

FROM PRODUCTION TO SUPPORT

A Review of Housing in South Western Nigeria

with an emphasis on Lagos

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Abstract

Nigeria is Africa's most populous country and Lagos its capital city has undergone a phase of rapid urbanisation whose inception can be placed approximately around the early 1960's. In an endeavour to explore this phenomenon and its effects on Lagos' population, this dissertation examines the subject of housing and its policy evolution in metropolitan Lagos over the last century.

Being a major plank of a nation's development, housing, allied with the process of development and especially within the context of Lagos (Nigeria) is part and parcel of a fractionalistic feature that appears to predominate. A consequence of this feature is the incompatibility it creates between the elements within the society which it has fractionalised. Following on from this a field study was undertaken to ascertain the nature and effect of this fractionalism on housing in Lagos. A result derived from the survey was the confirmation that the majority of Lagos' population was unable to afford the highly subsidized low cost housing produced by the government and various authorities. As a consequence of this finding and with fractionalism very much to the fore, a study of some of the more salient aspects of self-help housing was undertaken. In addition, a brief investigation was conducted into the traditional urban structure of south western Nigeria pre-dating the advent of colonialism in an attempt to identify some characteristics that may be relevant to the present situation.

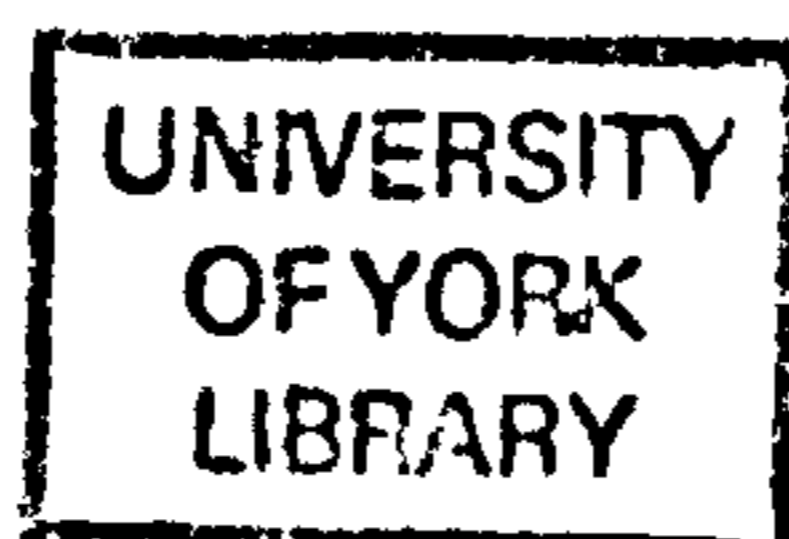
With Government's involvement in the self-help process on the increase and the resultant evolution of aided self-help in various parts of the Third World, aided self-help has become a sine qua non of the development of low income housing in these countries. Given the Nigerian situation and the importance of housing to her people, an aided self-help policy would seem the most appropriate approach towards ameliorating the worsening housing conditions whilst at the same time contributing to the overall development process of the nation.

Abbreviations

BHN	.....	Basic Human Needs
DPD	.....	Deputy Project Director
ECA	.....	Economic Commission for Africa
FBCEC	.....	Federation of Building and Civil Engineering Contractors
FHA	.....	Federal Housing Authority
FMBN	.....	Federal Mortgage Bank of Nigeria
FSDVM	.....	Fundacion Salvadorena de Desarrollo y Vivienda Minima
FSV	.....	Fondo Social para la Vivienda
FTF	.....	Federal Task Force
GDP	.....	Gross Domestic Product
GNP	.....	Gross National Product
HMSO	.....	Her Majesty's Stationery Office
ILO	.....	International Labour Organisation
IVU	.....	Instituto de Vivienda Urbana
JIP	.....	Jakarta Improvement Programme
KIP	.....	Kampong Improvement Programme
LEDB	.....	Lagos Executive Development Board
LSDPC	.....	Lagos State Development and Property Corportion
MHT	.....	Muhammad Hussin Thamrin Proyek
MIP	.....	Maroko Improvement Programme
MIT	.....	Massachusetts Institute of Technology
NBS	.....	Nigerian Building Society
NDP	.....	Natioinal Development Plan
NEPA	.....	Nigerian Electrical Power Authority
NHP	.....	National Housing Policy
NISER	.....	Nigerian Institute of Social and Economic Research
npd	.....	no date published
OSTI	.....	Organisation for Social and Technical Innovation
PADOC	.....	Planning and Development Collaborative International
PD	.....	Project Director
PNI	.....	Priority Needs Index
PNL	.....	Priority Needs Ladder
RHI	.....	Relative Habitability Index
SIV	.....	Satisfaction Index Value

SPSS Statistical Package for Social Sciences
TNIB The Namil Nadu Housing Board
UN United Nations
UNRISD United Nations Research Institute for Social Development
UPE Universal Primary Education

N Niara
\$ Dollar
£ Pound Sterling



Introduction

This dissertation examines the subject of housing and its policy evolution in metropolitan Lagos (Nigeria) (fig 001.) over the last century. In essence the examination commences with the establishment of British colonial rule and its provision of housing for the administrative staff. By the time of Nigeria's independence from Britain in 1960, no fundamental development in attitude had occurred towards housing and it simply remained part and parcel of the various ministries' or other government departments' social responsibilities and overheads. There was no question of housing forming an integral part of the country's development process.

However, with the advent and implementation of the Third National Development Plan (1975 - 1980) a change in official thinking on housing was brought about. In principle this involved embarking on a construction programme of 202,000 dwellings in order to meet the burgeoning demand for housing created by the rapid expansion of the urban population. For a variety of reasons some of which are explained in chapter 2, most of these dwellings and facilities were not provided.

By the time of the promulgation of the Fourth Development Plan (1980 - 1985) the Federal Government had come to recognise that the concept of housing goes beyond the mere production and provision of shelter. The Government saw that housing not only involved utilities and community services (such as energy, water supply, access roads, sewage and refuse disposal facilities, and proximity to employment opportunities as well as educational and health facilities) but also that housing is a complexity of factors determining the well-being of individuals, families, society and the nation as a whole (NDP,80:338).

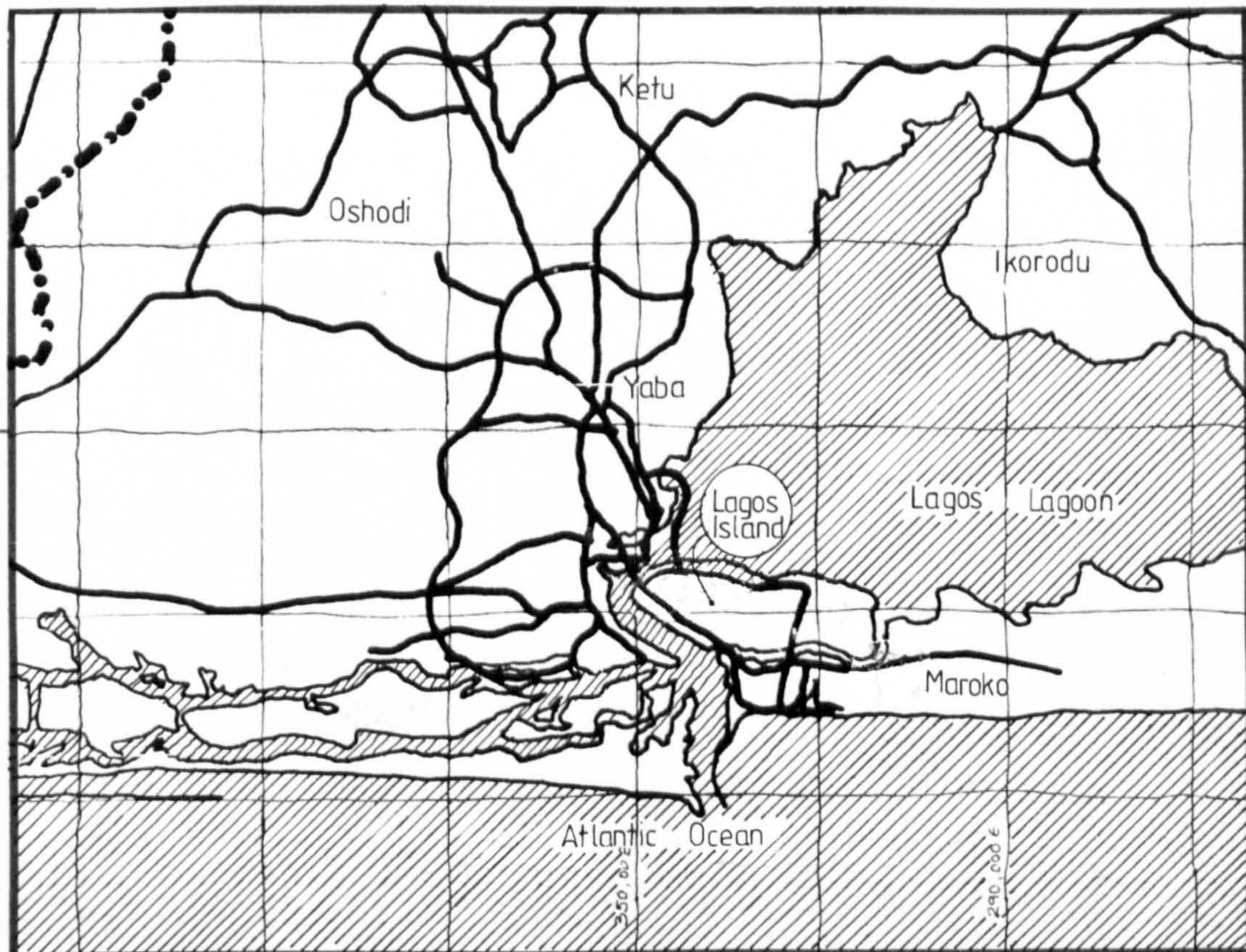
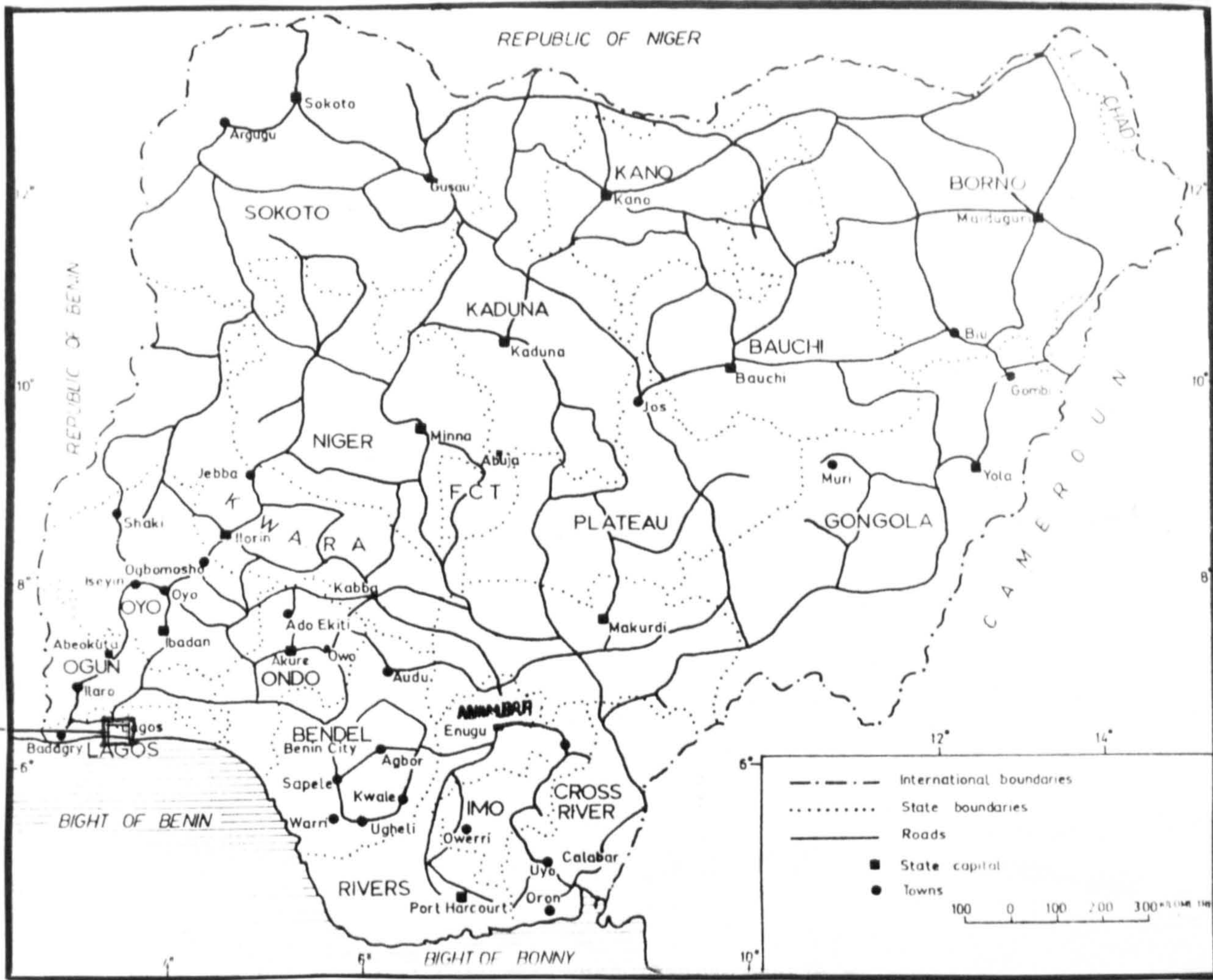


Figure 001. Geographic Maps of Nigeria and Metropolitan Lagos

Housing also forms the residential environment, in and around which the interaction of, access to and provision of these basic human needs (BHN)(1) required for the physical and mental health and the social wellbeing of the community can take place. Furthermore, this complexity, that is housing, "... involves phases of public health, planning, architecture and engineering, economics and finance, cultural and social traditions, government and the behavioural sciences, (that are) so intertwined with one another that it is difficult to isolate a single element for study, analysis and discussion ..." without involving the others (United Nations (WHO, 1961)).

Yet despite the ever increasing attention paid to housing politically and economically both at Federal and State levels with regard to the urban environment the substantial quantitative and qualitative housing deficiencies, are in fact getting progressively worse (Okpala, 1978 at pp.249-257; Awotona, 1978 at p.1) and may in the future continue to do so because: (i) the rate of construction of new houses coupled with the deterioration of existing housing stock is not commensurate with the rapid growth in urban population and, (ii) a distortion in the creation and distribution of wealth albeit with the massive increase in national prosperity puts even the most basic 'official' dwelling well beyond the affordability of the majority of the population. These factors are themselves the result of the interaction between a number of forces, characterised by a 'from above or centre down' type of modernisation experienced in Nigeria, the rapid growth in the urban economy and the resultant heavy migration from the rural areas (Stohr and Taylor, 1981). The combined effect of these forces has been the perpetuation of an underlying 'fractionalism' that pervades and characterises practically every aspect of the urban environment including housing (Drakakis-Smith, (1) see page 534.

1982 at p.20).

Many observers of this phenomenon tend to characterise the urban system by saying it has become divided into contrasting and often conflicting but related sectors, a modern sector and an informal sector (see chapt. 1). The consequence of this relationship on urban housing has been the creation of a fractionalised housing system. This fractionalism not only reflects the relationship between the two sectors but also their attitudes and approaches to housing and the housing problem.

On the one hand there is the dominant, policy determining modern sector which to all intents and purposes views housing in terms of numbers and standards, that is, in terms of the production and provision of a certain number of 'physical shelters' which are deemed sufficient to satisfy the housing needs of the population. These physical shelters are designed to meet specific building standards which will ensure an environment that conforms to specified concepts of health, safety, structure and human dignity - the 'deficit' view. In essence this approach puts the idea of housing as a 'commodity' beyond the financial means of those most in need of it (Wheaton, 1982 and 1983), the low income percentiles, especially those within the informal sector. These people are excluded from enjoying the protection of those standards and safeguards which are designed to protect householders.

The obverse view is that of the informal sector which perceives the housing issue not merely on the level of the acquisition of a 'commodity', but more as a major stepping stone towards its goal of fulfilling its non-material needs. These needs comprise elements such as proximity to work, greater mobility of residency and lower expenditure. When an attempt is made to put all these needs into practice, the result is that the lack of this specified 'commodity' as

perceived by the modern sector is not necessarily seen by the informal sector as a deficit. This situation echoes Turner's (1976) second law on housing, that the modern sector regards housing as what it is, whilst the informal sector views housing in terms of what it does.

The methods used by both sectors to resolve the housing problem are equally fractionalistic. With its 'commodity' approach, the modern sector tackles the (housing) problem principally in two ways. First, by finding methods of reducing the unit cost of housing by, for example, adopting the mass production techniques of industrialised countries which if effective tend to produce commodities (houses) better suited to consumption in industrialised countries with their industrialised housing system, higher disposable incomes and more temperate climate. Houses produced by this method are in most cases too expensive and are especially so in the case of the low income households who can afford neither to rent nor to buy them. They also prove too expensive for the Government to be able to subsidize them adequately.

Secondly, by increasing the disposable incomes of the population, - a measure usually achieved by adopting economic development policies which increase the Gross National Product (GNP) per capita of the nation. This approach has had very limited success in resolving the worsening housing situation. It has essentially benefited those in employment of the modern sector, i.e., the middle and higher income groups while simultaneously compounding the problem for the low income groups (Seers, 1971). For example, the field study (chapt. 4.) undertaken for this dissertation revealed that 72.7 per cent of respondent household heads on a selected public low cost housing estate in Lagos had an annual income of over *#2,800. However, such incomes are not prevalent amongst the majority of the respondent household heads in the selected 'informal-popular' and

*#1.00 - £0.76 - \$1.82 (1980)

'informal-traditional' housing environments (slums) in Lagos, where approximately 69.4 per cent and 67.2 per cent of respondent household heads respectively had annual incomes of ₦2,800 or less.

Given the nature and structure of Lagos' economy (see chapt. 1), this 'deficit' approach does not appear to take cognisance of the economy's fractionalism. The results of the studies clearly indicate that not only do the majority of the population (low income informal sector households) not participate directly in the modern economy, but that they have considerably lower productivity levels, and as a consequence are trapped in a position from which they are unable to generate the income necessary to enable them to form an effective demand for this 'commodity', housing. This fractionalised situation is further compounded by the fact that owing to its very limited executive, fiscal and physical housing resources, the modern sector is not only unable to meet the quantifiable material housing needs of the population at large but also its own sector's housing needs. The result of this is 'down raiding' - a practice whereby the higher income percentiles of the modern sector acquire for their own use, the slum housing of those in the informal sector.

Nevertheless, and for the most part, these informal sector households have housed themselves albeit in a rudimentary manner. With their priority needs approach to housing, many resort to squatting on public or private land, or residing with relatives or friends in order to satisfy these needs eg. proximity to work. The resultant overcrowding when residing with relatives and friends, and the shelters produced in most cases along rural or traditional lines create environments that go some way to helping these households meet their recognised needs. However, these dwellings are regarded and officially designated by the formal sector as slums and as such in most cases 'extra-legal'. Although these environments are not ideal,

access to shelter be it under a bridge or even a cardboard box may be the compromise which best suits user needs and means.

These areas which account for most of Lagos' environs, are creating a city which for all intents and purposes can be regarded as a city of the poor. The inability of Lagos' administrators, planners, tax collectors and health and building inspectors to tackle the overwhelming demand for housing is founded not solely on the sheer scale of the problem, but also on the fundamental misperception of the role of housing in the country's development process. These issues and other related factors are discussed more fully in chapter 2.

Following on from the review of the more contemporary urban housing situation chapter 3 makes a preliminary examination of a number of aspects of the traditional Yoruba urban settlements of south-western Nigeria with a view to highlighting some facets of the indigenous settlements that may be relevant in ameliorating the present condition of housing in Lagos.

Over a period of four months a survey was undertaken in three residential environments in metropolitan Lagos in support of a number of the housing issues outlined in the earlier chapters of the dissertation; namely the fractionalistic factor and its consequential effects on housing. Besides exploring the physical characteristics of the dwellings and neighbourhoods in the three chosen settlements, the survey also explored the nature of the households and their attitudes towards their dwellings and neighbourhoods. However, fundamental to the strategy of the survey was that it be couched in an approach which aimed to involve the user as to how and what they perceived as most needed in their housing environment.

Over the last couple of decades in various parts of the Third World this approach to housing has been gradually gaining acceptance by scholars, planners and others who are now recognising the benefits

that can be achieved by harnessing the initiative and resourcefulness of low income urban dwellers (Abrams, 1964; Koenigsberger, 1967; Turner and Fichter, 1972; Angel et. al., 1977). Paramount amongst these has been the introduction of community involved programs; the central aim of these programmes being the broader aspects of development such as education, health, security, political involvement and economic growth. Thus housing acts as a vehicle by which these goals can be achieved through a partnership between the authorities and the community and in support of the self-help efforts of local residents - one spin-off or outcome being improved housing conditions.

At the root of this housing approach is the realisation that social, economic, political, cultural, educational, health and housing aspects are all integral parts of a country's overall development (UNRISD, 74:117), and as such should always be taken into account and combined within the development plan, in conjunction with strong emphasis on "human resource development and popular participation" (UN, 1971 at p.273). The approach demands that development plans aim for participatory development of all groups including the low income groups which have hitherto and for the most part been alienated. It calls for the strategic re-orientation of planning, that will focus not only upon the amounts of products but also upon the kinds of products (applicable education, preventative health care etc.) that would be most appropriate in meeting the needs as identified by the particular nation or community.

Nevertheless, the evolution of housing policy in developing countries can be said to have undergone three fundamental threshold changes (Turner, 1983). Within this viewpoint the Nigeria - Lagos situation to date would appear to have gone little beyond the first threshold change, i.e., adopting a housing policy characterised by the

intervention of the State as an alternative developer or landlord or at least a principal promoter of low income and moderate income housing as proposed by the Third National Development Plan (1975 - 1980).

The second threshold in housing policy which has yet to be established in Lagos, essentially involves the recognition by the government that it can only house a very small proportion of low income households at relatively high subsidies. As a consequence of this and in order to maintain a significant role in housing, policy action moved away from direct construction of dwellings to one which emphasises improved tenure arrangements and the establishment of improved security of tenure, favourable financial arrangements and the site and service programmes, as highlighted by the review of some aspects of aided self-help housing in chapter 5. As indicated above this threshold has yet to be realised in Lagos - Nigeria and is primarily in the hands of the international non-governmental organisations and agencies with the government offering to provide some administrative and technical assistance when such projects or programmes present themselves.

The third threshold of policy change is marked by a shift from site and services projects and programmes to the kind of government intervention which increases local access to housing resources. Essentially this change represents a shift in attitude from central control to one of local enablement, support and participation by making institutional changes with regard to: i) the laws on planning and constructional standards, ii) security of tenure arrangements, iii) fund disbursement and credit generation, iv) administration and v) the decision making responsibilities between the parties involved, as demonstrated by the outline housing proposal in chapter 6.

Conclusive of both the survey and the proposal was the development

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of a user determined housing development methodology, which attempts to bring together a number of facets of the aided self-help approach into a quantifiable housing model.

There appears to be little doubt that if, in the future there are to be alternative methods of effectively tackling housing and its associated problems in urban environments such as metropolitan Lagos, there must be a fundamental change in attitude on the part of the authorities. The major plank of this shift in attitude would involve the authorities cooperating and establishing a partnership with the population at large on the housing issue, rather than dictating to it. From the authorities' view point, housing would form a major element in the overall development process as against a predetermined development objective based around standards and numbers. However, this change is beset with numerous difficulties, the chief one being a political shift, though it maybe a shift which the authorities may be unable or unwilling to make. However, it is submitted that, in the long run, an enlightened citizenry which is consulted by and actively participates with the authorities on housing and associated problems would be a better source for development than an uncooperative and ignorant one. With the publication of the 1986 Budget, the Nigerian Governemnt has made a a tentative move towards the concept of consultation and participation of the population at large. This appears to have been initiated with the setting up of a Political Bureau Panel, with the aim of establishing a viable political system through public discussion, consultation and participation leading to 'civilianisation' by 1990 (Weir, 1986 at p.61). With this in mind a housing approach based on consultation and participation may not only be supportive of this political aim, but could also contribute substantially in dealing with the complex housing issues of Nigeria.

Chapter 1

GROWTH, DEVELOPMENT AND THE MODERNISATION OF LAGOS.

1.01. Introduction

Over the last five centuries Lagos has grown from a humble fishing village in the early 15th century to a sprawling metropolis aiming at developing those types of environmental, social, political, cultural and economic systems that exist in industrialised countries.

From its humble origins, Lagos is now the capital of and the largest city in Nigeria. In terms of population it now has twice as many inhabitants as the next largest city, Ibadan. However, when viewed in relation to the capital cities of other less developed countries, Lagos' urbanisation is remarkably non-primate in demographic terms, as it constitutes only 4 per cent of the national population and 20 per cent of the national urban population. Moreover, these features do not reveal its economic dominance relative to the rest of the country: for example, by 1977-78 Lagos contained more than a third of the total number of wholesale outlets in the country and about a quarter of the total retail establishments in the formal sector, which accounted for over 60 per cent and 50 per cent respectively of Nigeria's employed population.

As an intergral part of the urban system housing forms the residential environment in and from which many of these aspects function, to isolate it as a seperate and unique segment of the urban system would indeed be to oversimplify it and its position. This chapter aims to explain this context by examining the historic perspectives of a number of these aspects.

1.02, Pre-Colonial Lagos

The origins of Lagos as of most (other) cities, is wrapped in myth and obscurity. According to Talbot, Lagos' earliest known inhabitants were under the domination of Benin before 1472 when the first Portuguese explorer, Sequeira arrived (Talbot, 1926; Akinsemoyin & Vaughan-Richards, 1977 at p.5). Talbot's view conflicts somewhat with that of other authors such as Baker (1974) and Kopytoff (1965 at p.11) who suggest that the first settlers who arrived during the 17th century were the Aworis, a sub-group of the Yoruba people who had originally migrated from Ile-Ife (Appendix II.).

This migration was the outcome of a dispute that erupted between

two brothers over the succession to the throne at Ile-Ife. A divine King after consultation with his oracle, ordained that the elder brother should leave the town with his supporters and follow the path of a basin of the Ogun river (Fig. 002). At various places on the southern route the basin stopped, Aro, Oke-Ata and Iseri, where some of the wanderers remained, but it was not until the basin actually disappeared 100 miles down stream at the place called Idumota, that the people ended their migration and established the first known settlement in Lagos. The name of the sub-group 'Aworis' derives from the response

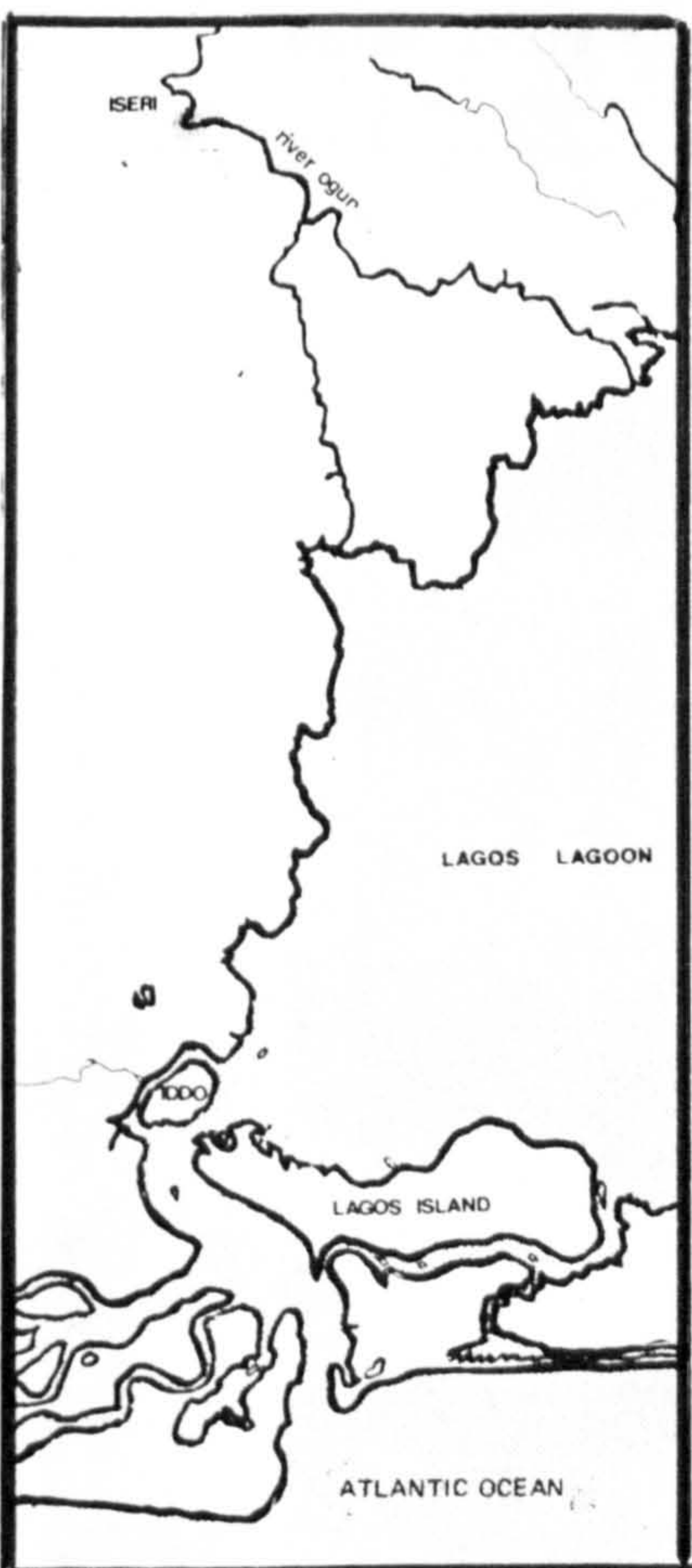


Figure 002. Settlement Location to the question "where is the basin". The Of Original Settlers Before Finding answer is 'awori' meaning "the basin has Sanctuary On Lagos Island. sunk".

The first settlement was located on the mainland in the area now known as Ebute-Metta, 'the three landings'. Owing to the danger of attack by warring tribes plaguing Yorubaland at that time the settlers moved to the island of Iddo to seek security. The Aworis were soon to be joined by people from neighbouring provinces particularly the Ijebus and the Egbas who made Lagos their trading centre.

The first crossing from Iddo to what is now Lagos island was made by Nta (Akinsemoyin & Vaughan-Richards). Nta who was better known as Aromire was one of the Olofin's (Ruler) sons, who soon after established a farm on the area which now houses the palace of the Oba (King) of Lagos. His success combined with the greater security from the civil unrest in the interior encouraged others to cross over to the island and establish the a town which today constitutes the city centre known as Isale Eko 'lower Lagos'.

The Olofin was reputed to have had thirty-two sons, amongst whom he distributed the land that is Lagos. He gave them white caps as an insignia of their status, a tradition unique in Yorubaland. The exact number that officially received this title is in dispute and varies from sixteen (Baker, *ibid.*), ten (Akinsomeyin & Vaughan-Richards, *ibid.*) to four (Elias, *dnk*). Coker (1966 at p.212) submits that the theory that the white cap chiefs were originally sixteen in number and are now eleven (or ten)(3) has found greater support and judicial recognition. This emblem still endures today and denotes a special class of headman known as the Idejo or White-Cap chiefs, who symbolically own much of the land in and around the city.

Shortly after the migration and after several attempts, the Oba of Benin successfully invaded and conquered Lagos after the Olofin was allegedly betrayed by his wife, Ajaje. During the conflict one of the Bini war captains, said to have been the son of the Oba of Benin was killed in battle and his body was brought home by a Yoruba chief named

(3) see page 536.

Ashipa. As a reward Ashipa was appointed war chief and supreme ruler of Lagos by the Oba of Benin, thus becoming progenitor of the royal dynasty from which future Obas of Lagos were and are chosen (Losi, 1967).

For two centuries Lagos had been paying tribute to the Benin Empire, but through the years the observance became more of a salute and gradually the 'Elekos' (kings installed by the Oba of Benin) threw off the yoke of Benin and became virtually independent. In fact by the middle of the 19th century the payment of the tribute was refused and the Eleko asserted his independence and became the outright Oba of Lagos.

The Obas appointed by Benin to rule Lagos did not usurp the traditional rights and land held by the families who had earlier settled in Lagos according to Yoruba tradition. This traditional Yoruba succession to land and rights derived from it was later ignored by the British not only in Lagos but also in the rest of Yorubaland under the colonial direct and indirect rule policies. These policies resulted in violence especially in the Yoruba hinterland with uprisings and riots being the order of the day. The colonial government embarked upon these policies primarily because it believed that they would provide a cheap, viable means of administering the colony which relied as much as possible on existing political institutions. But the institutions which they chose to recognise were in many cases those which had lost much of their authority to the local military chiefs during the 19th century.

The Obas were not like the autocratic rulers in Northern Nigeria with whom the power lay and therefore through whom administrative directives could be issued. Power, which had primarily rested with the chiefs of the towns shifted sharply in favour of the Oba who now thanks to the British, had a degree of independence from his chiefs

which he had not previously enjoyed: some Obas were even given jurisdiction over towns they had never controlled before. By contrast the Oba of Lagos had all his political and economic rights abrogated under the direct rule policy.

