. These, however, do not match their disadvantages. In the first place, the use of western technology and skill has directly resulted in a decline in traditional building technology and

Illustration 122

Modern Construction Site in Enugu



skill. Secondly, this practice has caused the abandonment of the traditional co-operative method of building and in its place has encouraged the commercialisation of the art of building. Today all aspects of building can be executed by contract agreements. In consequence, unlike what obtained in traditional practice, money is involved. Adequate accommodation can, therefore, be afforded only by the rich. Furthermore, this practice has also far-reaching economic consequences on the nation. This is because, in addition to placing unnecessary constraints on the national economy, it makes Igboland and Nigeria ever more dependent on foreign supplies. Moreover, experience shows that houses built with imported materials, technology, and skill are usually economically beyond the means of ordinary people. Such buildings are also more demanding in terms of maintenance as different skilled workers are needed to carry out even minor repairs.

Another cause of failure of current architecture in the land is that most new buildings are designed by either foreign architects or Nigerians trained in foreign schools. They seriously lack indigenous knowledge and experience. The houses they build depend on their training, and therefore bear unnecessary emphasis on western solutions. In a developing country, important buildings, such as universities, national libraries, and state houses ought to reflect the people's architectural heritage and serve as a symbol of national achievement. But in Igboland, if anything, the reverse is the case, because these buildings are designed by foreign architects. Examples of foreign architects' activities in the town of Enugu include the Institute of Management and Technology, designed by Avis and Horner, the State Library by the English firm of Cubitt and Partners, and the State House of Assembly by an Israeli firm. In fact these buildings make no specific reference to traditional architecture, but they do set the architectural character of the town.

There are some isolated attempts to reflect the spirit of Igbo tradition in current practice, but these have largely amounted to superficial copying. An outstanding example (ill. 123) is seen in the current use of traditional open screens. These are a form of non-load-bearing wall made of blocks laid in open patterns to allow a flow of air through them without the heat and glare penetrating as well. But for this to be effective, these screens have to be located in the path of both the sun and the prevailing wind. Often, however, they are used in modern houses as an aesthetic feature only, and consequently wrongly located. In these cases, the wall eventually becomes a haven for lizards, insects and dust.

The problem facing contemporary architects in Igboland range from their inability to understand the needs of the Igbo, to their lack of knowledge of their indigenous architectural traditions. This is how Godwin, one of those contemporary architects, spelt out their difficulties: "We are concerned with the solution of problems from first principles but lack the facilities for research and clients sufficiently experienced to know their own needs".⁸ This shows that even the problem itself is seen purely in a European context. For while the Igbo know what they want of a house, it is impossible to find it in the foreign houses in the towns.

This situation has been aggravated by the continuous use of foreign building standards. The Building Standards and Regulations of post-colonial Nigeria are strongly influenced by the colonial ones which were adopted from Britain. Today, the differences existing between those in use throughout the country, and those in use in Europe, are slight. They are mainly those differences dictated by the climatic conditions in the country. On the other hand, these Standards and Regulations still wrongly assume that the social needs of Nigerians are the same as those of

Illustration 123

Screen Wall Used purely for Aesthetic Purpose



Europeans. Recent years have seen several attempts to review them, but the reviews have often been entrusted into the hands of foreign consultants, who know little or nothing about the life of the people these Standards and Regulations are meant for. In consequence, the few changes introduced show much influence of current European practice. Referring to this persistent trend in December 1985, the founding president of the Nigerian Institute of Architects, Chief Michael Onafowokan, described the current planning laws of Nigeria as 'grossly inadequate'. He attributed the inadequacy to the involvement of foreign consultants in up-dating the country's planning laws. According to him, each time foreign consultants are called in for this purpose, they leave pockets of problems behind.⁹ This persistent use of foreign designs, materials, technology, standards and regulations, and skill, has resulted in what is best termed a 'transplantation' of foreign architecture into Igboland and Nigeria.

The culmination of all this is that the current architecture in Igboland seems to be struggling to build within the framework of the contemporary international style of steel and concrete architecture. In a nutshell, this means that in Igbo towns one can find many houses which are replicas of those in London or Washington D.C., with only slight modifications to allow for the difference in climate. The protagonists of this movement maintain that it is a logical outcome of a rational approach to design with new materials and techniques.¹⁰ They anticipate that an equality of life will result from the homogenising effects of world travel, industrial civilisation, and international commerce.¹¹ They therefore advocate an optimum universal architecture which will serve the different peoples of the world. This is, however, a utopian belief, because cultural differences have not disappeared, nor will they disappear soon.

This international style in Nigeria spurns the diverse and rich architectural heritage of the various ethnic groups

that make up the country. Originally, the traditional architecture and crafts of these different ethnic groups allowed individuality, however little they were valued. Individuality is observed in the layouts of the traditional settlements of these ethnic groups, the design of their houses, and their various ways of executing architectural details. The Hausa's cities, houses, and decorative patterns, for instance, are easily differentiated from those of either the Igbo or the Yoruba, although each is aesthetically pleasing in its own way. But today, the desire to join the main-stream of international architecture dictates the need to turn the whole of Nigeria into a mono-cultural entity. Yet in essence, architecture is a form of material culture which ought to express even the most minute of differences between any two cultures. The follies of adopting this international style of architecture were vividly expressed by Rene Dubos, thus:

It will be unethical and in any case futile to try creating one particular type of environment optimum for all mankind. Such a course would impose a common pattern of development on all human beings, and thus would be tantamount to suppressing their freedom. Society should instead provide as wide a range of environmental conditions as practically and safely as possible so that each human being can select the experiences most suitable to the development of his attributes and to the prosecution of his goals.¹²

An aspect of current architecture in Igboland which aptly portrays this international style is the rapid adoption of high-rise buildings.¹³ Not long ago, there were very few of them in Igbo towns, and they were used mainly as hotels and offices. Today, they are numerous and serve as residential buildings too. As it is, unless something is done quickly, their rate of growth in number shows that the

sky is the limit.

These tower blocks, the like of which can be found anywhere in Europe and America (ill. 124), dot whole towns. They started appearing in Nigeria immediately after independence in 1960. As at the start, they are still regarded as a symbol of modernisation, and are much more favoured than traditional low buildings. Currently the suitability of high-rise buildings is a much debated issue. Architects, builders, and landlords who are pro high-rise buildings, defend them on the grounds of both economy of construction and material, and the best use of exorbitantly expensive land. But such a defence is a camouflage for maximising the profit of the landlords at the expense of the tenants.

In Igboland, the characteristics of high-rise buildings are inconsistent with those of traditional architecture. Moreover, the environment they have created is entirely alien to the Igbo way of life. When they are used residentially, they promote life indoors. To the Igbo, who are traditionally used to an outdoor life, the high-rise building is like prison. It severely restricts domestic life. The Igbo do a lot of pounding with pestle and mortar during food preparation. But pounding in a high-rise building constitutes a nuisance, as it generates a loud, disturbing noise. Furthermore, because the only open space at ground level is often used for parking cars, the balconies in the high-rise buildings are usually turned into miniature, but totally inadequate, courtyards, in an attempt to suit the indigenous way of life. Worse still, the life of young children who grow up in these high-rise buildings is greatly impoverished, as they have to spend much of their free time indoors rather than playing outside. Next, on the grounds of economy, high-rise buildings become very expensive above a certain height. This is because they need more complex technology and highly specialised expertise as their height increases. In addition to this, at present, the public

Illustration 124

High-Rise Buildings in Enugu.



utilities available in Igbo towns, such as piped water and the electricity supply, cannot cope with the services these buildings require. So far as economies in the use of land are concerned, only the landlords stand to gain, and then at the expense of the occupants, who have to make do with the unsatisfactory environment thus created. On the whole, it is ironic that the West, which initiated the use of high-rise buildings, no longer accepts them whole-heartedly, while they are still greatly preferred in Nigeria.¹⁴

So it is apparent that architecture as practised in Igbo towns today fails to reflect and promote the social needs of the people. The same thing can be said of the aesthetic needs of the Igbo. The traditional art of house decoration, which in the past gave traditional architecture some of its unique characteristics, has in current practice lost its social meaning. It is today being obliterated and replaced by imported decorative traditions. Similarly, the natural blend of traditional houses and the landscape, which once formed the beautiful scenery that many early visitors wrote about, has been grossly neglected.¹⁵ The series of grotesque high-rise buildings, haphazardly located about the towns, presents a drab picture of monotonous apartments, one placed upon another. This contrasts sharply with the traditional lower buildings. Ulli Beier summed up the aesthetic failure of high rise buildings in Nigeria thus:

The traditional houses seem to follow the gentle curves of the land. Among this relaxed loose architecture stand the modern high buildings hard, angular, glaring white, and unapproachable ... They seem to defy the most basic principle of African life: rhythm.¹⁶

This aesthetic chaos is more to be seen in towns, but it is filtering gradually into the countryside.

There have been a few attempts to employ architectural

elements that embody traditional aesthetics, but they have made little or no impact. In fact, the only one worth mentioning here is the occasional use of carved doors in current architecture.

What is perhaps most disturbing about the failure of current architecture, is that to the majority of Igbo, towns are still as alien as they were when the earliest colonists pegged out their first gridiron layout. Towns are not regarded as homes, but workshops, hunting grounds, and places for making money which will be used later to improve homes back in the countryside. Following this general conception, the houses in the towns are also differently assessed by various classes of people. To the landlord, they are a means of making money, while to the tenants they are mere shelters devoid of any social meaning. Every Igbo today still wishes to be identified with his village environment. To belong to a particular town always implies being a native of a village group which is not far from the town. The irony is that, not realising how towns fail them, the Igbo still allow modern architecture to mar their surviving traditional environment.

The climax of this failure of modern architecture in Nigeria today is demonstrated by the mass desertion of modern houses by resettled people in the country. An outstanding example of this is the failure of the Kamberi resettlement programme.

The Kamberis are an ethnic group displaced when the Kainji dam was built in the 1970s. Robin Atkinson, the architect who undertook this project, tried to duplicate, in a superficial way, the Kamberis' traditional house form. He used non-traditional materials and construction techniques. Not having enough knowledge of local tradition, he created spaces that were out of scale. Furthermore, he could not successfully resolve, in the Kamberi traditional context,

the inter-relationship of these spaces. This caused a lot of problems for the Kamberis. In the first place, their social and domestic inter-relationship became disoriented. What, in their traditional spacial organisation was a single family domain, became a compound for several families. Their domestic animals got mixed up. Their domestic privacy was equally impaired. The Kamberis traditionally use fire inside their houses to warm themselves at night and drive mosquitoes away. But the asbestos sheets used for the roof cover of the new houses did not allow smoke to filter out, as did the traditional thatch. So each time they used fire, their bodies were covered by soot. In addition, the Kameberis had to seek professional assistance for even minor repairs to their houses. These new homes and the imposed life pattern were too much for them. So, after six months, they deserted the buildings and built themselves traditional homes in their own fashion.¹⁷

Today, the imposition of western architecture and the neglect of the traditional one is not restricted to Igboland, or Nigeria alone. This is how Fathy Hassan expressed a similar situation in his own country, Egypt:

The ever more shining products of Europe and America, the dazzling coloured glass jewelry and gilt furniture, have conquered the defenceless market of the villages, and forced into ignominious hiding the beautiful sober handiwork of local craftsmen ... Just as the rest of Egypt's living history is in full retreat up the Nile, so her craftsmanship is disappearing before the attack of shiny tin and gaudy cloths.¹⁸

In conclusion, therefore, it is evident that today's architecture in Igbo towns imposes on the Igbo what the contemporary architects believe in, but which, in essence, has nothing to do with the way the Igbo live.

In the Countryside

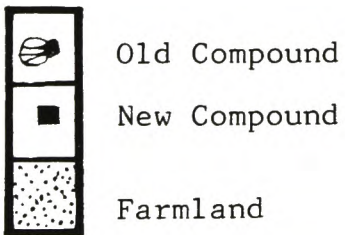
In the rural areas of Igboland the picture is slightly different, but even here there has been a steady invasion of new building techniques from the towns.

Following the acceptance of Christianity by some Igbo, schools, churches and mission quarters became common features in many villages. Some social activities which were originally held in the traditional village group centres, village squares, and ward commons, shifted to the mission grounds. This constituted a serious erosion of the importance of the traditional social centres.

Recent years have also seen a massive drift of rural dwellers to the towns. These migrants have maintained strong ties with their homes in the countryside. So there has been an increased interaction between the towns and the rural areas of the land. Many Igbo living in the towns have built themselves new homes in their villages. Here, the situation is comparable with what happened in Lagos and Ibadan, when freed slaves returned from Brazil. For just as those former slaves built Brazilian styled houses in the towns, the successful Igbo today builds a house similar to the alien houses in the towns. Unfortunately this imported architecture is the one the villagers see as modernity. Consequently, it is gaining ground in the countryside. Most traditional settlements have, as a result, undergone serious change. Many new builders abandon their old settled areas in order to build along a nearby major road linking the towns. Some do this to establish petty trading posts along the roads. Others do it to benefit from the public utilities that run from one town to the other.

The sketch diagram of Ohaffia (ill. 125) clearly shows the extent to which the traditional settlement pattern has been modified in present times. Earlier, we saw how the establishment of new compounds was restricted to particular

Illustration 125
Ohaffia Village Group.



(after Udo, 1965)

residential areas. This gave rise to giant compounds which characterise the village group. Today, many young men who build new houses, abandon the old giant compounds and the traditional pattern of spatial formation. Their new buildings are arranged along the major road which passes through the village group. In 1968 Ottenberg described how a similar trend was gaining ground in Afikpo village group: "In the past ten years, the Afikpo have been building dwelling places and small shops outside the [traditional] compound in increasing numbers, along roads and near the markets".¹⁹ This is also in sharp contrast to the traditional restriction to giant compounds, which was described in Chapter Seven.

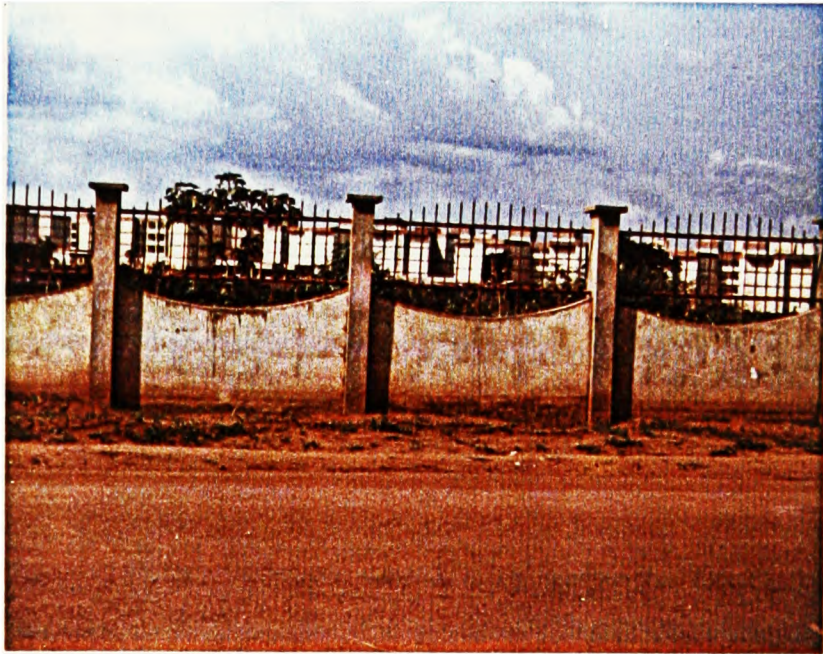
The compound system is still largely in use in rural settlements. However, the traditional meaning and value attached to some of its elements are being diluted. The compound wall, for instance, today has become more of a barrier against intruders than a cultural boundary that emphasises the Igbo individualistic character, and defines the ideal universe, the home. The emphasis on the functional dimension is evident in the need to line the top of the walls with metal spikes, broken bottles, and similar sharp-edged objects held in concrete to deter intruders, just as in the towns (ill. 126). It has also become very common not to pay the traditional attention to lavish and elaborate decoration on the walls. Today, walls are simply coated with imported paint.

The main gate is still used, but not invariably, because it is now very expensive. Once again, it has become fashionable to paint it in the European style, just like the compound walls. It is, therefore, never decorated as richly as it used to be.

The compounds themselves have become more compact in size. This may be attributed to land hunger, but a more important reason is as an imitation of the plots allocated

Illustration 126

Modern Compound Walls topped with Spikes
and Pieces of Broken Bottles.



in the towns, and the inward nature of the house designs copied from there.

Courtyards in the villages are also smaller in size, and no more physically segregated to possess traditional front and rear sections. The practice of building separate houses for the head of the family, his sons and wives, is also disappearing. This is partly due to the compact nature that the compounds are assuming and the adoption of new designs from the towns.

The traditional objects of worship are no longer a common feature of Igbo compounds. Both Christian converts and atheists have done away with them, so today they can be found in only a few compounds. Traditional architectural decoration seems to be the worst hit in the transition, for it has almost completely disappeared. Very few of the formerly much celebrated traditional decorative patterns are seen today, and little effort is being made to revive them. Only traditional carved doors and furniture are being revived on occasions, but there are yet to make any significant impact on current architecture in Igboland.

As in the towns, there is also a strong tendency to use imported materials and skilled labour for building construction. This has meant a virtual collapse of the traditional collective building practice. In consequence, even in rural areas, building a house today can be a very costly venture.

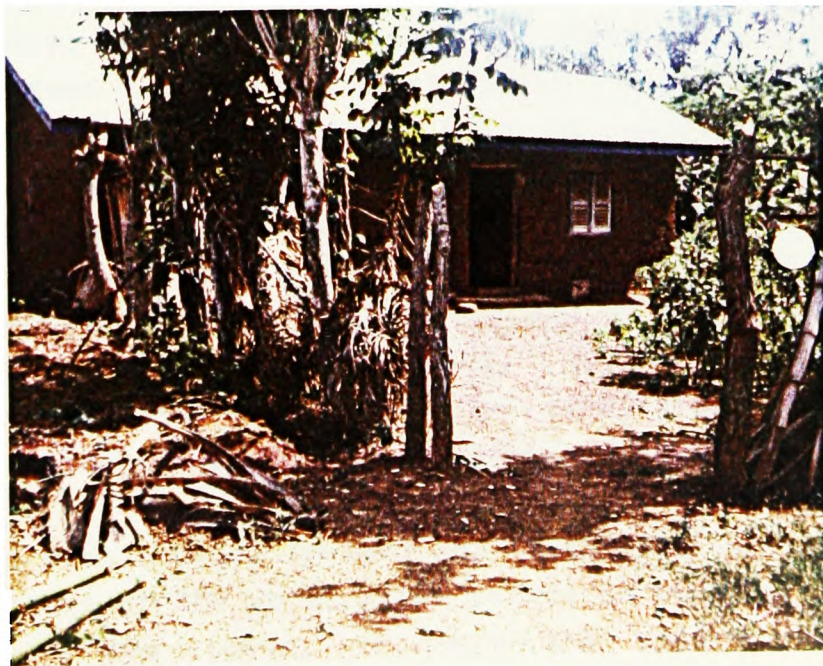
In terms of the use of building materials, building techniques, and the style adopted, it is possible to distinguish between four types of architecture existing side by side in rural areas. The first type still retains all the features of Igbo tradition and culture. It is of traditional materials and techniques. This type (ill. 127a) is fast disappearing, because it is largely seen today as a sign of poverty and backwardness. The second type (ill. 127b) is a

Illustration 127

Many Faces of Modern Architecture in the Countryside.



a. Traditional House.



b. Mixture of Traditional and Modern Methods and Materials.

mixture of traditional and modern methods and materials. Its construction usually involves both local people and a carpenter. The walls are erected by traditional techniques and with traditional materials, while the roof, usually of timber and corrugated metal sheets, is constructed by the carpenter. This type still maintains some aspects of traditional Igbo architecture, but, like the completely traditional one, is again regarded as inferior. There is also a third type which is similar, but employs even more modern forms. While mud may be used for the walls of a house, it is coated with a cement screed, and the house is roofed with corrugated metal sheets (ill. 128). This type is usually built by hired tradesmen in the same way that houses are built in towns. The fourth type (ill. 129), is utterly and completely alien to the Igbo way of life and environment. It is normally executed by contractors, with non-local materials, and in a European style. Air conditioning units and electric generators are often installed to ameliorate the intolerable internal temperature. In the same manner as the European houses in the towns, a servants' quarter is also built behind the main building.

On the whole, it can be seen that architecture in Igboland today, both in the towns and the countryside, is diverse and even conflicting in character. It is diverse in the sense that buildings, the like of which exist in European cities, can be found standing side by side with either a purely traditional one or one of the various permutations between them. Moreover, within either the town or rural setting, it is always possible to differentiate between what is today popularly regarded as the 'architecture of the poor' and 'the architecture of the rich', both strongly opposing one another.

Today's architecture in Igboland is conflicting because the architecture of the rural areas stands in sharp contrast with that of the towns. In both the towns and the

Illustration 128

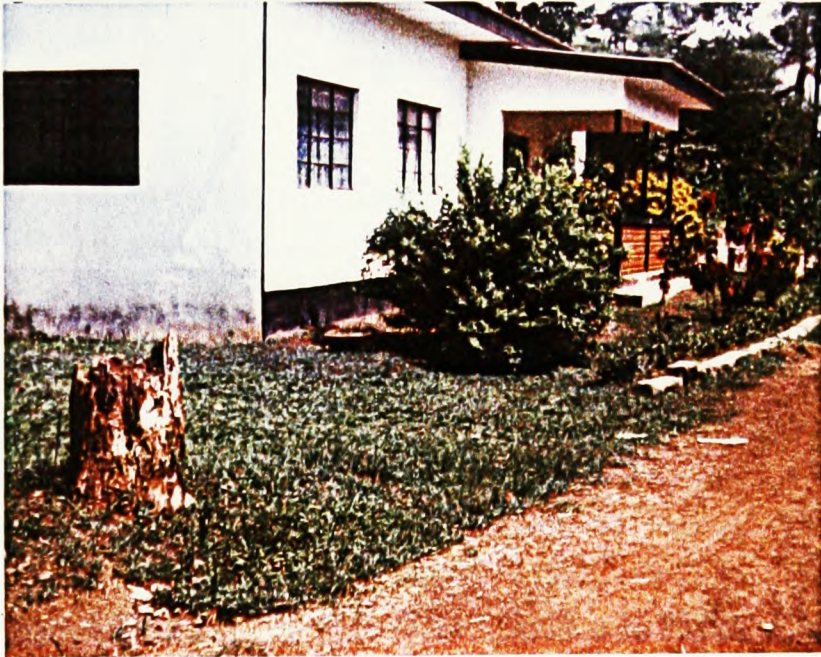
A More Advanced Form of Building of Traditional and Modern Methods and Materials standing side-by-side with Purely Traditional Houses in Ututu



Illustration 129

New Houses in the Countryside.

(note the openings provided for air conditioning)



countryside can be seen a great departure from a tradition that is still much alive in society. Instead of an architectural continuity, consonant with a similar continuity in Igbo culture and tradition, there is a sudden disruption in a vain pursuit of an incomprehensible alien order. Tradition is valued no more even though the alien architecture neither responds positively to the needs, desires, and values of the Igbo, nor to the environmental setting of the land.

In consequence today, Igbo towns and villages are crying out for a renaissance that will see the rebirth of its own architecture, but there is yet little or no response to this.

In conclusion, it is important to point out that as all these failures have their roots in the total neglect and violation of the traditional setting, they emphasise the need for the rediscovery of the past in a future architectural context. Above all, this rediscovery is necessary to re-establish this fading aspect of the Igbo cultural identity, and also to exploit its age-old solutions for the benefit of all Nigerians. In the absence of this, contemporary architects and planners in Igboland will continue to misunderstand the needs of the people. This can only perpetuate the mistakes of the past.

REFERENCES

1. C. Turnbull, The Lonely African (London, 1963).
2. A. Adedeji, 'Keynote Address on the Impact of Development, Modernization and Social Change in the Style and Quality of Life in Africa: An Assessment' (A paper given to the International School, Town and Country Planning Summer School, University of Lancaster, September 1982).
3. Imo State Government, Understanding the Land Use Decree Number 6 (Owerri, 1978), p.1.
4. S. Blilzer, J.E. Hardoy and D. Satterthwaite, Habitat - Five Years After: Earthscan Press Brief Document, 2 (London, 1981), p.36.
5. D.C.I. Okpala, 'Promoting the Use of Local Building Materials in Nigerian Housing Construction: The Problems and the Prospects', Journal of Administration Overseas, no 2 (April 1980), 118-127.
6. J. Dethier, Down to Earth Mud Architecture: An Old Idea, a New Future, translated from French by R. Eaton (London, 1982), pp.12-13.

J. Madeley, 'Why Mud is Better than Cement', West Africa, no. 3337, 13 July 1981, 1588-1590 .
7. Ibid.
8. J. Godwin, 'Architecture in Nigeria', Nigeria Magazine, no 91 (1966), pp.247-254.
9. West Africa, no 3563, 9 December 1985, p.2615.

10. B.C. Brolin, The Failure of Modern Architecture (London, 1976), p.8.
11. W. Gropius, 'Sociological Premises for the Minimum Dwelling of Urban Industrial Populations', in Scope of Total Architecture (London, 1956), pp.105-116.
12. R. Dubos, 'The Crisis of Man in his Environment', in Human Identity in the Urban Environment, edited by G. Bell and J. Tyrwhitt (London, 1972), p.184.
13. The term 'high-rise' is applied to all buildings which are higher than three storeys.
14. Since the collapse of Ronan Point in 1968 in London and the subsequent observation of many social inadequacies of high-rise buildings, their suitability has been a much debated issue. In fact presently some boroughs in London have embarked on the demolition of high-rise buildings, as the best way of correcting the mistakes made by building them.
15. The Rt. Rev. Bishop Jameson, writing home about his travels throughout Igboland recalled, "The scenery everywhere is beautiful especially in the more hilly parts, where villages are often found nestled amongst groves of palm, coconuts, and banana trees, with their branches waving gracefully over them". See Church Missionary Intelligencer (January 1904), 3-13.
16. U. Beier, Art in Nigeria (Cambridge, 1960), p.110.
17. D. Aradeon, 'Space and House Form: Teaching Cultural Significance to Nigerian Students', Journal of Architectural Education, 24 (1982), 25-7.
18. F. Hassan, Architecture for the Poor (London, 1973), p.53.