By this time Lagos had drastically changed from a small fishing village to a prime commercial centre on the West African coast. In 1730 it was reputed that 70,000 slaves were being shipped annually from West Africa and by the end of the century this number had increased to 200,000. This vast increase in the traffic of humans was essentially due to events that were taking place in the interior. The Yoruba empire of Oyo was disintegrating with the Fulanis pressing on its northern boundaries and the kingdom of Dahomey on its the west. The old capital, Oyo lost its ascendancy and the subordinate city states of the empire began to ravage each other in an internecine struggle that lasted until the intervention of the British. The great surge in the expansion of the slave trade for Lagos came with the suppression of this trade by the British in 1807. Marris (1961) states that the export of the slaves between 1829 and 1849 was as high if not higher than fifty years earlier. Estimates of the total volume of human cargo over the 350 year practice, which peaked in Lagos at the time when other slave stations were dying, ranged between 15 and 20 millions, these figure representing only those that survived the Atlantic crossing. Lagos owes its success as a slave port to two factors:

- (i) its geographic location and protected harbour,
- (ii) the open encouragement of the trade by the Oba (eg. Kosoko) and the city's chiefs who would divide the proceeds derived from the revenue paid by the Portuguese slave traders.

This situation continued until New Years Day 1852 when the British successfully attacked and occupied Lagos. Oba Kosoko was deposed and

Akintoye installed in his place. Akinyoye signed a treaty promising to abolish slave trading, human sacrifice, the execution of prisoners of war, and to open Lagos to missionaries and legitimate trade. By the middle of the 19th century Lagos saw the arrival of the westernised African immigrants, the missionaries, the establishment of British consular rule and the opening of a new chapter in the development of Lagos.

The following sections attempt briefly to illuminate on the socio-demographic and socio-structural changes that appear to have been concomitant with the growth and development of Lagos.

1.03. Socio-structural Aspects

Apart from the establishment of the traditional Yoruba social organisation, which was essentially introduced with the arrival and settlement of the migrants from Ile-Ife, Lagos did not undergo the sort of major change in its social organisation which placed a person's social status on the ascriptive elements of his/her descent group membership, age and sex. Towards the middle of the 19th century however, a major change began with the establishment of a new social structure primarily composed of the Colonial administrative staff, Europeans, traders, the Saros, Amoros or Agudas, missionaries and Egba refugees from Abeokuta.

The Saros constituted one of the most important immigrant groups to arrive in Lagos. They were the descendants of the 19th century liberated slaves who had been freed during the first few decades of the century and had originally settled in Freetown, Sierra Leone but later migrated to Lagos. During the period in Freetown they had received a Christian education from the missionaries and were mostly professional men of Yoruba ancestry who shared the Victorian values of the British officialdom, with whom they combined to establish an

Anglo-African oligarchy (Baker, 1974 at p.271). The Saros stood between the two worlds of European and African culture and were distinguished from other Lagosians by their unique background. They emulated English behaviour and mannerisms, rejected native authority and adopted Christianity; but most Saros were also fully conscious of their Yoruba origins and in some cases supported African practices of domestic slavery and polygamy and the maintenance of native churches within the missions. They held themselves socially aloof from the indigenous community and in the eyes of the latter seemed to be more related to the white man and more comfortable in his environment than in the traditional African setting.

Many in fact sent their children to Great Britain for higher education and became the first generation of European trained African lawyers, doctors, surveyors and journalists in Lagos. Most of them inter-married with other Saros and thereby continued the pattern of social exclusivity. They conspicuously displayed their wealth and culture by letting "it be known that they had been places, seen the sights and had achieved a rank that no ordinary native in Lagos hoped to match" (Brown, 1964 at p.37). Despite their humble background, Lagos Saros were soon regarded by Africans and Europeans alike as a sophisticated elite with wealth, status and power.

The second group of immigrants, the Amoros or Agudas, were self-emancipated slaves who came from Brazil and Cuba. This group although not as highly educated as the Saros, had nevertheless learnt a trade during their time in bondage and aquired skills such as bricklaying and carpentry. These skills they used to great effect in the by now rapidly expanding Lagos. The third group of immigrants were the Egba refugees, who had been expelled from Abeokuta in 1867 as part of a widespread Christian purge. The European missionaries and their converts, whom the colonial authourities were obliged to resettle,

were given tracks of land at Ebute Metta.

The next stage of change came during the middle of the 20th century with the development of a local literate elite. This was essentially the product of the spread of education during the colonial period. The effects of education were quite strong. Substantial amounts of evidence by various authors have demonstrated its effect on fertility, child-bearing, marriage and the roles of husband and wife.

Even though substantial changes did take place many of the educated and wealthy elite maintained close contact with their poor kin and home towns. Variations in education and status within the same group of full siblings were not uncommon; often a civil servant would have a brother who was a farmer or petty trader. According to Fades (1980), the children of this elite began increasingly to monopolise the education system and, as a consequence he suggests, they initiated a quasi-hereditary group which he predicts would eventually sever its links with the rest of the population. This prediction is based on an unsound premise for many of the elite belong to some ethnic group or other and are as such bound to their communities by a variety of "primordial ties" (Aranson, 1971 at pp.263-281). These ties are part of the kinship laws, customs and the heritage which continue to bind the elite to their home communities and the obligations imposed by them are many and onerous. Some examples of these obligations are; securing a heel for a political constituency 'back home', gaining cheap building land and commercial opportunities. This has led to the belief that the society is more vertically stratified than horizontally stratified.

The decades after Independence witnessed a number of social changes some of which came about as a result of the civil war but the majority were the consequence of the explosive expansion of the economy which accompanied the oil boom and the expansion of the Civil Service. The

population of Lagos grew rapidly with mass migration from the rural and urban corners of Nigeria. These socio-demographic changes as illustrated below highlight this expansion.

1.04. Socio-demographic Aspects

Prior to the enumerations of 1866 putting the its population at 25,083 estimates of the city's population at the turn of the century had been put at about 5,000 persons.

The decennial census undertaken by the colonial administration in 1871 estimated the Lagos population at some 28,518 persons. On examining the social make-up it was found that the Saros and Amoros were equally divided and constituted about 40 per cent of the population. The European community constituted less than 0.4 per cent and the indigenous and other local immigrants made up the greater part of the population. By 1901 the population of the city had reached 41,847 with the first half of the 20th century witnessing a five fold increase to 230,256 by 1950. The rapidity of this increase was due not only to the heavy inmigration but also to the natural increase resulting from improved health facilities and environmental conditions. At present trends the population in 1984 was estimated at 8.406 millions and if these continues it will be 12.949 millions by the turn of century (Table 001.).

Although the present land area of Lagos when compared to that of Nigeria as a whole, amounts to little over 0.4 per cent, it does accommodate over 5 per cent of the estimated 80 million population of the country. Of this urban population a sizeable proportion is under 30years of age (fig. 003)(table 002.). It would appear that the population Lagos has, over the decades, exhibited a youthful characteristic, with significant increases in the relative size of this group occuring between 1931 and 1976. This sizeable increase can

in the main be attributed to two essential factors; firstly, a decline in the infant mortality rate coupled with the 'improved' health facilities and thus boosting the growth rate of the 0-9 age group. Relative to the rest of Nigeria, i.e., the areas with an infant mortality rate put at over 150 per 1,000 born, infant mortality in Lagos is put at around 70 per 1,000. However, when compared to other countries of a similar per capita income Nigeria and Lagos do not fare very well (World Bank Report, 1981).

Table 001. Lagos Population (1866-2000)

Year of Census	Area covered by census	Total Pop. Metro. Lagos	Percentage of Lagos State	Annual Growth Rate
1866	-	25,083	-	-
1871	1.5	28,518	-	-
1881	1.5	37,452	-	-
1891	1.5	32,508	-	-
1901	-	41,847	-	2.5
1911	18.0	73,766	-	5.7
1921	20.2	99,690	-	3.1
1931	25.6	126,108	-	2.3
1941	-	-	-	-
1950	27.2	230,256	-	3.3
1952	26.9	354,396	-	9.4
1963	26.9	951,677	-	9.6
1976	68.9	3,100,000	-	-
1978	104.7	3,779,000	87.88	9.37
1979	-	4,133,000	88.31	9.37
1980	-	4,518,000	88.72	7.27
1984	-	6,048,000	89.81	7.27
1990	-	8,406,000	90.72	4.48
2000	-	12,949,000	90.98	-

Sources: i) Akin L. Mabogunje (1968)
 ii) Pauline H. Baker (1974)
 iii) A. A. Awotona (1981)

Secondly, migration is probably the primary contributive factor to the massive urban population expansion, especially of the 10-19 and 20-29 age groups.

This migration is primarily the outcome of a kind of 'push' and

'pull' mechanism. The 'pull' factors are the attractions of urban life. The opportunity for non-agricultural industrial male oriented employment and access to social amenities are practically non-existent in the rural areas. The 'push' factors concern the failure of rural living, low incomes related to urban incomes, few non-agricultural jobs, heavy manual labour and the association of farming with illiteracy and backwardness. The cash incomes in the rural areas being inadequate to meet their rising level of expectation, Lagos thus offers the opportunity to meet these expectations. The search for better economic conditions (higher wages, higher income potential and employment opportunities) appear to over-ride the socio-cultural and

Table 002. Age Distribution in Lagos between 1931-1976 (By Percentage)

Age Group	Lagos				Nigeria (1963)
	1931	1950	1963	1976	
0-9	17.4	21.8	25.9	28.4	32.3
10-19	19.5	20.2	19.8	20.1	20.1
20-29	24.8	25.3	29.3	25.2	22.4
30-39	17.1	15.8	13.4	13.5	12.2
40-49	9.0	8.2	6.6	6.9	6.4
50-59	4.1	3.6	2.9	3.1	
60+	3.5	1.7	-	-	-
	100	100	100	100	100

Sources: i) Annual Abstract of Statistics 1975 (F.O.S. Lagos, 1979)

ii) 1931, 1950, 1963 Census

iii) "Statistical Survey of Lagos State, Nov./Dec. 1976" (Lagos State Ministry of Economic Development and Establishments, 1978).

psychological difficulties encountered by the newly arrived migrant. Studies of the informal areas (slums) of Lagos indicate that economic factors exerted a greater influence than non-economic ones for up to 81 per cent of the population, in that constraints in the rural areas gave an impetus for the move to Lagos. In spite of the considerable attention given to the phenomenon of rural-urban and urban-urban migration little is known about the prevailing conditions in rural areas beyond the knowledge that the concentration of social, economic and political activities in the cities has generated the expectation of an escape from the drudgery and desolation of rural life. The result is often disorganisation of both the rural and older urban communities.

Farmers themselves have become conscious of the limited opportunities which farming offers for attaining the 'good things' of life. They view the city as the primary source of such things and hoping to realise their ambitions, come to the city by themselves or even with their family or just send their children to stay with relatives or friends, in order that they may have an opportunity of attending school. The aim is that by attending school the children will not become farmers but will be provided with an escape route from the traditional rural society (Damachi, 1973) and given an opportunity of participating in the formal sector activities. In a survey carried out by Olusanya (1969), on the socio-economic basis of rural-urban migration in south western Nigeria, 89 per cent of the parents interviewed thought it was a good thing for the children to migrate into the cities, whilst 71 per cent of the children interviewed expected to take up some occupation other than farming. This is apparently because there are simply no good opportunities for making a decent livelihood in the rural areas (fig. 004)(table 003.).

Interestingly though, the groups below 15 years of age and above 40 years of age have more females and a lower sex ratio. This could be accounted for by the trend that out-migration takes places, especially for the above 40 years old group, possibly indicating retirement and the desire to return to their State of origin 'home town'.

These dramatic increases in migration to the cities coupled with an increase in the natural growth rate (itself the outcome of, amongst other things, improved health care facilities) can also be associated

Table 003. Migrant Population (Between 1960-1965)

Age and Sex Ratio (Percentage)

Age Group	Male	Female	Total	Sex Ratio
0-4	0.4	2.0	2.4	20
5-9	5.5	8.0	13.5	68
10-14	6.4	6.6	13.0	96
15-19	8.6	1.6	10.2	537
20-24	27.1	11.7	38.8	231
25-29	6.9	5.8	12.7	118
30-34	-1.3	1.0	-0.3	-130
35-39	2.0	0.3	2.3	666
40-44	0.6	0.8	1.4	75
45-49	0.1	0.3	0.4	33
50-54	0.3	1.0	1.2	30
55-59	0.4	0.4	0.8	100
60+	2.3	2.8	5.1	82
Total	59.3	40.7	100.0	140

Source: Human Resources Unit, University of Lagos.

with the establishment of major infra-structural routes, most of

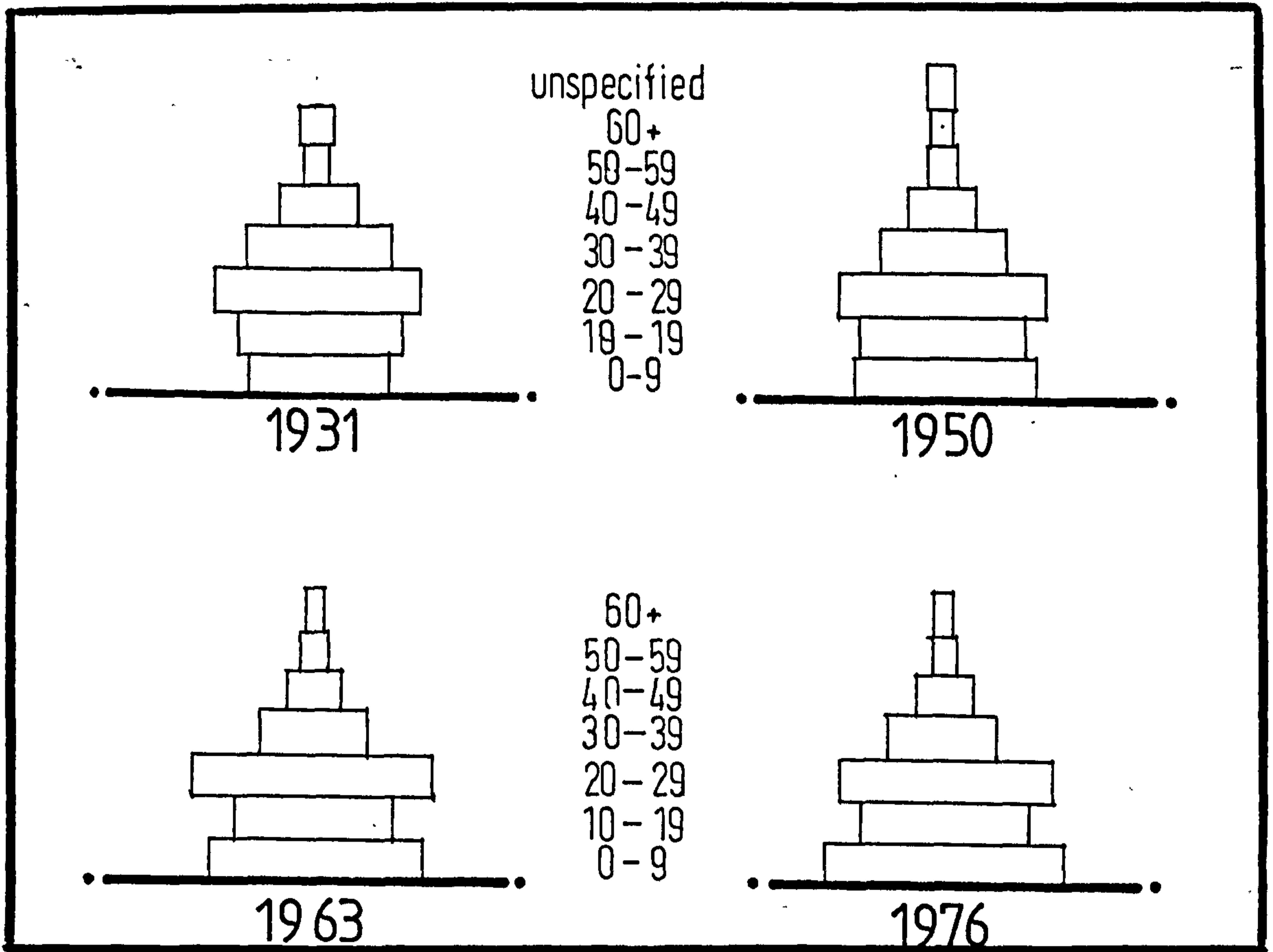


Figure 003. Age Distribution Percentage (Lagos), 1931 - 1976.
Sources: See Table 002.

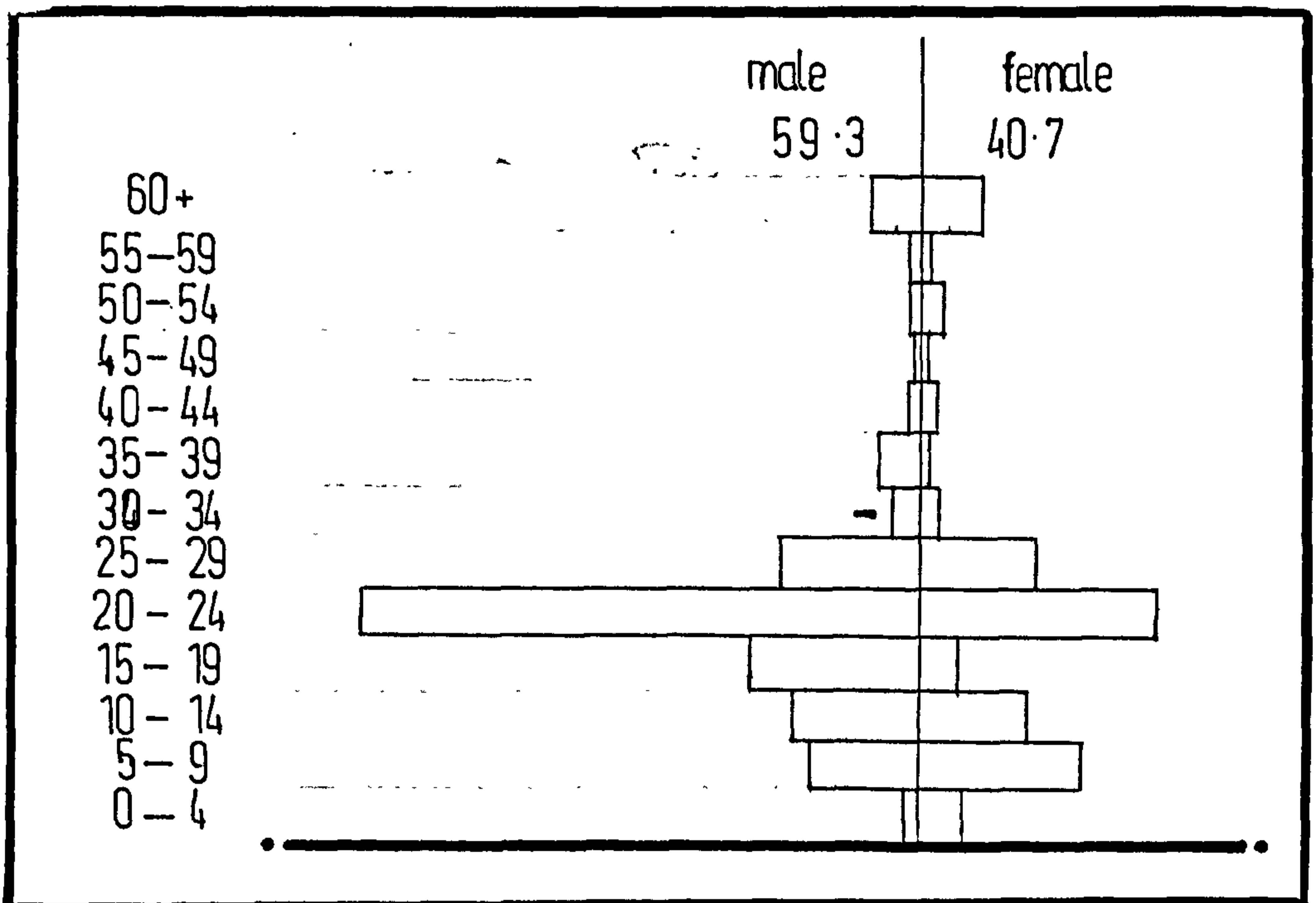


Figure 004. Migrant Age/Sex Distribution (Percentage), Lagos 1960 - 1965.
Source: See Table 003.

which either emanate or terminate in Lagos as illustrated in fig 006. (table 005.). Of these migrants the majority come from the adjacent States. Thus as fig 006. and table 005. illustrate, up to 27 per cent of the migrant population come from Ogun State, 12 per cent from Oyo State, 6.9 per cent and 6 per cent from Ondo and Imo respectively. Once these migrants have arrived in the city the influence of primordial ties comes into play. In other words within the city there appears to be a spatial distribution reflective of the ethnic characteristics of the population.

Table 004. Urban Sex Ratio (Lagos) 1871-1978

Year	Males per 100 Females	Males as Percentage of Population
1871	90	47.4
1881	108	52.0
1891	93	48.2
1901	102	50.6
1911	118	54.0
1921	135	57.5
1931	126	55.6
1950	119	54.2
1952	116	53.8
1963	131	56.7
1972	98	49.5
1976	120	54.5
1978	120	54.6

Source: O. Adegbola (1975)

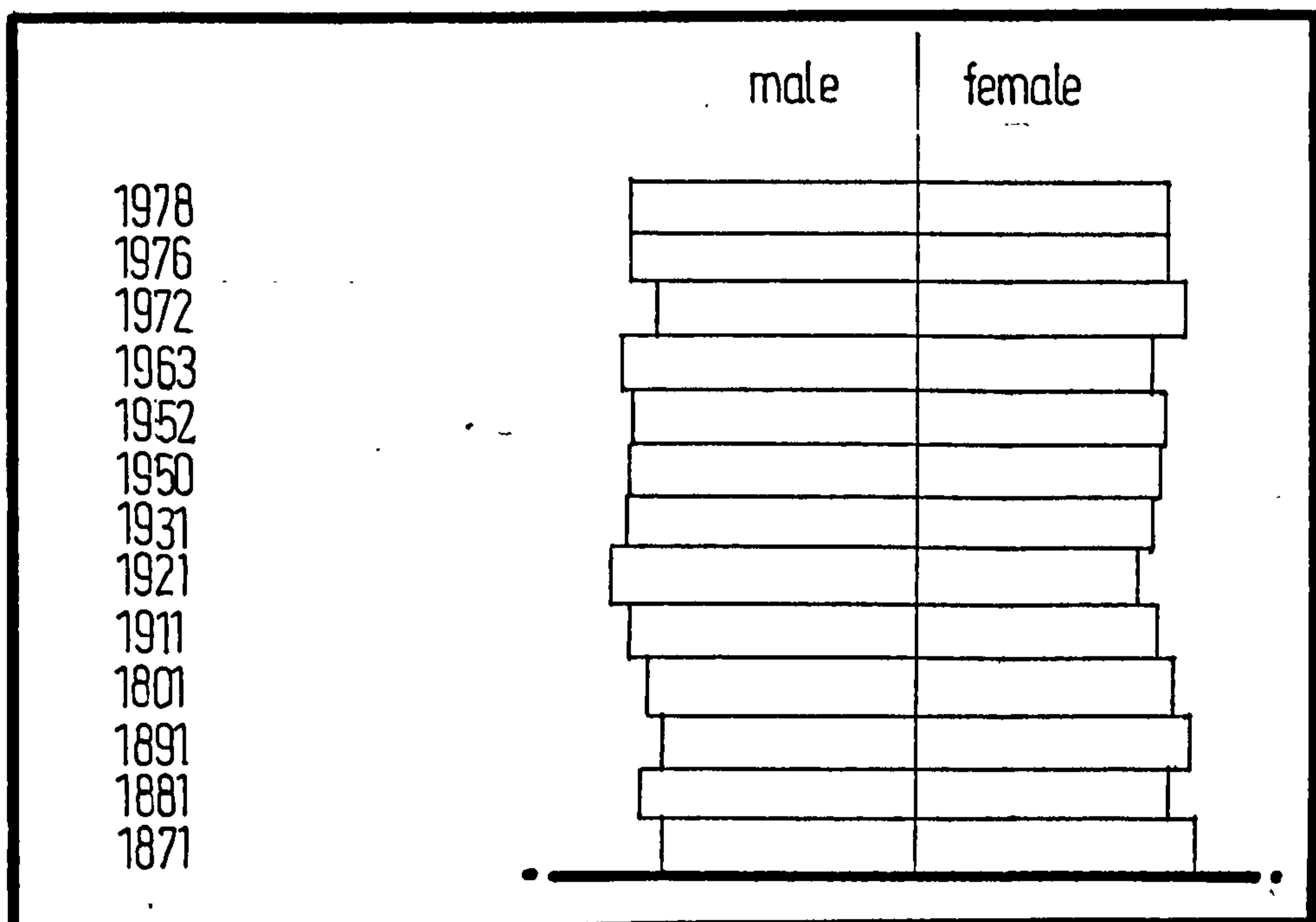


Figure 005. Urban Sex Distribution Percentage (Lagos 1871 - 1978).
Source: O. Adegbola (1975).

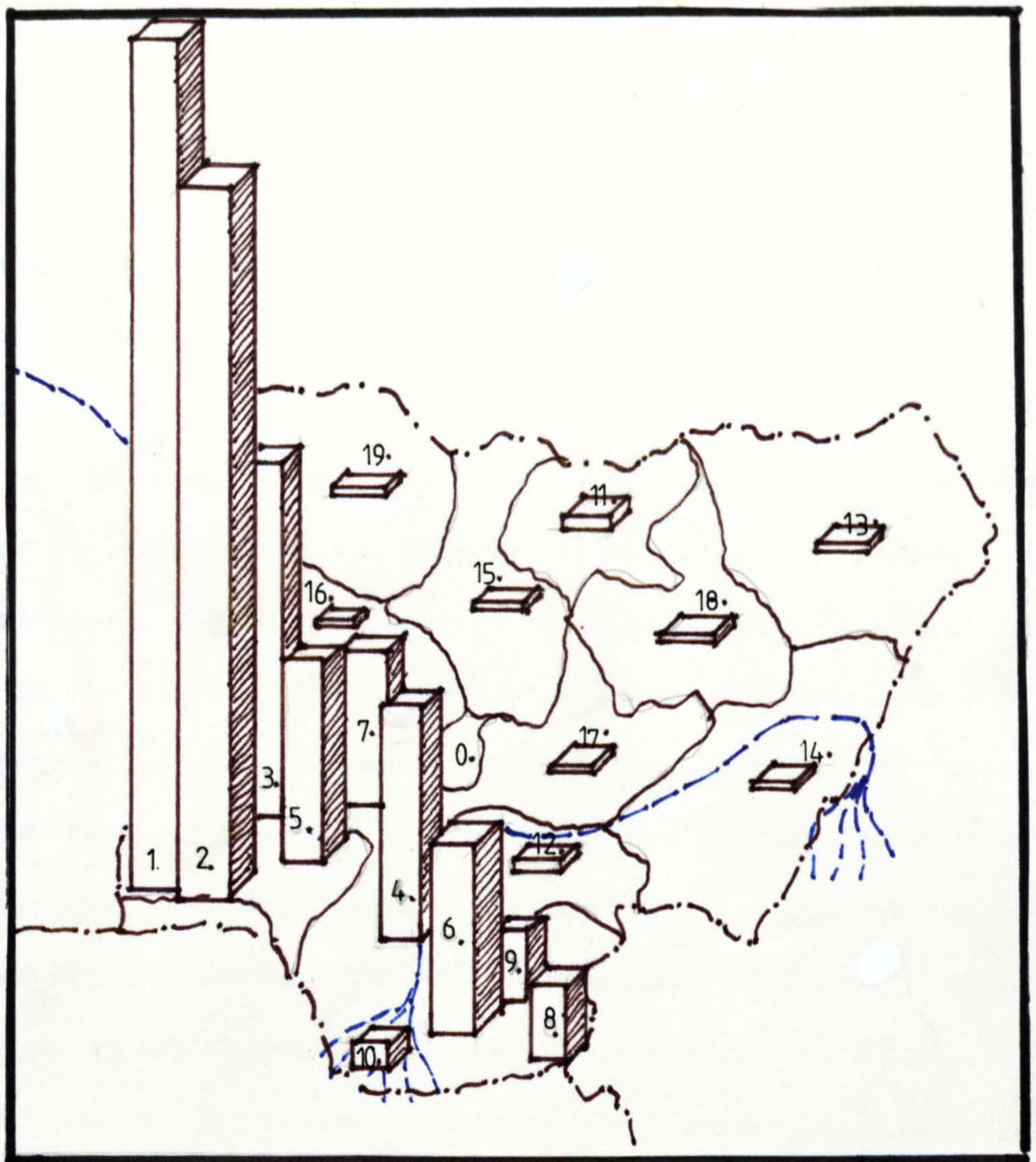


Figure 006. Percentage Distribution of Migrants By State of Origin (1976).

Table 005. Population Distribution (Percentage) State of Origin (1976)

State of Origin		Percentage
Lagos	1.	25.14
Oyo	3.	12.14
Ondo	5.	6.90
Ogun	2.	27.10
Anambra	9.	2.03
Imo	6.	6.08
Cross Rivers	8.	2.44
Rivers	10.	0.96
Plateau	17.	0.09
Kaduna	15.	0.15
Benue	12.	0.49
Kano	11.	0.62
Kwara	7.	5.18
Bendel	4.	8.17
Niger	16.	0.12
Borno	13.	0.23
Sokoto	19.	0.05
Bauchi	18.	0.06
Gongola	14.	0.23
Others	0.	1.71

Source: Lagos State Government, Ministry of Economic Development and Establishments.

1.05. Economic Aspect

The cession of Lagos and its emergence as a Crown Colony in 1861 saw one of the major developments in the nature of the economy, with its character changing from that of an essentially 'Lagos-centric' economy, based on trading in slaves, gold, ivory, cotton and tailed peppers to one that was subservient to British interests; the economy became primarily structured to produce, administer and export a limited range of crops needed to feed the rapidly expanding British industries. In the light of this change, the growth and development of the Lagos economy over the following decades was very rapid. These exports varied from palm produce which represented some 75 per cent of the total export to rubber, timber, cotton, coffee, cocoa and maize. Textiles, spirits, tobacco, building materials, salt and other provisions constituted the major imports. By 1870 more than £1million pounds worth of goods passed through the port annually. This was a success that led the Colonial Secretary, George C. Denton to comment in the Annual Colonial Reports of 1890 (at p.20) that:

"Lagos has a future of considerable importance before it. It is free from debt, has a trade of about £1.25 millions, and collects a revenue of between £70,000 and £75,000 a year with the lowest custom tariffs known". Geary (1965 at pp.24-67), comments similarly that as a result of an active export-import trade, Lagos was rapidly becoming "the ideal colony, self-supporting and self protecting ... so constant was the surplus of revenue over expenditure that in 1896, before it was necessary to raise money by loan for the large capital expenditure required for bridges and the railways, there was a credit balance of over £50,000, invested in England".

As the expansion into the interior progressed so Lagos continued to evolve into a dynamic commercial centre whose character contrasted

sharply with the rest of the surrounding land. With this evolution and development came the division of the city's economy- a division which gave rise to a sharp contrast between the sophisticated 'formal sector' economy of the European and Saro communities and the 'informal sector' economy of the indigenous communities. That division still exists albeit in a somewhat modified form and pervades practically every aspect of the urban environment.

By 1912 the railway had reached Kano, 700 miles into the interior and points further north, thus permitting more varied and valuable exports to flow in larger quantities to the southern ports. The growth of trade was so rapid, that by 1953 berthing facilities became inadequate and an additional £3.25 million was expended on increasing the docks capacity. 1946 saw the introduction of development planning in Nigeria. This came about as a result of the Colonial Development and Welfare Act of 1945, which required the Colonial Administration to submit a Ten Year Development Plan to guide the allocation of colonial development and welfare funds. The Plan was primarily concerned with the aim of having a smoothly functioning colonial administration. Up till then projects had neither been co-ordinated nor related to any overall economic role (Central Planning Office, 1978). The main emphasis was on the development and expansion of a limited range of export materials needed to feed British industries and for the building-up of transport and communication systems to facilitate both transportation of these materials to the sea ports of Lagos and Port Harcourt and to ease the movement of colonial administrators around the colony.

The main objective of this strategy, according to Filani (1981 at p.285) was the export expansion of semi-processed raw materials. This industrial activity was characterised by saw-milling, sheet-rubber manufacturing, tin-ore mining, cotton ginning, groundnut shelling and

ground oil extraction. So much so that by 1959 there were some 2,400 establishments in Lagos employing approximately 40,000 workers.

Since independence in 1960, Nigeria has maintained the concept of development planning with the adoption of the Keynesian macro-economic planning strategy and the production of periodic five-year national development plans (NDP). Mabogunje (1977 at p.19), comments that the main characteristic of this strategy is the reliance on 'monetary and fiscal policies to generate the appropriate stream of total spending so as to assure steady growth with full employment and no inflation. To this end four NDPs have so far been launched. The first (1962-68), the second (1970-74), the third (1975-80) and the fourth (1981-85) with the fifth hopefully (1986-1990).

The outcome of adopting this kind of development strategy has, according to Filani (1981 at p.293) created a paradox for Nigeria, in which the 'State' has grown wealthier with regards to a phenomenal increase in its Gross National Product (GNP) while at the same time not conferring any relative improvement on the plight of the population at large and the entrenchment of the formal-informal structure.

The brief review below illustrates this situation, in terms of formal and informal sector employment and income distribution and productivity of the Lagos economy during the third NDP period. In economic terms, the modern sector here essentially consists of economic activities under conditions in which production methods, consumption patterns, business organisation, levels of personal sophistication, relationships with various units of the economy are officially established. The informal sector consisting essentially of the rest of the generated income.