19. S. Ottenberg, Double Descent in an African Society, first published in 1968, reprinted (Washington, 1970), p.83.

CHAPTER TWELVE

TRADITIONAL ARCHITECTURE FOR TODAY AND TOMORROW

Traditional Architecture and Today's Needs

Opinions vary greatly about the validity of traditional architecture in today's context. But of the various schools of thought, the least sympathetic is the one championed by the proponents of the civilisation and modernisation of so-called primitive peoples and places. Expressing their line of argument is an article published by Bijon Sarma in the New Nigerian newspaper of February 1, 1983.¹ In their opinion, the whole traditionally built environment is a disgraceful reminder of cultural backwardness and a notable barrier to modernisation. Nigerian society has been undergoing radical changes since colonisation, and this has resulted in certain needs that can only be met by adopting western architecture. To those who hold this view, traditional architecture is the physical expression of the inability of primitive people to accept the benefits of westernisation. They advocate nothing short of total obliteration of the traditionally built environment to achieve modernisation.

Despite that, modernisation should not be confused with westernisation, nor does westernisation always imply progress. In Igbo society, this confusion between modernisation and westernisation not only compounds the existing problems, but also generates new ones as it erodes the Igbo cultural heritage. Nevertheless, change is a natural phenomenon of all society and cannot be avoided. No culture can remain static for ever. Cultures have always confronted each other through war, trade, or migration. The intricate relationship between victors and vanquished, guests and hosts, exploiters and exploited modifies each group. Social change may be either evolutionary or

revolutionary. If it is evolutionary, traditional values continue to play a part. New needs, desires, and values evolve, but often this is brought about by a fusion of the old and new. Similarly, for a society's architecture to continue to be valid, it must change. However, in a society like Igboland, this pattern of change cannot be expected to conform to any ready made European formula. It would be far better if it evolved from the needs, desires, and values of the developing society. Its validity must depend on its degree of response to society's needs.

There has always been change in Igboland, even though European contact and subsequent colonisation have accelerated it. Some even believe that the accelerated changes brought about by European contact have overwhelmed Igbo culture to the extent that it has been destabilized, and has entirely collapsed.² For the protagonists of westernisation, this justifies the current transplantation of foreign architecture into the land. But the opposite view can be more firmly substantiated.

Colonisation ushered in a new era of imported architecture into Igboland, primarily through the establishment of new towns. Although these new towns do not offer the same environment as the traditional village groups, the Igbo nevertheless carry those fundamental and vital aspects of their tradition and culture to them, when they go to live there. In these towns, village groups and village organisations are known under several names today, such as 'Patriotic' and 'Improvement Unions', or 'Welfare Associations'. These organisations meet on a weekly or monthly basis, to discuss common problems, mutual help, the welfare of their village groups, and to restrain any member who is likely to bring shame to their village groups. In fact, in the context of urban life and social relationships, the Igbo will still normally refer to any person from his own village group as a brother or sister. For mutual encouragement, support, and social control, it is not

uncommon to find people from the same traditional village group living in the same part of the town. The reason for this is that, traditionally, the older immigrants are socially obliged to shelter the new ones.

In rural areas, the traditional institution continued to operate during the colonial days, and remain still very much alive today. Of these, the most important is the lineage system of organisation. This cultural continuity in Igboland was demonstrated by a survey carried out in Enugu in 1971, which showed that in spite of colonial and western influences, no significant differences of socio-political values have emerged between the urban Igbo, who were believed to have been highly influenced by western culture, and the rural Igbo, who have not been much influenced.³

Economically, colonisation did not drastically change the pattern in Igboland. The main economic change that it brought was the opportunity it offered some Igbo to make their living through paid employment instead of traditional farming, trading, carving or iron work. Ottenberg, who investigated change in Igbo society since colonisation, wrote:

... Paradoxically, of all Nigerian peoples, the Igbo have probably changed the least while changing most. While many of the formal elements of social, religious, economic, and political structure, such as lineages, family groups, age grades, and secret societies have been modified through cultural contact, many of the basic patterns of social behaviour, such as the emphasis on alternative choices of goals, achievement and competition, and the lack of autocratic authority, have survived and are a part of the newly developing culture. But the basic patterns of social behaviour, of interpersonal relationships, have changed little though new symbols of success replace the old ones and new goals appear.⁴

In short, what Sylvia Leith Ross so aptly described as the Igbo response to Christianity is true of all aspects of Igbo culture. According to her:

Such a tremendous load has been suddenly put upon shoulders not yet ready to carry such a burden that it is no wonder the bearer falters, turns back or rests a while in the familiar world of his own customs before resuming the christian path. The only real surprise is the fact that he does not seem to know that he is doing so, so that with no constraint nor conflict, he can attend communion and believe in 'medicine', keep, until he is found out, a 'church' wife and several 'native marriage' wives, tie up precious in the same corner of his handkerchief his rosary and the shaped bit of 'iron' or juju made for him by an Awka blacksmith, plant side by side in the garden round his new cement and pan-roofed house, the hibiscus of civilisation, and ogirisi tree of pagan family rites.⁵

This situation described more than four decades ago has not changed today, except so far as more and more of the old culture is being revived and parts of Christian and western culture are being incorporated into them. Leith Ross attributed this to the suddenness with which Christianity was imposed, but this theory needs to be further tested. I am rather more inclined to believe that it is an aspect of persistence of a people's cultural traits and a struggle between such traits and imposed ones. That cultural traits die hard is not known among the Igbo alone. This is how Dogan Kuban put it: "... the dialectics of change in human environment have always shown a strong element of continuity throughout history".⁶ In the architectural context, Brodin has well illustrated this with the Italian community in the United States of America, where the behavioural pattern of

even the third and fourth generation of Italian-Americans reflects the life style of urban and village dwellers in Italy. This is particularly evident in their use of the street as a communal outdoor space, which has persisted in spite of the influence of other cultures.⁷ It is, therefore, natural that the Igbo still retain many aspects of their old culture, while not being particularly conservative.

So, in reality, colonisation and western influence affected Igbo society only to the extent that then created more avenues to achieve the virtues of society. Today, one can also achieve honour, respect, and high reputation in society by acquiring European education or holding a high post in the government. The means of achieving social virtues are, therefore, no more restricted to the acquisition of wealth, feeding many mouths, or taking titles. In essence, the social virtues of the present time remain derivatives of those of the past. What has changed is the means by which they can be attained. To reinforce this fact, the 'changes' often invoked by the importers of western architecture, have neither made the Igbo socially indistinguishable from other Nigerian ethnic groups, nor have they successfully forced on the Igbo a European physical outlook or behaviour. This illustrates a significant degree of cultural continuity in society and it can thus be inferred that the social changes since colonisation have been more evolutionary than revolutionary.

If then colonisation and western influence have not brought about a disintegration of Igbo culture, it is only appropriate that Igbo architecture should not disintegrate, but maintain a corresponding continuity. As the current needs and virtues of society evolve from the old ones, they can be more effectively embraced by a current architecture that has its roots in tradition. In this context, just as the old needs and virtues of society form the core of the new ones, traditional architecture should serve as a vital basis for the evolutionary process of building a suitable

man-made environment in modern Igboland. It is, therefore, an indispensable source for the creation of a suitable current Igbo architecture.

Far from being ripe for obliteration, traditional architecture has much to offer today. First, it is a tangible reminder of the Igbo's history and traditions. As their history is still being rediscovered and pieced together, the surviving traditional architecture is increasingly seen as an aspect of Igbo material culture, which will facilitate this rediscovery. Obliterating it would have disastrous consequences as it would amount to a denial of history. A praiseworthy effort has been made by the Federal Government of Nigeria to collect and preserve various specimens of traditional Nigerian architecture in an architectural museum to serve as a tangible reminder of the past. However, the value of the museum has not been fully realised, because it is still treated mainly as a showpiece for tourists.⁸

Secondly, traditional architecture is a symbol of ethnic identity and pride, whose loss would bring the ethnic groups that make up the country closer to extinction as distinct groups. This is because the traditional architecture of each ethnic group uniquely embodies and promotes the age-old cultural traditions by which that group is known. In fact, it is an important cog in the wheel that constitutes the raison d'être of a people's culture. As it concerns Nigeria, her diverse cultural wealth solely derives from her multi-ethnic character. The different traditional crafts, arts, and architecture of these various groups constitute this wealth of cultural heritage, which gives the country its unique identity in the world.

We have seen earlier how the architect's lack of understanding of people's needs has contributed to the current architectural crisis in the country. To resolve this situation, traditional architecture should serve as a

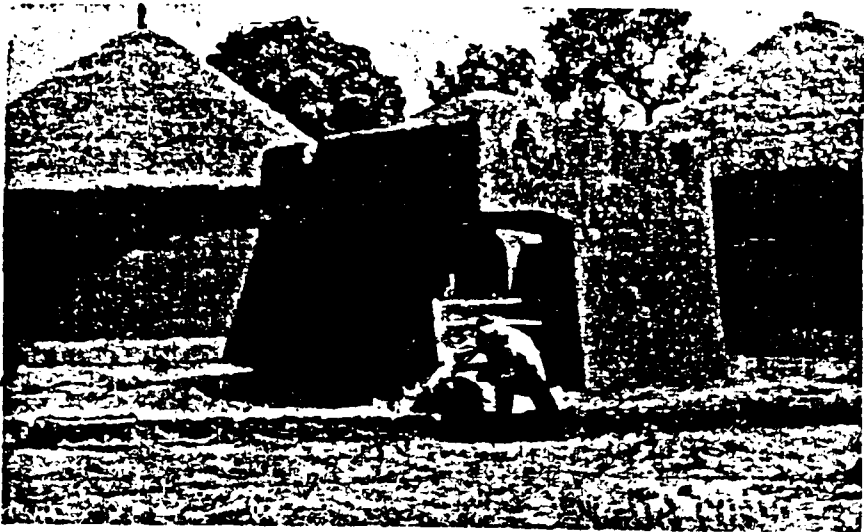
well-stocked library and an invaluable source of inspiration. It provides much information about the cultural, social, and environmental needs of the Igbo. The practising architect should follow the well-known maxim that "If humans as a species have certain characteristics, and if they have done certain things for a very long time, then there may be very good reasons for doing these things". This will pay rewarding dividends, especially as some architectural problems have persisted for centuries. Their solutions have been perfected in traditional architecture and today, there is no need for reinventing the wheel. Take for example, climatic problems, which have changed little for ages. Traditional architecture offers tested and proven solutions which, with only a little upgrading, remain relevant today. For the teacher of architecture, traditional architecture offers an irreplaceable basis for the creation of a more successful architectural programme. This is because it represents a good example of the transformation of the society's needs into architectural forms. A programme based on this transformation would produce better results than the one copied from western architectural schools. For students, the surviving traditional architecture, besides serving as a museum and library collection, offers most of what they need to know about the habits and characteristics of the people they are to build for. It is, therefore, a significant starting point for their future careers. So for all of them it provides something to learn from and build on.

Learning from the past in this way is a well-known principle in architectural education. This is evident from the work of many contemporary architects. Le Corbusier's *la Tourette* of 1960, for instance, was inspired by French monasteries of the twelfth century.⁹ Edward Cullinan's conference centre at *Minster Lovell* near Oxford also vividly portrays how the constraints of tradition inspire modern invention. In the design of the conference centre, he made use of a series of Cotswold stone buildings and adapted them

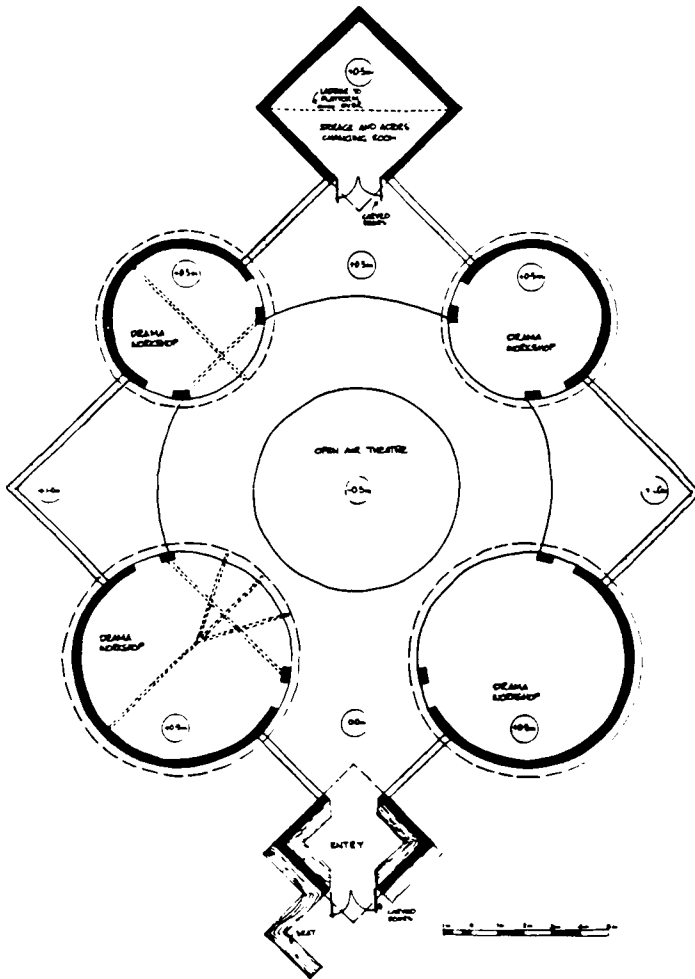
for modern use.¹⁰ In Africa, the designs of Tona Friedman and Ronald Simounet are evidence of inspiration from the honeycomb architecture belonging to the African Oasis culture.¹¹ In Egypt, the work of Fathy Hassan in the village of New Gourna is an outstanding example of the relevance of traditional architecture in the modern context. In the resettlement project of New Gourna, Hassan was able to apply the Egyptian architectural tradition to a modern situation.¹² In Nigeria, a remarkable example that immediately comes to mind is Steven Ehrlich's and Michael Etherton's mud theatre (ill. 130), for the Drama School of Ahmadu Bello University, Zaria. Although the theatre was planned to be temporary it nevertheless showed how new tradition breaks out of an existing one and how, through an evolutionary rather than a revolutionary process, the traditional architecture of any people could be advanced to suit the contemporary demands of a society.¹³