The analysis below examines these aspects across the sectoral divisions of the economy. As such the primary, secondary and tertiary

sectors of the economy are divided up into nine activity sectors each of which (except public administration) has a formal and informal component. Both these components are added together to make up what is here referred to as 'metro-global' activities.

The primary sector essentially comprises of:

1. the agriculture, forestry and fishing sector;
2. the mining and quarrying sector;

The secondary sector is essentially made up of:

3. the manufacturing component of the economy.

The tertiary sector or the service sector is made up of a number of activity sectors such as:

4. Utilities, namely electricity, water and gas
5. Building and construction;
6. Distribution - this covers a multitude of wholesale and retail trade from importing companies and department stores of the formal sector to the single individual selling a few goods at a make-shift stall in the informal sector.
7. Transport and communications;
8. Public administration;
9. Other activities not under the above groups, such as banking, of her financial services finance and professional activities or road side automobile repairs go to make up the 'other services'.

Based on the 1975 figures (Master Plan Project Unit, 1980), which put the proportion of the population of working age at 63.5 per cent with a labour force participation rate of this group at 65.4 per cent, the potential labour force population of the city can be estimated at some 1,161,000. Taking into account unemployment for that year, put at approximately 18 per cent, the total employment force can be estimated at 953,500. However, this relatively high figure is rather distorted by the high level of under-employment usually associated with and

accounted for by the informal sector. Theoretically this sector employs a large number of people but at subsistence incomes.

In fig 007. below, distribution(6) accounts for upto 38.2 per cent of the employed population, with services(4) accounting for 19.3 per cent including public administration(8).

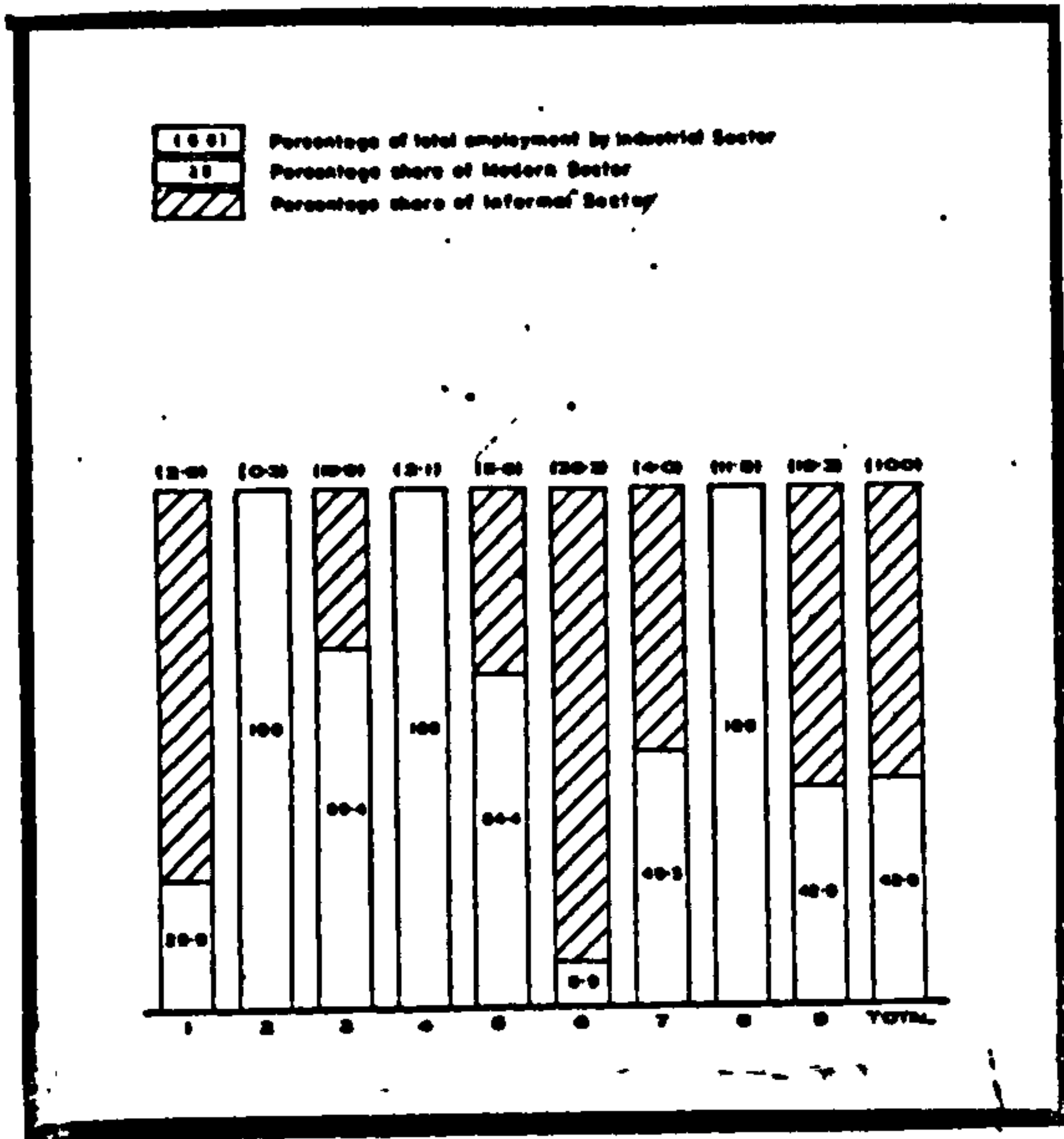


Figure 007. Employment By Activity Centre.

Collectively, the tertiary sector or service sector of the economy accounts for some 70 per cent of the employed work force. The secondary sector which covers manufacturing(3) only accounts for about 24 per cent of the employed population while the primary sector which, owing to the size of Lagos State and its relatively high urbanisation accounts for only 3 per cent of the employed population with fisheries predominating.

The fig 008., illustrates the employment distribution between the formal and informal sectors by activities' sectors.

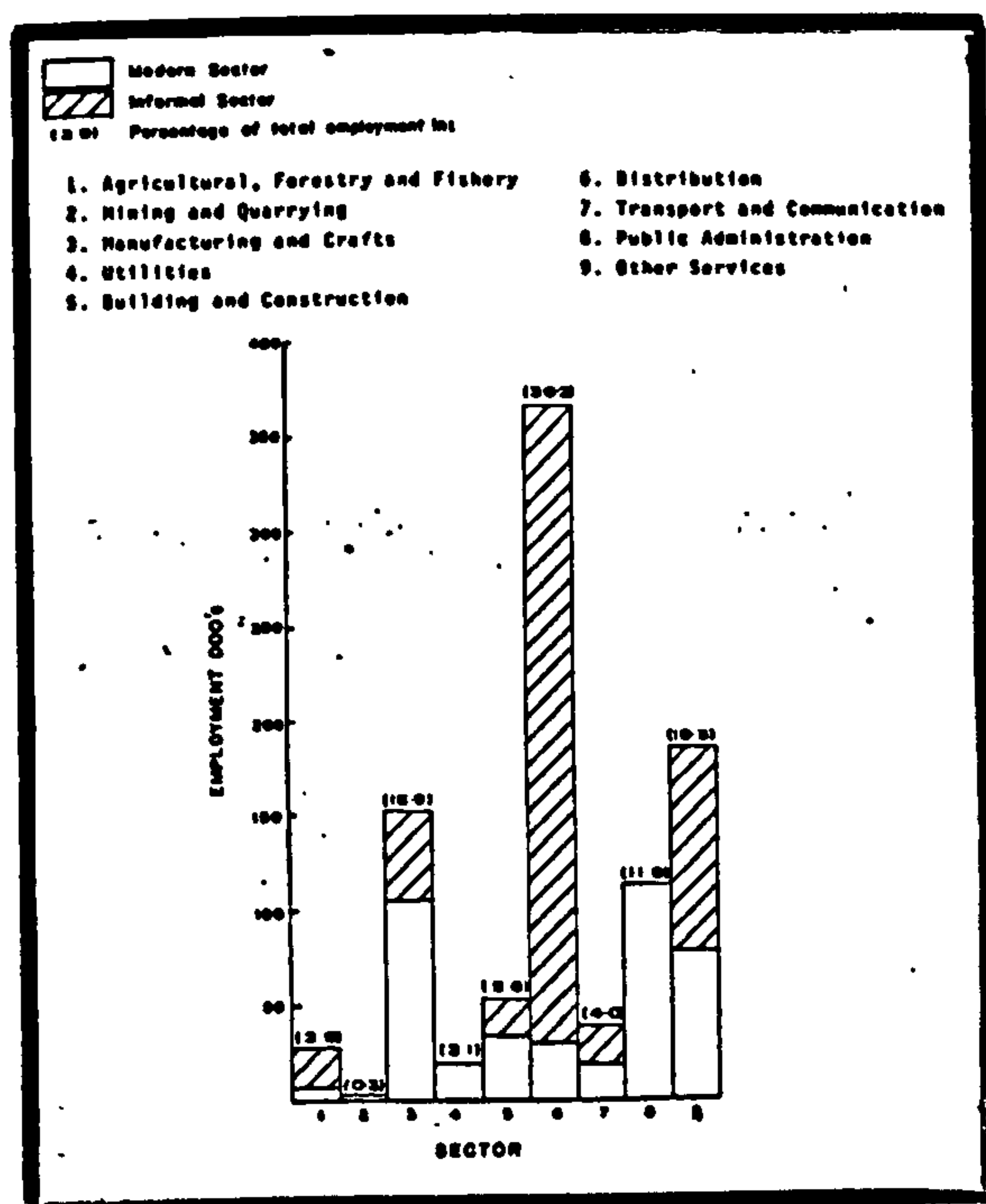


Figure 008. Formal And Informal Employment Share By Activity Sectors.

This demonstrates that of the total formal sector employment, some 42.8 per cent of the employed work force are employed in the public administration and manufacturing activity sectors. Although the informal sector accounted for over 57.2 per cent, it can be seen that

a great proportion of the

population was employed in the tertiary or service sector, accounting for some 91.1 per cent of the employed in the distribution sector and 50 per cent of the transport and communication sector.

With regards to output however, the informal sector contributes less than 14 per cent of the total 'value added'. In this case value

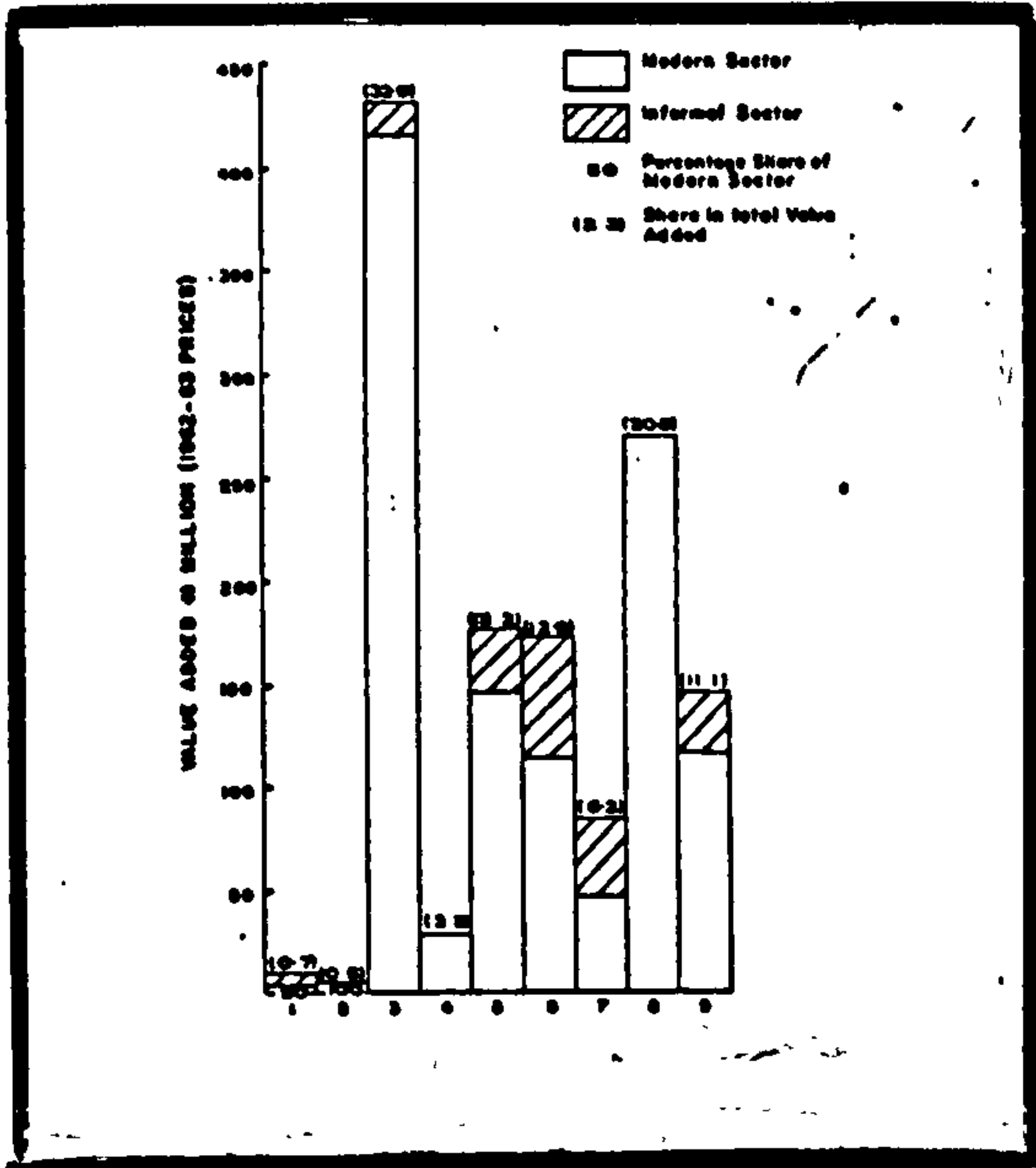


Figure 009. Value Added By Activity Sector.

added means the gross output minus industrial costs - with the formal sector accounting for a minority of the employed account for approximately 86 per cent of the wealth created. Figure 009. and tab.006. illustrates this across the various activity sectors. Manufacturing and public administration accounting for up to 53 per cent of the wealth created.

Further analysis and comparison of the output of the employed workforce and that of the value added by activity sector highlights the difference in the degree of

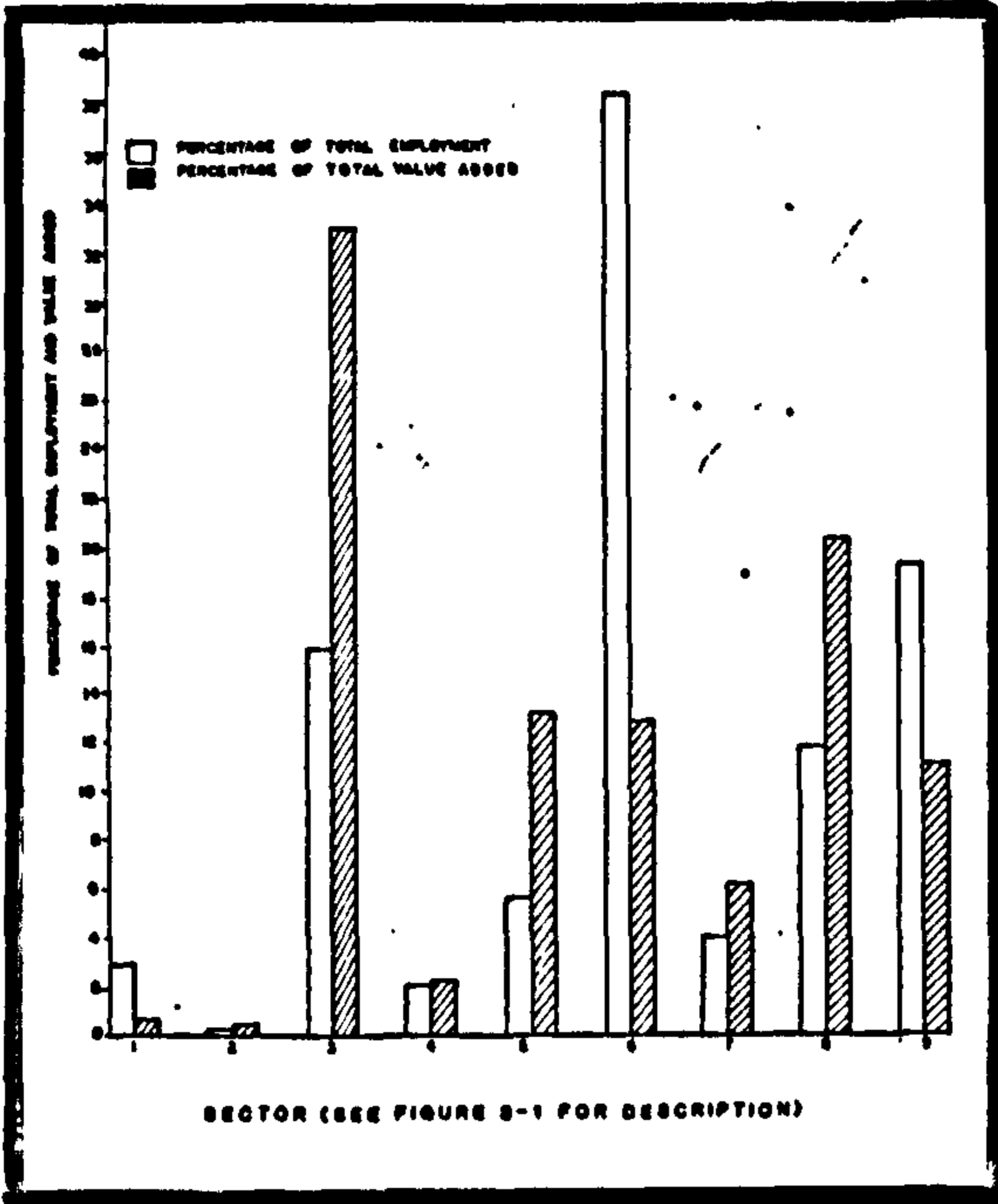
Sector	% of Value Added	% of Employment	Value Added/Worker (1962-63 Naira)		
			Metro-Global	Modern	Informal
1. Agriculture, Forestry and Fishery	0.7	2.9	324	647	216
2. Mining and Quarrying	0.5	0.3	2,240	2,240	-
3. Manufacturing and Crafts	32.9	15.9	2,888	3,962	459
4. Utilities	2.3	2.1	1,398	1,398	-
5. Building and Construction	13.2	5.6	3,304	4,293	1,518
6. Distribution	12.9	38.2	470	3,690	175
7. Transport and Communication	6.2	4.0	2,149	2,433	1,872
8. Public Administration	20.3	11.8	2,401	2,401	-
9. Other Services	11.1	19.3	804	1,600	300
10. Total	100.0	100.0	1,392	2,814	332

Table 006. Value Added And Employment By Activity Sectors.

under-employment between the formal and informal sectors (fig. 010.). From these figures it can be seen that the construction and building industry exhibit's the highest productivity per worker, this applies even to the informal sector workers. However, other activity sectors such as

distribution show relatively low productivity.

When compared to the rest of Nigeria (fig 011.) the spread of the

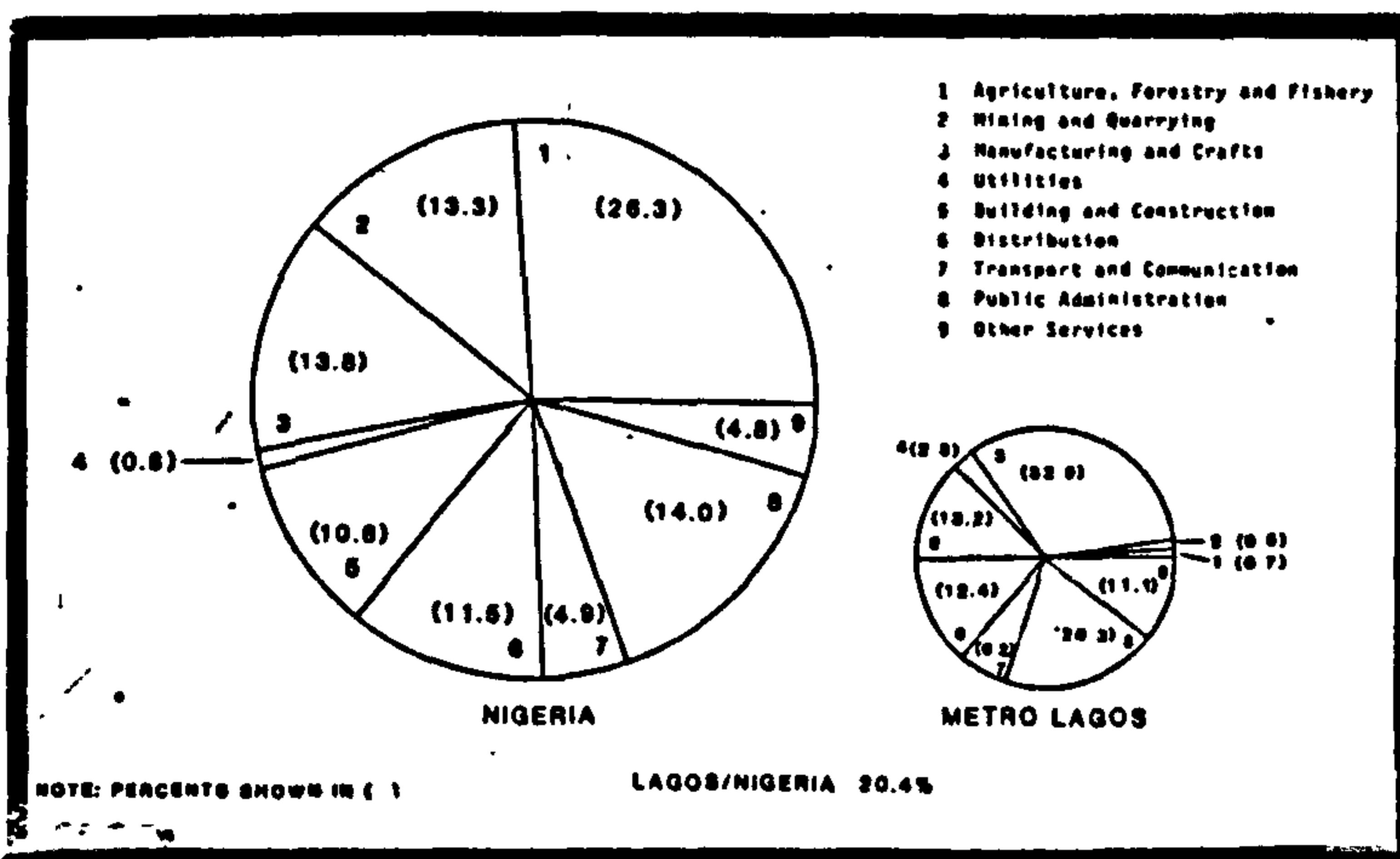


value added by activity sector exhibits a marked difference. The 'wealthiest' activity sector is the primary sector which accounts for about 40 per cent of the value added of the country at large, the secondary sector accounting for 13.8 per cent as against 32.9 per cent for Lagos.

Figure 010. Value Added And Employment By Activity Sectors.

When examined in terms of formal/informal sector value added distribution the relative

proportion differs from the 86 per cent - 14 per cent to 70 per cent - 30 per cent. However, when examined in employment terms it can be seen that the formal sector employs only 7.5 per cent of the national workforce. The Lagos formal sector accounts for approximately 25 per



cent of the value added for the national formal sector, a sizeable share of which has in fact been growing from 10.5 per cent in 1958 to 20 per cent in 1975, but which in the light of the recession has seen a decrease.

Figure 011. Sectorial Distribution Of Total Value Added For Nigeria And Lagos.

The dominance of the informal sector employment population is mainly due to the influx of the rural migrants and the inadequate growth of appropriate productive urban employment opportunities. It is

the combination of these aspects that primarily differentiates the early stages of economic development in say Europe, where urbanisation followed increases in manufacturing activity, from countries like Nigeria where urbanisation has taken place before industrialisation. According to Stohr and Taylor, (1981 at p.1), this state of affairs is borne out by the nature of the overall strategy of Nigeria's development.

This 'from-above' or 'centre-down' development -fuelled by oil revenues - is essentially outward looking or externally orientated, urban and industrial in nature, capital intensive, dominated by high technology and large construction projects; it is extremely vulnerable to the fluctuations of international economic factors (Stohr and Taylor, *ibid.*), such as the present world recession and oil crisis. The consequences of this development approach on the new, young and relatively unskilled urban population are that the great majority find themselves either unemployed or under-employed, existing at subsistence levels and unable to afford any form of prescribed 'official' housing. This is a condition that has been confirmed by studies on living conditions and incomes of the informal sector (Fapohunda, 1977 and Chapter 4.)

1.06, Environmental Aspect

The environmental aspect probably constitutes the most important ecological and spatial manifestation of the changes associated with the process of rapid urbanisation. The metropolitan area of Lagos differs from many Nigerian cities in that its urban land uses are so mixed that it is difficult to differentiate them accurately. Studies on its land use (Ayeni, 1977) suggest that the residential constituent occupies about 50 per cent of the total settled area of the metropolis, while industrial usage occupies some 11.31 per cent (table 007). Other major users of land are educational institutions which occupy 5.73 per cent, commercial activities which occupy 3.92 per cent, transport which occupies 8.88 per cent; and administration which occupies 3.02 per cent (fig 012.). Over the period between 1886 - 1976 the settled area of the city has increased from about 3.97km² to an estimated 271.20km² (Ayeni, 1978)(fig 013.).

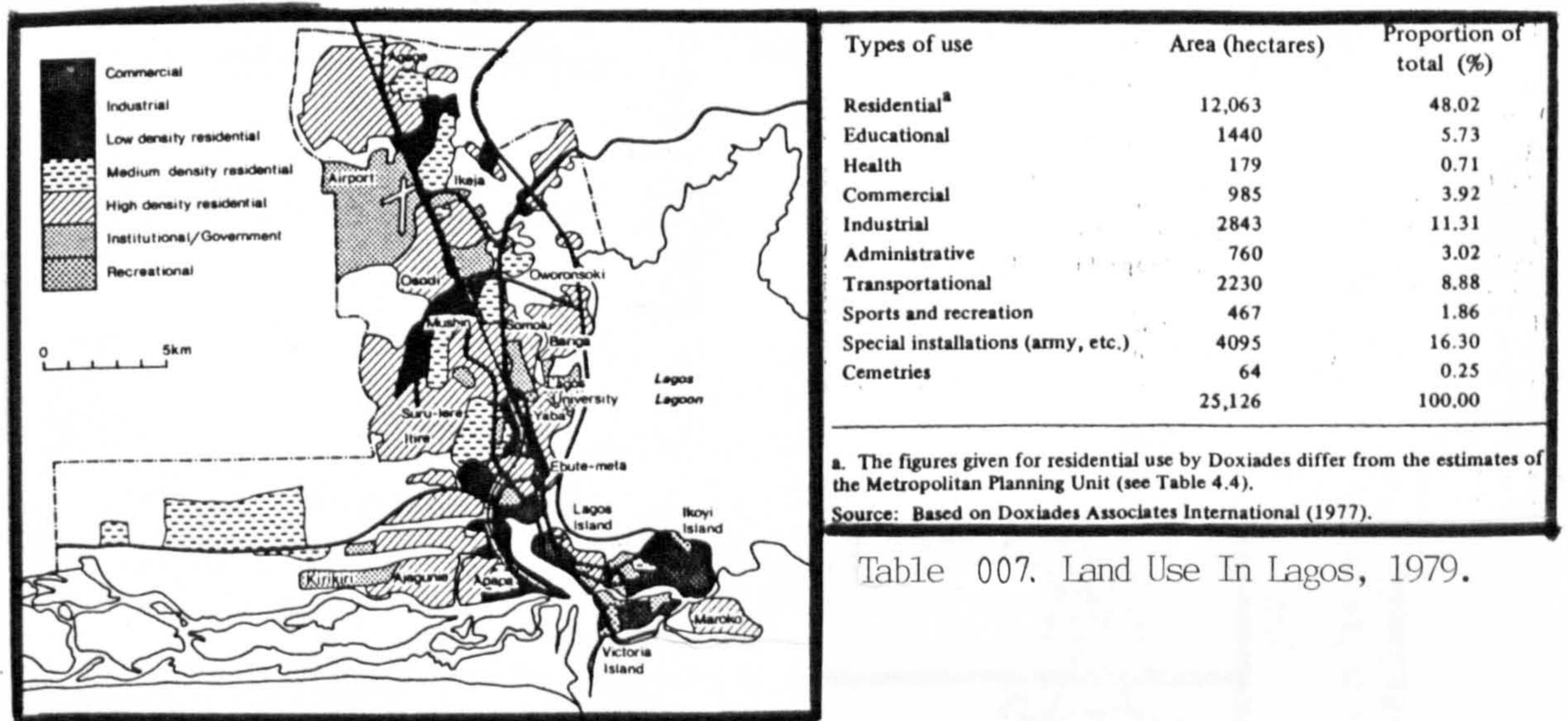


Figure 012. Land Use In Lagos, 1979.

The particular residential distribution which characterises Lagos (Table 008.), has been the outcome of a number of influential factors

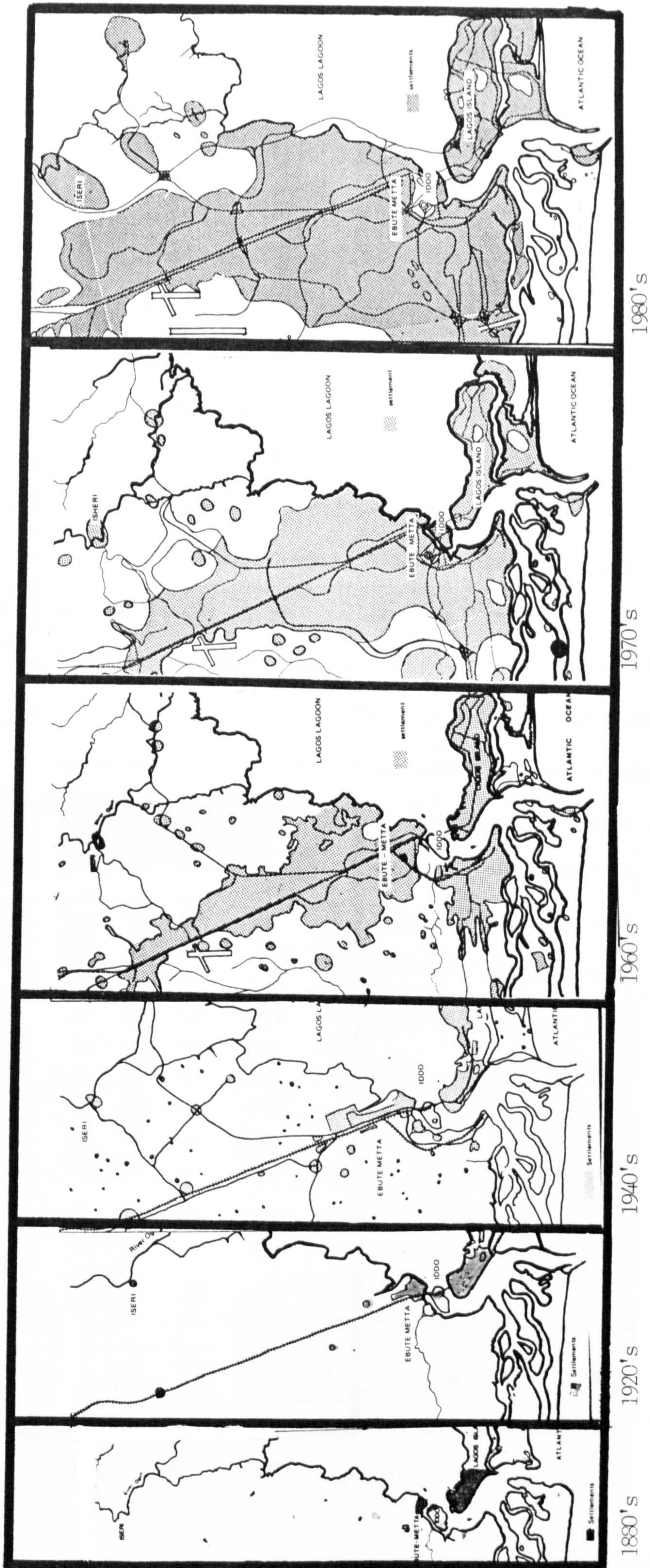


Figure 013. Settlement Growth Of Metropolitan Lagos, 1860's - 1980's
 Source: Akinsemoyin & Vaughan-Richards, 1977.

that have taken place over the last century and a half. The first and possibly the most significant is that which came with the ceding of Lagos and the adoption by the colonial administration of the 'Dual Mandate' policy. This policy set out an urban planning pattern in which the colonialists were, as much as possible, physically segregated from the subject population (Home, 1983 at pp.165-175). The outcome of the policy was, on the one hand, the creation of garden city residential areas such as Ikoyi which were exclusive to the colonialists and their servants (ibid.), and on the other, neglected indigenous areas such as Isale-Eko. It was an environmental arrangement which in broad terms persists till this day.

The second major change with regards to the environment and housing came with the tide of the oil boom era. This era saw widespread developments and a massive migration of poor, ill-educated and unskilled rural people to the city. Due to lack of housing and income the majority of which concentrated in the informal unplanned

Zones	Total area (hectares)	Built-up area	Gross residential area	Fraction residential (%)	Estimated inhabitants (thousands)	Number of houses
Agege	2428	1139	910	79.9	393.6	13,404
Airport-Sogunle	2783	2414	403	16.7	131.8	4006
Ikeja	2010	1353	820	60.6	144.2	6040
Oregun-Ketu	2358	590	293	49.7	138.0	2513
Mushin NW	940	624	197	31.6	30.6	1115
Ijeshatedo, Iire	876	704	615	87.4	250.3	5943
Mushin W, Surulere N	565	506	388	75.7	298.8	4627
Mushin Central	323	302	193	63.9	289.7	4301
Mushin E, Bariga	1837	881	697	79.1	480.5	9431
Surulere S, Ebute-Metta	1274	1012	537	53.1	143.6	5762
Yaba S, Ebute-Metta E	980	834	427	51.2	242.6	5864
Amuwo Town, Festac Town	4553	1716	553	32.2	12.2	721
Iganmu, Ajegunle, Apapa	2586	1771	1044	59.0	519.0	9318
Lagos Island N	361	281	128	45.6	243.1	5487
CBD and Institutions	163	158	6	3.8	9.5	-
Ikoyi West	409	317	114	36.0	33.8	1247
Ikoyi East	720	591	524	88.7	51.3	2332
Victoria Island	505	358	194	54.2	14.4	939
Maroko	514	234	222	94.9	85.4	3117
	27,120	16,177	8288	51.0	3519.0	86,197

Source: Lagos State Ministry of Works and Planning (1977).

urban slums or shantytowns. The result of these occurrences was the creation of particular residential environments which can be closely associated with the traditional, formal and informal characteristics of other aspects of the urban system, e.g., the economy.

The formal sector residential areas can be broadly categorised into government residential areas such as Ikoyi, Victoria Island, Ikeja and Apapa

Table 008. Residential Land Distribution In Lagos, 1976.

to name but a few and the modern residential development areas such as parts of Surulere, Maryland, Ilupeju, Dolphin and Palmgrove (table 008.). The government residential areas are in essence a legacy of the colonial era. The housing to be found in these areas is of a relatively high standard, being generously interspersed with large

Zones of the Metropolis	Total number of houses	Inhabitants per house	Inhabitants per household	Inhabitants per room
Agege	13,404	29.4	3.1	5.0
Airport-Sogunle	4006	32.9	8.2	3.7
Ikeja	6040	23.9	5.7	3.8
Oregun, Ketu	2513	54.9	4.7	3.2
Mushin NW	1115	27.4	4.5	2.5
Ijeshatedo, Itire	5943	43.1	5.9	4.0
Mushin W, Surulere N	4627	64.6	5.1	3.5
Mushin Central	4301	67.4	6.1	4.5
Mushin E, Bariga	9431	50.9	5.1	3.1
Surulere S, Ebute-Metta	5762	24.9	-	-
Yaba S, Ebute-Metta E	5864	41.4	5.1	4.1
Amuwo, Festac Town	721	16.9	3.7	1.6
Iganmu, Ajegunle-Apapa	9318	55.7	5.8	4.2
Lagos Island N	5487	44.3	8.8	5.4
CBD and institutions	-	-	-	-
Ikoyi West	1247	27.1	7.6	4.1
Ikoyi East	2332	21.9	-	-
Victoria Island	939	15.3	-	-
Maroko	3117	27.4	5.4	3.7
Total	86,197	40.8	5.8	4.1

Source: Lagos State Ministry of Works and Planning (1977).

Table 009. Housing Characteristics In Lagos, 1976.

gardens and having relatively low population densities approximately 150 persons per hectare. Access to accommodation in these areas is very closely linked with occupational status, with residents being either senior civil servants and government ministers and the local elite from the private sector or expatriates. The modern development areas are a more recent occurrence and consist of both public and private housing. The houses are generally built to a fairly high standard within a formally planned layout. The residential densities within these areas are however not as low as those in the Government residential areas and are put at approximately 400 persons per hectare. Access to accommodation in these areas is either by income or 'connection' (who you know) or a combination of both, and the residents tend to be a mixture of indigenous and migrant workers from the middle to high income groups.

On the other hand there are the informal sector residential areas which can also be broadly categorised into area types, reflecting the traditional areas such as Isale Eko and the stranger (immigrant) areas

such as Ajegunle, parts of Oshodi, Ketu, Ojola, Maroko, Shomolu and parts of Mushin (table 009.). The traditional areas are the oldest settled areas of Lagos and constitute a sizeable proportion of Lagos Island. These areas are characterised by traditional compounds, in which the courtyard forms the focal point (an organic morphological component and the most dominant spatial element). The 'houses' are usually built to a relatively low standard as compared to the government areas and in most cases lack basic services and amenities with no proper or effective system of refuse disposal. Population densities within these areas are very high with estimates put at some 1,899 persons per hectare. Access to accommodation is via

Type of amenities	Maroko (%)	Ajgunle (%)	Ojola (%)	Mushin (%)	Central Lagos (%)
Houses with piped water	0.0	76.0	0.0	42.0	50.0
Houses with wells	36.8	15.0	10.0	0.0	0.0
Houses with electricity	0.0	97.0	100.0	100.0	97.5
Types of toilet:					
pail	54.0	78.0	0.0	8.0	33.3
pit	33.3	18.0	100.0	62.0	27.3
water closet	2.1	0.0	0.0	20.0	39.3
Kitchen with adequate facilities	21.5	23.0	35.0	56.0	50.0

Source: Ayeni (1977).

the family, with inhabitants of the compound being in most cases almost entirely composed of a group of patrilineally related persons. It is known that some compound house as many as 300 descendants.

Table 010. Household Amenities In Slum Areas Of Lagos, 1975.

The stranger areas have residential conditions similar to those in the traditional areas. These houses too are usually built to relatively low standards of construction and also lack basic sanitary amenities (table 010.). In general they are physically 'unplanned' and are officially designated as slums. The occupancy rates are high with population densities estimated at an average of about 750 persons per hectare. Access to this accommodation although relatively more open than to those mentioned above tends to have a degree of area related ethnicity. The great proportion of these residents are poor and have low incomes. These areas house approximately 83.5 per cent of the population of Lagos (Master Plan Project Unit Bulletin No.3, based on the

Qualitative Land Survey 1976) and the majority of the houses are rented on a room by room basis. In general these rooming houses are one to three storey, multi-occupancy buildings. Each dwelling unit being made up of a household within one or two rooms. The households share the use of facilities such as bathroom, kitchen, lavatory, front door and corridors with the other households in the building. In the main most of these areas are officially regarded as slums (fig. 014.).

1.07. Concluding Remarks

The earlier sections of this chapter have illustrated the growth and development of Lagos over the past few centuries, a growth which was both accentuated and altered by cession to Britain in the mid nineteenth century. Colonisation brought a change to Lagos and a marked pattern of growth and development which established a structure (modern and traditional sectors) extant today. This structure owes its existence to a combination of direct and indirect rule policies employed by the British. Although Lagos was ruled directly by the British governor, there were several areas within the city which were more or less left to govern themselves, viz., Isale-Eko - these were left to their own devices so to speak; in otherwords there was a virtual 'freezing out' of this and other areas like it from the modernisation and growth of Lagos during the colonial era. The stunting effect of this policy is clearly visible today - to all intents and purposes Isale-Eko, surrounded by the apparent opulence and architectural splendour of Manhattan and City of London skylines is struggling valiantly to become a part of twentieth century Lagos. This kind of modernisation commonly associated with colonialisation has, according to a number of authours such as Geertz (1963), Eisenstadt (1966), Balandier (1966), King (1976), Castells (1977), Mehmet (1978) and many others been described as unbalanced or dualistic in nature.

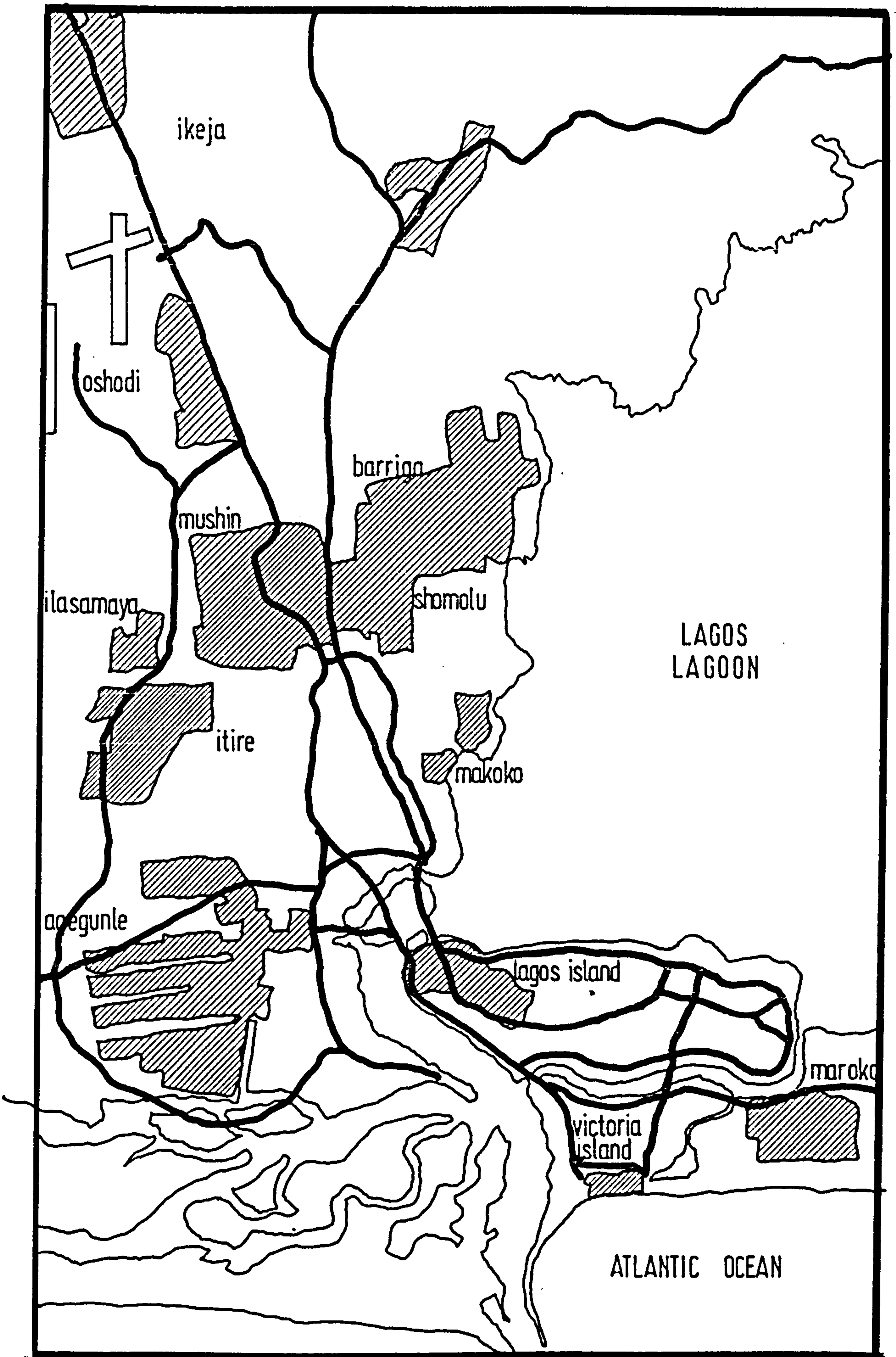


Figure 014. Officially Designated Slum Areas. (1980)

Source: Awotona A. 1981

A century later (the 1950's) more fundamental changes took place with the advent of national and social movements which had developed within the dualistic system and were highly sensitive to it. These new movements having been founded on the premise of ridding Lagos and the rest of Nigeria of dualistic development and its attendant consequences with the added promise of replacing the 'system' with modern structures appealing to the aspirations of the mass of the population found themselves on the horns of a dilemma. The dilemma being that they inherited at Independence a dualistic system which they could not utilise to fulfil their earlier promises of satisfying the aspirations of the people. In effect the structure established under colonialism had taken very deep roots which the new movements for all their enthusiasm and efforts could not dislodge.

After Independence and with the realisation that in order to satisfy the demands of the populace, the ever-growing gulf between the modern and traditional sectors would have to be bridged, the original aims of the new movements (now the government) were modified (e.g. National Development Plan, 1975) The Government saw that the new symbols of national identity had to be forged from a very diverse grouping of ethnic, religious and ideological traditions which, in the main still determined the allegiances of most of the population (Shils, ob.cit; Nash, 1959 at pp.137-151; Kautsky, 1962).

In endeavouring to achieve these objectives whilst also avoiding the problems associated with adopting ethnically biased policies, development strategies similar to those tried and tested in developed countries including those related to housing (although now under question, Coleman, 1985) were adopted. However, three and a half decades of Independence have not resolved this situation and in some instances may have worsened it. In principle the housing policies do not appear to have taken cognisance of the diverse and dualistic

political, economic, social, and cultural aspects of the housing needs of the population and especially that of low income households. The Government's inability to bridge the gulf between the modern and traditional sectors has resulted in the growth and development of a hybrid (informal) housing sector. This informal sector is developing a uniquely Nigerian character by utilising and harmonising traditional and modern housing techniques in an attempt to meet the user's housing priorities. In effect the lack of recognition of this sector's basic housing needs has banished the traditional and informal sector households to the shanty towns or slums which dominate the residential environment of Lagos. The so-called low cost housing projects designed to help bridge the gulf and act as symbols of modernisation in practice symbolise the gulf and the alienation created by it.

It must be emphasised that the adoption of these housing policies is not wholly based on political symbolism because they also play a social and economic role in the overall modernisation and development process. An economic role in which "the inputs into housing are seen as forming an optional mix in which the marginal contribution to the income from the housing sector plus its marginal income effect on the non-housing sector is equal to the decrease in contribution of the non housing sector resulting from an additional investment in housing" (Klaassen & Burns, 1963), which are then transmitted back into the economy through physiological and psychological channels (Burns and Khing Tjioe, 1970). However, in the Nigerian context, the importance and the contributory role of housing as part and parcel of the development and modernisation process was not realised until the Third National Development Plan (1975). Prior to this, housing had been considered a low priority sector and was essentially regarded as a "social overhead" (NDP, 1975). A possible reason for this attitude, given the particular circumstances of a country like Nigeria, could be

the fact that no clear evaluation of such an investment in quantifiable terms within a cost benefit framework existed, especially with regards to modern sector housing policies and the traditional and informal sectors.

In time it is hoped that this informal housing sector will come to be regarded as a starting point from which housing policies even within a national development plan can be launched. Working within such an approach the Government's goals of improving the housing conditions of the population at large could probably be achieved by co-operation and partnership between it and the population. This strategy has been used successfully in Jarkarta, the capital and largest city in Indonesia (under the Jakarta Improvement Programme (JIP)), and has improved the housing conditions in almost all the depressed (slum) areas under the project's jurisdiction. In Jakarta 50 per cent of the city's population of six million have had their living environment improved in under a decade. The spin-off from this co-operative approach between the Government and the population at large would be the bridging of the social, political and cultural gulf between the sectors which would not have been achieved otherwise. It is to be hoped that Jakarta's experience will be repeated in Lagos in the not too distant future.

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SOME ASPECTS OF HOUSING IN NIGERIA

With an emphasis on Lagos

2.01. Introduction

This chapter briefly reviews the Nigerian housing situation with reference to Lagos and examines it within the framework of a number aspects, such as, direct construction, rent control, laissez-faire attitudes, availability of finance, access to land, building materials, manpower, building standards and the establishment of upgrading programmes, self-help schemes, etc. In addition, there is a brief discussion on the issues of housing needs, demands and deficits.

2.02. Accessibility to Land

Land probably constitutes the most important element of the housing process and accessibility to it is determined by the form of tenure system that operates. In Nigeria at present, this access is frustrated by the complex tenure structure that is in operation.

Traditionally, under customary tenure, land belonged to the 'community' (family, village or town) and could not be alienated. All the members of the community had and arguably still have, rights to that land (Lloyd, 1962 at pp.64-65). The head of the community had charge of the land, holding it as trustee, until such time as members (co-owners) of the community required the use of it. Should such member(s) require use of the land he or they would be required to petition the community head for permission, the individuals(s) concerned did not however acquire 'ownership', but were merely being granted the use of the land by the community which still remained in

the ownership of the community.

Although no terminology exists in English law by which the members' rights to the land can be (aptly) described, the term 'corporate' is the closest approximation to the description of the community members' rights with regard to this particular system of land tenure. These rights, it must be stressed, do not derive from the corporate rights of the community as such but exist through the operation of customary law, (in other words, the rights of the members could be inferior to, coterminous with or indeed superior to the sum total of the rights of the community). The main purpose of such a system is the protection of weaker members of the community and the rights of future generations. The land as such could therefore not be sold off, unless this course was agreed upon by all 'co-owners' of the land (Coker, 1967).

With the cession of Lagos in 1861 a new land tenure structure was introduced based on English common law. The colonial administration acquired land for its own use and established that land as Crown land, thereby paving the way for an additional system of 'dealing' in land. The consequences of the simultaneous operation of these two systems of land tenure were initially extremely disruptive and their effect on housing development is felt even to the present day.

Under such circumstances for instance, prospective buyers whether public or private had first to ascertain the actual identity of the owners of the land and approach the head of the community as well as the principal 'co-owners' of the land, i.e., the heads of specific branches of the community involved. However, because these facts are not easy to come by, the painstaking searches can and often do end fruitlessly. In some cases this can be attributed to the deliberate deception of the prospective purchaser by individual members of the community. This situation is often further compounded by the fact that

more often than not the land transaction is undertaken by informal gentlemen's agreements or customary conventions which are not officially recorded. The effect of this situation on housing development has been twofold:

- i) lengthy litigation over land transfers, and
- ii) rapid escalation of land prices which between 1959 and 1978 increased by 620 per cent.

Until 1975 these two factors were in essence instrumental in crippling Government housing objectives and goals.

By 1975 it had become clear to the Government that a more effective method of reducing the high cost of land and the extremely complex litigation involved in land transfer had to be found. Prior to this, land policy designed to tackle this situation was principally relegated to the "reinforcing of the existing legislation on public land acquisition and streamlining the compensation procedure with a view to minimising land speculation and unearned income... the rationalisation of land use... and effective zoning" (NDP, 1970). Initially the Third National Development Plan (NDP (1975)), maintained these policies and more with the establishment of a Land Reform Commission which attempted to overcome the difficulties of obtaining land by setting up land banks in suitable locations.

Until the promulgation of the Land Use Decree on the March 28th 1978, there was an absence of any effective measures to regulate the use and value of land, and the speculative land market greatly impeded development activities.

In 1976, in an attempt to rationalise a basis for a popular housing programme, the Government set up three panels;

- i) a Rent Panel,
- ii) an Anti-Inflation Panel and
- iii) a Land Panel.

The Land Panel's report was never made public; however, Decree No.6 Land Use Decree 1978, (Federal Ministry, 1978) was the outcome of these panels work.

In place of the traditional rulers, the State Governor became the repository of the land. The main thrust of the Decree was the vesting of all the land in the Government to be held in trust and administered for the use and common benefit of all. The fundamental objectives of the Decree were;

i) the elimination of the countless obstacles which had hitherto prevented the various public agencies and private investors from acquiring land for housing development,

ii) the control of land prices,

iii) the discouragement of land speculation and

iv) the creation of incentives for owner occupation by low income households.

In an attempt to control rapid urbanisation, the Decree established Land Use Committees for both urban and rural land and also mandated the definition of the physical limits between urban and rural land. In addition, it stipulated that ownership applied only to the development on the land and the right to transfer such development. It also went on to stipulate that each individual had a right to the occupancy of half a hectare of undeveloped land with the Government retaining control over the use of land via the existing housing regulations, building codes and permits. More importantly as will be shown later, the Decree instituted the 'certificate of occupancy'. Without this document the purchaser cannot develop, sell, obtain a loan or otherwise dispose of the land - it is essentially a form of land registration and a means by which the Government intended to control and monitor land development.

However, investigations (Aradeon, 1977) are now beginning to reveal

that the land use problem is worse than it was before the Land Use Decree was promulgated. This situation appears to be the outcome of the fact that a vast amount of the land holdings are in the hands of secondary landlords, i.e., the landowner leases the land to the developer who rents it out to a tenant who in turn sub-lets to a sub-tenant and so on. This has been made possible by the fact that although there is a legal maximum unit of land holding whether developed or undeveloped set at half a hectare, no restrictions exist on the total number of plots that can be held by an individual. Added to this is the tremendous cost of land, which, even though it is sold and therefore supposedly controlled by Government has, since the promulgation of the Decree been on the increase. Some plots in exclusive residential areas have reportedly been sold for as much as ₦404,694 (1) a hectare. Thus it would appear that the Decree has had little or no effect on inhibiting land speculation (Nwaogu, 1979).

Another drawback to the Decree has been the issue of conveyancing. In the pre-Decree days when individual families and the government controlled conveyancing, conferring legal ownership of the land on whoever purchased it from them in principle it is now only the Government that can grant 'ownership' of the land by issuing the certificate of occupancy. The lack of bureaucratic machinery and power needed to process the certificates has led to a situation in which obtaining the document itself is almost as fraught with difficulties and setbacks as is the actual purchase of land.

Indeed it is argued by some that the Decree is only operative on a paper. Numerous families still own vast acreages of land and continue to sell the land as if there were no Decree. As Olu Owokere (President of the Federation of Building and Civil Engineering Contractors (FBCEC)) has put it, "the Land Use Decree has, especially in the southern states, given land a dual ownership. On the one hand you have

(1) see page 536.

the land belonging 'physically' to the different families and individuals but legally (remotely) it belongs to the Government, and there appears to be no move by the Government to change this".

To illustrate Owokere's statement, take an instance where a person is anxious to purchase land to build house for his family: in order to overcome the difficulties associated with the Decree he will strike a private deal with the 'owner' of the land, and although both parties are aware of the law as enacted by the Decree they are dissuaded from adhering strictly to it because of the factors already mentioned above. Thus, in order not break the price controlling aspect of the Decree the two parties will tender false receipts. Another means used to avoid the Decree is the backdating of the receipt of purchase of land to a date prior to that on which the Decree's provisions came in to effect. These are just two methods used to sidestep the frustrating and time consuming wait for a certificate of occupancy, which in some cases has taken as long as three years to obtain.

Another drawback to the Decree is the enabling aspect of the allocation process in disenchanting the delivery of land for housing for low income households: the Decree has, firstly not targetted the land prices to the incomes of the prospective low income households. For example, would-be purchasers of plots of land that cost in the range of ₦5,000 to ₦10,000 have a grace period of ninety days from receipt of the allocation letter to payment of ₦4,000. Even a civil servant on salary level 10,11 or 12 earning ₦7,000-₦8,000 would have difficulty in finding the ₦5,000 or so required for the deposit. Given the present economic climate most people's savings have probably dried up.

The outcome of this predicament is that the Decree really only benefits those who have 'influence' and/or have a high income especially those of the private sector who can raise funds by means of

a business overdraft and as such do not have to go to the bank for a loan to build, while awaiting their certificate of occupancy. This situation is further compounded by the fact the banks are no longer willing to accept undeveloped land as collateral for a housing loan and insist on developed real estate as collateral (Aradeon, 1977). Therefore in practice the Land Use Decree appears to have aggravated those very inequalities that it was supposed to remove. For it allows those who have to continue to have whilst reinforcing the alienation of those who do not have. This issue, especially when viewed in the light of the rapid changes that are taking place, have created a situation which, according to Professor D. Aradeon has absolutely no chance of resolving the worsening problems, because;

a) The section of the population that is in need of housing is expanding every year, while the land that is available for allocation is diminishing probably at a faster rate.

b) i) Even if the land were not diminishing, the cost of preparing it for housing allocation is becoming more expensive, ie., by making the same number of plots available every year (not to mention of the increasing maintenance requirements).

ii) The price of alienating the land is also going up because the families that own the land can see that not only can they sell their land to private people who desperately need it but also they can probably sell more smaller size plots for a higher price than that which the Government is imposing on them.

c) i) The Government is constantly spending public funds to make this plan available, which means that the wider population that contributes to this fund, was and is in fact caught out by the system.

ii) Since in practice it is possible for some people to get one, two or three plots allocated to themselves even though this is not supposed to be the spirit in which the programme was structured, a new

land owning class is being created, and it appears to be growing and becoming self-sustaining at the expense of public funds.

Resolving this now very complex situation will be difficult and cannot be simply brought about at the stroke of a pen. If new tenure procedures are to be established and realised the Government must in principle be able to process and police it effectively. This does not mean that the present Land Use Decree cannot be part and parcel of these hopefully more appropriate tenures. Land tenure as a component of the housing provision and delivery process, must be tailored to the needs and means of those involved, the success of this will, to a great extent, depend on the establishment of an understanding of the interests, objectives and relationships between the various actors.

Although many authors suggest that customary land tenure is probably the main stumbling block for the provision of land and the cause of high land prices and the consequential high rents being demanded by landowners, development owners and landlords, the fact remains that when land becomes a commodity and is in short supply anyway its value will rocket far beyond the means of most individuals including some of those in the middle and upper income groups. Land under traditional tenure avoids this by regarding land not as a marketable commodity but as a series of rights of use over this commodity which is dependent on the involvement of the indigenous owners of the land. It is suggested that Government could within the context of its Land Use Decree, tackle the land issue in terms of establishing a balance between the fundamental traditional principles and the needs of modern life.

2.03. Finance

Lack of finance is said to be a major stumbling block in the provision of housing. However, it would be an over-simplification of the issue if it were thought that the release of limitless funds would solve the problem. It has long been accepted that simply increasing the availability of finance for the housing market only leads to increased costs of housing and therefore whatever gains in housing provision are made are quickly lost. This is further compounded by the fact that there is a limited amount of funds available for housing and those funds that are available are controlled and orientated for use by the modern sector. In practice this operates via the stringent criteria that have to be satisfied in order that funds can be made available to individuals for housing, criteria which in most cases automatically cut out the majority of the population. Furthermore the inconsistency of the informal sector's low income restricts the regular repayment of the interest on the loan thus ensuring that the only beneficiaries are the middle and upper income groups of the modern sector.

For example, the Nigerian Building Society stipulates conditions of minimum standard requirements, short amortisation periods and sizeable deposits of 10 per cent before any loan is granted - this just about rules out the majority of households whose annual incomes average below ₦2,000. With the cost of an official low income dwelling put at approximately ₦20,000 the deposit required exceeds the income of the household. The outcome though appears more serious, a scenario has developed where a higher income individual earning say ₦10,000 to ₦20,000 a year will, on a ₦60,000 to ₦70,000 house, have a mortgage repayment scheme in the order of ₦100 to ₦150 per month; this is the rent for a room in some parts of Lagos.

Although still in its infancy the availability of credit facilities for housing as earlier mentioned, has been operational in Nigeria since the mid 1940's with the provision of credit for indigenous senior staff to an amount equivalent to five times their salary. This enhances the already advantageous position of the employed and alienates the informal sector even more. Part of the reason for this, according to the Federal Government, is the fact that traditionally there has been no significant demand for such a service, with personal effort and family loans serving the overwhelming majority of home-owners. The late 1950's and early 1960's witnessed the introduction of mortgage lending through the establishment of the Nigerian Building Society and the Staff Housing Loan Schemes designed to promote owner-occupation by civil servants. This was carried further in 1972 with the purchase of shares by the Nigerian Building Society (NBS) from the Commonwealth Development Corporation by the Federal Government.

Prior to the advent of the Obasanjo administration, Government did not accept any responsibility for the provision of housing for the masses and therefore did not deem it necessary to participate financially in mass housing programmes (NDP, 1975 at p.308) for the low income groups. However, with the realisation by the Obasanjo administration of the important role that housing plays in the development of a nation attitudes changed. In 1976, during the Third Plan period the Federal Government bought up more of the shares of the NBS, and converted it to the Federal Mortgage Bank (FMBN) with a considerably enlarged capital base which rose from ₦21 million to ₦150 million in a deliberate policy of expanding mortgage lending in the economy. Wider service delivery was achieved by the establishment of branch offices in all State capitals with the establishment of an additional seven area offices to strengthen co-ordination and

administration.

The aim of all this Government intervention was alleged to be one of making credit facilities available to Nigerians, with special emphasis on the low income earners. The bank was set up primarily to stem the increasing alienation of the majority of Nigerians from access to land and to curtail the dominance of the professional landlords on the housing market. The Obasanjo administration also gave guidelines to the commercial banks on how they could devote substantial percentages of their available loans funds to housing. The administration further promised to assist large companies, by making land available to them so that they could provide houses for their workers (Decree No. 54 of 1979) while at the same time it urged the planning authorities to aim at approving plans within a period of thirty days.

The level of investment in housing by financial institutions has been inhibited for a number of reasons, a couple of which are:

- i) The traditionally wealthier groups do not invest in low income housing as this does not provide the larger and faster returns that other investment opportunities such as speculation in land and luxury buildings do.
- ii) Inflation caused by the indirect effects of the oil boom, renders long term investment unfavourable and causes both rich and poor to hesitate before investing.

Although lack of finance does in its own way inhibit the provision of housing, it must be realised that in the case of Lagos, the majority (70 per cent) who earn less than #2000 per annum contribute less than 13 per cent to the wealth creation of the State (see chapt. 1). It would be futile to provide easy access to funds for housing as the consequential levels of inflation would quickly re-establish the position as before.

Other financial measures for housing have also been introduced such as the Government's directive to the private sector commercial institutions to:

- a) set aside 10 per cent (NDP, 1980 at p.339) or 5 per cent (NHP, 1980 at p.16) of their loan funds for the housing sector in the case of the commercial banks,
- b) set aside not less than 25 per cent of their life funds for investment in real estate in the case of the insurance companies, and
- c) for all these institutions to lend the FMBN any unused part of the funds earmarked.

During the Fourth Plan period, the Government stated that it would introduce additional measures to boost housing finance by:

- a) Widening the financial base of the FMBN.
- b) Introducing differential rates charging for interest to achieve equity and efficiency, viz, 6 per cent for owner-occupied houses (social loans) and 8.5 per cent for mixed purposes (including letting), with residential development being allocated an interest rate of 10 per cent or more.
- c) Introducing a mortgage insurance to decrease the down payment required by home buyers and hence (hopefully) bring home buying within the means of the low income groups.
- d) Introducing nation-wide secondary mortgage institutions which would obtain their funds from the FMBN through sales of some mortgage portfolios.
- e) Trying to establish a National Savings Organisation and Co-operative Housing Societies.
- f) Allowing the FHA and SHC to raise funds for the construction of houses from the capital market.

In spite of the great number of measures taken by the Government to make funds available for housing especially through the FMBN, in

reality it "has failed in its objectives and has in fact alienated the masses" (O. Owokere, President of the FBCEC).

By act of omission (or maybe because of the low returns due to interest rates that were relatively low) the FMBN in 1979 introduced the collateral securities requirement of land and property to be satisfied before giving a loan. The consequence of this appears to have been to the advantage of the professional class of landlords. They could meet all the loan conditions and coupled with their influence in society the professional landlords were able always to obtain loans to build houses or secured owner occupier type houses. In the meantime the low income groups as well as some of the middle income group who were trying to get land and a house (most of whom did not have any land or property) became bystanders.

This rather undesirable situation is further compounded by information from various sources, that the FMBN itself was a 'theatre of corruption' (at whose performances the lower income groups are denied even an standing room). However, these same sources have stated that the Bank is presently being reorganised so that it can function according to the objectives set for it in 1976.

2.04. Rent Control

In 1920 the colonial administration attempted to prevent landlords from cashing in on the increasing demand for the limited supply of housing caused by the demobilised ex-servicemen who fought on the side of Britain during the First World War. This move was quickly forestalled by the landlords who succeeded in obtaining a court order to increase the rents.

It was not until the Federal Government was ousted in January 1966, that a housing policy of sorts to cater for the low income groups especially the self-employed, was promulgated. As a matter of

fact, the First National Development Plan was silent on the issue of housing for the low income groups. Overwhelming pressure was put on the Government to interfere with the market forces of housing in order to bring down rent charges in the urban centres. The rent by then was approaching about 20 per month for a detached room. So on March 23rd, 1966, the government of Major General Agunyi-Ironsi promulgated a decree (Decree No 15, 1966) that sought to reduce rent. The Decree ordered a reduction of two shillings in every pound where the rent charged was not above 240 per annum, in respect of accommodation consisting of one or more rooms which were not self-contained. It also made provision for the setting up of rent tribunals which were responsible for all matters arising from non-compliance with the Decree. Failure to comply with the requirements of any order made by the rent tribunal was deemed an offence, punishable on conviction by a fine of not more than 110, imprisonment for a term of not more than three months, or both.

Although the Ironsi government was overthrown by July of that year, Decree No 15 of 1966 was never abrogated. Surprisingly no rent tribunal functioned until the period between the middle of 1969 and 1970. In fact, apart from Lagos State where the military administration had created several tribunals between June 1969 and April 1973, edicts controlling rents in most other states were under rent control boards, which were to say the least highly ineffective. Except for Lagos State and the Mid-west State, the situation persisted even after the Military Council came out with another directive in October of 1971 requiring States to enact new edicts that would fix a ceiling for rent. The directive itself came about as a result of increasing rents created during the post Civil War years, when those in the warring areas returned to their former abodes.

Decree No. 15 of 1966 and its subsequent edicts, rent tribunals

and rent control boards proved to be a colossal failure. This was perhaps due to its shortsightedness and apparent interim nature. Rather than merely providing for a reduction in the agreed rental charges in respect of accommodation consisting of one or more rooms which were not self contained, it could have fixed rents against various categories of houses/accomodation. Further to this, in response to the provisions of the rent control edicts some landlords and their agents reduced rents only to give 'quit' notices to their tenants under some pretext or another, and quickly reached agreement with new tenants on new rents that were generally higher than the old rate. As a consequence, it appears that the landlords were in fact making more profit even after the two shillings in every pound had been deducted.