This relevance of traditional architecture notwithstanding, some aspects of it have been severely criticised, and therefore need to be objectively appraised here. First, it is often argued that the usefulness of traditional architecture is very limited, because of the absence of standards and regulations that guarantee economy, convenience and safety. This is only true so far as architecture relates to literate western society and its written standards and regulations. For standards and regulations do exist in traditional practice, even though they are undocumented. The illiterate Igbo know precisely what room sizes are adequate for their different activities, and what span is technically possible for safety. They know what timber is proof enough against termite attack for building construction. They also know what cross sectional size of a particular species of timber is adequate as a beam, post, or rafter. They may not be as economical as modern builders in their use of materials, but the existence of standards and regulations cannot be denied in their practice. The big difference is that theirs are not

Illustration 130



Front Elevation (photograph)



Plan

Mud Theatre Built in Zaria.

(after Ehrlich and Ethertons, 1976).

prescriptive. They are the result of centuries of experimentation and observation, based on the indigenous cultural environment and on technological factors. Unlike the current prescriptive ones, they have been handed down orally, and by practice, from generation to generation. They worked in Igboland in the past and still work today, whereas the imported prescriptive ones of the West fail. Admittedly, without modifications, the validity of traditional standards and regulations, in the face of today's construction needs, are questionable in some instances. Nevertheless, they provide a useful basis for further research into the formulation of an appropriate standard for practice in Igboland today.

In much the same manner, traditional building materials and techniques often come under criticism. This is not limited to Igboland or Nigeria, but is a world-wide issue. Henry-Russell Hitchcock, for instance, wrote in 1929 that traditional materials in general imply the past rather than the present and must be avoided.¹⁴ Apparently, the larger question of the influence of international politics and commerce on the developing countries plays a great part in this criticism when it concerns the third world. Industrial corporations and multinationals, which have a vested interest in foreign building materials and technology, as well as their architects, planners, and technical consultants, discredit traditional materials and techniques to protect their own interests. These institutions base their prejudices on the grounds that traditional materials are archaic, inferior, and weak and therefore unsuitable for modern use. They capitalise on the poor performance of these materials, especially when exposed to extreme physical conditions such as fire, prolonged rainfall, and strong wind. They also criticise the temporary nature of these materials and claim that only poor products can be obtained from them.¹⁵ Generally, critics see a way out of the current architectural problems of the developing countries in either the massive importation of foreign materials or the

establishment of high-technology industries capable of producing modern building materials, especially cement, asbestos, metal sheets, and steel in these countries.

In fairness to these criticisms, traditional building materials undoubtedly do have disadvantages, such as lower strength, poorer weather resisting qualities, greater vulnerability to termite attack and destruction by fire, and greater need for more frequent maintenance. These shortcomings raise the question of how relevant they can be to contemporary architecture. On the other hand, they are cheap, readily available, more responsive to the local climatic conditions, and permit the individual to build his own house without skilled labour. For these latter reasons, they still remain essential to a majority of the indigenous population in many countries.

Although the imported materials possess some admirable qualities, they have not proved perfect substitutes. For example, the metal sheets used as a substitute for the local thatch, though more durable and fire resistant, are less resistant to the passage of heat to the inside of the house, are very noisy during rain, have a high initial cost, and require special skills for fitting and maintenance. In much the same way, cement is stronger and more durable than mud, but also has serious disadvantages similar to those mentioned above.

Today, the shortcomings of both indigenous and imported materials can be rectified. Mud, for instance, can be stabilised by several methods.¹⁶ Thatch can be treated chemically to resist both insect attack and fire.¹⁷ Similarly, to ameliorate the intolerable atmosphere in houses built with imported materials, electric appliances such as fans and air-conditioners are often installed. Of these two alternatives, the rectification of the disadvantages of imported materials is evidently more problematic and economically less viable. The fact remains,

therefore, that the failings of foreign building materials outweigh their merits, whereas the reverse is the case when traditional materials are considered. Currently, the situation in Igboland is that indigenous materials still remain indispensable to a majority of the population. Through centuries of usage, the Igbo have accumulated a wealth of knowledge of their qualities. This knowledge offers a basis for further development.

Traditional building techniques are similarly neglected today. Of course these techniques also do have some serious shortcomings. These include a slower rate of building, the employment of more labour, and limitations on structural scope. So simply returning to them and adopting them in toto for modern construction cannot be advocated. On the other hand, just like traditional materials, the viability of these techniques is attested by the fact that the majority of Igbo still use them successfully. They, therefore, also offer a basis for further development, as we shall see.

The current architectural and constructional problems cannot be adequately solved by the importation of technology and experts. The best approach is for architects, planners, engineers, and even people in authority to re-examine the traditional techniques, identify their inadequacies, and explore simple and cheap ways to improve them. In this exercise, care must be taken not to lose their advantages nor to create other problems.

Lessons from Traditional Architecture

Much has been said about current architecture in Igboland and its failure to respond adequately to the needs and desires of society. But the fact remains that no matter how this current architecture is viewed, it must be recognised as an undeniable reality that cannot be removed overnight. At the same time, its inadequacies constitute real and threatening ills which must be curbed or they will

continue to multiply indefinitely. This has created a challenging situation which calls for intensive effort to find immediate solutions. The situation is not restricted to Igboland or Nigeria. Today, it is a global problem, characterising all developing countries. The desire for a solution is equally global, but not all believe that traditional architecture is of much use here. Even among those who see traditional architecture as the key factor, opinions still vary widely about how best to employ it. This variety of opinions fall into three main classes, a purely traditional approach, one that upgrades traditional architecture, and one that advocates the adoption of perfected solutions from elsewhere.

Considering each of these separately, a purely traditional one implies adopting traditional architecture in toto for today. Traditional architecture served in the past and, although society has not changed radically, traditional architecture cannot cope with all the complex aspects of modern society. Moreover, some needs that influenced the design of the traditional house in the past have either been modified today, or even lapsed completely. The barn, for instance, is an important element of the traditional compound, but in towns it is unnecessary, as most town-dwellers are not engaged in farm work. Similarly, the tradition of keeping domestic animals in the house has lapsed, and need not be accommodated in today's designs. The traditional approach, without modification, therefore fails, because it is both too conservative and inadequate to accommodate all the needs of today.

The second approach, which upgrades traditional architecture, means applying the principles of traditional architecture in a modern form to meet current needs. This term is, however, often misinterpreted as simply erecting multi-storeyed buildings in mud.¹⁸ Yet it does not mean this, any more than Fathy Hassan's efforts to revive

traditional Egyptian domestic architecture would have meant erecting high-rise buildings in mud and straw.¹⁹ Anicet Kashamura, the Zairian Minister of Information, in 1971 expressed the issue clearly:

We must choose what has to be conserved, adapted, and handed on. We must choose between utopia and realism. We must escape the misfortunes which menace the so-called civilized society.²⁰

Upgrading, therefore, implies adaptation of adaptable solutions from past practices. This involves reassessing traditional building practices and exploring cheaper ways of removing their shortcomings without losing their advantages. Here, the point must be stressed that superficial copying is not the issue, because experience shows that it has failed in several instances. This approach is more likely to succeed, but it can hardly be applied to all new situations especially those formerly unknown in traditional practice. To illustrate this point further, hospitals, schools, and offices are unknown in traditional Igbo architecture. Consequently, there is neither a basic idea that can be upgraded nor any provision for them in traditional experience. So, the upgrading approach considered alone is also not enough.

In much the same way, the third, which advocates the adoption of architectural solutions from other cultures, cannot apply successfully to all situations. This is because not all architectural solutions that work in other places will work in Igboland. Apparently, none of these approaches considered strictly in isolation will be adequate to solve current architectural problems. However, they are not in conflict, but are complementary. It is also important to note that all of them rely on traditional architecture for inspiration and the provision of the necessary basic framework that can be improved on. All these diversified approaches can, therefore, become a concerted effort if

embraced by a single one which seeks the overall practical relevance of traditional architecture in the face of today's architectural problems. This should mean a cross-fertilization exercise involving all the approaches applied according to particular needs. In view of this, areas of possible cross-fertilization of the current practices in Igboland with traditional ones are outlined below.

In the first place, it should be recognised that current architectural problems possess both physical and purely cultural dimensions. Their solutions must, therefore, involve realistic efforts directed towards both dimensions. Considering the physical dimension first, for both towns and new resettlement layouts in the countryside, traditional experience in the use of vegetation in residential areas can be adopted today. This will make for a much more suitable environment in Igboland as it would both improve the look of the towns and help to control their climate.

As a majority of Igbo town dwellers grew up in rural areas and still retain much of their traditional way of life, the traditional pattern of layout still has a cultural validity among them, even in an urban context. So, in the general planning and design of towns, there is also enormous scope for the cross-fertilization of current practices with traditional ones. The traditional principle of zoning, that is a centripetal tendency for socio-cultural activities, and a centrifugal one for occupational activities, ought to be adapted for future towns and village plans. Similarly, the clustered pattern of layout should be used. Following these traditional concepts, a new town should be made up of a cluster of layouts each with enough space for expansion and arranged about a central square. These clustered layouts should be planned to fall into the traditional three zones, a central core which should contain the major stadium, administrative office, and place of worship; the residential zone primarily for dwelling, and an occupational zone in which will be located major industries and agricultural

land. Similar clustering arrangements can also be repeated at other levels in the hierarchy of the layouts. This will mean that individual plots and compounds will also be planned around open spaces. It is necessary to point out an implied decentralisation of utilities in this suggestion. For instance, the major stadium in the central square should not be the only stadium in the town. Each of the layouts that make up a town and even its wards should also have their own minor stadia or at least play-spaces in their respective central cores. Besides being more related to the Igbo way of life, in comparison with the widely used gridiron pattern, the clustered pattern is more efficient and economical, especially in terms of land optimisation, circulation, and even the maintenance and operation of utility services.²¹ While suggesting this as a basis for the evolution of a more suitable town layout, it must be emphasised that the issue here is not to reproduce replicas of traditional layouts. To illustrate this point, consider the issue of the graded scale of open spaces from the village group centre to the compound courtyard, which forms a basic feature of the traditional layout. In adapting this for modern layouts, it may be found necessary to provide more or even less than the traditional four levels of open spaces, while not violating the hierarchies involved or the cultural meanings or values of these spaces. Nonetheless, they must be able to accommodate those surviving cultural activities they traditionally accommodate. Adapting this pattern of spatial layout will go a long way to compensating for the current acute shortage of recreational ground in Igbo towns, as the centres, squares, and meeting places traditionally known to the Igbo will reappear. The need for this today is further emphasised by the fact that some Igbo cultural activities, such as group dancing, masquerades, and wrestling, are still practised in towns, but in the absence of suitable spaces, they are largely conducted along streets, especially during festivals. In addition, open spaces at the different levels of the layout hierarchy will serve as sports grounds, assembly areas, open-air theatres,

markets, clubs, and other public utilities. This will also end indiscriminate hawking along the streets and the creation of markets anywhere and anyhow, which is currently in vogue. In the rural areas, the traditional roles of such open spaces as symbols of community corporateness will then once more be revived if this pattern is adapted.

In much the same way, the traditional compound system has much to contribute to the evolution of a range of standard land areas that should serve as plot sizes for building dwelling units in the towns. The plot sizes have to be based on the result of an extensive survey of traditional compound sizes in relation to the daily domestic activities prevalent in Igbo society. The current arbitrary 15 x 30m which has been in use since colonial days should be abandoned, because it does not permit a life style characteristic of the Igbo.

The traditional compound itself constitutes a rare specimen for the development of a most suitable domestic domain for the Igbo. Perhaps there may be need for slight modification, but a better home is likely to emerge from it. This supposition is buttressed by the fact that the compound system allows for organic growth and promotes all kinds of family, social, private, and outdoor activities characteristic of Igbo life. Experience elsewhere shows that normal urban densities can still be achieved using the compound system.²²

The domestic life style of the people today still emphasises the need for the privacy and effective social interaction of each member of the household to be possible within the home, and even within the whole residential territory, in a manner similar to that analysed in Chapter Eight. Even a visitor should be able to discern with ease the different degrees of privacy, domesticity, and publicness attached to various parts of the residential domain. In addition to these, there is still the need for a

barrier against dust and road noise, the latter being a new problem created by motor transport. As we have seen earlier, traditional architecture has solved these problems by the use of the compound system, which involves a secluding wall, multiple houses, and a spatial ordering pattern that makes for a gradual penetration of the residential domain. The basic concept of this system provides the necessary clue to the evolution of a suitable home today. The concept is again only a basis for further development as some of the traditional practices will be found to be obsolete. For instance, partitioning the courtyard into fore and rear parts would be unnecessarily conservative, but there is still the need for the compound to have a buffer zone and public, domestic and private areas. In today's context, instead of partitioning the compound courtyard, the house itself should be located in the plot so as to allow ample space in front of it and behind it. These spaces can serve as the public and domestic parts of the compound respectively. Furthermore, in as much as separate houses for the members of a family may prove very uneconomical and even an inconvenience, privacy and Igbo domestic life style within the building are key factors that must be reflected in today's house designs.

Earlier, the need to evolve an optimum plot size was pointed out. Here it must be emphasised that the ratio of the built to the open area of the compound must reflect the Igbo's use of the closed and open parts of the compound. This ratio, as we have seen, averages 1:3 in the traditional compound. Perhaps further research establishing the ratio between the built part of the traditional compound and its front and rear courts respectively, will even provide more data for determining the optimum plot and compound sizes for today.

Cross-fertilization can again be sought in the area of the design of the house itself. This follows from the fact that the daily routine and domestic habits of most Igbo have

not changed much from the traditional ones outlined in Chapter Three. This should not come as a surprise, because as has been mentioned, the majority of the Igbo, having grown up in rural areas, retain their rural background, even in the towns. With the exception of a minority middle-class group, most Igbo still prefer their meals to be served by their wives. Very few men eat with their young children, although meal times may be the same. Furthermore, little children are still more attached to their mothers than their fathers, and food preparation is largely done by the wives. In the same way, some social activities, such as discussions, are separated between the sexes in a group involving both sexes. In addition to these persistent domestic habits, visitors and relatives still call without warning and must be duly accepted and accorded respect. These and other aspects of the traditional life-style are well catered for in the traditional design, while the current architecture does not take them into consideration. Current architecture in Igboland should, therefore, exploit these traditional solutions. But again, the adaptation of these solutions must not mean superficial copying. To illustrate this point further, we have seen that the use of a single living-room is not compatible with the Igbo domestic life style. On the other hand, the traditional solution, which provides separate houses for members of a family, is not an ideal, especially in the towns. But the basic concept of the traditional solution suggests a degree of flexibility or segregation. In today's context, this can be achieved by either providing two living rooms, or a multipurpose one to enable the segregation of activities when it applies. This will inevitably imply the duplication of furniture and other appliances in the house, but a second living room offers a useful place for the children, the wife, or even an unexpected guest who arrives in the middle of a discussion and must not be turned away.

Much can also be learnt and adapted from the traditional house in the functional relationship of the

houses's cellular units, which aptly depicts the Igbo's life and activities inside the house. For instance, in as much as the traditional position of the kitchen, especially the one outside the houses, poses the problem of distance and security, it does exclude fumes and smoke from reaching the living area. On the other hand, the current practice of locating it adjacent to the living room is not a suitable alternative. Cross-fertilization then implies a compromise, which reduces the disadvantages of the traditional solution without losing its advantages. A solution may be to remove the kitchen from near the living room or ensure adequate ventilation which will prevent heat and smoke from reaching the living area and other rooms in the house.

The organic entity of the traditional compound, which aptly reflects the organic nature of the family, has the undisputable advantage of giving the compound owner an opportunity to exercise full control over the planning and execution of his dwelling. This allows him to combine financial and material resources to his own convenience. Experience of traditional architecture suggests two basic ways of achieving this today. As in traditional practice, current designs should make it possible for the cellular parts of the house to continue to alter in size and form, according to the user's growing needs. This particular aspect is possible by the use of traditional non load-bearing wattle and daub as partition walls. Such walls can be knocked down with ease and at will, to enable the house's internal space to be repartitioned to suit a changing situation in the family. The second alternative is to add rooms externally to the finished building as family needs grow. The principle of the organic compound has been put into practice with success elsewhere. During the colonial years, for example, the French Travaux Publics, recognising the organic nature of the indigenous dwellings of some of their African subjects, were inspired to develop 'expandable house plans'. This allowed for the growth of the house by the addition of more rooms horizontally as the family grew

in number.²³

Another area where traditional Igbo architecture can boost the development of a more suitable current architecture is the employment of traditional building materials for today's building construction. Some of these materials can still be used in the traditional manner, while others need upgrading. Mud, for instance, can today be employed in the internal part of the building for non load-bearing walls, or even generally for temporary structures. On the other hand, different methods exist today by which mud can be stabilised and its qualities improved without losing its merits. Such methods include coating a mud building with a cement screed, controlling the sand and clay ratio of mud mentioned in Chapter Four, mixing mud and bitumen, and mixing mud with a little cement.²⁴ With stabilised mud, it is possible to erect houses up to two storeys high. Experiments in India and Zambia have shown that buildings of stabilised mud respond better to the tropical climate than those built of imported materials.

The use of local timber is perhaps among the few traditional building practices that have survived the onslaught of imported materials. Today it is still largely used in building construction as roof structural members, joists, door and window members, and furniture. This limited scope of its use can be widened by borrowing from traditional experience. Traditionally, it is also used as mud wall reinforcement. It can still be employed in the same way with stabilised mud in today's construction. The use of bamboo is similarly confined to making scaffolding and supporting concrete formwork. But traditional experience again suggests that it can be employed as decorative and wall reinforcing material. Its use can even be extended to the construction of ceilings instead of using imported ceiling boards. These materials are indigenous and plentiful in Igboland and Nigeria. Their use in these ways will reduce the nation's reliance on imported building materials. Other

much more neglected traditional building materials include the grass and raphia palm leaflets used as roofing materials. Although efforts elsewhere directed towards the improvement of their qualities by chemical impregnation have not been very successful, they have not been exhaustive.²⁵ As these materials grow abundantly in Igboland, it would be sensible to pursue research in their direction. For instance, they could be used as an alternative material for producing roofing sheets, if they were pulverised and treated to resist fire. In the same way, other locally available raw materials, or even waste materials such as coconut and peanut husks, can be similarly experimented with. In Zambia, efforts in this direction have shown that durable, cool, quiet, cheap and fire-resistant roofing sheets can be produced from sisal and elephant grass fibres. ²⁶

In a similar way, the traditional building techniques which aptly reflect the skills, indigenous level of technology, and the general attitude of the Igbo towards habitation, have much to offer in today's context. In Chapter Five, we have seen that the three major structural systems, load-bearing, timber framework and composite, used in traditional Igbo construction, and some of the techniques the Igbo employ to erect their structures, are similar in principle to structural systems and techniques adopted in modern construction. Experience throughout the third world today shows that even at the indigenous level, these systems and techniques are valid for erecting low rise buildings. Daubed skeletal framework, load bearing, and composite structures of good quality timber and stabilised mud are simpler, cheaper, and better known to most people than the imported technology and techniques currently in use. There is, therefore, no doubt about their viability, especially if improved traditional materials are used.

The scope of physical cross-fertilization does not end with the use of traditional materials and techniques, but

even embraces some concepts embodied in many technical solutions existing in traditional architecture. Take the design and execution of the traditional roof, which allows the circulation of cooling air, and the traditional methods of ventilation, which precludes the use of either large window openings or heavy blinds. These solutions would suggest the introduction of vent holes in ceilings to enable circulating air to cool the underside of the roof, reduction of window openings to reduce glare and solar heat, or the use of large window openings shaded by trees in the compound. Other details, such as the establishment of the optimum sizes of vent holes and window openings, should, however, be subject to further research.

Traditional house decoration discussed in Chapter Six also offers a unique opportunity of improving the aesthetic quality of Igbo towns, compounds and houses. The walls of the houses need not be drab and boring. The various techniques and motifs discussed should lend inspiration to architectural details and decoration, which will be in accord with Igbo aesthetic taste.

This discussion has so far bordered on areas of possible physical cross-fertilization of current architectural practice with the traditional one. But this alone can hardly produce the much needed renaissance that will ensure the evolution of a more suitable architecture in the land today. The need for a purely cultural cross-fertilization derives from the fact that since colonial days the Igbo have unconsciously allowed elements of foreign culture to intrude into and adulterate their traditional culture. Thus, in the architectural context, some Igbo still conceptualise development simply as the acceptance of architectural solutions that have been perfected in western societies, and give no thought to their suitability. This cultural delusion, unless arrested, will not only constrain the development of traditional architecture, but will, in due course, bring about a situation in which any revival

will be impossible. Thus, in a nutshell, the cultural dimension of this cross-fertilisation exercise implies the revival and propagation of the cultural aspects of traditional Igbo architecture. Revival here implies creating a strong awareness in the Igbo to realise the meaning and value of their indigenous architecture and take pride in it. Propagation will be effected through the employment of the revived meaning and value in current architectural practice.

This should start with the universities and other institutes of higher learning in Igboland and Nigeria. Each should set up a department with the aim of prying deeper into traditional architecture, in order to identify more aspects of it that are suitable for upgrading and, by experimentation, defining ways of upgrading them to suit today's needs. This effort should be backed up by a study of socio-anthropology in the context of habitation in the land. The study must be aimed at identifying continuity in all aspects of society and establishing ways of reflecting it in today's house designs. The objective here is to make current architecture more responsive to the needs and values of the people. It should also be a primary objective of these departments to produce an indigenous architectural programme for schools of architecture. The programme should incorporate a history of Igbo architecture and emphasise the use of surviving traditional buildings as academic specimens. An important aim of the indigenous programme should be to train future architects to understand, appreciate, and practise in the tenets of their own tradition. The departments must also endeavour to develop indigenous building regulations and standards for all architectural activities in the land. Besides having the same objective as the school programme, indigenous regulations and standards will end the dependency on foreign ones, which do not work in Igboland. The emphasis on further research work is underlined by the fact that the amount of work done on Igbo architecture so far is comparable to a single grain in an empty sack that must be filled to the brim.

Another equally vital step is to remove the influence of the social ideals instituted by the missionaries and colonists which adulterate and tend to overshadow the traditional ones today. The Igbo and all Nigerians should realise the meaning and value of their traditional architecture in today's context, as opposed to the present transplantation of foreign architecture into the country. The ordinary people, who constitute the majority of the population, need encouragement here. The leaders in this revival should be the whole Igbo elite, but especially the architects, planners and administrators. We have seen that in the past the Igbo were lured into looking up to Europeans' ways by the latter's apparently superior knowledge and ability to control the physical world through science. Now, the elite must demonstrate that they can employ their acquired knowledge and ability to develop the traditions that have survived in Igbo society. The administrator, for his own part, must recognise the need for this effort, while it is the duty of the whole elite to accept and support it. On the issue of acceptance and use of indigenous building materials, Tete, the Dean of Architecture at Kumasi Institute of Science and Technology, said: "If we are to enable people to use local materials, then the elite, the planners, the people who have been educated abroad or in the mould of developed countries, have to learn not to denigrate traditional materials".²⁷

The architect will facilitate this process by discovering and encouraging local crafts related to traditional Igbo architecture. Such local crafts include wood carving and house decoration. This will make the ordinary Igbo look on their traditional product with pride. By so doing, the local craftsmen will be stimulated to develop and use their own products, while other Igbo will once more be in a position to understand and appreciate their crafts. What was once formerly ignored or even

despised, will then suddenly become something to boast about. Currently, sporadic efforts are being made by individual carvers (ill. 131), but their efforts still lack the spirit of tradition. In addition to this, their efforts are ill co-ordinated, and seriously lack patronage. So far, these efforts have failed to make the necessary impression.

In much the same manner, it is clear that much can be borrowed today from the traditional 'users' participation' in building activities. In the first place, users' participation reduces greatly the labour cost in building. Secondly, it helps to ensure that for each man, his house is his home. This will involve the efforts of all Igbo. The administrator must see to the re-organisation of the administrative process. A significant starting point of this re-organisation is dismantling those hurdles that have today isolated the building team from the people it is building for. The architect, for his own part, must come closer to the people he is building for, understand them, and seek their close co-operation in most aspects of building. For instance, we have seen earlier that building was a co-operative activity in Igboland, and this to a great extent reduces labour costs. Moreover, the maximum involvement, in addition to reinforcing a community's sense of belonging, helps the future house owner to realise fully the Igbo cultural meaning of home. This co-operation existed in the past, partly as a social obligation, and partly as mutual help. Perhaps today, the obligatory dimension is fading away, but the need for mutual help is still much alive. The survival of this in Igbo society today is manifested in the enumerable organisations aimed at mutual help which thrive even in the towns. The most popular of these organisations is 'isuso'. Members of an isuso association normally convene at regular intervals to help a particular member with money or labour. Such help is extended to all members in turn, and each individual reimburses the advance he receives gradually by rendering his own share of labour or financial help over an extended

Illustration 131

Modern Doors Carved in Traditional Fashion in Awka.



period of time. No interest is involved. The traditional co-operative method of building can, therefore, be revived through such associations if the government encourages members to include building activities in their programme. Here, the architect will be relied upon for advice as a new leader of the building team, especially in areas of upgrading and new developments. Use can also be made of this type of association to erect community buildings, such as health centres and assembly halls. Similar co-operation can also exist between the government and the people at the community level, whereby the government can provide important materials while the people provide labour. This type of co-operative building activity has proved a great success in countries like Botswana, Kenya, Senegal and Zambia.²⁸ Similarly, in London today, some boroughs are experimenting in co-operative building practice, and the initial results are very encouraging.