The increase in economic activity which Nigeria experienced as a result of the wealth derived from the dramatic increase in oil revenue did little to alleviate the housing and rent problems. In fact this up turn was in many ways at the root of the worsening housing situation. It was not unusual to find some Nigerians, especially those living in the urban areas such as Lagos spending about 50 per cent of their monthly income on house rental. A one room accomodation in many densely populated areas of Lagos for example, attracted as much as #60 rent. This high rent was not all, most landlords demanded payment by as much as two years for individuals and five years in advance for companies. In many cases the tenants and especially those in flats were without many basic amenities such as water and garages to park their cars. This situation was further compounded by the fact that these same tenants not only stood at risk of being evicted if for one reason or another the landlord demanded the accommodation for personal use but also in many cases the landlord exploited the situation by further rent rises.

In an attempt to combat this an Anti-Inflation Task Force on rent controls was set up in 1976. The recommendations of the Task Force were that rents should be frozen for two years and that advance payment of rent by new tenants for residential accommodation should cover no more than a maximum period of three months. These recommendations were rejected by the Muritala Mohammed regime on the grounds that they would pose too great a problem, - in as far as policing the controls were concerned so they were never implemented.

On January 5, 1976, a panel headed by Dr. Micheal Omoliola was set up to look solely into the issue of rent control in Nigeria. One of the main aims was to explore the possibilities of harmonising rents with the existing housing situation in the country and the goals of the housing sector of the 1975-80 Third National Development Plan. The recommendations submitted by the Omoliola panel on June 1, 1976 should have put paid to the high rent and scarcity of housing in the rapidly expanding urban centres of Nigeria. The recommendations did not only stipulate that a standard room should be between 120 and 150 square feet but also that advance payment of rent in excess of three months for individuals and one year for companies constituted an offence. Further, all matters relating to landlords and tenants were to be determined by rent tribunals and it recommended that all types of residential accommodation were to be subject to rent control. Government reaction to the recommendations was swift and immediate.

On the 29, June 1976, the then Head of State Lieutenant-General Olusegun Obasanjo, in a nation wide broadcast directed that the highest rent to be paid by a tenant for a room in Lagos should be N12. This was meant to apply to single rooms in the best locations of Lagos. He also directed that a house in the low density areas of Lagos should attract rent pegged at 25 per cent less than the prevailing rate observed by the panel at that time. Inspired by his

administration's conviction that the poor should be housed cheaply and adequately, General Obasanjo instructed all State governments to employ the two new rate levels adopted in Lagos State and to proceed immediately to zone the various centres and fix appropriate rents. The directives that followed, at least in spirit, did not appear to redress the unprecedentedly high rents and increasing housing shortage that greeted the civilian government on its coming to power in the closing months of 1979.

In spite of the series of rent control edicts promulgated over the last four to five decades, most have proved to be ineffective in controlling escalating rents.

The main reasons for this are attributed to:

- a) an acute shortage of housing,
- b) an uncontrolled and uncontrollable increase in the cost of building materials, and
- c) the absence of any administrative or legal regulation of private undeveloped land.

(Third National Development Plan at p.37)

However, it was not until the formulation of the Third National Development Plan that the concept of rent control began to operate in conjunction with the wider aims and objectives of the housing policies and programmes. The aims and objectives of rent control policies appeared to be similarly orientated to those of direct provision. Firstly, they contributed by stimulating general housing demand in order that a high and rapidly increasing housing consumption by the population as a whole could be achieved (the general housing consumption goal). Secondly, in preventing transfer of income and wealth from the poorer tenants to the richer house owners (the general income distribution goal).

Thirdly, they hoped to achieve a more equitable distribution of real

income among tenants (the inter-tenant income distribution goal).

Fourthly, by keeping down rents of new houses they aimed to stabilise the cost and volume of house construction (the construction market stabilisation goal).

Fifthly, they hoped to help low-income families, particularly those families with children, to compete with other household categories in the housing market (the housing consumption distribution goal).

Sixthly, they dampened the tendencies of cost inflation (the general anti-inflation goal).

Today, about four years after the 'National Housing Policy' document was published in Nigeria, the situation seems to have taken a turn for the worse in terms of rent charges and availability of habitable accommodation. As Dr. Tade Aina (Senior Lecturer, UNILAG, Department of Sociology) comments, "rent in Nigeria, is not even for low income or even medium income people - rent in Nigeria is very very unrealistic". A two-bedroom flat in some parts of the city which used to cost between ₦150 and ₦180 per month to rent in 1979 now costs between ₦200 and ₦250 per month sometimes with an advance payment of two years being demanded. The rent payable for a one-room flat has similarly increased from between ₦25 and ₦49 per month to over ₦60 per month. As the position worsens some inhabitants are resorting to using bridges and flyovers as their bedrooms.

Olu Owokere (President of the Federation of Building and Civil Engineering Contractors) attributes the failure of the rent edicts and in particular the the rent tribunals to the, "simple economic truism of demand, if there is a scarcity of anything you cannot control the price of the commodity by just saying 'O.K., you will not sell for so much or you will sell for so much'. The lawyers are making judgements in vain". Furthermore, Dr. Tade Aina argues that, "the composition of the tribunals was responsible for their failure, there

is an element of corruption. You see, three-quarters of the people who are involved in the operations of government, ie., the officials of the rent tribunals, are house owners, they are landlords".

There appears to be a consistent failure of rent control measures to control rents, many of which, as indicated above are due to administrative and economic influences. If solutions are to be feasible they must be positive. Negative ones such as rent controls by themselves have no chance of success as not only do they not provide houses but scare away potential investors from the housing market (Wahab, 1974). The reality of this apparently insoluble situation is best illustrated by the words of a distraught low income slum dweller: "They told me to pay ₦100 for each room. I am looking for two rooms for agreement. Then I will pay ₦50 for each room to agents. Then I will pay ₦40 for each room for a year. I looked into this and I haven't got half of this amount to pay in the conditions of nowadays I havn't even got half of this."

(January 1985).

2.05. Laissez-faire

The definition of this title is self-evident and does not really require any further explanation. However, the review below illustrates the institutional nature of this attitude which to all intents and purposes still exists and which has its origins in the colonial administration.

With the establishment of colonial rule the existing housing situation in Lagos appears in hindsight to have been worsened by the then colonial city administrator's housing policy, a policy which was initially and primarily concerned with the provision of housing for European administrative staff only, leaving the indigenous population to fend for itself within the framework of 'The Dual Mandate'. This

was a framework which, owing to the absence of a sizeable population of European settlers, required the colonial physical presence to be segregated as far as possible from the subject population (Home, 1983 at pp.165-175). The outcome of this was the creation of exclusive garden city type residential areas such as Ikoyi for the administration's officers and their servants (ibid.) on the one hand while on the other there were the ever worsening slum conditions in the indigenous areas.

According to Gale (1979 at pp.11-24) intervention by the Colonial Administration to improve the housing conditions in these areas of Lagos was resisted for several reasons:

- i) It was not seen as a legitimate claim on public expenditure.
- ii) Successive administrations pleaded that there was a lack of funds.
- iii) It was not the role of government to get involved in this aspect of the urban environment.
- iv) Government officials maintained that the situation was not as bad as portrayed.
- v) There was no point in getting involved.

It took nothing short of the outbreak of two terrible plagues, the Influenza and Bubonic epidemics between 1920 and 1930 which claimed many lives to force the colonial administration to intervene. The first step towards the recognition that poor housing and environmental conditions were linked to the incidence of the existence and spread of diseases was the establishment of the Lagos Executive Development Board (L.E.D.B.) in 1928.

2.06. Direct Construction

With the establishment of the LEDB a major milestone in the endeavour to improve the living environment of Lagos was reached. The

major function of the LEDB - a planning and housing authority - was primarily the "replanning, improvement and development of Lagos" (L.S.D.P.C., NPD at p.7) - in addition to other statutory obligations such as

- i) Slum and swamp clearance.
- ii) Resettlement of people displaced by slum clearance,
- iii) Vetting and approval of building plans
- iv) Planning residential and industrial estates.

However, it appears that these obligations were carried out on paper only or at best only in the European reservations. Little if any slum improvement activity took place. The slums that were cleared in and about Idumagbo, were replaced by housing that proved too expensive for the original residents. The swamp clearance that was undertaken appears to have been confined to those areas in and around the European staff reservations. The idea of ridding Lagos Island of its slums lay dormant until about 1945. It was not until political action (in the form of a strike by the African staff workers in 1945) was taken that the Government committed itself to providing housing for the indigenous population (although 'modern' sector linked). Under the African Staff Housing Scheme which had originally been established in 1926 about 2000 dwelling units were built in Surulere (Fadahunsi, 1980).

By the 1950's, with Independence 'round the corner', the administration undertook a sizeable housing programme. This was to provide housing for the future civil servants of the independent Nigerian government. In the First Republic politicians adhered strictly to the legacy inherited from the colonial administrators with most of the top politicians and civil servants moving straight into the previously exclusively European residential areas. Public housing was provided for government workers in residential reservation areas.

This was achieved by using the newly created regional Housing Corporations and the introduction of a mortgage lending establishment known as the Nigerian Building Society (N.B.S.) to provide the financial backing.

It was not until the Government was ousted in January 1966, that a housing policy of sorts to cater for the low income groups, especially the self-employed was promulgated. As a matter of fact, the First National Development plan was silent on the issue of housing for low income groups. All states were instructed to increase their housing programmes. Over 200,000 houses were earmarked for construction under the redeemed Third National Development Plan that had originally planned for an expenditure of ₦1,837 billion for the construction of some 60,000 housing units nation - wide during the Plan period. The Federal government undertook to build 4,000 units in each of the 19 states, while each state was directed to build an additional 4,000 units. In addition to this, Lagos State was to have an additional 46,000 units while Kaduna was allocated a further 12,000 units. Furthermore, the Obasanjo regime established the Federal Mortgage Bank to facilitate access to finance for the construction of houses.

On coming to office in 1978 the new civilian administration immediately set about tackling the housing problem. The Lagos State government under the governorship of Latefe Jakande, initiated a crash programme for the construction of 50,000 housing units throughout the state. This particular policy of direct construction was embarked upon primarily because of the failure of past legislation on housing which appears to have concentrated essentially on rent controls. The Government had come to terms with the fact that housing was a commodity (given the nature of the market) and hence greatly influenced by the economics of supply and demand.

The implementation of this programme was initiated by the

restructuring of the board of the LSDPC on October 15, 1979, and by the setting up of a 'Project Implementation Committee' (two weeks after the Government had assumed office) which was headed by the Governor. This body was immediately charged with executing the crash programme.

In conjunction with this programme, the Government tried a number of approaches in an attempt to increase access to housing for the low and middle income groups, ie., those on or below salary level 07 (₦3,170), the idea was to restrict the access of high income earners to these dwellings, as they would merely have let them out at exorbitant prices to the poor - this was the case with the LEDB housing estate in the early 1960's. The Government's approach included among other things:

- a) liberalisation of payment for the allottees of government housing,
- b) liberalisation of plot allocations to high income groups,
- c) accelerating the planning approval period to be accepted or rejected within two weeks of registration, and
- d) having constructed the housing units, the government established a loan scheme to assist those who were buying (or building their own) dwellings, by setting up a Building Investment Company.

With the launch of the massive house construction programme in the late 1970's, the idea of government-provided housing appears to have been almost exclusively for the a modern sector. Housing for the 'masses' was more of an ideal, an ideal which only began to take shape with the assumption of office by the civilian administration.

The administration, as the Third National Development Plan indicates, began to realise that housing could play a role in the developmental process and that, 'public housing programmes could:

- a) serve as a tool for the redistribution of urban incomes and
- b) use public sector management and control as part of the housing

delivery process which would ensure adequate housing standards and facilitate orderly urban development.

It was now officially recognised that low-income houses for letting were not a viable economic proposition for private financial speculation' (NDP, 1980).

Although, in theory the efforts undertaken by successive governments in an attempt to ameliorate the housing problem by direct construction demonstrate a great determination to deal with the housing crisis in urban areas, these efforts have, with hindsight been shown to be wanting with regard to redressing the balance and solving the housing problems of urban low income groups. Several studies have shown that the high cost of construction and the high standards of the housing units coupled with the extremely low effective demand by the majority of the urban population, i.e., those below the government salary scale, have resulted by default (or deliberately), in the re-targetting of these public housing programmes towards the middle and high income groups.

Moreover, the criteria for eligibility for a public housing dwelling unit further curtails access to them by the majority of the informal sector. For example an applicant must:

(i) be a Nigerian citizen (ironical as many of the low income earners are from neighbouring countries),

(ii) be over twenty one years of age,

(iii) should have resided in metropolitan Lagos for at least one year,

(iv) not previously have obtained a loan from the Government or any of its agencies for the purpose of erecting a house in metropolitan Lagos,

(v) not have been allocated a house previously either under the present scheme or any earlier housing schemes unless allocation has

been surrendered earlier to the allocating authority,

(vi) not possess any house in the area irrespective of how the construction was financed,

(vii) not have been ejected from a Federal or State government property or one belonging to any statutory agency by reason of inability to meet financial obligations and/or maintenance conditions imposed by the appropriate authorities and

(viii) have paid tax and have at least a gross income of ₦720 to be eligible even for the one bedroom units. A family consisting of a husband, wife, and children under the age of twenty one years are counted as a single applicant. To this is added the requirement to 'furnish' a deposit of between ₦1,000 to ₦1,600, which, as indicated above did not guarantee the supply of a dwelling unit. For most low income households simply to give the authorities this amount of money with no guarantee of supply would appear a somewhat expensive exercise, when this could well be over 25 per cent of the household's annual income.

Furthermore, the fact that the housing authorities encourage owner-occupation can only further discriminate against and exclude the low-income households from benefiting from these programmes. This does not take into account the fact that the majority of the population of metropolitan Lagos (government constructed housing dwellers included) is composed of migrants who would rather invest in a house in their home town or village than in Lagos, their place of employment. Although it is generally believed that the substantial efforts made by Government during the Fourth Plan period did help alleviate the housing problem of the city (Lagos), it has been the mode of construction and the quality of the work done on the buildings which has once again begun to work against the low-income allottees. It is a situation which requires each allottee of an apartment to be

personally liable for the cost of putting finishing touches to the building and this can vary from ₦1,000 to ₦5,000, depending on the financial status of the allottee.

From the period between October 1979 to December 1983, the Government's housing programme allocation of dwelling units required a range of deposits from ₦1,000 to ₦1,600 for 2 to 3 bedroom units which were sold on mortgages of ₦5,000 and ₦6,000 for the 2 and 3 bedroom types respectively, and later, as a result of cost increases to ₦7,000 and ₦8,000 respectively. A total of 20,685 applicants had been given allocations in advance of the commencement of their buildings while another 2,416 applicants awaited allocations at the inception of the present military administration. By the time the acceptances of fresh applications were closed in May 1984, a total of 3,577 applicants were recorded on the waiting list. For a total of 20,685 allottees for whom 20,716 units were planned in various locations - vis; Amuwo-Odofin, Iponri, Abule-Nla, Ankantamo, Ijeh, Isolo, Abesan (Agege), Surulere, Iba, Epe, Ikorodu and Badagary, only 10,428 housing units had been completed as of June of 1984. Another 634 allottees were also to be accommodated on the Ilasan Scheme in Lekki Peninsula this was earmarked for people who were displaced from Maroko as a result of the construction of the Lagos-Epe expressway. About 300 medium income houses of the four bedroom type were also embarked upon but not completed by the previous civilian administration of Governor Jakende.

The present military administration stopped work on all housing projects in all but four states in 1984. This course of action was decided upon because, according to Major Abubakar Umar (Administrator of the Federal Housing Authority (FHA)), the agencies and authorities charged with administering them were "laced with corruption and betrayed a lack of foresight". In Lagos the military administration has opted for a number of somewhat temporary and, it would appear,

cosmetic housing strategies namely:

- i) No new housing projects will be started.
- ii) Abandoned housing programmes will be completed and used mainly for staff accommodation. Due to the defective nature of some of the houses constructed, only those units built on stable ground and which have been built up to ground floor slab level and above are to be completed. Altogether these units number 3,546. Those units to be completed will be plastered and painted externally.
- iii) All the completed units, i.e. 10,428 in all are to be plastered and painted. The first phase will be primarily concerned with the peripheral units along the major roads into Lagos (memories of pre-independence preparations). Essentially because many residents in the completed units have complained of water seeping through the walls of their present, unplastered and unpainted units.
- iv) New designs are to be drawn up, the prototype of which are at present under construction, these are apparently to meet the shortfall in the allocations.

There is no doubt that the construction of owner-occupied houses under the low and middle cost schemes has, in no uncertain terms made more houses available to the citizens of the nation and Lagos. However, urban dwellers have been quick to complain about the mortgage conditions of Federally owned low cost housing schemes which, they insist, are anything but cheap. Today, the residents find that they are paying more than they bargained for. The original condition that 10 per cent of their salary would go for rent-mortgage has been revoked and a blanket rate imposed on everybody, irrespective of their income. As a result, a heavy and substantial amount of their salary now goes on paying rent. The 'spirit', as it now seems is one where the tenant-owners are considering ridding themselves of their newly acquired dwellings. Consequently, the government owner-occupied

housing schemes are gradually being turned into extensions of the professional landlord estates, thereby making a nonsense of the government's efforts to alleviate the housing problems through the direct construction of owner-occupied houses. In the meantime allottees on a government estate for instance, are being forced to pay #250 per month - an amount which is even higher than the average income of the city. With the present freeze on house construction projects by the Government, it would appear that the housing crisis can only get worse.

2.07. Aided Self-help

a) Site and Services

In Nigeria, the sites and services concept in the sense of merely providing serviced plots for housing has long been in practice mainly for the relatively higher income groups (e.g., the planned housing estates in Lagos-Victoria Island, etc. where prepared plots were provided by the State Housing Corporations). However, in the context of the need for low income groups, as emphasised by the international development agencies (e.g., the World Bank), the concept is relatively new and has just been introduced in a pilot project in Bauchi, this quote taken from the National Housing Policy (NHP, 1981 at pp.25-27) sums up the attitude towards site and services by the authorities.

Although site and services have been recognised as a possibility for low income housing, its conceptual basis is still in keeping with that described above albeit in a somewhat modified form. This modification on past projects is based on the assumption that low income households can ill-afford to develop dwellings according to the approved standards and as a consequence, site and services for low income households involves the further provision of core housing units

made up of a simple structure, i.e., bedroom, kitchen, dining area as well as washing and toilet facilities. The closest adaptation of this process is that of the low cost housing projects on a multi-floor basis such as Dolphin Phase 1 & 2. This involved the construction of the structure of two and three bedroom flats with minimal toilet and washing facilities and electrical wiring, finishes such as plastering and painting of walls being left to the householder to provide. As the field survey highlighted, a sizeable proportion of these dwellings was occupied by middle and higher income households.

The adoption of site and services as a viable addition in housing for low income households has in general been based on the fact that governments can now develop between two and five sites and service plots with those resources needed to build a single house in a conventional housing project. However, the success of these site and services schemes especially for low income households has been limited. This can in the main be attributed to high building standards requirements, poor location aspects, high demand and subsidies.

b) Incremental Settlement Development

This housing process is essentially a kind of urban 'home steadying'. In essence it involves the laying out of plots by the Government, or some other combination of land holding participants in approved locations, the prospective users can then build homes which are within their means, in their own time with minimal interference from officialdom: incremental development involving amenities such as water, roads etc., is carried out in conjunction with government and/or other involved agencies in consultation with the residents/representatives. This approach to low income housing is not new to Nigeria and especially not to Lagos. In 1886 Governor Glover provided land laid out on a grid-iron format for the refugees fleeing from the troubles in Abeokuta. Part of the area presently known as

Ebute-Metta was divided into blocks of land of about 300ft by 300ft, these blocks were separated from each other by strips of land approximately 50ft wide. Each block in turn was further divided into eight plots. Over the years the Glover settlement has been gradually developed.

Incremental settlement development is a housing process that has yet to be widely implemented, primarily because it is believed that this approach will encourage the poor to migrate into the towns (even though a vast body of research has strongly indicated that housing is a very minor consideration in the decision to migrate to the towns (Strassman, 1983); however, it could be said that the economic benefit that would accrue from such an acquisition would on economic grounds be an indirect justification for moving to the city .

2.08. Manpower

Like the other aspects of the housing provision and delivery process, the issue of executive ability of the construction industry (manpower) is similarly characterised by the dualistic trait. G.Daz (1983) in his description of the industry clearly reveals this situation in some of the findings as follows;

1. "historically, housing provision was the responsibility of individuals and not governments, and 70 per cent of housing production was done by the 'jobbing builders' who are either technicians or tradesmen in the building industry".
2. "Since 1975, the scale of the National Development Plans (NDP) has increased construction activity (financed by large oil revenues) far in excess of supply".
3. "The building industry in Nigeria now consists of a small number of large, efficient and affluent expatriate firms at the top (modern sector) and a large number of inefficient and impoverished indigenous

contractors at the bottom (informal sector)".

4. "The little manpower stock is even inefficiently utilised with the professionals isolating themselves into consultancy services remote from the industry".

5. "The large number of drop-outs from the formal system (European based) have no avenue for informal training".

6. "The building industry in Nigeria still heavily depends on foreign manpower".

The findings literally speak for themselves.

These findings are in essence reflective of and sustained by the nature of the various construction programmes undertaken by the modern sector and the lack of an appropriate manpower training policy to meet this demand.

The manpower structure of the Nigerian building industry can best be described as pyramidal. At the base are a large number of one-man Nigerian contracting firms and at the top a small number of very large contracting firms often expatriate owned. A consequence of this (given the nature of the project programmes undertaken by government) is that the majority of the indigenous contractors are cut off both financially, technically and in terms of experience in handling large complex projects. Table 011 below illustrates this in terms of size (grade) of contracts against distribution among the various contractors.

Although the Indigenisation Decree of 1973 attempted to deal with this maldistribution of projects, it has, in practice persisted. The outcome of this Decree has in general been that Nigerians have been appointed to the boards of those companies at the top of the construction industry while the management of the companies is left in the 'capable' hands of the expatriates.

Table 011 . Disribution of Contracts Grades Amongst Nationality of Contractors, 1978.

Grade of Contract	Nationality of Contractors				Percentage of firms Non Nigerian
	Nigerian	Italian	British	Total	
A	397	-	-	397	0
B	129	-	-	129	0
C	29	-	-	29	0
D	22	1	-	23	5
E	24	4	1	29	17
F	23	8	6	37	40

Source: Building Information Paper 1, Nigeria 1973.

The raison d'etre for this laissez-faire attitude towards the indigenisation of the management of the construction industry lies, according to Daz in the belief by some of the influential circles involved in the industry that, given time the expertise will trickle down without planning. In view of the circumstances existing today, the question is, how long will it take.

This situation is worsened by the fact that there is a dramatic under-estimation of the manpower required to implement the ambitious programmes of the construction industry. To give an example, consider the estimates of 1,500,000 men required to implement the Third National Development Plan (1975), out of which it has been estimated that 433,000 would be required in the building and construction industry for projects generated by public sector direct investment (ibid.). If as Grimes (1976 at p.39) suggests, the employment generation capability of the housing sector is put at seven jobs for every \$10,000, invested then the manpower need can be calculated.

Given this and also the fact that project investment in the private sector during the Plan Period (1975-1980) was estimated at #2.7 billion (\$4.05 billion, £ 2.9 billion) and that the housing sector alone accounts for some 35 per cent of the building and construction sector, it can be estimated that a workforce of some 900,000 men would be required to implement the Plan in this sector alone. This figure when compared with that of public sector investment in the building and construction sector for the same period (#3.8 billion), not only casts doubt on the entire National Development Plan's estimation of a workforce requirement of 433,000 men but also on the wisdom of embarking on such massive programmes. In order to meet the requirements of these programmes, there has to be importation and use of a sizeable 'alien' (foreign) manpower, building techniques and housing processes, all at the expense of the development of the indigenous construction industry.

Apart from the overall manpower shortages the construction industry is also characterised by a marked maldistribution of the various cadres. Table 012, below reveals a marked shortage of professionals such as architects, surveyors engineers etc required to service the needs created by the rather ambitious programmes.

Furthermore, the manner in which these professions are distributed between the sectors demonstrates the extent of the polarisation which in itself contributes to the ineffectiveness of the construction industry in the country. Manpower studies carried out in 1977 indicate that the majority of these highly and expensively trained professionals and technicians are to be found in the service sector, acting as consultants or in other advisory roles rather than taking an active part in construction activities.

Of the data that exist on the modern sector (which it must be said is not very reliable (Daz, *ibid.*) little if any exist which give the

Table 012. Vacancy In Building Occupations All States 1977.

	Number Employed	Vacancies 1977	Percentage
Professionals			
Architects	412	403	97.0
Town Planners	191	186	117.0
Quantity Surveyors	415	224	55.9
Land Surveyors	526	305	57.9
Estate Surveyors	247	122	49.3
Civil Engineers	8,069	2,617	32.4
Electrical Engineers	1,567	930	59.3
Mechanical Engineers	1,170	587	50.1
Total/Mean	12,597	5,420	43.0
Intermediate Staff Technicians			
Architectural	292	331	113.3
Planning	302	249	82.4
Surveying	1,162	629	54.1
Civil Engineer	2,148	1,310	60.9
Electrical Engineer	14,955	11,401	76.2
Mechanical Engineer	2,992	937	31.3
Draughtsmen	1,848	931	50.3
Total/Mean	23,699	15,788	66.6
Artisans and Craftsmen			
Carpenters	21,376	4,430	20.7
Masons	17,005	4,033	23.7
Plumbers	4,888	1,038	21.2
Domestic Electricians	5,567	1,029	18.4
Total/Mean	48,836	10,530	21.6

true figures as to the actual manpower distribution ratio of the informal sector construction industry. Most calculations regarding this sector tend to be based on the difference between the 'global' amount and the modern sector amount. What can be speculated upon, with some degree of certainty is that architects and other professionals are rarely involved in design and execution in the informal sector and one can thus conclude that the distribution ratio of this sector will be extremely bottom heavy.

There is of course no simple solution, building industries the world over being complex institutions. Nevertheless, given the anomalies existing in the industry in Nigeria and the considerable amount of investment that has been ploughed into it, it is difficult to comprehend the laissez-faire manner in which the country's economic planners have treated its role in the economy; it is not as if the planners had no access to the abundant literature which exists outlining the role that construction can play in developing the economy.

In the National Housing Policy Document of 1981, the government appears to indicate its awareness of this maldistribution. In attempting to deal with this situation the Government stated that it would establish training programmes in construction management skills (similar to those run by the Kenya National Construction Corporation) for the benefit of local contractors. Furthermore, in the same document the Government went on to declare its support for the use of traditional materials and the adaptation of traditional Nigerian construction techniques as well as expressing reservations about the use of the 'industrialised system', which it regarded as ineffective in dealing with the housing problem in Nigeria (NHP, 1981 at p.20).

The overview of this document with regards to the role of manpower in the housing provision and delivery process would seem primarily to be that concerned (and quite rightly too) with boosting house production and actively encouraging lower costs in order to aid the building programme. However, little consideration appears to have been given to long-term production and the need for housing policies and construction programmes for example, amended legislation on building standards, with the nation's manpower capability. This viewpoint (although masked by indications that efforts would be made to harness the potential of the vast numbers of the under and unemployed labour force by promoting programmes geared to manual labour) is, nevertheless confirmed by the further comment that these same programmes would be designed to "attract the needed manpower" (ibid.). The needed manpower as illustrated above would be best supplied by the shipping-in of large numbers of highly qualified management and skilled manpower to meet the massive demands of the programmes.

Moreover, the climate under which these massive construction programmes and 'one-off' projects are undertaken by both the Federal and local governments tend to be clouded in 'discretion', with contracts being awarded on a record of performance which in practice cuts out the indigenous contractors - a 'catch 22' situation. Daz (ibid.) further suggests that the awarding of contracts for projects also has a more political and social connection basis, a view which is similarly shared by the present military administrator of the FHA.

Otto Koenigberger commenting on the manpower situation in Nigerian cities states that, "like those of many other developing countries, there is no shortage of unskilled manpower. They also have a good supply of of semi-skilled workers (traditionally and informal sector

orientated) consisting of newcomers from the rural areas. Every African peasant is expected to build his own house and to assist with the construction of the houses of relations and friends. Practically every newcomer to the city knows how to build village-type houses. Although his experience is limited to the materials of his rural background he brings with him important skills in the field of construction" (npd). The maldistribution of manpower for housing appears as other aspects of the provision and delivery process to be well institutionalised. Any move to break it will doubtless be resisted by the various interests that exist not only in the modern sector but also in the informal sector. Unless it is radically overhauled, this polarised situation will be perpetuated to the detriment not only of those most in need but also of the nation as a whole.

2.09. Building Materials

The use of building materials in urban areas such as Lagos has, like other parts of the housing process, substantially influenced and reinforced the dualistic factor. On the one hand the informal sector has, of necessity to exploit the use of less expensive and processed traditional building materials which are locally available and which are regarded by the formal sector as not conforming to the regulatory requirements as specified in building regulations. On the other hand the formal sector has inherited and adopted to its own use highly processed (Western) building materials, seventy per cent of which are imported according to estimates (Okpala, 1983 at p.42-46).

This need to import a sizeable quantity of building materials stems from the effects of:

- a) inherited and adopted building material standards and,
- b) the massive ₦1.5 billion investment by the Government for the

provision of 202,000 dwelling units.

The inability of the local building industries to cope with this sudden demand, meant that building materials had to be imported. A report in the Business Times of Nigeria (August 8, 1978) stated that over 70 per cent of Nigeria's cement consumption at this time was imported, a situation which was further compounded by the fact that the ports were unable to handle this massive surge in importation. In time, this led to the creation of a 'cement ship city' on the high seas and the dumping of cement in the sea. No doubt the huge importation bill arising from this coupled with laytime for the cement ships raised the cost of cement and consequently the units further. The outcome, apart from increasing the cost of houses, was a substantial drop in the number of houses originally proposed in the National Development Plans.

Table 013. below illustrates the cost of two of the major building materials, cement and steel. These accounted for some ₦300,369,000 million in 1978 which represents 3.6 per cent of the total import bill in that same year.

Table 013 . Imports of Cement and Steel (1975-1979).

Periods	Cement	Steel
1975-1976	71,148,000	164,910,000
1976-1977	73,016,000	252,791,000
1977-1978	168,167,000	286,982,000
1978-1979 (1st & 4th quarters)	89,376,000	113,390,000

Source: Federal Ministry of Statistics.

In an attempt to arrest this situation the Government embarked on a number of remedial actions, the most notable of which was use support for the use of locally produced materials. Within the confines of the building standards, the government planned the construction of

a number of cement factories to meet the burgeoning demand. Nigeria now has some eight cement factories with an installed capacity of about 4,515,000 tonnes per annum. The local production of cement was hampered by insufficient power (electrical) supply reaching the factories. In a survey carried out by the Economic Commission for Africa (ECA, 1979) a team of experts found that most Nigerian cement factories were in fact operating at only 50 per cent capacity.

This shortfall of building materials did not occur solely with cement. It also applied to a long list of other 'essential' building products such as, hollow bricks, ceramic blocks, plastic materials for furnishing, pipes and fittings, ceiling materials, sandstone tiles, porcelain and cast iron sanitary articles, installation fittings and ventilation pipes to name but a few. The importation bill (as computed from the December issues of the Nigerian Trade Summary (published by the Federal Office of Statistics, Lagos) for these products during the mid-seventies soared from ₦269.9 million in 1974 to ₦564.5 million in 1976 to ₦431.9 million for the first six months of 1977.

The Government in both the Third and Fourth National Development Plans as well as the National Housing Policy Document stated that this situation could only be tackled by increased investment in domestic production of cement and other essential building materials so as to reduce the increasing dependence on imported building materials which were required to supplement domestic production. This it was believed could be achieved by the use of local materials (such as burnt brick) which would be vigorously promoted (NDP, 1975).

The measures embarked upon were, amongst other things, the establishment of brick factories in Lagos, Ibadan, Enugu, Jos, Kaduna and Maiduguri; secondly, the imposition of restrictions on the importation and export of wood into the country and thirdly, the introduction of licences for the importation of building materials.

However, as with other aspects in the provision and delivery process, these measures proved in practice to favour indirectly the modern sector especially those of the middle to high income groups.

The effectiveness of these measures appears to have worsened the supply situation, in that not only do the licencing requirements stipulated by the Government cause scarcity, but also those who held those licences often had to wait a long time for the processing of the various accompanying forms etc. - this took time and in the construction industry as in most others, time costs money. So a job which should in most cases have taken two months would take perhaps six months.

Furthermore, there is the phenomenon of the middleman. This is where certain individuals are nominated sole agents, ie., the only ones who can distribute the products, the effect of their intervention can result in a price increase in, for instance, a flush door from the true market prices of between #30-N40 to between #200-N300.

Table 014. Building Material Prices, 1970's-1980's.

Materials	Early 1970's	Early 19780's
	Naira	Naira
Lorry Load of Sharp Sand	16	70
Lorry Load of Gravel	20	100
One Bag Of Cement	1.5	12
One Gallon Of Emulsion Paint	5	20
Labour Per Day	0.76	8

Given the importation bill for building materials it might seem that Nigeria is a desert without natural resources for buildings. In fact she has extensive resources for construction material such as timber, clay, rocks, aggregate, asphalt and lime scattered over her 91.2 million hectares. Calculations have shown that with a total forest area covering some 36 per cent of the land surface which

consists of an estimated 600 species of which over 100 are useable as constructional timber (Okigbo, 1963), from which Nigeria could market large quantities of timber estimated at about 708 million m³ (Floyd, 1963). Over three and a half times the estimated material timber input of 190.44 million m³ specified in the Third National Development Plan. Lime, a building material used in almost all the industrialised developed world is practically unknown in Nigeria, even though there are substantial reserves available all over the country. Ninety per cent of the glass used in the building industry is imported with most of the remaining 10 per cent being used in the beer and bottling industry.