In conclusion, it is necessary to emphasise that traditional Igbo architecture is neither a liability nor a disgraceful reminder of the past that should be obliterated. It is, in fact, an invaluable aspect of Igbo cultural heritage which, if put to wise use, will undoubtedly guarantee the continuity of Igbo cultural identity, simpler and cheaper building techniques relying on indigenous resources, and the creation of a more culturally and climatically responsive architecture in Igboland and Nigeria. In a broader context, for the current architecture to respond adequately to the needs, desires and values of society, it must be firmly rooted in traditional practice. Without this, architecture is bound to degenerate and become more problematic. The success of people like Fathy Hassan in Egypt, and the experiments of Onibokun in Ibadan, Nigeria, are today solid proof that this is possible.²⁹

REFERENCES

1. B.B. Sarma, 'Context of Planning in Architecture', The New Nigerian, 1 February 1983, p.12.
2. J.C. Anene, Southern Nigeria in Transition 1885-1906 (Cambridge, 1966), pp.250-7.
3. D.R. Smock, 'Urban-Rural Contrasts in Political Values in Eastern Nigeria', Journal of Asia and Africa, 6 (1971), 81-90.
4. S. Ottenberg, 'Ibo Receptivity to Change', in Continuity and Change in Africa, edited by Boscom and Herskovitch (London, 1969), pp.130-143.
5. S. Leith-Ross, African Women (London, 1939), pp.292-3.
6. D. Kuban, 'Conservation of the Historic Environment for Cultural Survival', in Building in Islamic World Today: The Aga Khan Award for Architecture (New York, 1983), pp.32-4.
7. B.C. Brolin, The Failure of Modern Architecture (London, 1976), p.80.
8. Work began on the selected site at the Jos Museum to build an open air museum of Traditional Nigerian Architecture in 1973. The first phase opened in 1978, and work still continues there, to build and conserve more specimens of the country's traditional architecture.
9. Space, Time and Architecture: Lectures for 1938-9, edited by S. Giedion, fifth edition (London, 1967), p.XLII.

10. R. MacCormac, 'Tradition, and Transformation', Journal of the Royal Society of Arts (November 1983), 740-753.
11. U. Kultermann, New Architecture in Africa, translated by E. Flesch (London, 1963), p.6.
12. F. Hassan, Architecture for the Poor (London, 1973).
13. S. Ehrlich and M. Ethertons, 'Mud-Brick Theatre', Architectural Design, 46, no 12 (1976), 758-9.
14. H.R. Hitchcock, Modern Architecture: Romanticism and Reintegration (New York, 1929), p.213.
15. M. Evans, Housing, Climate and Comfort (Chatham, 1980), p.1.
16. Appropriate Building Materials for Low Cost Housing, Proceeding of a Symposium held in Nairobi from 7 to 14 September 1983, 2 vols (London, 1983).
17. In India, for instance, an attempt has been made to impregnate thatching grass with chemicals to make it fire-proof. See R.J.C. Spencer and D.J. Cook, Building Materials in Developing Countries (New York, 1983), p.277.
18. U. Beier, Art in Nigeria (Cambridge, 1960), p.110.
19. F. Hassan, op. cit.
20. A. Kashamura, 'Culture et Alienation en Afrique', Edition du Cercle (Paris, 1971).
21. B. Tokman, 'Physical Planning Aspects in Low Income Urban Areas', in Housing Problems in Developing Countries, edited by F.H. Dakhil, O. Ural and M.F. Tewfik, 2 vols (New York, 1978), II, 500-7.

22. A. Awotona, 'Housing the Extended Family in High-Rise Buildings: An Analysis of Possibilities and Limitations' (A paper presented at the annual general meeting and seminar workshop of the Nigerian Council of Social Services held at Hill Station Hotel, Jos, unpublished 1983, p.12.
 23. M.A. Foyle, The Development of West African Architecture (unpublished PhD dissertation, London University, 1959), p.163.
 24. Appropriate Building Materials for Low Cost Housing, ibid.
 25. R.J.C. Spencer and C.J. Cook, op. cit., p.277.
 26. D. Bhalla, D. James and Y. Stevens, Blending of New and Traditional Technology (Dublin, 1984), pp.209-213.
 27. J. Madeley, 'Why Mud is Better than Cement', West Africa, no 3337, 13 July 1981, 1588-1590.
 28. T.L. Blair, Urbanization, Housing, and Human Settlement Planning in Africa South of Sahara (Unpublished, 1984), 10.
 29. F. Hassan, op. cit.
- A. Onibokun, 'Low Cost Housing: An Appraisal of an Experiment in Nigeria', Journal of Administration Overseas 26, (April 1976), 114-120.

SUMMARY AND CONCLUSIONS

This thesis has set out to analyse traditional Igbo architecture in the context of the physical and cultural environment of Igboland. Two fundamental ideas served as a beacon to guide the research work involved through to this concluding stage. The first is a strong belief that a great deal of the present architectural problems in Igboland derives primarily from the total neglect and abandonment of the indigenous traditions in architecture. The second idea, which is closely related to the first, is the hypothesis that indigenous architecture holds vital clues to the solution of these current architectural problems, and the development of a more responsive current architecture, but the wholesale transplantation going on now is not a solution.

For the analysis, the data presented include a general survey of the physical geography of Igboland, of Igbo culture, traditional building materials and techniques, and the indigenous architectural setting itself.

Careful analysis of these data helped to explain, in the widest possible sense, the moulding effects geographical and socio-cultural factors have had on traditional Igbo architecture. It was equally possible to elicit the true meaning, value, and aims of architecture in the Igbo context, and shed light on the suitability of this architecture for the society it served. Further analysis helped to produce a hypothetical, if imperfect, reconstruction of the origin and development of the traditional architecture. A particular spatial ordering pattern, inherent in traditional Igbo architecture, was also uncovered.

The thesis demonstrates that, far from primeval shelters or collections of mud huts, traditional Igbo

architecture shares many common characteristics with the architecture of other peoples of the world. True, the type of grandiose monuments commonly found in western architecture can hardly be found in Igbo architecture, but like western architecture, Igbo architecture is an integral part of a people's culture, possessing an ordering pattern, successful structural systems, and aesthetic qualities. Its evolution and development also follow a general pattern which characterises the architecture of even highly technologically advanced societies. Nevertheless, there are also some peculiarities in planning, design, and construction, observed in traditional Igbo architecture. These peculiarities derive mainly from the fact that this architecture has evolved and developed relative to the geography of Igboland, Igbo culture, social structure and organisation, economy and technology. Igbo society as a whole mirrors an ideal setting which exists as a concept. A tendency towards this ideal is central to all aspects of Igbo life and existence. As regards the traditional architecture, the conceptual ideal forms the factor that gives meaning to its characteristic spatial ordering pattern and manner of living in even the smallest component of the settled area. In contrast to western architecture, which emphasises physical elements of scale and grandeur, traditional Igbo architecture lays more emphasis on the realisation of social relationship in space in accordance with their conceptual ideals. So, whereas architecture in western societies can be understood and appreciated from a superficial point of view, traditional Igbo architecture evolves from inside-out, and has to be understood thus to be appreciated. This latent fact, and other similar characteristics, become apparent and significant only when this architecture is viewed in the context of the Igbo's physical and cultural environment under which it has evolved and developed.

Traditional Igbo architecture can be justifiably said to have efficiently served the culture that produced it. But

the social environment under which this architecture worked has not remained static or uninfluenced by external forces. Increased foreign contacts, colonisation and economic and political forces since the nineteenth century have brought about changes and foreign architectural activity in the land. In consequence, traditional Igbo architecture has been put in the background. In fact, recent years have witnessed unprecedented doubt about its validity. The thesis has, therefore, also examined the origin and growth of foreign architectural activities in Igboland. By critically appraising current architecture in Igboland, some of its major flaws were highlighted. These include the perpetration of colonial planning and designing principles, the importation of even more modern and alien ones, and the gross neglect and violation of many aspects of traditional architecture and experience. The avant-garde of the current practice largely relegate traditional architecture to a thing of yesterday, and share the view that adopting western architecture is a way of catching up with development. Transplantation of western architecture is, therefore, advocated. "Land is costly, and multi-storeyed buildings cannot be erected in mud", they argue, but the thesis has also argued that the desirability of multi-storeyed buildings today is very questionable. Besides, the existence of cities like Los Angeles, in which most of the residential buildings are low, points to the fact that multi-storey buildings are not the only solution for residential buildings today.

In all, however, it must be re-emphasised that architecture cannot be seen in the context of leaders and followers along the same path, where the developed countries are the leaders and the developing countries are followers. Architecture should rather be seen in the light of building according to a people's needs, values and capabilities. But the needs, values and capabilities of different peoples vary a great deal. A corollary which is equally true is that there cannot be an optimum architecture that will suit all

the people in the world. It then follows that the present tendency of Igbo architecture to become a part of a unified global culture, whereby the town of Enugu in Igboland will look like any town in Europe or America, can only produce architecture that will never work.

Igbo culture did not collapse owing to the onslaught of colonisation or European influence. Nor has it even experienced drastic changes. On average, there has been a gradual cultural development in which much of the society's ethos and ideals still retain their validity although some new habits are growing out of older ones. In other words, there has been a remarkable cultural continuity in Igbo society. For current architecture to serve present society efficiently, it must reflect this cultural continuity.

In support of this line of argument, the thesis reassessed the virtues of traditional architecture in today's context. It also outlined possible aspects of current architecture in Igboland which can be enriched by applying some principles and solutions from traditional practice. These include general planning and designing of towns and houses, the use of traditional materials and techniques, the development of indigenous academic programmes, standards and regulations, and the revival of the cultural meaning and value of architecture in the Igbo context. The impression of antiquity and obsolescence existing today about traditional architecture may still prompt doubts about the validity of the principles and virtues discussed. But it is true that the basic structure of many modern towns was laid out many centuries ago. These modern cities, therefore, grew out of archaic principles which still remain valid. Relating this to Igbo architecture, the basic spatial ordering principles, for instance, produce an old pattern, but they are valid as they fit Igbo needs and way of life better than so-called modern ones. So, contrary to the widely held view, traditional Igbo architecture has a great potential for development and can serve as a basis for the creation of a modern responsive Igbo architecture.

APPENDIX ONE

Meek produced a pattern of social structure which portrays the Igbo as a tribe made up of many sub-tribes. According to his pattern, each sub-tribe is made up of a number of large clans each of which is in turn made up of a number of small clans or village groups. The village groups are then made up of kindreds which he calls umunna or umunne or nchi.¹

For Meek, umunna is the basic unit of Igbo social structure. He suggested that there were about 200 clans in Igboland 50 years ago. But Talbot had maintained that there were 59 clans in Igboland before him.²

Green also produced a pattern following Meek closely, but contrary to Meek, she portrays umunna as a village which is made up of a number of umunne.³

Obi disagreed with Meek's pattern on the grounds that his hierarchical arrangement of the different social units involved does not reflect the existing traditional order. He further contended that Meek's social units and some of the anthropological terms he used were only employed for the purpose of creating a social structure that would facilitate indirect rule in Igboland. In his own pattern, he maintains that Igboland is a nation and a town, obodo, ala, or mba, is the highest social unit. According to him, towns are made up of villages, ebo, which are in turn made up of localised patrilineages, umunna. The localised patrilineages are in turn made up of extended families, obi or oluama.⁴

The above highlights the confusion of thought that has existed in this area of Igbo studies until recently.

NOTES TO APPENDIX ONE

1. C.K. Meek, Law and Authority in a Nigerian Tribe (London, 1937), p3 and pp82-139.
2. P.A. Talbot, The People of Southern Nigeria (London, 1926), pp39-41.
3. M.M. Green, Ibo Village Affairs (London, 1964), pp9-32.
4. S.N.C. Obi, The Ibo Law of Property (London, 1963), pp4-18.

APPENDIX TWO

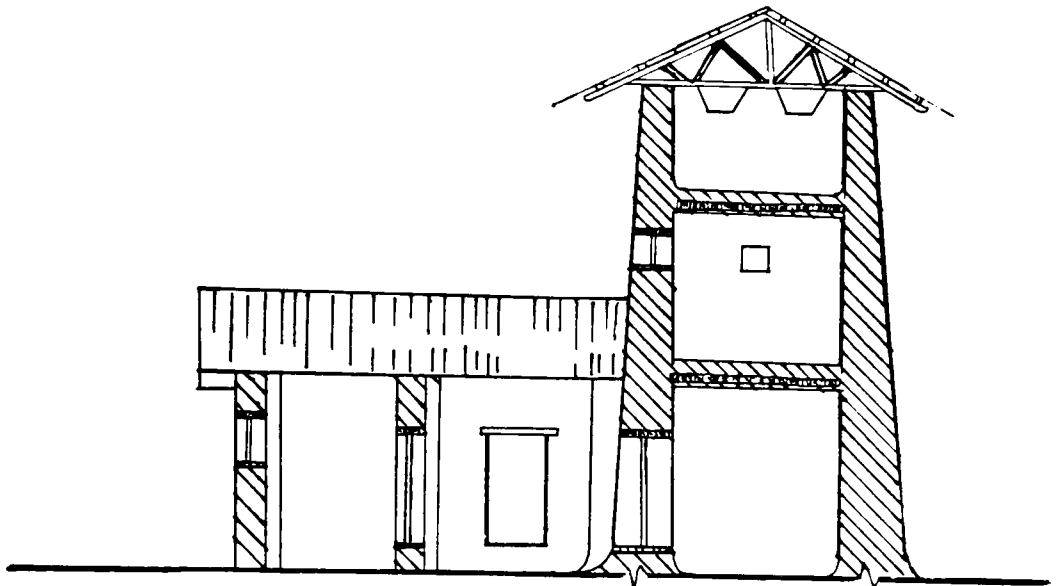
Uno nkpo

Uno nkpo is a type of defensive structure built in Awka area of Igboland in the past. It is usually one or more storeys high, but compulsorily higher than all other structures in its vicinity (ill. 132). Like most traditional buildings, its walls are of solid mud, the higher floors of timber and mud, and its roof of timber and thatch. In the past, especially during the inter tribal and village group wars and slave raids, it served as a watch tower as well as a strong house for storing valuables. Today among the surviving few is the one at Nibo built by Chief Ekwunife's father during the later part of the nineteenth century.

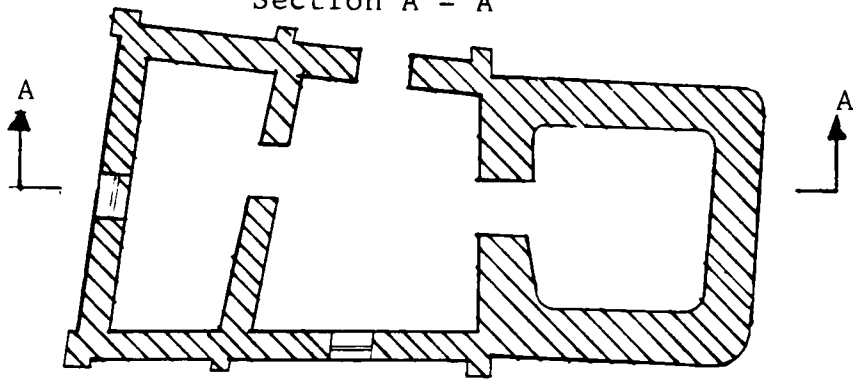
The importance of uno nkpo as an architectural achievement of the past has been recognised in present times. Efforts have, therefore, been made by the Federal Government of Nigeria to preserve the few surviving. These include some reconstruction work on their roofs and floor structures, and a plan to build a copy in the Museum of Traditional Nigerian Architecture in Jos.

Illustration 132

Uno nkpo in Nibo.

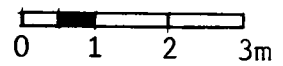


Section A - A



Plan

Scale



(Jos Museum)

APPENDIX THREE

Ozo Title Society

The ozo society is a title-taking association in Igboland which has political, ritual and economic significance. The society is more developed in the northern and central part of the land.

Membership is open to all free-born people who can afford to fulfil the conditions necessary for admission. Initiation into the society involves ritual ceremonies, elaborate festivities, and the payment of a large sum of money to old members.

Apart from much respect and prestige which a member of the society enjoys, politically his membership of the ozo society earns him a position in the higher decision-making and enforcing body of his village group. Ritually, an ozo title holder is more like the chief priest of his family. He enjoys the privilege of conducting all communications with the family's ndi ichie and performs all necessary sacrifices. His financial privileges include getting a share of the money paid by each new member. So in due course a member recoups his initial payment and continues to make profits.

The insignia of the society is a metal staff, ngwu agiliga, and the regalia is made up of a red hat with a feather, beads worn around the neck, a long robe, threads worn on the ankle, a leather fan, and a bell.

Within the society itself, a ranking system operates and the rank of a member is often expressed by the type of wooden carved door he hangs on his compound main gate.

SELECTED BIBLIOGRAPHY

ACHEBE, C., Things Fall Apart (London, 1958).

ADEYEMI, E.A., 'Changing Traditional Culture and Modern Architecture', fourth in the series of 1975/6 session University Public Lectures (Zaria, 1976).

AFIGBO, A.E., Ropes of Sand: Studies in Igbo History and Culture (Ibadan, 1981).

AFRICAN CULTURAL DEVELOPMENT, edited by O.U. Kalu (Enugu, 1980).

AFRICAN WORLDS, edited by D. Forde, first published in 1954, reprinted (London, 1963).

AGARWAL, A., Mud, Mud: The Potential of Earth-Based Materials for Third World Housing (London, 1981).

ALEXANDER, C., Notes on the Synthesis of Form (Cambridge, 1971).

ALLISON, P.A., 'Historical Interference to be Drawn from the Effect of Human Settlements on the Vegetation of Africa', Journal of African History, 3, no 2 (1962), 241-9.

ALLSOP, B., The Study of Architectural History (London, 1970).

ANDERSEN, B.K., African Traditional Architecture (London, 1977).

ANDERSON, R.C., 'Primitive Shelter', Journal of the American Institute of Architects, 36, nos 4 & 5 (1961), 33-9 & 46-55.

ANENE, J.C., Southern Nigeria in Transition 1885-1906 (Cambridge, 1966).

ANIAKOR, C.C., 'Igbo Architecture: A Study of Forms, Functions and Typology' (unpublished doctoral dissertation, Indiana University, 1978).

ANIAKOR, C.C., 'Space and Concept in the Architectural Planning of an Igbo Village: Nekede Example', Nigeria Magazine, nos 130-2 (1980), 27-40.

ANSON, P.G., 'Architecture without Architects', Landscape, 12, no 2, (1962), 18.

APPROPRIATE BUILDING MATERIALS FOR LOW COST HOUSING, Proceeding of a Symposium held in Nairobi from 7-14 September 1983, 2 vols (London, 1983).

ARADEON, D., 'Space and House Form: Teaching Cultural Significance to Nigerian Students', Journal of Architectural Education, 24 (1982), 25-7.

ARMSTRONG, R.G., 'The Development of Kingdoms in Negro Africa', Journal of the Historical Society of Nigeria, 2, no 4 (1960), 27-39.

ARMSTRONG, R.G., 'Glottochronology and African Linguistics', Journal of African History, 3, no 2 (1962), 283-290.

ARMSTRONG, R.G., 'Prolegomena to the Study of Idoma Concept of God', African Notes, 5, no 1 (1966), 11-17.

ARMSTRONG, R.G., The Study of West African Linguistics (Ibadan, 1966).

ARNOT, A.S., 'Art and Industry in Aro Chuku', Nigeria, no 12 (1937), 10-13.

AWOTONA, A., 'Towards Appropriate and Culturally Relevant Architectural Education in Nigeria. An Analysis of Research Needs'. (A Paper presented at the International Symposium on the Cultural Implication of Science Education held in Zaria, Nigeria from 21-24 November 1983).

BALZ, H., Where the Faith has to Live: Studies in Bakossi Society and Religion (Basel, 1984).

BANHAM, R., The Architecture of the Well-Tempered Environment (London, 1969).

BARBOUR, M., et al., Nigeria in Maps (Hong Kong, 1982).

BARTH, H., Travels and Discoveries in North and Central Africa 1849-1855, 5 vols (London, 1857).

BASDEN, G.T., 'Notes on the Ibo Country and the Ibo People, Southern Nigeria', Geographical Journal, 39, no 3 (1912), 241-2.

BASDEN, G.T., Among the Ibos of Nigeria (London, 1921).

BASDEN, G.T., 'Notes on the Ibo Country, Southern Nigeria', Geographical Journal, 65, no 1 (1925), 32-41.

BASDEN, G.T., Niger Ibos, first published in 1938, new impression (London, 1966).

BEIER, U., Art in Nigeria (Cambridge, 1960).

BHALLA, D., JAMES, D. and STEVEN, Y., Blending of New and Traditional Technology (Dublin, 1984).

BLAIR, T., 'Urbanisation, Housing and Human Settlement Planning in Africa South of Sahara' (unpublished, 1984).

BLITZER, S., JORGE, E.G. and SATTERTHWAITTE, D., Habitat - Five Years After, Earthscan Press Brief Document, 2 (London, 1981).

BLIXEN, K., Out of Africa (London, 1964).

BOLLNOW, O.F., Mensch und Raum (Stuttgart, 1963).

BOURDIER, J.P. and MIN-HA, T.T., 'The Architecture of a Lela Compound', African Arts, 16, no 1 (1982), 68-72.

BRAUN, H., Elements of English Architecture (Newton Abbot, 1973).

BRINKWORTH, I., 'Wanted - A New Architecture', West African Review, 30, no 382, (1952), 549-551.

BROLIN, B.C., The Failure of Modern Architecture (London, 1976).

BROLIN, B.C., Architecture in Context: Fitting New Buildings with the Old (New York, 1980).

BRUNSKILL, R.W., Illustrated Hand Book of Vernacular Architecture (London, 1971).

BUCHANAN, K.M. and PUGH, J.C., Land and People in Nigeria (London, 1933).

BUILDING IN THE ISLAMIC WORLD TODAY: THE AGA KHAN AWARD FOR ARCHITECTURE (New York, 1983).

CAIN, A., FAROUKH, A. and NORTON, J., 'Indigenous Building and the Third World', Architectural Design, 45 (April 1975), 207-224.

CARTER, B., 'The Development of Africa: Primitive Architecture in Rural Communities of Nigeria', Architecture East Midlands (July-August 1969), 23-5.

CENSUS OF NIGERIA, i (1921), 5-7.

CHADWICK, E.R., 'Wall Decoration of Ibo Houses', Nigerian Field, 6, no 3 (1937), 134-5.

CHERMAYEFF, S. and ALEXANDER, C., Community and Privacy (New York, 1963).

CHUBB, L.T., Ibo Land Tenure, second edition (Ibadan, 1961).

CITY IN CULTURAL CONTEXT, edited by Agnew, J. et al (London, 1984).

CLAPPERTON, H., Journal of a Second Expedition into the Interior of Africa from the Bight of Benin to Soccatoo (London, 1829).

CLIFTON-TAYLOR, A., The Pattern of English Building (London, 1972).

COLE, H.M., 'Mbari is a Dance', African Arts, 2, no 4 (1969), 42-51 & 79.

COLE, H.M., 'Art as a Verb in Igboland', African Arts, 3, no 1 (1969), 34-41.

COLE, H.M., Mbari: Art and Life among the Owerri Igbo (Bloomington, 1982).

CONTINUITY AND CHANGE IN AFRICA, edited by Bascom, W.R. and Herskovits, M.J. (London, 1969).

COKER, O., 'A Boost to the Architectural Profession in Africa', Daily Times of Nigeria, 26 May 1981, p.7.

DENYER, S., African Traditional Architecture (London, 1978).

DETHIER, J., Down to Earth Mud Architecture: An Old Idea, a New Future, translated from French by Eaton, R. (London, 1982).

D'HOORE, J., 'La Carte des Sols d'Afrique au Sud du Sahara', Pedologie, 10 (1960).

DIKE, K.O., Trade and Politics in the Niger Delta 1830-1885 (Oxford, 1956).

DIKE, K.O., 'The Scientific Study of Africa's History', UNESCO Courier (June, 1967), 9-13.

DUNHAM, D., 'The Courtyard House as a Temperature Regulator', New Scientist (8 September, 1960), 663-6.

EHRlich, S. and EThERTONS, M., 'Mud-Brick Theatre', Architectural Design 46, no 12 (1976), 758-9.

ELIADE, U., The Sacred and the Profane (New York, 1959).

ENGEL, H., The Japanese House: A Tradition for Contemporary Architecture (Tokyo, 1964).

EQUIANO, O., The Interesting Narrative of the Life of Olaudah Equiano or Gustavus Vasa the African, first published in 1789, abridged and edited by Edwards, P. (London, 1967).

EVANS, M., Housing, Climate and Comfort (London, 1980).

FATHY HASSAN, Architecture for the Poor (London, 1973).

FERRE, B., 'Primitive Architecture: 1 Social Influences', American Naturalist, 23 (January, 1889), 24-32.

FITCH, J., and BRANCH, D.P., 'Primitive Architecture and Climate', Scientific America, 203 (December 1960), 134-144.

FLOYD, B., Eastern Nigeria: A Geographical Review (London, 1969).

FOYLE, M.A., 'The Development of West African Architecture' (unpublished PhD dissertation, London University, 1959).

FRASER, D., Village Planning in the Primitive World, edited by Collins, G.R. (New York, 1968).

FREEMAN, M., 'Ethnic Differences in the Way that we Perceive and Use Space', Journal of the American Institute of Architects (February 1977), 47-8.