Nigeria is overendowed with an abundance of basic construction materials for example, clay (Wahab, 1975) and timber (Nnama, 1975). Yet she still has to import some 60 per cent of her building clay products and is not self-sufficient in the supply of constructional timber. This desire to import can in part be attributed to the fact that locally produced building materials are not readily acceptable by the population as a whole, for instance the fact that between the period 1975 to 1979 the Government established six red brick factories to reduce both the cost and dependence on cement and especially on imported cement does not necessarily mean that the bricks have found favour with the local people. In areas where the brick factories were operating at capacity and where building sites had run out of cement, people did not turn to the use of red bricks. For example, the factory in Okgwe in Imo State has stock piles of bricks which are so large that production has practically had to be halted for lack of demand which in turn led to lack of storage space (Berauschet-Moret-Bosboom, 1975:6).

Wahab (ibid) and Nnama (ibid) have attributed this lack of interest in the use of local building materials to the fact that:

i) Buildings constructed of mud walls or bricks (whether sundried or fired) have become identified with poverty and primitiveness.

ii) The use of sandcrete blocks in the construction of buildings has become a status symbol.

iii) The attitude of successive governments which have unduly favoured the use of sand cement in their building programmes.

iv) The relatively high cost of labour and equipment for the processing and treatment of timber.

v) Nigerian home owners prefer cement to timber.

vi) The cost of a timber building is uncompetitive when compared with that of a sandcrete building.

The negative attitude towards the use of local materials in buildings was quite well highlighted during an Oyo State Government exhibition, the outcome of which was that many people who visited were said to wondered aloud:

'If it is as good as the government claims it to be, why don't they build and live in such houses' (Onibokun, 76:114-120). The importance of the building materials industry to the construction sector and hence to the economy as a whole is beyond question as the table below illustrates. The fact that present legislation severely restricts the use of locally less processed building materials (wattle and daub) only further legitimises and encourages the use of expensive imported building materials.

If amongst other steps, appropriate legislation is enacted to amend the present standards pertaining to the use of building materials (whilst of course, protecting the interests of the users) and these steps are specifically geared towards the use of both the informal sector and government agencies of locally accessible materials, then an effective demand could well be created for them. This should in turn stimulate the demand and interest of those

concerned with profiting from and producing and developing locally accessible building materials with the added bonus of possibly improving employment opportunities. In order to achieve this goal however, much research is needed to ascertain the performance, durability and use of these building materials.

Table 015. National Accounts Gross Of Domestic Product at Current
Factor Costs

Activity Sectors	1973-74	1974-75	1975-76	1976-77	1977-78
1.	3,327.79	4,845.18	4,729.99	6,426.45	7,473.76
2.	2,020.59	6,087.27	6,668.37	6,796.31	7,904.96
3.	496.90	661.13	1,170.44	1,464.30	1,554.96
4.	45.19	52.49	57.94	72.05	98.6
5.	1,123.21	1,315.66	1,814.57	2,605.81	2,990.84
6.	418.17	1,315.66	1,814.57	2,605.81	2,990.84
7.	26.67	36.85	41.16	51.04	52.14
8.	2,197.08	3,020.41	4,329.17	5,501.80	6,771.71
9.	32.50	36.42	49.38	62.99	66.79
10.	140.45	305.95	514.67	574.03	690.61
11.	61.05	68.86	94.64	96.37	102.23
12	625.94	751.11	871.28	1,010.69	1,081.44
Sub-Total	10,515.54	17,655.91	19,973.9	25,464.00	29,775.23
13.	664.41	897.99	1,352.94	1,492.2	2,216.76
Total	11,179.95	18,553.73	21,326.85	26,956.28	31,991.99
1.-Agriculture, 2.-Mining and Quarrying, 3.-Manufacturing, 4.-Utilities, 5.-BUILDING AND CONSTRUCTION, 6.-Transport, 7.-Communications, 8.-Whole Sale and Retail Trade, 9.-Hotels and Restaurants, 10.-Finance and Insurance, 11.-Real Estate and Business Services, 12.-Housing, 13.-Producers of Government Services					

Source: Federal Office of Statistics, Lagos.

2.10. Standards

Present housing standards as laid down by the Government and backed by statute, local bye-laws and regulations can and are proving to be a considerable constraint on the provision of low cost houses and plots of land, for they demand a level of needs that is not only economically unrealistic but also socially and culturally unrelated. The reasons for this are a legacy of the colonial era when town and building regulations were first introduced ostensibly on health grounds but also on socio-political ones as well. These regulations were used as a means of 'protecting' the Europeans from the native community behind a 'cordon sanitaire' whilst also deterring migrants from settling in and around Lagos (Home, 1983 at p.166).

The origins of the present Official Housing Standards used in Nigeria can be traced back to the London Building Regulations. These emerged towards the end of the 12th century when London's population was expanding and it became necessary to impose rules to regulate boundary disputes between neighbours. Over the following centuries as London grew the scope of these rules was extended to incorporate health and fire protection regulations and provisions. Nevertheless these laws did little to regulate building and in a sense, had as little effect on 16th century London as those presently being administered in Nigeria. Knowles and Pitt (1972 at p.10), further highlight this dilemma, in which the rules were used not simply to protect the health and welfare of the population but the interests of particular groups such as the City guilds whose livelihood was being jeopardised by the arrival in London of successive waves not only of rural migrants but also of foreigners. It was not until the outbreak of the Great Fire of London in 1651. that substantial developments and restrictions to protect the population were enacted. In time the

objectives of the regulations evolved and become more orientated towards amenities, good building practice and town planning. As the wealth of industrialisation began to be realised they were the instruments used in the complex administration of the rapidly developing urban settlements.

The London Building Regulations 'wearing their Nigerian hat' have been enacted as the following:

- i) The Laws of Nigeria, Township Ordinance Cap 216 of 1948.
- ii) The Laws of the Federation of Nigeria and Lagos Public Health Ordinance Cap 165. Vol 5 of 1958.
- iii) Lagos Local Government Act No 18 1959.
- iv) Lagos City Canal, Drainage and Sanitation Byelaws 1970; Extracts from Lagos Local Government Bye-laws.
- v) Manual of Space Standards for Urban Development in the Western State of Nigeria. Technical College. Ibadan 1970.
- vi) Metropolitan Lagos, Interim Land Use Housing Plan. Physical Planning Division, Ministry of Works and Planning Lagos State, Nigeria.
- vii) Lagos City Council, Building Bye-laws and Regulations. Extracts from the Lagos Local Government Bye-laws (1937-47), commonly referred to as, 'the Regulations'.

The official minimum standards, used as the basis for the provision of the government-built low income dwellings have as various studies (Okpala, 1978 at pp.249-257, See chapt. 4) have shown, become too costly for the low income households even at subsidized rates. As a consequence these households are forced to make do with houses which are not built to official requirements to resort to multi-occupancy and its consequent over-crowding. This is the only way low income households can afford to live in the already highly subsidized government rented dwellings.

The official minimum housing standards as stipulated by the Lagos Town Planning Acts require, for example, that for every dwelling there should be: at least one shower or bath, a flush toilet, an electric light, a pipe borne water supply, an adequate quality of ventilation in and around the dwelling and that building materials should be of durable quality. Furthermore, other controls on housing for which local government approval is mandatory, must conform to the 1937 Building Codes and Planning Regulations (last ammended in 1947). These in addition to those mentioned above demand a minimum number of rooms and a minimum size of rooms which are just beyond the means of the majority of urban households.

However, the findings of a study (field study, 1985), on housing conditions in Lagos (see chapt. 4.), indicate that the majority of dwellings fall far below these stipulated standards. The regulations are in fact practically impossible for the majority to conform to, and attempting to enforce them would be to put it mildly futile.

The effective enforcement of these regulations has proved evasive for two prime reasons:

a) Most of the specifications are outmoded, irrelevant and inappropriate (Awotona, 1981). The legislation borrowed generously from similar bye-laws in Britain especially the old London County Council bye-laws and in its present form still retains the use of such terms as, attic, bresummer, gangway and partywall-structures, which one would be hard pressed to find in use in Lagos.

b) The regulations have tended to be discriminatory and limited in their effect. Studies have shown that most if not all the recommended standards are infringed not just by slum dwellers but also by Government housing agencies.

By looking at planning and site coverage one can see two further examples of this inappropriateness:

i) In the regulations, bye-law 6 stipulates for instance that;
"No person shall erect any new building on any site which does not abut on to an approved street or site of an approved street until the Council shall have approved the erection of a building on that site and the position within the site of the proposed building". Despite this a sizeable proportion of the dwellings in the Maroko settlement were built before the roads were even laid out. Given the inability of the authorities to keep up with urban expansion, this restrictive attitude, appears not only to inhibit the majority of households from participating positively in the improving of their housing conditions but gives rise to yet more disorganisation.

ii) In byelaw 31(1);

"...the open spaces provided for any building shall not be diminished by any means whatsoever...". This is probably the most flagrantly flouted bye-law. Housing is regarded by the residents in the informal sector settlements as a continuous process. The proportion of open space left around buildings will therefore tend to diminish with the passage of time as additions are made to the original structure to accommodate the expanding household. A number of studies have shown that the majority of dwellings do not comply with regulations with practically every respondent to the questions of the studies admitting to infringing not one but several aspects of the regulations. Awotona's study (ibid.), for instance, indicated that over 86.95 per cent of the sample study plots had a plot coverage over 50 per cent as stipulated by the regulations. The widespread existence of the slums (FOS survey estimate of 'type-0' housing (slums) represents well over 40 per cent of the urban total), which 'pock-mark' Lagos appears to confirm that these stipulated standards and regulations are not only unrealistic vis-a-vis the capabilities of these inhabitants but also that they are unadministerable and that the enforcement of these

regulations is motivated by corruption.

The nature of urbanisation in south-west Nigeria as portrayed earlier in this dissertation was and is fundamentally different from those of the urbanised industrial nations whose urban systems and social structures developed from and in pace with industrialisation in the 17th century. Housing became a commodity purchasable with the income derived from employment in the factories. Yet the standards derived from this system would appear to have been grafted on to the Nigerian system without much consideration of the cultural, climatic or economic context (Heinecke, 1975). In order for housing standards in Lagos to be able to come anywhere near those in force in London for example, they must evolve something in keeping with the rapidly changing urban scene. If they are to be relevant to a particular situation and provide the authorities with some form of legitimate control, they must, over time, at least exhibit some degree of flexibility and appropriateness.

As a multi-cultural developing country, Nigeria must, in its own best interest develop a flexible housing standards system which will not only cater for the wide variety of needs that exist but will also look forward in anticipation of the changing needs of the future.

However, given the limitations of Nigeria the devising such a system must involve the interaction of the users and 'experts' if the mistakes of the past are to not to be repeated. The myths, principles and beliefs that at present operate, are in fact proving to be obstacles to the solutions (Angel, 1976) and must be questioned. Hopefully the outcome will be minimum standards that are consistent with national, state, community and individual resources and with economic and social development, and which take into account the climate, customs, health and sanitation, space requirements and densities that reflect the dynamic, evolutionary and incremental

nature of housing in Lagos and in Nigeria as a whole.

2.11. Needs

The findings of various research teams, conferences, workshops and seminars on housing in Lagos and the rest of Nigeria (and in most other developing countries) would seem to indicate that the problem of the provision and delivery of adequate housing for the teeming masses in the rapidly expanding urban centres of the Third World is urgent and approaching crisis point (Okpapa, 1978 at pp.249-257). It is a crisis that has developed as a result of rapid growth in the economy, inflated real estate values, speculative activities and the influx of large numbers of poor rural immigrants; all these factors are symptomatic of the development and modernisation process of developing countries. It must be stressed though, that this crisis is occurring not only in urban areas but also in rural ones (NISER, 1982). Furthermore, it is a problem that has both qualitative and quantitative dimensions (see 2.12. and 2.13.). Although both these aspects are reviewed independently, they are so intertwined that it would indeed be difficult to isolate one for study and analysis without at some stage involving the other.

Although housing need is generally perceived as the extent to which the supply of adequate housing falls short of the household's demand in terms of its physiological and psychological need, in the Nigerian context it is as in other aspects of housing, epitomised by the schismatic factor.

On the one hand there is the modern sector, which views housing needs as the extent to which the quantity and quality of existing accommodation fall short of that required to provide every household in the nation with accommodation of a specified official minimum

standard necessary for the well-being of the household irrespective of ability to pay or personal preference. The modern sector's approach to housing need is invariably to see it in terms of numbers and standards (Lansing and Marars, 1969 at pp.195-199; Hamidi N., 1985), ie., the production and provision of a certain quantity of dwellings required to satisfy the officially alleged need as well as the maintenance of specified standards which will ensure and conform to specific concepts of health, structural safety and human dignity. On the other hand there is the informal sector which views housing needs in a somewhat different light. Housing is not seen simply as a 'commodity' but rather as a constituent ingredient in the process of meeting a hierarchy of other needs - the priority need, such as access to work and greater mobility. This in practice creates the scenario whereby the lack of the specified 'commodity' (Wheaton R., 1982 & 1983) as determined by the modern sector may not necessarily be regarded as a need.

The modern sector view does not appear to take cognisance of the fact that the user's needs might differ (due to socio-economic, ethnic or climatic conditions) from those officially designated housing needs. As a consequence these officially recognised needs are considered somewhat artificial, as they appear to overlook the problem. This variation of needs is well illustrated in the table below. This shows differing needs priorities expressed as a function of household expenditure of differing socio-economic groups (to name just a single influencing factor).

Table 016. Differing Need Priorities As Expressed By Income Group

Expenditure

(Ranking By Percentage of Total Monthly Expenditure)				
34-67	100-133	168-333	501-669	over 668
Naira	Naira	Naira	Naira	Naira
Food	Food	Food	Food	Food
Transport	Housing	Education	Housing	Education
Housing	Clothing	Housing	Education	Housing
Other	Education	Other	Other	Other
Entertainment	Other	Clothing	Entertainment	Entertainment
Medical	Entertainment	Entertainment	Transport	Clothing

Source: Master Plan Project Unit / United Nations / Wilbur Smith and Associates Field Survey, 1978.

As the example above illustrates needs can vary considerably between different income groups, but it is a variation that is not restricted to income. Other factors which act as varients are, for example, age, education, ethnic origin, religion and size of household. Furthermore, as climate, quality of the dwelling and the nature of the surrounding environment also affect needs, these needs may vary over a period of time for that same community, household or individual. At different stages in the family's growth and development, some needs will be more pressing than others. Space requirements, aesthetics, financial burdens, home-ownership and location of the dwelling will assume dominant positions at different periods of the family's existence, e.g.;

a) The 'just arrived stage', - the newly arrived migrant in search of work shares accomodation with relatives, friends or lives alone.

b) The 'pre-child phase', - after marriage but before the arrival of the children.

c) The 'expanding household phase', - the bearing and rearing of

children.

d) The 'fully fledged household phase', - the children are all grown up, unmarried and still at home.

e) The 'multi-household phase', - when married children continue to live at home with their parents or vice-versa.

Added to all these factors will be the possibility that at some stage or other, the household will, (perhaps because of financial constraints) need to rent out some of its own space either to live-in tenants or to a small business or it will use the space for a retail business on its own account. It can, therefore, be seen that household needs, preferences and aspirations for shelter are evolutionary and dynamic, often shifting and changing with economic and social circumstances. All of this falls some way short of the standards and processes imposed by the planners and legislators in the belief that they are providing "what the people want".

Apart from those needs created by domestic and economic forces, householder's attainment of these are coloured not only by their own values and expectations but also by the fact that they tend to aspire to the life-style of the group that is immediately 'above' them on the social 'ladder' (Urry, 1973 at p.57).

J.F.Turner's (1978) dimensional concept of housing needs takes cognisance not only of a hierarchy of priority needs but also of the schismatic factor, - he considers the modern sector approach to housing as "one-dimensional" in that it appears to ignore the possibility that those occupying and living in houses regard them as something more than mere physical shelters. He considers that there is more to housing than merely four walls because other factors such as security of tenure and location also contribute to the hierarchy of priority needs. Thus Turner considers housing to be a 'multi-dimensional' issue with needs which cannot be defined

absolutely and solely in terms of objective quantifiable physical criteria - but more to a combined set of attributes such as the dwelling's and the locational aspect of the being amongst the most notable non-material (quantifiable) attribute. Turner (ibid.) further suggests that there are some secondary non-quantifiable but all the same vital attributes such as support or expression of identity, of security, and of stimulus and opportunity as identified above. These he has classified as innate needs, which are never absent and are never more than temporarily satisfied. Moreover, he stipulates that there is a hierarchy of priority needs for any particular person, household or community for a given place at a particular time. This simple but important concept is illustrated schematically below in figure 015.

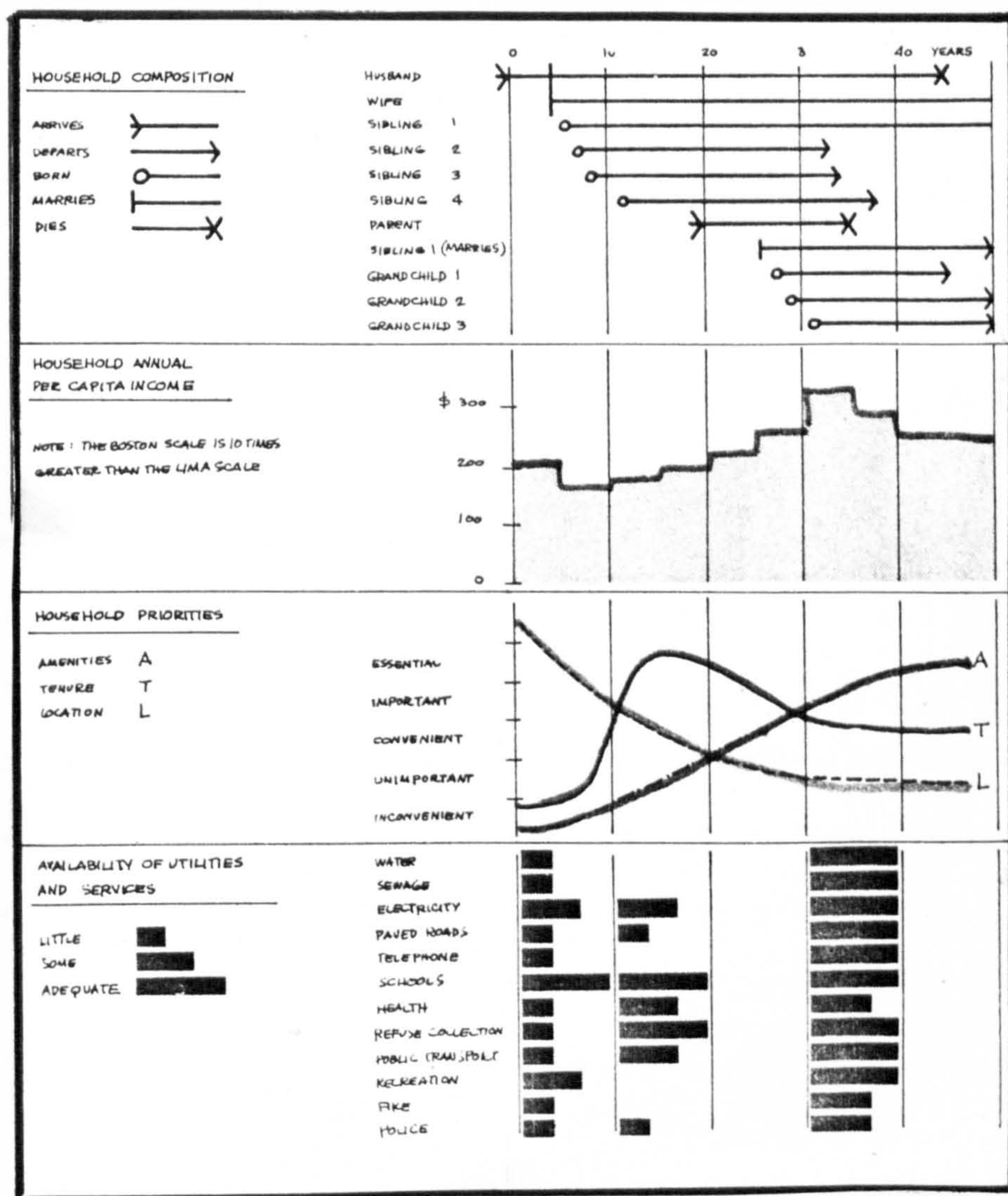


Figure 015. Priority Needs Distribution

In this light a situation exists where the diversity of these needs and their consequential effects on man's quest for shelter makes it necessary to focus on housing not just as a commodity but as part and parcel of the life process of the occupants. Housing becomes a collective constellation of independent and dependent attributes, that makes housing differ not only from community to community and household to household but also from one person to another within the same household. Housing takes on an evolutionary and dynamic metaphysical characteristic, a product of the continuous interaction between the members of the household and their environment and cannot be treated simply as a commodity conventionally viewed by the modern sector.

This difference in approach to housing between modern and informal sectors is compounded not only by the conventional belief that the users have little idea of their needs and how to go about achieving them (Churchman, 1968 at p.72) but also by the notion that the participation of the users in the designing, planning and implementation of housing programmes should be avoided (Wilson, 1963 at p.413). This view is somewhat narrow as the majority of houses are actually produced by and for the informal sector and the fact that the information about the users needs is within the users' head.

Thus it would appear that if government policies and programmes are to be more effective in tackling the housing problems by meeting the needs of the low income households, an approach that recognises the importance and role of the users in the provision and delivery process must be taken. It is suggested that this role would be essentially a participatory one, involving the authorities and the users in a partnership (see chapter 6.).

2.12. Demand.

As the core of the residential environment, housing provides a number of varied services over and above that of simply acting as a shelter from the elements. It can serve as a focus of economic activity, as a symbol of achievements and social acceptance and as an element of urban growth and income distribution, whilst also fulfilling a number of social and community needs (Grimes, 1976 at p.3).

Though it plays a major role in the economy by virtue of the fact that it requires the supply of many goods and services to maintain it, it must be remembered that housing does not depend solely on economics for its justification. It would appear that the fact that housing needs rest primarily on value judgments means that housing economics (demand and supply) can never be absolutely defined nationally or for that matter even within the same city or town. It will in essence depend on the perceptions and judgments of those making the decisions about the demand or supply of the various goods and services, and hence will most likely be specific to the socio-economic framework within which the judgments are made whether those making them are from the modern, traditional or informal sectors or from a combination thereof.

So, although demand for housing is usually referred to as "what the people want", under market pressures, housing has come to be seen more as a commodity than a need, - the factors which determine its availability unlike those of need are essentially income, pricing and cost related. As such, the effective demand for the 'officially' specified commodity is in most cases, even when heavily subsidised, affordable only by those of the middle and high income groups. The majority do not possess the necessary resources to constitute an effective demand and thus are not able to participate in the official

housing market except maybe at the petty commodity level. The field study (see chapter 4.) highlights this issue and demonstrates that even at highly subsidised rates the great majority of the respondents could not afford the 'rentages' (mortgages).

The integration of the sectors into a larger and possibly stronger housing sector must be seen as a plus for the housing industry and the urban environment. After all there is a 'pent-up' demand. This is regarded as a demand that would arise and become effective if the influence of the present shortage and limitations (such as categorial relocation projects limiting choice by tying households to specific patterns and thus destroying the economic rationale of their actions, special incentives or subsidies such as very low frozen rents, which induce expenditure strategies very different from those preferred in the absence of such incentives) within the existing market are removed (Sudra, 1976). It is this pent-up demand, which if recognised could be harnessed to help combat the housing problems.

There is also the potential demand, which could be activated if some specific basic changes in supply took place; changes such as restructuring access to some of the basic resources. In other words, if the potential demand matches the existing resources, irrespective of who controls them, then by realising this demand in the context of the user-participation approach there would be an expenditure strategy based on priorities as identified by the users.

If this integration is to be achieved there must be recognition and acceptance of the role of the user in the provision and delivery process; for, given the complex nature of housing needs (as outlined earlier) and the cultural abyss that appears to exist between the official housing industry and the majority of the informal sector, the consumer is most probably best qualified to identify and decide on priority needs. But this aspect of need cannot be taken in isolation,

as it is affected for the worse by the ineffectiveness of the present system.

2.13. Deficits

The quantitative need-deficit question, is an area of great contention at the heart of which lies the qualitative issue, considering the conventional and official view of housing need-deficit with its standards and numbers bases. Numerous studies (listed below) have managed to establish irrespective of the diversity of the qualitative need a finite number of existing dwellings and those that would be required in the future to meet the ever-growing housing crisis. This situation is, however, further confused by the varied amounts that each of these highly competent studies produced for the same area and period. The list below highlights this point with regards to Lagos.

Table 017. Projected Housing Needs for Lagos.

United Nations Human Settlements	for 1985	612,600
Lagos State Development and Property Corporation	for 1985	914,607
Awotona	for 1985	425,000
Planning Studies Programme, University of Ibadan	for 1985	519,574
Romconsult	for 1985	1,600,000

These conflicting and bewildering deficits arose because 'official' needs as characterised by the modern sector's standards are erroneously assumed to be the needs of the whole population. Little consideration is given to the determining needs of the informal sector influenced by such aspects as income, ethnicity, household size, access and location from employment etc. as mentioned earlier. This is not to say that the housing conditions under which the majority of the informal sector live are ideal, but it does show that the minimum levels set by the modern sector appear for the best part to be

unattainable and quite unrelated to the real housing needs of these groups. The outcome of this alleged quantitative need has, in a number of ways outlined below, contributed to the problem:

i) By legitimising the rationale behind the ambitious public sector housing programmes, such as that of the Third National Development Plan, which proposed a massive project investment of ₦1.5 billion for some 202,000 dwellings. The consequential demand on the housing resources of the country in terms of financial, executive and physical resources could not be satisfied and therefore could not play a contributive role in the escalation of housing prices.

ii) The inability of local industry to repond to this demand in turn legitimised;

a) the promotion of imported materials, manpower and building techniques at the expense of local ones.

b) the adoption of imported dwelling houses not ideally suited to the pattern of living of the proposed inhabitants.

Furthermore, in order that the Government's low income housing policy should reach its target population, very sizeable subsidies had to be introduced. This in turn reduced the amount of finance available for the provision of more houses and so the vicious circle continues.

This situation is made worse by the fact that few if any State Governments throughout the Federation (including the Federal Government itself) have been able to achieve even 10 per cent of their original targets. The consequential increase in prices caused by demand outstripping supply appears also to have reduced the ability of the informal sector households to provide themselves even with slum housing. The gross shortage of housing seems to have encouraged 'down-raiding' by the higher income groups for this officially illegal housing.

Various studies have attempted to review these 'need-estimating'

techniques in an attempt to establish more legitimate figures. There is a vast amount of literature in the field of housing need determination (Onibokun et al. 1973). No attempt is made here to review or list the numerous studies as they require detailed up-to-date and very accurate demographic data as well as a series of reliable censuses.

A comparative population figure (Doxiadis and Associates, Regional Plan for Lagos State) highlights the validity of such an approach in Nigeria, and although resolveable at an academic level it does create a situation where all kinds of political, social and economic factors beyond the immediate objectives come into play.

Table . 018. Population Projections for Lagos, 1975.

Source	Projected Population
Federal Office of Statistics for 1973	2,102,744
National Census (Provisional) for 1975	3,500,000
Planning Studies Programme for 1975 (University of Ibadan)	3,315,348
Lagos State Ministry Of Health for 1975	3,120,000

Since the last two national censuses have generally been regarded as unreliable (Aradeon, 1978), demographic studies in Nigeria have been based on the 1963 census. Given the dramatic demographic developments including the various expulsions of West African immigrants over this period, the reliability of demographic estimations, by what ever method may be mere guesstimates.

2.14. Concluding Remarks

From the critical review above, it is evident that the official

provision and delivery process in Nigeria and in Lagos in particular, has right from the early days of colonialism to the present exhibited a high degree of continuity and fluctuation in scale rather than being innovative and developmental. As such, government policies and programmes appear to have been determined by the changing demands and needs of the modern sector, whether colonial or post-colonial rather than by the needs of the nation at large.

It is a trend characteristic, which Dr. Oberu Aribiah and Professor D. Aradeon consider to be "elitist, in the sense that it mostly thinks in terms of those who are in employment...", in the modern sector. The consequence is that "those who are least able to compete in the ((modern sector determined)) housing market" (ibid), ie., the under and unemployed are left out. The apparent objectives appear to reflect a strong bias towards not only the creation of an elitist class but also the entrenchment of this class at the expense of the nation at large.

Many of the government measures do not appear to have been accompanied by effective programmes of action and appropriate institutional arrangements for their execution, and as a consequence many of them did not go beyond the paper they were written on. Some examples of these measures are: the Anti-Inflation Task Force recommendations of 1976, the banning of the exportation of timber and the provision of standard plans for house types. Other measures such as the Rent Panel Reviews of 1976 and the Land-Use Decree of 1978 did have a limited effect but it would appear that they inhibited housing provision rather than to encouraging it.

Under the direct construction strategies, both Federal and State governments embarked on sizeable construction programmes which in practice did not reach the majority of the low income households in the informal sector. This mis-targetting was compounded by the very

limited number of housing units actually completed. During the Third Plan Period only about 1/8 or 13.3 per cent (Onibokun, ndp:21) of the proposed number were actually completed. This situation was further compounded by the (practically) outright abandonment of the strategy by the Buhari regime (1984-1985) and the selling off of government housing estates (West Africa, 1984 at p.2145).

This inability to meet the proposed targets, despite the vast amounts of oil revenues 'thrown at' housing was, as mentioned earlier due to a combination of a lack of and misplacement of financial, executive and physical resources available to the industry. This in practice, led to those same units being outrageously over-priced when compared to what individuals paid to build their own 'houses'. These so called low income-low cost houses became affordable only to the upper income groups (even after subsidies). Added to this was the mis-targetting of access to the components of the provision and delivery process. The finance system which had been modified considerably to improve the financing of housing in practice mainly benefitted the upper income households, ie., those most credit worthy. When finance then became available at all levels demand was such that it far outstripped supply, which was in itself poorly structured. Both the executive capability and materials supply were unable to absorb the relatively enormous demand. Aside from this, their structures were such that this further hampered the industry from responding effectively and efficiently.

The apparent overriding concern for numbers does seem to have played a major role in the housing policies and programmes. For instance, in 1973 during the Gowon regime a scheme to build 59,000 units was proposed out of the blue. This was then followed by another proposal for 202,000 units in 1975 even before 10 per cent of the original 59,000 had been built. No consideration was given to the

ability of the construction industry to take on such a task let alone for the actual needs of the nations most needy. Regretfully this seems to be borne out by the meagre completion figures of 13.3 per cent ie., less than 25,000 units being completed. To this numbers game can be added that of political one-upmanship between the Federal and State governments, who in a bid to out-manoeuvre each other took no notice as to the real housing needs of the nation. Throughout the country, the lack of any proper direction in the location and planning of housing projects is quite obvious, for instance some estates were built at a distance of up to 16km from existing settlements in the bush. According to Major Abubakar Umar (Administrator of the FHA) a case in point was located in a marshy valley in Cross-Rivers State, where three bedroom houses, were constructed at a cost of ₦100,000 each. On visting the site the Major (a commander of the armoured devision) commented that the houses, some of which were already falling down would best serve as an excellent tank obstacle defence for the town and luxurious accomodation for rats and snakes.

Moreover, it would appear that the nature of these policies and programmes is such that although not inherently bad were they to be implemented in the appropriate environment, they have in the Nigerian context, initiated and determined a chain reaction of inhibiting housing policies and programmes on a self-sustaining basis. These policies and programmes have maintained an influencing process of adaptation to the inherited British norms, which have become (in the development of the 'Nigerian house') defined as the so called African elitist norms. These norms in turn have come to represent the ideal to which the poor, guided by consumer hunger for the 'other housing', aspire (Aradeon, 1978) and as such, form the basis on which policies and programmes whether promulgated by low, middle or high income groups will be used as a frame of reference. However, this adaptation

although sustained by policies and programmes, (framed by the elites with their perception of good housing determined in the main by the standards inherited, adopted, or witnessed on their travels or from what they learned through training and education) must be questioned. In reality most elitist households often contain dependent relatives who form an integral part of the household. This therefore creates a situation where the overcrowded elitist homes are incompatible with both the Nigerian households and the spaces designed for British norms.

Could this aspect therefore be at the heart of the somewhat contradictory and conflicting characteristics of the policies and programmes of the planners in Nigeria outlined above? For instance, given the nature of the guidelines on its implementation, the FHA, focusses its attention on issues of urban renewal and road widening programmes. During the 1975-1980 Plan Period almost 60,000 people were rendered homeless in the metropolitan area of Lagos as a consequence of road widening (Aradeon, 1977). When considered in relation to the relatively low output of official houses it creates a scenario where the FHA by its actions may actually be making more people homeless.

No doubt great quantities of resources required for the provision and delivery of housing have either been misplaced or misdirected. The massive ₦1.5 billion investment although highly commendable (when compared to the total National budget expenditure of ₦2.3 billion and ₦3.2 billion for the First and Second National Development Plans respectively) in its apparent commitment to tackle the housing problem over the Plan Period 1975-1980, caused a catastrophic multiplier effect on the economy of housing and urban settlements. This effect appears not to have been anticipated. The outcome of this massive investment has been to push the cost of functional human settlements almost beyond the financial capacity of the nation. To have invested such an

amount, in such a way, over such a period of time may in the long run prove to be disastrous.