GAILEY, A., Vernacular Architecture of Northern Ireland (London, 1985).

GEERTZ, C., The Interpretation of Culture (New York, 1973).

GIVONI, B., Man, Climate and Architecture, second edition (London, 1976).

GODWIN, J., 'Architecture in Nigeria', Nigeria Magazine, no 91 (1966), 247-254.

GOTTMANN, J., 'Locale and Architecture', Landscape, 7 (1957), 17-25.

GROPIUS, W., The New Architecture and the Bauhaus (London, 1937).

GROPIUS, W., Scope of Total Architecture (London, 1956).

GROSSMAN, D., 'Do We have a Theory of Settlement Geography? The Case of Iboland', The Professional Geographers, 23 (1971), 107-203.

GUIDONI, E., Primitive Architecture, translated by Wolf, R.E. (New York, 1969).

GUTKIND, E.A., 'How Other Peoples Dwell and Build: Indigenous Houses of Africa', Architectural Design, 23, no 5 (1953), 121-4.

HARTLE, D.D., 'Archaeology in Eastern Nigeria', Nigeria Magazine, no 93 (1967), 134-143.

HAYDEN, D., Seven American Utopias: The Architecture of Communitarian Socialism 1790-1975 (London, 1976).

HENDERSON, R.N., The King in Every Man (Yale, 1972).

HENRY, J., 'The Missionary on the Upper Niger', Church Missionary Intelligencer (September 1882), 547.

HILLER, B. et al, 'Space Syntax', Environment and Planning B, 3 (1976), 147-185.

HISTORY OF WEST AFRICA, edited by Ajayi, J.F.A., first published in 1971, second edition (London, 1976).

HITCHCOCK, H.R., Modern Architecture: Romanticism and Reintegration (New York, 1929).

HOECK, O., 'Looking at Houses through the Eyes of an Architect', Nigeria Magazine, no 29 (1948), 233-245.

HOLDEN, C.H. and HOLFORD, W.H., The City of London (London, 1950).

HOUSING PROBLEMS IN DEVELOPING COUNTRIES, edited by Dakhil, F.H., Ural, O. and Tewfik, M.F., 2 vols (New York, 1978).

HULL, R.W., African Cities and Towns before the European Conquest (New York, 1978).

HUMAN IDENTITY IN THE URBAN ENVIRONMENT, edited by Bell, G. and Tyrwitt, J. (London, 1972).

IGBO LANGUAGE AND CULTURE, edited by Ogbalu, F.C. et al (Ibadan, 1975).

IKE, A., The Origin of the Ibos (Aba, 1951).

IMO STATE GOVERNMENT, Understanding the Land Use Decree, no 6 (Owerri, 1978).

INTRODUCTION TO ARCHITECTURE, edited by Snyder, J.C. and Catanese, A.J. (London, 1979).

ISICHEI, E., A History of the Igbo People of Nigeria (London, 1976).

ISMAGILOVA, R.N., Narodui Nigerii: The People of Nigeria, Russian Text (Moscow, 1963).

JEFFREYS, M.D.W., 'Dual Organisation in Africa', African Studies, 5 (1946), 81-105 & 155-176.

JEFFREYS, M.D.W., 'The Umundri Tradition of Origin', African Studies 15 (1956), 119-131.

JONES, G.I., 'Mbari Houses', Nigerian Field, 6, no 2 (1937), 77-9.

JONES, G.I., 'Ohaffia Obu House', Nigerian Field, 6, no 4 (1937), 169-171.

JONES, G.I., 'Agriculture and Ibo Village Planning', Farm and Forest, 6, (January-March 1943), 9-15.

JONES, G.I., 'Dual Organisation in Ibo Social Structure', Africa, 19, no 1 (1949), 150-6.

JONES, G.I., 'Ibo Land Tenure', Africa, 19, no 4 (1949), 309-323.

KARMON, Y., A Geography of Settlement in Eastern Nigeria (Jerusalem, 1966).

KASHAMURA, A., Culture et Alienation en Afrique, edition du cercle (Paris, 1971).

KING, A.D., Colonial Urban Development (London, 1976).

KING, A.D., The Bungalow: The Production of a Global Culture (London, 1984).

KITSON, A.E., 'Southern Nigeria', Geographical Journal, 41, no 1 (1913), 16-38.

KULTERMANN, U., New Architecture in Africa, translated by Flesch, E. (London, 1963).

KULTERMANN, U., New Directions in African Architecture (New York, 1969).

LA FONTAINE, J.S., 'The Gisu of Uganda', in Ethnographic Survey of Africa (London, 1959).

LANDER, R.L. and LANDER, J., Journal of an Expedition to Explore the Course and Termination of the Niger with a Narrative of a Voyage down the River to its Termination, 3 vols (London, 1832).

LAPIDUS, M., 'A Quest for Emotion in Architecture', Journal of the American Institute of Architects, 36, no 5 (1961), 55-60.

LAWRENCE, R.J., 'The Interpretation of Vernacular Architecture', Vernacular Architecture, 14 (1983), 19-28.

LEITH-ROSS, S., African Women (London, 1939).

LEONARD, A.G., The Lower Niger and its Tribes (London, 1906).

LEVI-STRAUSS, C., Structural Anthropology, translated from French by Jacobson, C. and Schoepf, B.G. (London, 1963).

LEWIS, E., The Romance of Textiles (New York, 1953).

LIVING CULTURE OF NIGERIA, edited by Biobaku, S.O. (London, 1976).

LUGARD, F.D., Revision of Instructions to Political Officers (London, 1919).

MacCORMAC, R., 'Tradition and Transformation', Journal of the Royal Society of Arts (November, 1983), 740-753.

MADELEY, J., 'Why Mud is Better than Cement', West Africa, no 3337, 13 July 1981, 1588-1590.

MAGUIRE, P., From Tree-Dwelling to New Towns (London, 1962).

MARTIN, (MISS), 'A West African Day School', Western Equatorial African Diocesan Magazine (August 1905), 30.

MEANING IN ARCHITECTURE, edited by Jencks, C. and Baird, G. (London, 1969).

MEEK, C.K., Law and Authority in a Nigerian Tribe (London, 1937).

MERPORT, A.I., Organizatsia Letnih Pomeshenii Djilish v' Stranah s' Suhim i Djarkim Klimatum (Moskva, 1973).

MIDDLETON, R., 'The Architect and Tradition', Journal of the Royal Society of Arts (November 1983), 719-739.

MOFFAT, R., Missionary Labours and Scenes in South Africa, (London, 1842).

MOFFETT, N., 'Nigeria Today', Journal of the Royal Institute of British Architects, 84, no 6 (1977), 244-254.

MORGAN, W.B., 'The Grass Towns of Eastern Nigeria', Transaction and Papers of the Institute of British Geographers, no 23 (1957), 213-224.

MURISON, H.S. and LEA, P., Housing in the Third World Countries: Perspectives on Policy and Practice (London, 1979).

MURRAY, K.C., 'Body Painting from Umuahia', Nigeria Teacher, 1, no 4 (1935), 3-4.

MURRAY, K.C., 'The Okwu Wall near Umuahia', Nigeria, no 27 (1947), 19-24.

NADEL, S.F., A Black Byzantium: The Kingdom of Nupe Nigeria, first published in 1942, third impression (London, 1951).

NEATHER, C.N., 'An Interpretation of Igbo Carved Doors', African Arts, 15, no 1 (November 1981), 49-55.

NORBERG-SCHULZ, C., Existence, Space and Architecture (New York, 1971).

NSUGBE, P.O., Ohaffia, a Matrilineal Ibo People (Oxford, 1974).

OBI, S.N.C., The Ibo Law of Property (London, 1963).

OJIKE, M., My Africa (New York, 1946).

OJO, G.J.A., Yoruba Palaces (London, 1966).

OJO, G.J.A., 'Traditional Yoruba Architecture', African Arts, 1, no 3 (1968), 14-17 & 70-72.

OKONJO, U., The Impact of Urbanisation on Ibo Family Structure (Gottinger, 1970).

OKPALA, D.C.I., 'Promoting the Use of Local Building Materials in Nigerian Housing Construction: The Problems and the Prospects', Journal of Administration Overseas, no 2 (April 1980), 118-127.

OLIVIER, M., Psychology of the House, translated from French by Wood, J. (London, 1977).

ONIBOKUN, A., 'Low Cost Housing: An Appraisal of an Experiment in Nigeria', Journal of Administration Overseas, 26 (April 1976), 114-120.

ONWUEJEOGWU, M.A., 'An Outline Account of the Dawn of Igbo Civilisation in Igbo Culture Area', Odinani, 1, no 1 (1972), 15-38.

ONWUEJEOGWU, M.A., 'Igbo Culture and Civilisation', Odinani, 1, no 1 (1972), 39-41.

OTTENBERG, S., Double Descent in an African Society, first published in 1968, reprinted (Washington, 1970).

OTTENBERG, S., Leadership and Authority in an African Society (Washington, 1971).

PARK, M., Travels in the Interior Districts of Africa ... in the Years 1795-7 (Edinburgh, 1799).

PEOPLE AND CULTURE OF AFRICA, edited by Skinner, P.E. (New York, 1973).

POPULATION CENSUS OF NIGERIA, 1952-3.

PRUSSIN, L., Architecture in Northern Ghana (Los Angeles, 1969).

PRUSSIN, L., 'Fulani-Hausa Architecture', African Arts, 10, no 1 (1976), 8-19.

PRUSSIN, L., 'An Introduction to Traditional African Architecture', Journal of the Society of Architectural Historians, 33, no 3 (1974), 183-205.

RAPOPORT, A., House Form and Culture (Englewood Cliffs, 1969).

RIVIERE, G.H., 'Folk Architecture, Past, Present and Future', Landscape, 4 (1954), 3-12.

RUBIN, A., 'Review of Philip A: African Stone Sculpture, and Frank, W: Ife in the History of West African Arts, African Notes, 6, no 2 (1971), 113-123.

RUDOFISKY, B., Architecture Without Architects (Englewood Cliffs, 1965).

SARMA, B.B., 'Context of Planning in Architecture', The New Nigerian, 1 February 1983, p.12.

SCHWERDTFEGER, F.W., Traditional Housing in African Cities (New York, 1982).

SHAW, T., Igbo-Ukwu: An Account of Archaeological Discoveries in Eastern Nigeria (London, 1970).

SHAW, T., Nigeria: Its Archaeology and Early History (London, 1978).

SHELTER IN AFRICA, edited by Oliver, P. (London, 1975).

SHELTON, A., The Igbo-Agala Borderland (Albany, 1971).

SPACE, TIME AND ARCHITECTURE: LECTURES FOR 1938-9, edited by Giedion, S., fifth edition (London, 1967).

SPENCER, R.J.C., and COOK, D.J., Building Materials in Developing Countries (New York, 1983).

SKOLLE, J., 'Adobe in Africa: Varieties of Anonymous Architecture', Landscape, 12, no 2 (1962), 15-17.

SMITH, B., Egyptian Architecture as Cultural Expression (New York, 1939).

SMITH, R., 'Christian Week Itineration in the Ibo Speaking Country', Niger and Yoruba Notes, 4, no 46 (1898), 82-3.

SMITH, R., 'Totemism in the Ibo Country', Western Equatorial African Diocesan Magazine (1905), 25.

SMOCK, D.R., 'Urban-Rural Contrasts in Political Values in Eastern Nigeria', Journal of Asian and African Studies, 6 (1971), 81-90.

SNYDER, P.Z., SADALLA, K.E. and STEA, D., 'Socio-Cultural Modification and User's Needs in Navajo Housing', Journal of Architectural Research, 5 (December 1976), 4-9.

TALBOT, P.A. 'Notes on Ibo Houses', Man, 79-80 (1916), 129.

TALBOT, P.A., The Peoples of Southern Nigeria, 4 vols (London, 1926).

THOMSON, J., To the Central African Lakes, 2 vols (London, 1881).

TOCHTERMANN, W., 'Architecture Without Architects', UNESCO Courier, 28 (February 1975), 4-13.

TROWELL, M. African Design, second edition (London, 1963).

TURNBULL, C.M. The Lonely African (London, 1963).

UDECHUKWU, O., 'Uli and Li: Aspects of Igbo and Chinese Drawing and Painting', Nigeria Magazine, nos 134-5 (1981), 40-9.

UDEMEZUE, O.A., 'Ibo Rural Housing and Planning' (unpublished BSc dissertation, Massachusetts Institute of Technology, Swarthmore, 1954).

UDO, R.K., 'The Disintegration of Nucleated Settlements in Eastern Nigeria', Geographical Review (January 1965), 53-67.

UDO, R.K., Geographical Regions of Nigeria (London, 1970).

UDO, R.K., The Human Geography of Tropical Africa (London, 1982).

VITRUVIUS, Ten Books on Architecture, translated into English by Morgan, M.H., Dover Editions (London, 1960).

VLACH, J.M., 'Affecting Architecture of the Yoruba', African Arts, 10, no 1 (1976), 48-53.

WEST AFRICA, no 3563, 9 December 1985, p.2615.

WILLSON, (MISS), 'Village Life in the Ibo Country', Western Equatorial African Diocesan Magazine (1906), 43-49.