From this brief outline it would appear quite conclusively that efforts by the Government to improve the housing environment in Nigeria by simply throwing in vast amounts of money in the hope that equally vast numbers of units would magically appear, seem somewhat ill-founded, a strategy which Onibokun in his warning at the 1980 Kaduna Third International Conference on Housing cautioned against. The fact that policies and programmes did not consider the involvement of the users in the planning of and investing in their environment is likely to lead to a feeling of alienation and dependence on the Government. This creates a situation in which the Government will most probably be incapable of either meeting the rising housing expectations of the nation or of maintaining the present conditions.

Little or no attention has been paid to alternative solutions which do appear to be making inroads in tackling the housing problems of other developing countries, notably the various aided-self-help approaches, such as site and services and especially upgrading. If more functional and socially desirable policies and programmes are to be achieved, then the role of Government at both national and state and community levels must be to stimulate, support and marshal available resources in order to enable people to make a continuous investment in their environment, perhaps on a participatory basis. With a shift in emphasis from direct provision and deterrent action and attitudes Government could achieve much by the encouragement and enhancement of these alternative approaches.

Chapter 3

URBAN SETTLEMENT IN SOUTHWEST NIGERIA PRIOR TO COLONIALISATION

3.01. Introduction

This study of urban settlement in southwest Nigeria prior to the impact of colonialisation, has been prompted primarily by the apparent failure of inherited and adopted architectural and planning techniques in effectively tackling the present deteriorating and alienating environmental situation. Whilst being conscious of neo-traditional romanticism, it is hoped that this investigation might highlight some characteristics (a few of which may still be latent in the present environment) which could be utilised to ameliorate present conditions.

Although little evidence exists in terms of the physical remains of cities (most were destroyed by the effects of passage of time, weather and the devastating wars and invasions that took place in south-west Nigeria during the 19th century), early historic material found in records on Benin to the east and Dahomey (now the Republic of Benin) to the west indicate that both were subject to political control by the Yoruba cities from as early as the 12th and 13th centuries. D'Aveiro, a Portuguese explorer visiting Benin in 1485 during the coronation of the King learned that sanction was required from the Ogane before the coronation could proceed ((Talbot, 1926) has identified the Ogane as the King of Ife)). Bascom (American Journal of Sociology, 1955 at pp.446-454) considers the Yoruba as undoubtedly the most urbanised of all African people and that urbanisation among the Yorubas is a traditional characteristic and "not an outgrowth of European acculturation" or a product of colonialisation; their level of urbanisation and large urban communities being comparable to those

of the European nations. Table 019. below demonstrates this similarity and indicates that by 1931 after the effects of the jihad from northern Nigeria, inter-tribal wars and the slave-trade, nine out of the ten largest cities of Nigeria were Yoruba. The estimated index of urbanisation fell between that of the United States of America and Canada with a population distribution resembling that of France. According to the 1953 census, 22 per cent of the Yoruba population lived in towns of over 100,000 and 53 per cent in towns of over 5,000 inhabitants (Bascom, 1959 at p.32). The reasons for such levels of urbanisation are numerous and varied and are discussed below.

Table 019. Comparative City Size Distributions and Urbanisation Index

	Over 2000	Over 5000	Over 25000	Over 10000	Over 100,000	Index of Urbanisation
Yoruba (1931)	78.8	58.9	45.9	29.6	15.3	37.4
U.K. (1931)		81.7	73.6	63.1	45.2	65.9
U.S. (1940)		52.7	47.6	40.1	28.8	42.3
France (1936)		41.7	37.5	29.8	16.0	31.2
Sweden (1935)		37.1	33.4	27.0	17.5	28.7
Poland (1931)		22.8	20.5	15.8	10.7	17.4

Source: Bascom, *ibid.*

It is not yet fully understood how these large urban environments came about. What literature there is on the subject is often conflicting. J.S. Eades (1980 at p.43), suggests that the development of these towns was brought about by " a complex division of labour, craft specialisation giving rise to (and intensified by) long-distance trade, and a need to control the major trade routes", with the more recent towns (this was still before colonialisation) being a product of the re-grouping of refugees in cities like Ibadan and Abeokuta. Wheatley (1970) indicates that urbanisation came about as a product of ritual centres, with Mabogunje (1968 at p.76) suggesting that their

development was a result of the need for administrative centres for the in-coming Ifa dynasty (Appendix II.).

Nonetheless the existence of these large urban settlements organised socially, economically, politically and spatially along some form of lineage system cannot be denied. Similarly Bascom (1955 at pp.446-454) states that patrilineal lineage or clan is the basis of Yoruba society whether it be rural or urban. The large cities are composed of segments based on kinship and are organised politically into permanent, clearly defined wards or quarters and precincts or sub-quarters. It is this characteristic of the Yoruba urban system that distinguishes it from the urban systems developed in the western industrialised nations. Wirth (1938 at p.8) distinguishes between the two types of cities,

stating specifically: "It is important to call attention to the danger of confusing urbanism with industrialism and modern capitalism. The cities in the modern world are undoubtedly not independent of modern power driven machine technology, mass production and capitalistic enterprise. But different as the cities of the earlier epochs may have been by virtue of their development in a pre-industrial and pre-capitalistic order from the cities of today, they are nevertheless cities, operating with their own characteristic and appropriate urban system." Hoselitz (1953 at pp.52-57), postulates that industrialisation is the key variable, accounting for the distinctions between pre-industrial cities. The industrial city was developed from the complex division of labour which required a specialized managerial group, often extra-communicative in character, whose primary function was to direct and control others for the 'factory system', something typically lacking in pre-industrial cities (Sjoberg, 1955 at p.438). The type of social structure required, developed and maintained a form of production, utilising inanimate sources of power quite unlike those

of the pre-industrial city. He further stresses, that at the very least, industrialisation requires a rational centralised, extra-community economic organisation in which recruitment is based more upon universalism than on particularism - a class system which stresses achievement rather than ascription, a small flexible kinship system, a system of mass education, which emphasises universalistic rather than particularistic criteria and mass communication. Industrialisation required a special kind of social structure within the urban community which is different from that of the non-industrialised urban communities of say, the Yoruba. The Yoruba kinship system is functionally integrated with social position, - it reinforces it and is itself reinforced by the economic organisations. All employment was through guilds which select their members primarily on the basis of kinship with most of the work being carried on in the home or in the immediate vicinity.

3.02. The Yoruba Urban Settlement

The Yoruba themselves commonly distinguished between the town, 'ilu', and farm village - 'aba' or 'abule'. Ilu denotes a permanent settlement with its own government. The farm villages, on the other hand, are more akin to temporary settlements where the people stay if they are working on the farms outside easy commuting distance from the town. The distinction is irrespective of size.

The organisational frameworks of the traditional Yoruba cities, as with other aspects of the traditional Yoruba urban system, co-exist to form a unique urban system, each aspect depending on the other for a harmonious existence. As explained later, the consequential spatial organisation is reflective of the interweaving of these aspects. The dominant and it would appear, most strongly reflected influence not only on the spatial organisation of the towns and cities but also on

the entire urban system is that of the socio-political influence. This factor is in itself a consequence of the inter-relationship of the kinship, kingship and ruling council that determine the framework of social, economic, political and spatial aspects of the urban environment.

3.03. Institution of Kinship

The basis of the Yoruba community or groups is the institutionalisation of kinship and lineage, from which the native laws and customs which the members follow and the social, economic, political and spatial organisations of the large urban settlements are framed.

The Yoruba are a polygamous people, and as a consequence a small kinship unit exists ('omo-iyá') which forms the basis of the social organisation of the Yoruba. This is not necessarily the so-called 'elementary or conjugal' family of Western sociology (Fox, 1967 in Chpt. 1. at Sec IV) consisting of father, mother and children, but the non-independent group consisting of a wife and her children in a polygamous household. When headed by the same father this group known in Yoruba as 'omo-iyá' is collectively termed, 'oba-akan'. A number of these 'oba-akan' in turn constitute a co-residential kinship group or unit which, when grouped with other co-residential units established a division or segment 'igun' or 'origun' of the lineage. Each segment occupying a (sub) compound or a series of rooms in the compound.

The basic residential unit of the Yoruba urban settlement is the compound, whose residents may vary in number from several hundred to the few that make up the oba-akan. The members of a compound can be classified into three groups which are not necessarily divided into economic units along kinship lines as a household may include both related and unrelated members. These are first, the compound head's

household; secondly the other related households which are dependent and semi-dependent and thirdly the tenant households which pay weekly or monthly rent for their rooms. The man who can trace his descent most directly from the lineage founders is the headman of the compound around which the family is clustered. On his death, leadership usually passes to the eldest next of kin, who in most cases is the brother or the eldest son.

These compounds in turn build up into the sub-wards or precincts which form units of larger units of the town, usually referred to as wards or quarters. This hierarchy not only provides a framework for residential organisation but also the important units of political organisation (Eades, 1980 at p.45). During the 19th century for example, some of the compounds of the military leaders became extremely large, with an influx of slaves and followers becoming cores of the political factions within the town. Indeed it is this link between descent groups and the compound, coupled with the fact that a man is a citizen by virtue of his membership of such units, that has led many scholars to see the Yoruba towns as a 'confederation of lineages', linked at the top of the political hierarchy by the institutions of kingship and the ruling council (Krapf-Askari, 1969 at p.63) discussed later.

Within the patrilineal descent system are two descent groups, the agnatic and cognatic. The difference between the two descent groups, which to some is little more than a terminological issue, does seem to correlate with marked differences in political structure, difference in status of wives and some say possibly differences in personality (although some authors would disagree (Lloyd, 1965 & 1968)). The agnatic groups are based on descent by the male line from a male ancestor, while the cognate groups are founded on the descent traced from the apical ancestor in both male and female lines. The

development of these kinship groups can best be illustrated by using a lineage growth model that describes successive stages in the development of the co-residential groups.

a) Agnatic Groups

The kinship diagrams (fig : 016.) are given in their simplest form although in reality they are likely to be more complex and include more related persons belonging to any one given kinship group. The compound head (CH) has two wives and two or three children, while other married relatives have only one or two children apiece. The aims of the diagrams are to illustrate the cyclic tendency which regulates the development of the domestic groups and to expose the factors that limit their expansion within the confines of the Yoruba city compound (stage 1, diagram A). Stage 2 of kinship structure is reached when one or more sons of the compound head has married as in diagram B, and there are thus two or more semi-dependent households under the leadership of their father. The compound head's daughter will have left the house on her marriage. On the death of the compound head stage 3 is arrived at in the development of the co-residential units as in diagram C, thus converting it into a grouping of collateral agnates and their families, with the older brother usually succeeding as compound head. After the mourning period is over, barren and junior widows of the dead compound head will normally leave the compound for re-marriage. Stage 4 as illustrated in diagram D is reached when the new compound head's son and/or one of the full or half brothers' sons marries. As always, since women move to their husbands homes, the marriage of the girls reared in the compound does not affect the structure of agnatic kinship groups. Diagram D shows that the two daughters have left their fathers house on marriage. Stage 4 groups are usually large co-residential groups with complex kinship networks and an average population of about 24.2 persons per compound

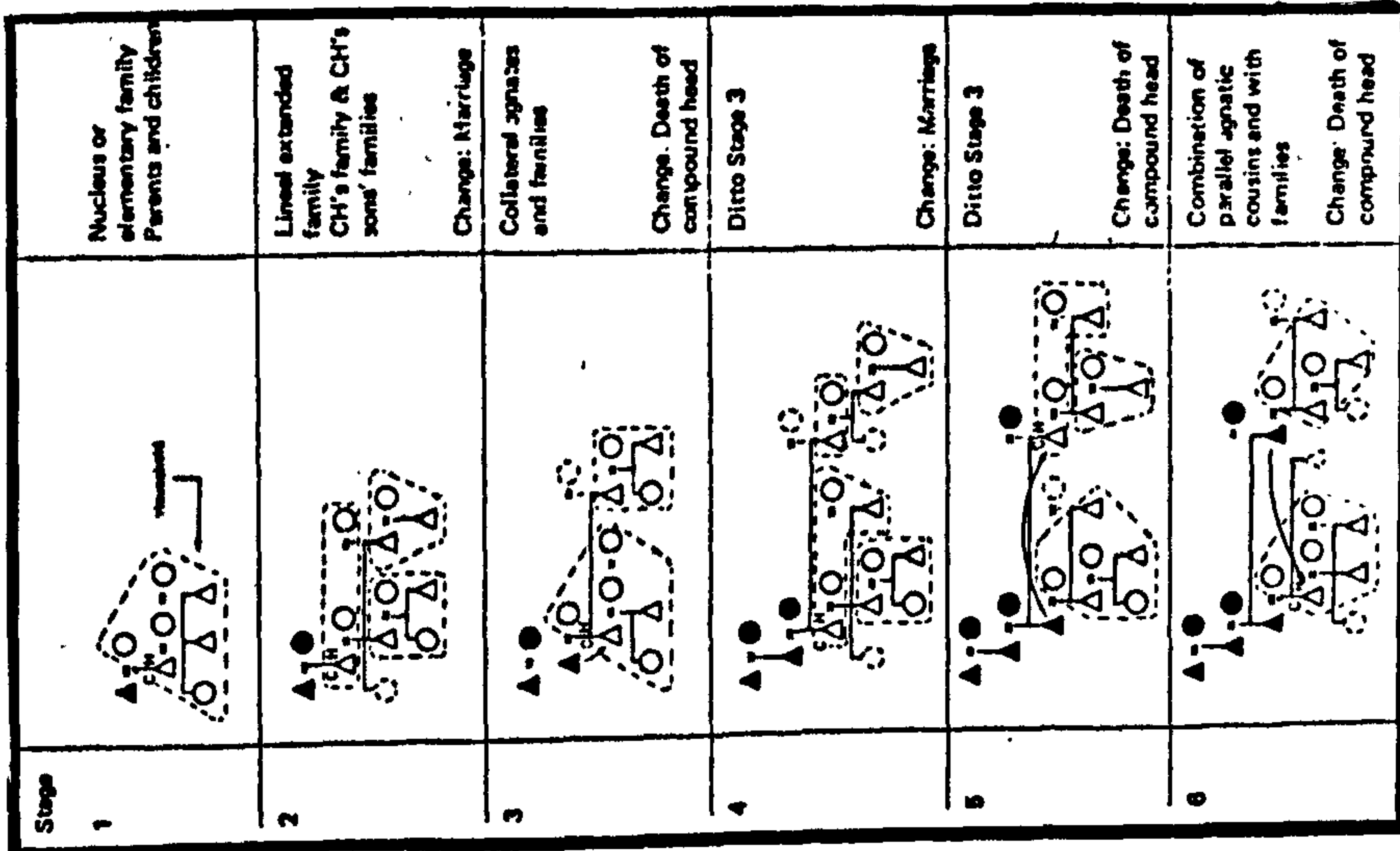


Figure 016. Schematic Growth Model Of Agnatic Kinship Groups.

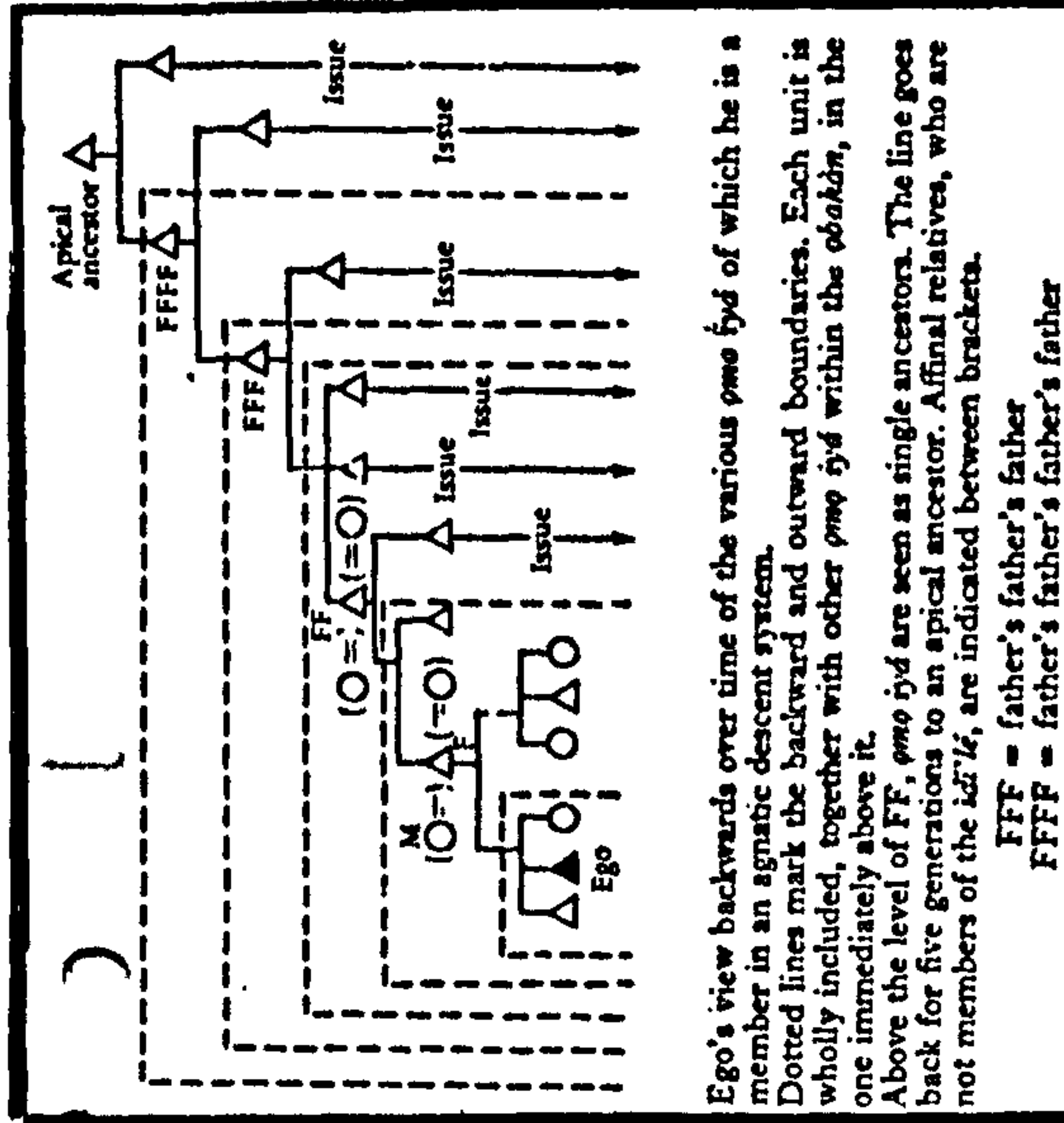


Figure 017 Ego's View Backward Over Time As A Member Of An Agnatic Descent System.

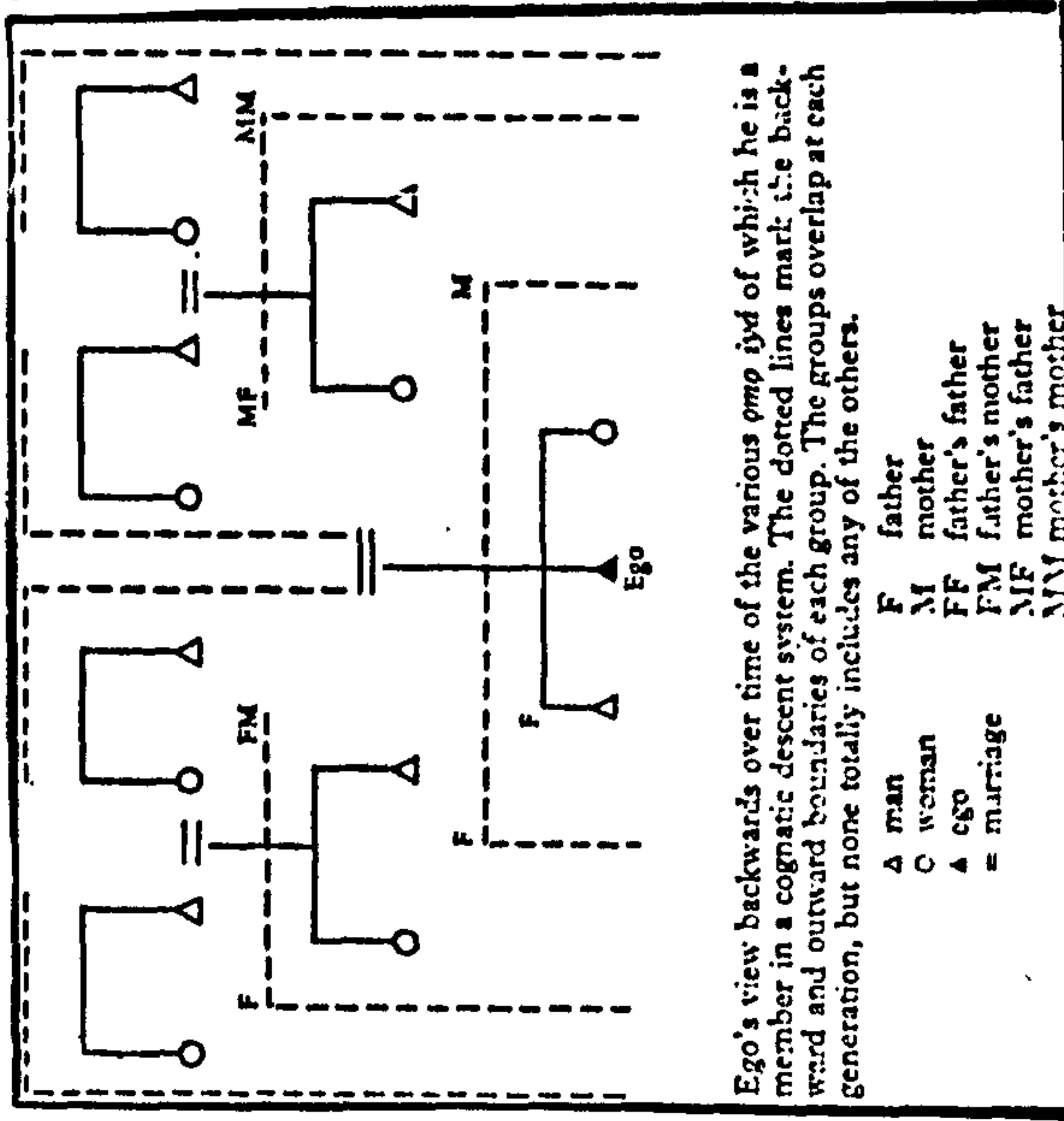


Figure 018. Ego's View Backward Over Time As A Member Of Cognatic Descent System.

(Schwerdtfeger, 1982). These extended collateral families are of particular interest because their internal structure normally generates a split of the old kinship group and the establishment of a new residential unit which then begins the cycle at stage 1 as in diagram A. On taking over as the new compound head (senior surviving brother) all responsibilities for the co-residential unit are transferred. As illustrated in diagram E, stage 5 is brought about as divergent interests and ensuing friction amongst the various household heads may result in the splitting of the kinship group. However, it must be stressed here that a division of the co-residential kinship group can occur at the earlier stages when, for example, the compound head has built a new section for his eldest son or if one of the dependent household heads becomes economically independent and wishes to build his own. Stage 6 as illustrated by diagram F shows a relatively rare combination of parallel agnatic cousins and their families and possibly their married sons living together in one compound. The two household heads are related through agnates in the second degree of kinship, and this was the widest span of kinship that formed a basis for a co-residential groups.

b) Cognatic Groups

These groups which are more common in the southern areas of Yorubaland, can be divided into two types the Ijebu and the Ondo.

In the Ijebu type (fig 018), the apical ancestor of the descent group is also the founder of either the compound, the quarter, the village or the town. In the settlement there live at present a proportion of his descendants in both the male and female lines; almost all of the household heads claim such descent. All compounds in the town and most in the village are believed to have been founded long ago, so that the settlement pattern seems to be fairly stable. The territorial units from which it is made up form only a proportion

of the descendants of the founder and are much smaller than the compounds of the agnatic descent groups. In such a situation, even where land and occasionally a title, are still corporately vested in the descent group it is hardly surprising that both compound heads and title holders are overshadowed by the 'oloritun' or quarter head.

In the Ondo type settlement the situation is slightly more fluid, due essentially to the development limitation exerted on the town by the surrounding forests and the consequential population pressures. The quarter heads in these town types thus find themselves being urged to grant land to individuals to build their houses in order to alleviate the pressures of crowding. The outcome of this process enables the members of a crowded compound to build elsewhere maybe in another quarter as a matter of course. The result of this aspect on the socio-residential pattern of the town, is the lack of a large core descent groups being resident on the land of the apical ancestor. The descendants will most probably be dispersed all over the town or even elsewhere in the country and land becomes vested in a territorial unit (quarter, village, town or nation) rather than descent groups. Coupled with this is the fact that descent groups are traceable through both male and female lines, with the effect that no group is exclusive and over a period of time the large group ceases to operate as an effective socio-organisational unit. Accordingly, chieftancy titles are not vested in the descent groups but granted by the Oba on the advice of his senior chiefs.

3.04. Institution of Kingship

The entire Yoruba people have never been thoroughly organised into one complete government in the Western sense. The system that prevailed was a feudal one, with the remoter areas functioning more or

less in a state of semi-independence, whilst loosely acknowledging an over-lord. The true government of the Yoruba, was completely organised on a hierarchical basis with the 'Alafin' (king) situated at the top of the system.

The Alafin was the supreme head of all the kings and princes of the Yoruba nation as he was and is the direct descendant and successor of the reputed founder of the nation. The office he assumes though hereditary, does not necessarily go from father to son; the successor being elected by the body of noble men known as the 'Oyo mesi', the councilors of state (discussed later). The Alafin lived a secluded life in the palace, - a life which was determined by ritual restrictions - and administered the empire through a staff of eunuchs and slaves who probably numbered several thousands.

3.05. The Institution of the Oyo mesi (Council of State)

Outside the palace, the city was divided into a number of wards. Some of these housed members of the royal descent group, and were administered by the senior royal chiefs, such as the the 'Aremo', the 'Ona Isokun' and the 'Baba Iyaji'. The other wards of the capital contained the non-royal descent groups and were administered by the Oyo mesi. This was a ruling council made up of several principal non-royal chiefs, who together formed the Alafin's council. They were also responsible for the final choice of the new Alafin from candidates presented by the royal groups. The most senior of the seven was the 'Basorun' who was regarded as the prime minister and chancellor of the kingdom. The other title members were the 'Agbakin', the 'Samu', the 'Alapini', the 'Akiniku' and the 'Asapa'. Each title was hereditary within the same lineage but did not necessarily pass from father to son. They represented the voice of the nation on them devolved the chief duty of protecting the interests of the people of

the kingdom. The king had to take council with them whenever any important matter affecting the state arose. Each had a state duty to perform every morning and afternoon which was delegated to a special deputy at times when their absence was unavoidable. The Basorun was also the president of the council whose influence and power were immeasurably greater than those of the other councillors' put together. His power and influence was checked by the use of 'Ilaris' (body guards) who were allocated to the Basorun by the Alafin.

3.06. Settlement Pattern

The classic plan of the Yoruba settlement resembles a wheel (figs 019., 020., 021., 022. & 023.); the Oba's palace and market being located at the hub, the town walls at the rim and the spokes a series of roads radiating out from the palace and linking the town to other centres (Krapf-Askari, 1969 at p.39). This form is derived from and is a product of the widely shared socio-political structures (discussed earlier) of each of the towns, which, as Ojo (1966) states, "imposes a more or less identical morphology".

Most of the towns probably developed from a cluster of huts around the farmstead of an enterprising farmer who established a place for refreshments for weary travellers along a trade route between two or more major towns. In time, neighbouring farmers would bring their produce for sale at the markets which were held weekly. As the houses began to spring up the heads of the particular households would choose a 'Bale' (mayor) for the village who would, to all intents and purposes be the man who had originally set up the hamlet. The Bale having been elected, he in turn appointed his 'Otun' (right hand man), his 'Osi' (left hand man) and other civil officers of the village.

This village would now become answerable to the nearest town from which it sprang. The establishment of the market in front of the

Figure 019. Town Plan Of Abeokuta.



Figure 020. Town Plan Of Ado Ekiti.



Figure 021. Town Plan Of Ile-Ife.

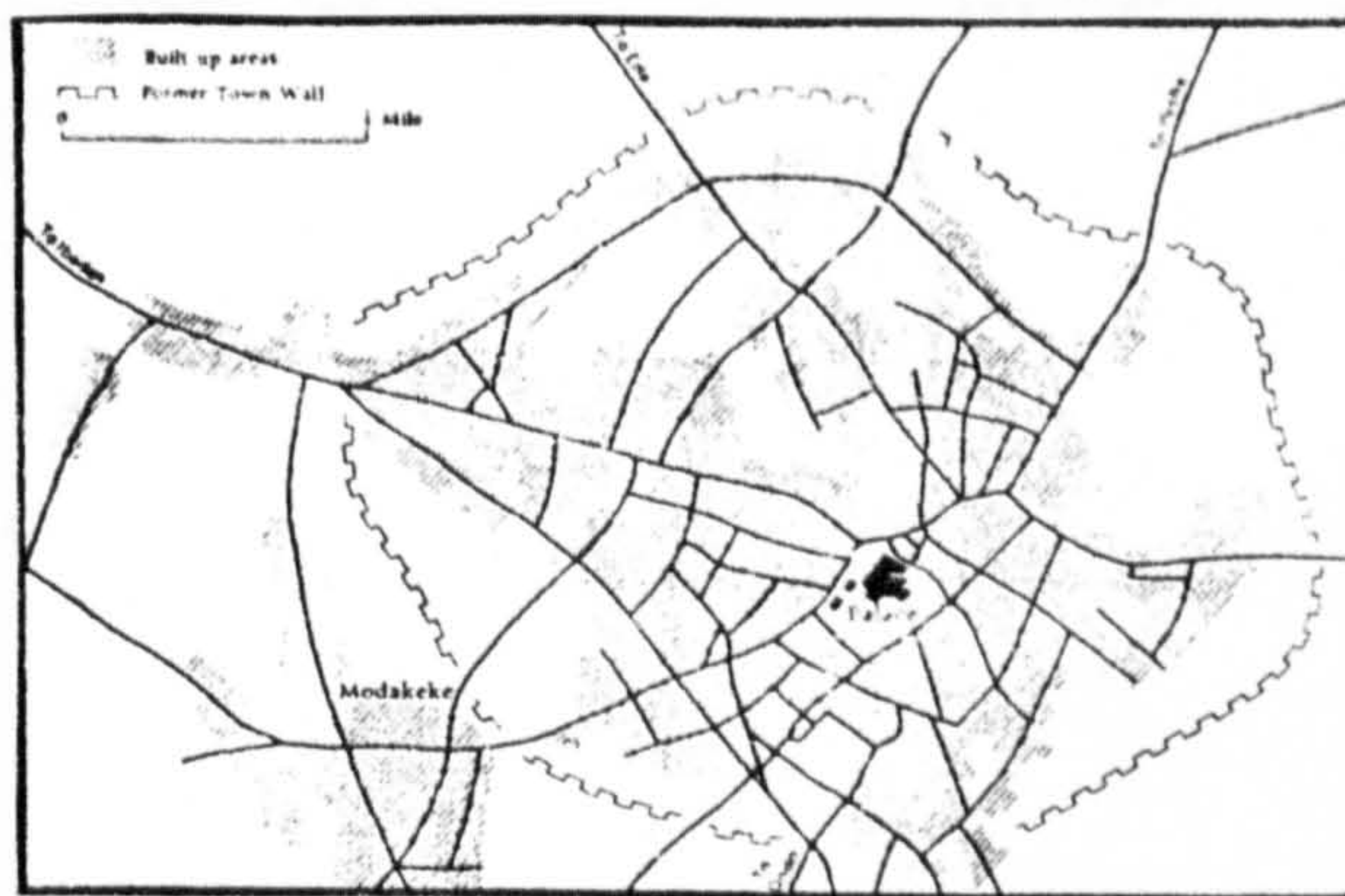
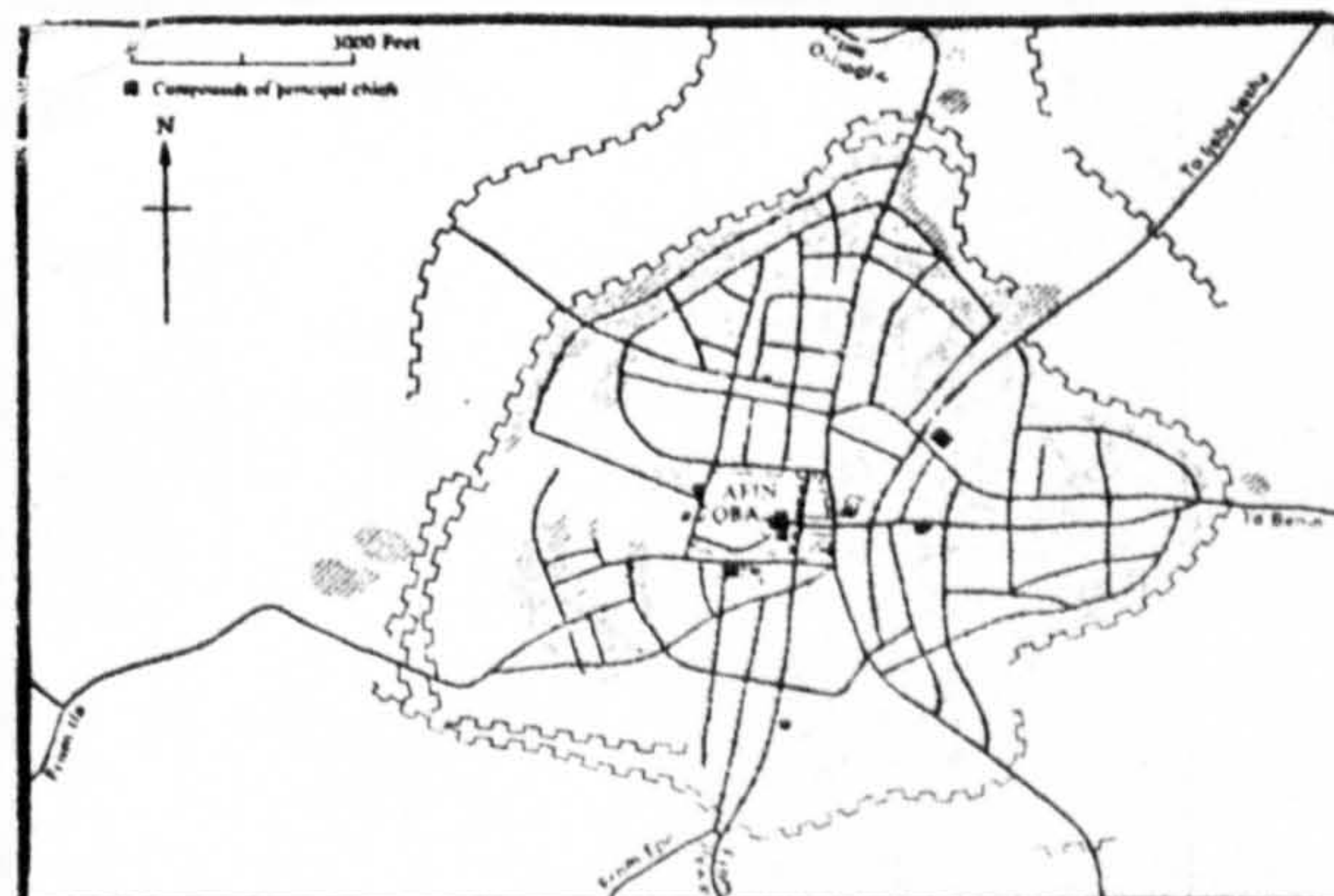


Figure 022. Town Plan Of Ilesha.



Bale's compound was without exception and hence the 'Oloja' (one having a market) was used as the generic term or title of all chiefs of a town, be he a King or Bale. Minor chiefs also have smaller markets in front of their compounds. The market square doubled up as the general rendezvous of the town on every national and municipal occasion, and was usually planted all over with trees to provide shade and lounging areas.

Most towns were walled, with deep trenches dug around the outside, the more exposed the town was to attack the more substantial was the wall. To improve the security of the town the bush or thicket

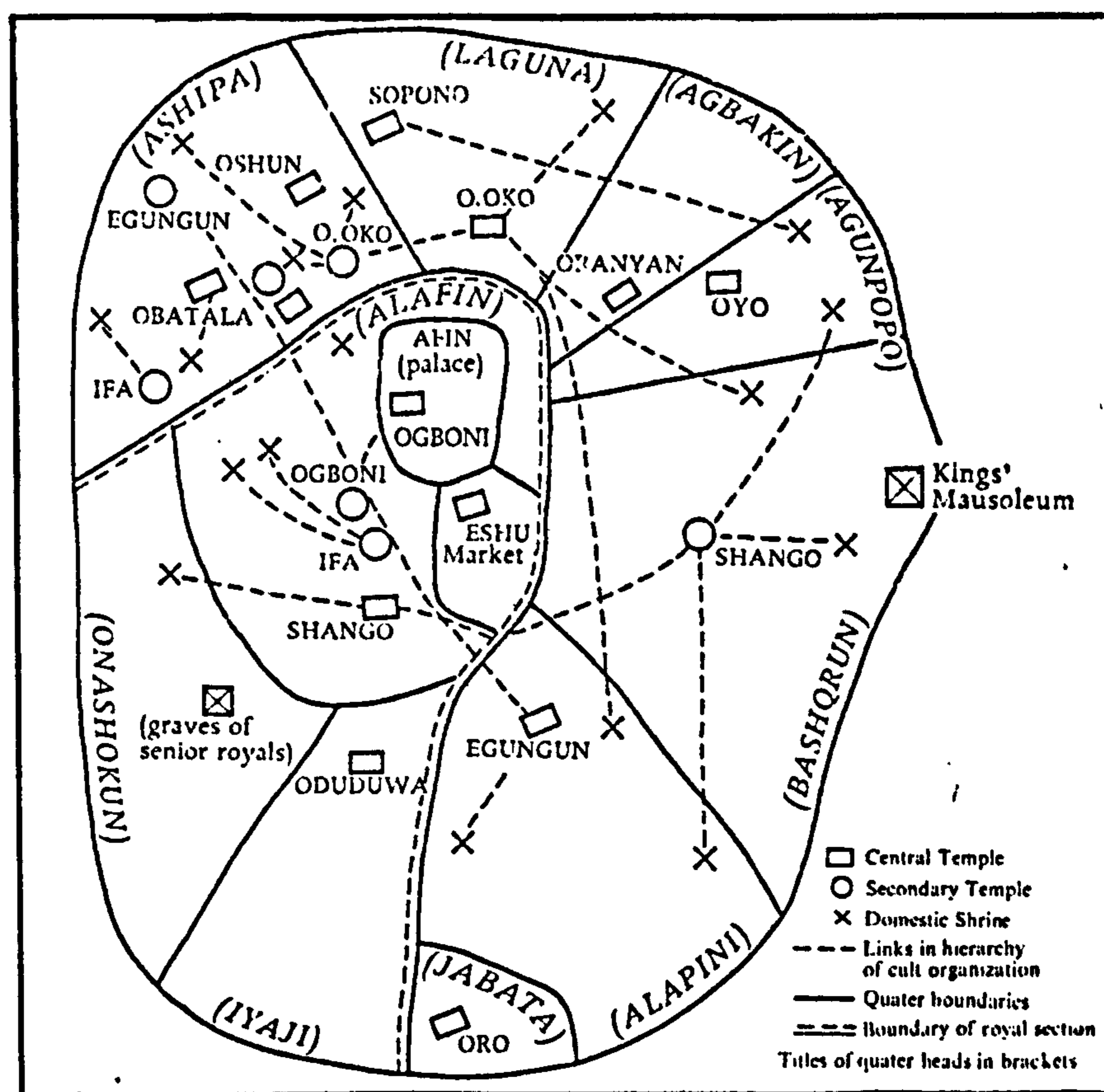


Figure 023. Town Plan Of Oyo Showing Distribution Of Temples And Domestic Shrines.

('Igbo-Ile') was kept at a distance of half a mile from the wall, thus providing a rudimentary early warning system against a sudden cavalry attack, as well as a safe ambush for defence. The tallest trees were used as watch towers and it was a punishable offence to cut them down for fire wood. The massive gates (figs. 024. & 025.) were

manned by a resident gate man, who collected tools from the passers-by. Market people paid a fixed sum varying from 40 to 200 cowries, while farmers contributed a portion of their harvest as they passed through. These gates were named after the most important town to which they led. The responsibility for maintaining the road, gate and wall was that of the chief of the ward in which the gate was located. This chief also ensured that a fixed amount was collected for the town council.

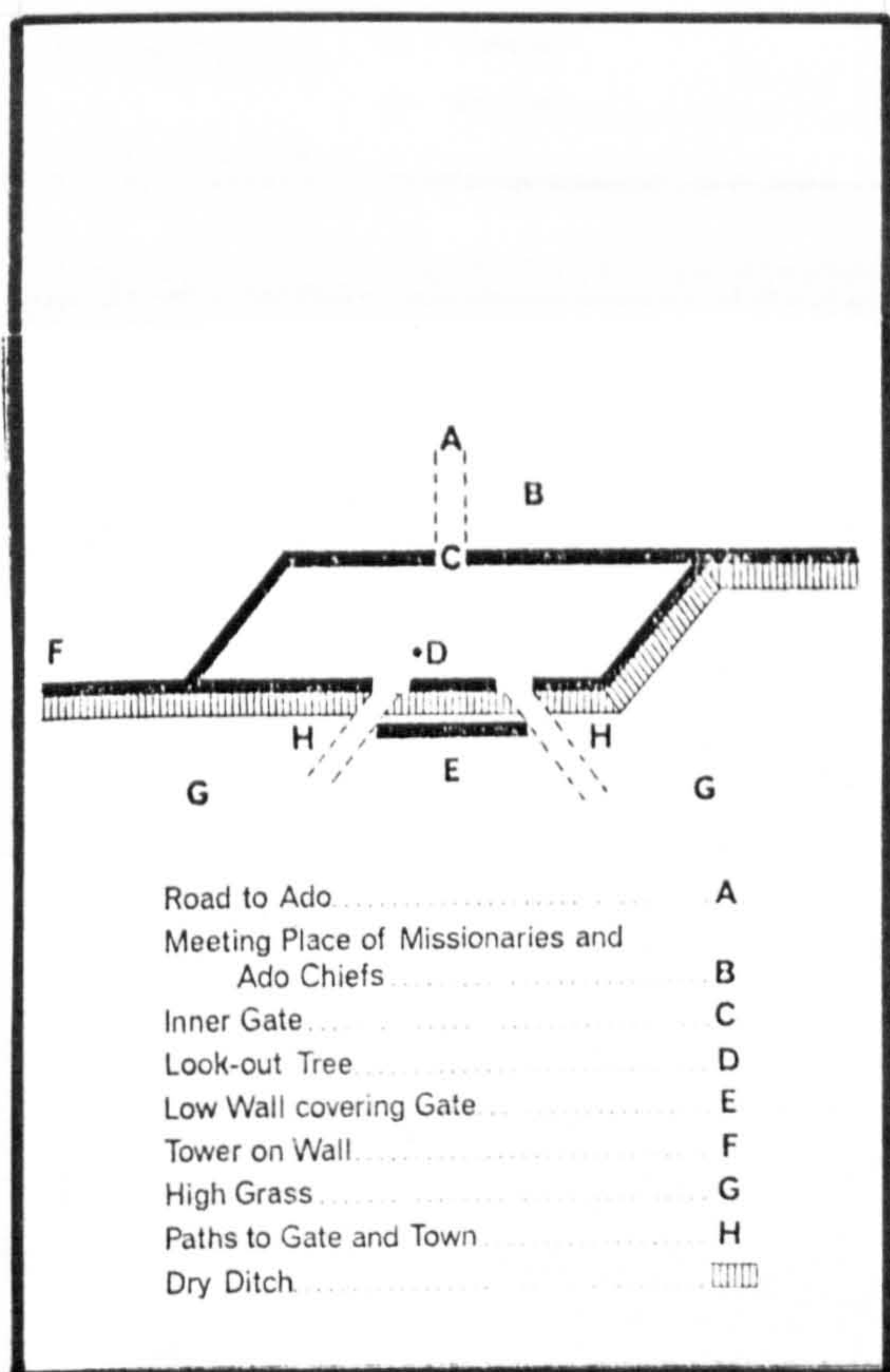


Figure 024. Ground Plan Of Ado Town Gate.

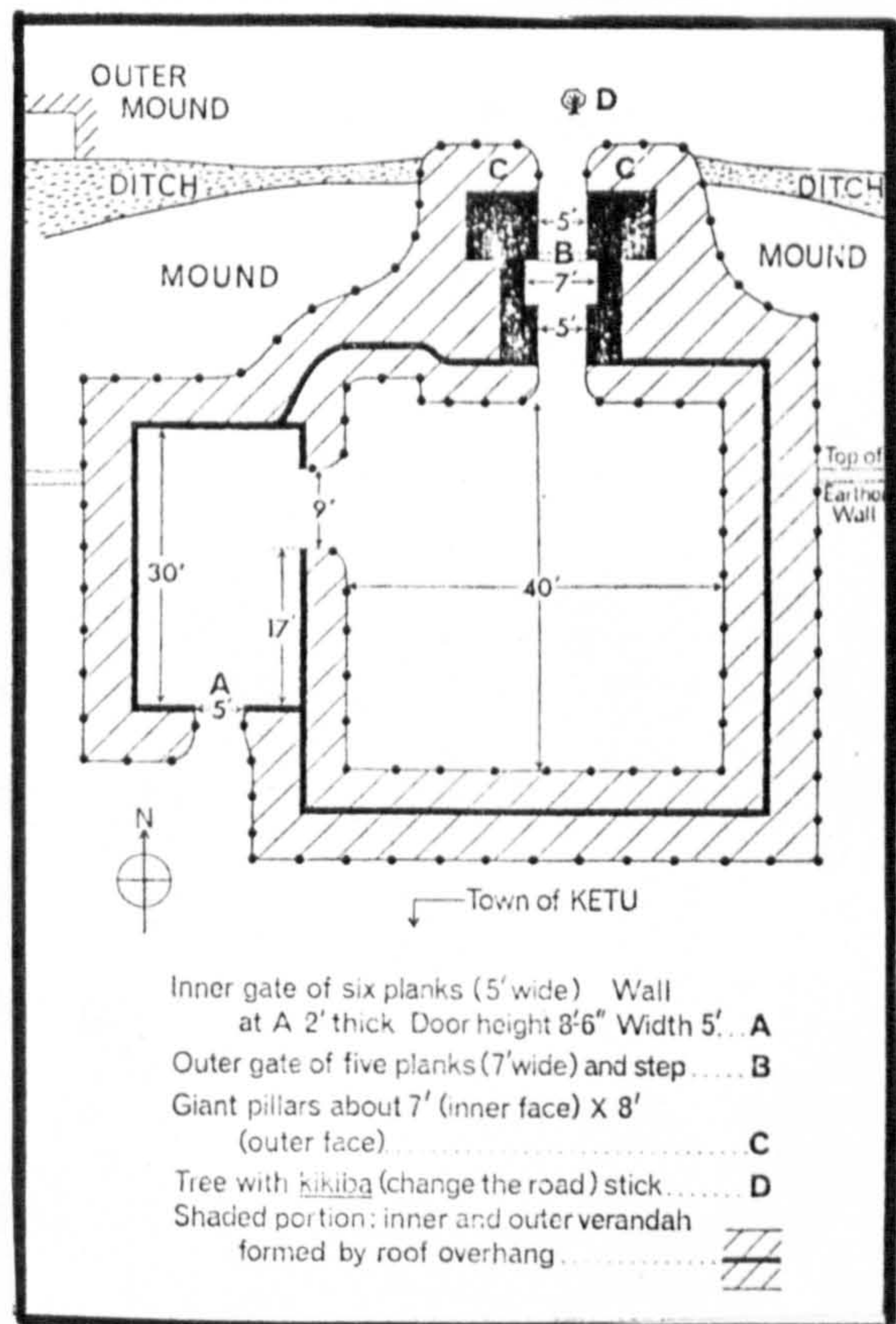


Figure 025. Ground Plan Of Idina Gate, Ketu, Benin.

Over a period of time the town would be built with its help of the entire population. The new streets would follow the line of the old footpaths to the farms which were now enclosed within the town.

This settlement pattern can be categorised into three types , classic, new and chessboard (Lloyd, 1962 in Krapf-Askari, 1969).

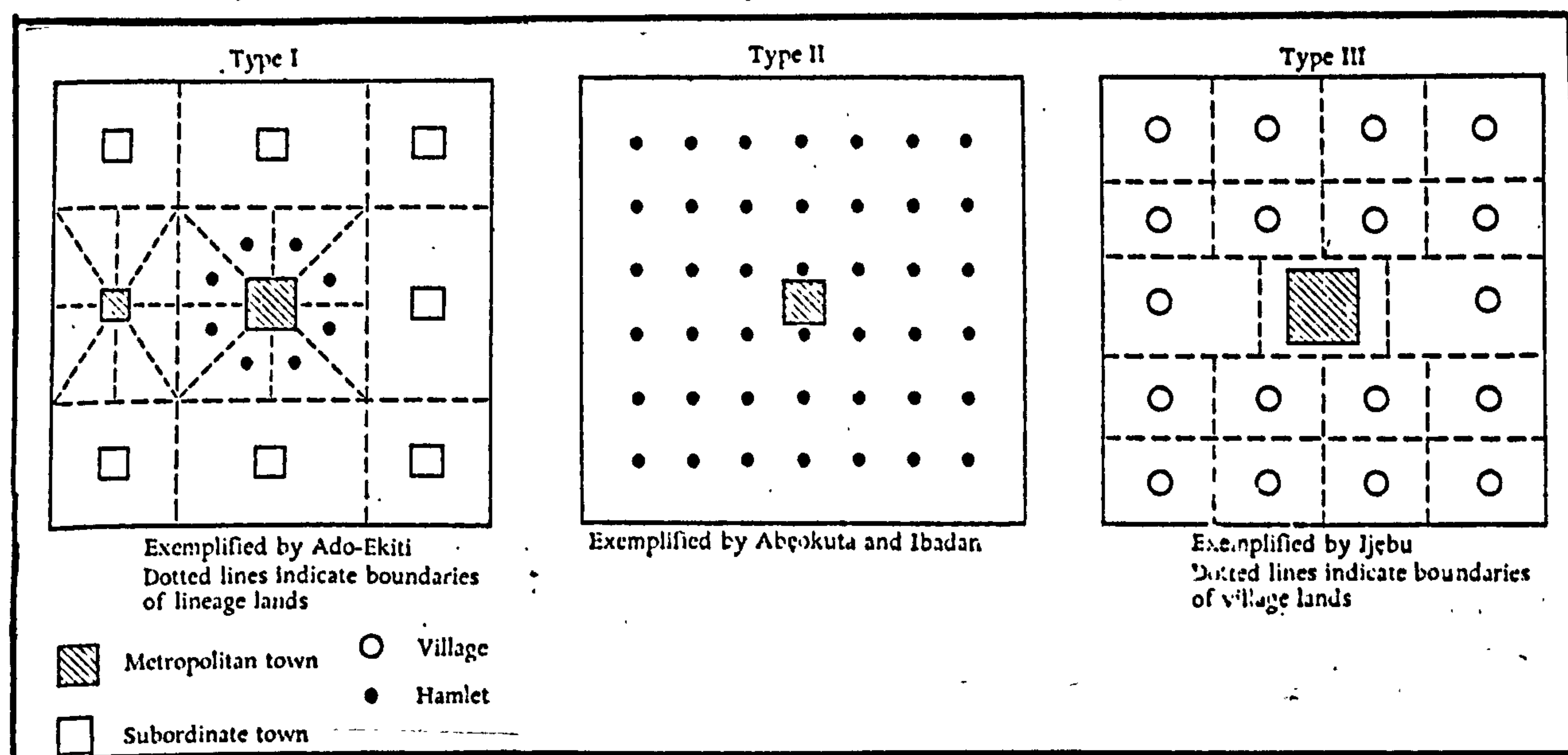


Figure 026 Schematic Representation of Settlement Patterns.

Type I - Classic Plan

As exemplified in the Oyo and Ekiti towns, this type presents the same radial appearance as the Ile-Ife town plan or 'classic' town plan described earlier. The boundaries of the compounds and quarters in the town extend into the farms so that, schematically, the farm areas appear as segments. Plots of land, lying within three miles (say an hour's walk) from the town, form the 'oko etile' or border farms, which are cultivated by the men living in the town. Beyond that are the 'oko egan' where distance requires their cultivators to live in small hamlets.

Type II - New Plan

The establishment of these towns often referred to as 'new towns' (Lloyd, *ibid.*) is attributed to historical events which took place during the early decades of the 19th century. With the collapse of the Oyo empire and the devastation of the towns and villages by marauding armies most of the inhabitants, now refugees, fled south and re-grouped. The most famous of these re-grouped settlements are Ibadan

and Abeokuta. The newly arrived population established their descent groups by staking out claims to land over a wide area. Within Ibadan, land was granted to the military and other leaders, who proceeded to settle there with their retainers and relatives. It is these blocks of land that provided the basis for the order of the present day quarters. The chieftancy structure of Ibadan, made up of both civil and military, formed part of the quasi-bureaucratic promotional ladders, with no permanent link being established between chieftancy title, descent group and responsibility for a quarter as in the case of the *ilu alade* of type I.

The case of Abeokuta is somewhat different as the town grew from the overflow and consequent merging of separate villages. The town we see today is essentially a conglomeration of 153 of these villages, with the 'Alake' (king) as the overall ruler. This description of authority is somewhat exaggerated as each township has its own local organisation and the Alake has very little influence in the managing of day to day local affairs. His authority only becomes material when consent is granted by the Principle Chiefs or 'Ogbonis', who form the political council and power base of the settlement. Hence we see that there is not one central market but several with their principal Baloguns or Serikis. There are at least four kinglings and several Ogboni houses, each section being jealous of its liberty and symbolic rights. Abeokuta has never been organised along the single town basis of the European style

Type III - Chessboard Pattern

These towns unlike the radial patterned towns of type I, such as Ondo and Ijebu, resembled a chessboard. In these towns, the roads divide the town into rectilinear sections. The compounds as such are much smaller than those of the type I settlement, which are found further north. The majority of the houses face the street or are

grouped around subsidiary courts or cul-de-sacs. Although aligned with reference to the street, the quarters have pathways running at their rear which form the boundaries between them. These towns' compounds and quarters do not extend their boundaries outward into the agricultural land; instead, the metropolitan town is marked off from the relatively narrow strip of farmland which surrounds it, and in turn from surrounding sub-ordinate towns and their lands.

To conclude, Lloyd (ibid.) attributes these differences to the corresponding types of descent groups, agnatic and cognatic in the south. Krapf-Askari (ibid.) suggest also that "if this is so, it goes far in explaining the sociological differences that exist between the towns". Eades, however, rejects the Lloyd model, in which the relationship between the two aspects does not take into account the numerous variables involved, and the fact that this classification is too arbitrary. He suggests that the presently wide diversity of kinship organisation is a result of the interaction of two or three principles of social organisation which the actors use to organise their lives. These principles are: first, that kinship is reckoned to be bi-lateral. Secondly, residence on marriage is verilocal, and that therefore, other things being equal, the outcome will be a group of agnatically related males living together, along with their wives and children. Thirdly, where groups who are unrelated happen to live together in the same social unit, a way has to be found to organise patterns of authority, seniority, kinship terminology and exogamic restrictions which are found in kinship units. As such it is the combination of variations in the relative strengths of these principles which relate more closely to a range of historical, environmental, economic and political factors, and as a consequence on the variations of the Yoruba settlement patterns and urban systems.

3.07. The Compound-Courtyard House

The compound, 'agbo ile' forms the basic residential unit of the traditional Yoruba settlement. Traditionally, the dwelling units within this element (all to be found on the ground floor), form a hollow square, horse shoe or circle shaped courtyard or collection of courtyards, around which runs a verandah-piazza, from which there is usually one principal gateway fig 027. Although a product of a number

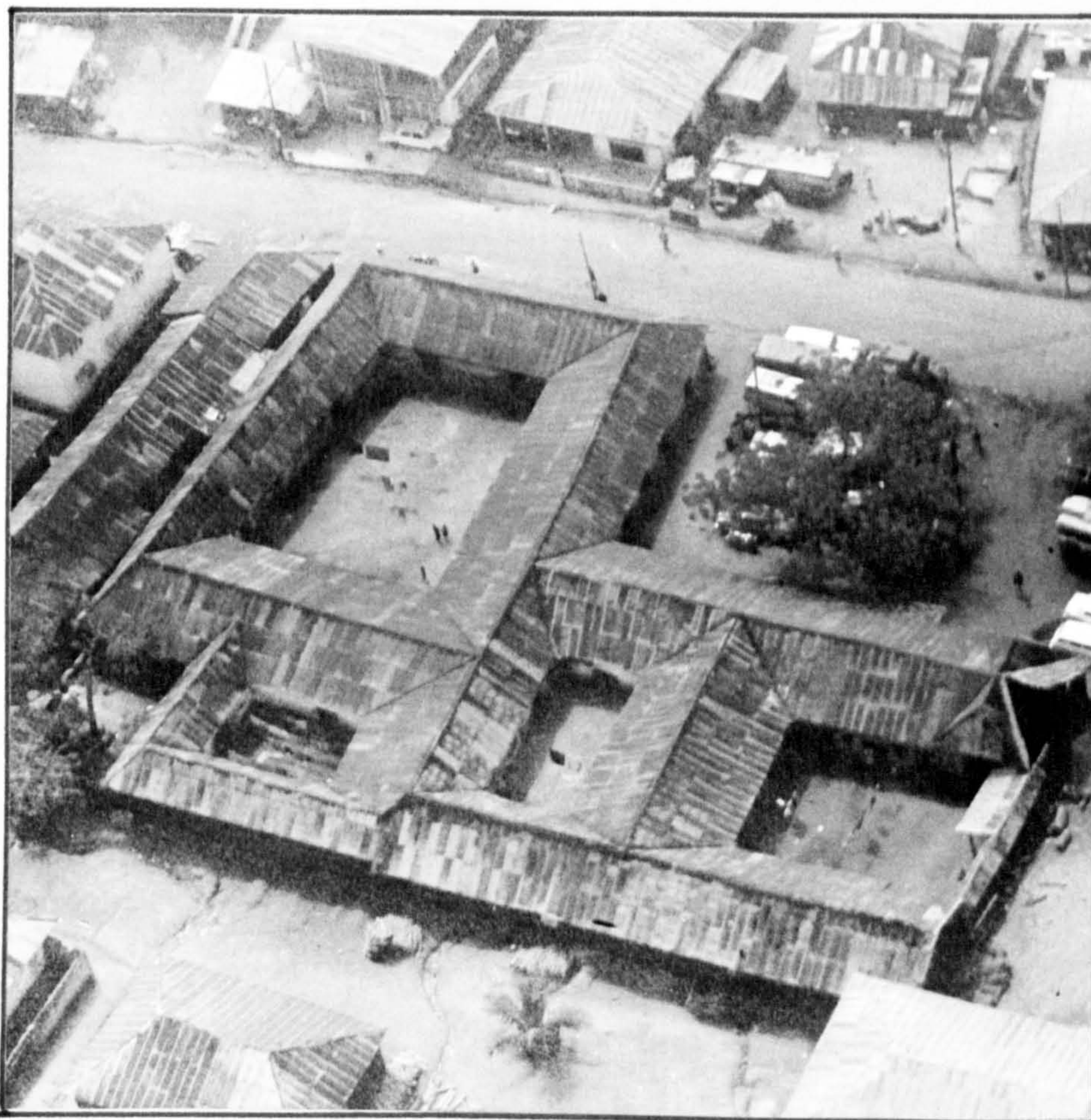


Figure 027. Aerial View Of A Large Yoruba Compound

of inter-related factors, the planning layout of the compound is indicative of some very strong socio-domestic factors.

The courtyard and its adjoining verandah have significant social and utilitarian functions. They may serve: as the purdah or harem, especially for Moslem housewives, who traditionally are forbidden to go

out, the women sit on the verandahs busily spinning, sewing, making baskets, cooking, gossiping or working on other household activities - this area also serves as the playground for children.

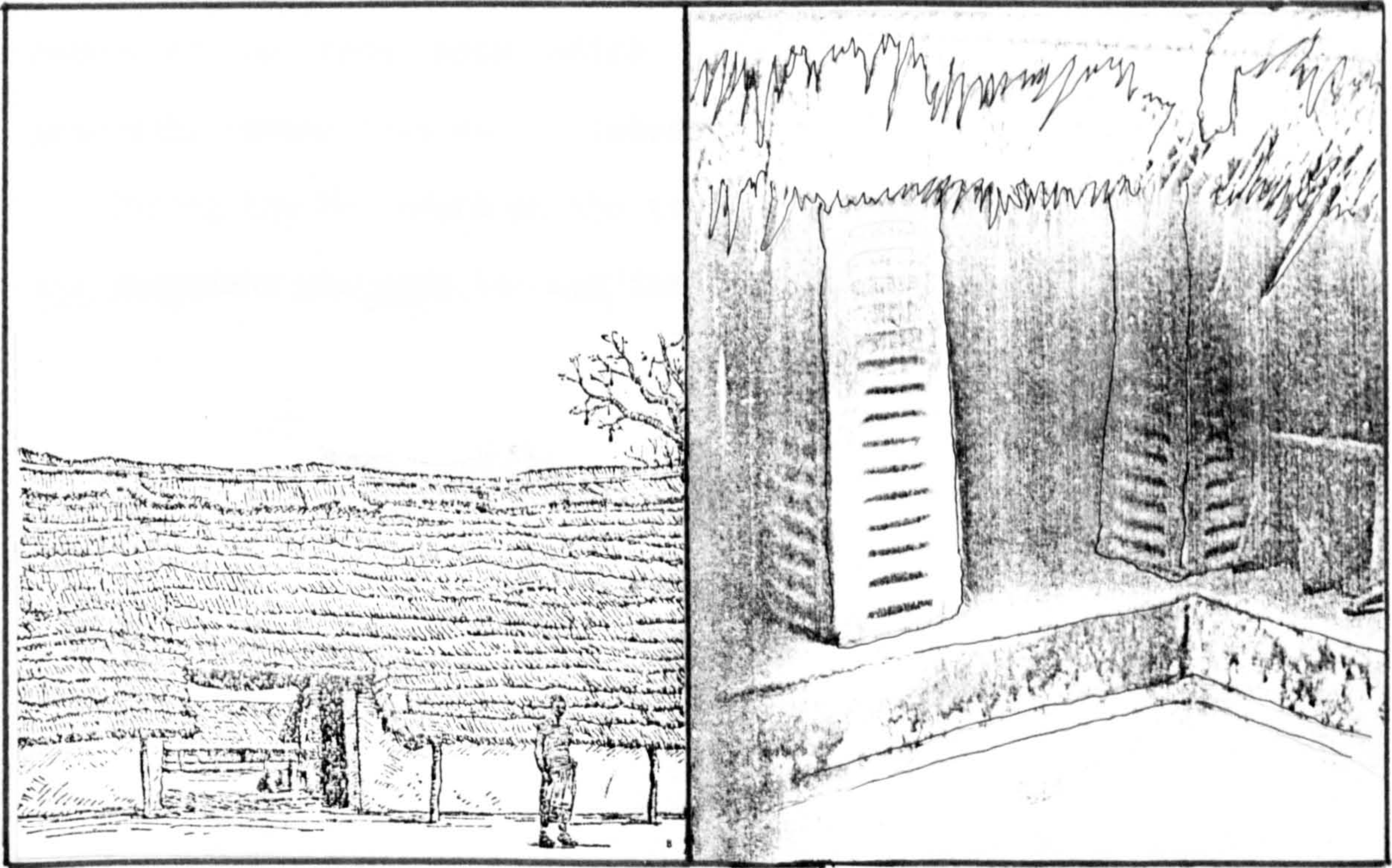


Figure 028. Entrance to A Large Yoruba Compound.

Figure 029. View Of An Impluvium.

Within the courtyard or court is the impluvium (fig 029.), whose main function apart from providing light and ventilation, was to collect the rain water that ran off the roofs (fig 028.) and (fig 030.). As a residential unit its interlocking courtyards and courts also serve as physical controls within which children can be confined (according to their age groups) within the range of parental supervision. For instance children under the age of three might be confined to playing in the innermost courtyard, children between the ages of three to six years are allowed to wander into the larger courtyards according to their parents' estimate of their mental alertness to danger and the the 'bad company' of stray hoodlums. Nowadays when a child is over six years old, he or she goes to school

and is considered 'mature' enough to play in the more open public spaces.

Household furniture consists essentially of cooking utensils, water pots and a mortar and pestle. The use of bedsteads, tables and chairs is not prevalent as most activities requiring such items are conducted on cane mats which are placed on the ground and are generally rubbed down and polished once a week.

During the hot hours of the tropical day and night the courtyards and verandahs may also be used for sleeping.



Figures 030. View Of Rain Water Jars In Impluvium.

The head of the compound's 'apartment' is usually located opposite the main gateway. It is generally larger with a loftier roof and a more spacious and prestigious verandah than the others in the compound. The 'apartment' of great men often have yet more small courtyards off the main courtyard, these are called 'kara' or retiring quarters, each of which may be devoted to a specific use whether harem or stables.

Compared to the other compounds, that of a chief is distinguished by the street verandah that runs from either side of the main gate. In addition these compounds are embellished with decorations, sculptures and carved plaques.

3.08. Summary and Concluding Remarks

The peoples of south-west Nigeria, notably the Yoruba have lived in large, dense and permanent settlements for centuries and, as a way of life urbanisation is not new to them. Even after the devastating effects of the inter-tribal wars of the 19th century, studies on urbanisation in 1931 rated the urbanisation index of this region higher than that of most countries in Europe. The creation of these urban environments, unlike those of industrialised nations appears to have been the result of the inter-action between a number of related factors which were needed to support the administrative requirements of the incoming Ifa dynasty (Appendix II.). However, the migration of refugees from the war-torn areas in the northern regions of Yorubaland country coupled with the effects of slave raiders no doubt contributed to the formation of a number of the sizeable urban settlements in the south, such as Ibadan and Abeokuta; this was especially true in the decades just prior to the arrival of the colonialists.

The structure of these environments can be closely related to the socio-political structures of kinship, kingship and ruling councils of Yoruba society with the classic town plan, which if overlaid with the socio-political structure resembling that of a 'wheel'. At the social, political, economical and spatial centre or hub was the Oba's palace and the town market, around which and radiating from which were the residences of the ruling council (fig 031.). Each member of the ruling council represented the interests of a particular quarter or ward of the town and the commerce associated with that area. The town walls formed the rim and a series of roads radiating out from the palace and linking the town to other centres or 'administrative centres' formed the spokes. The area between the 'spokes' i.e., the town's quarters were made up of compounds - the basic residential unit

within which the courtyard or court 'element' constitutes the focal point of the 'plothold'.

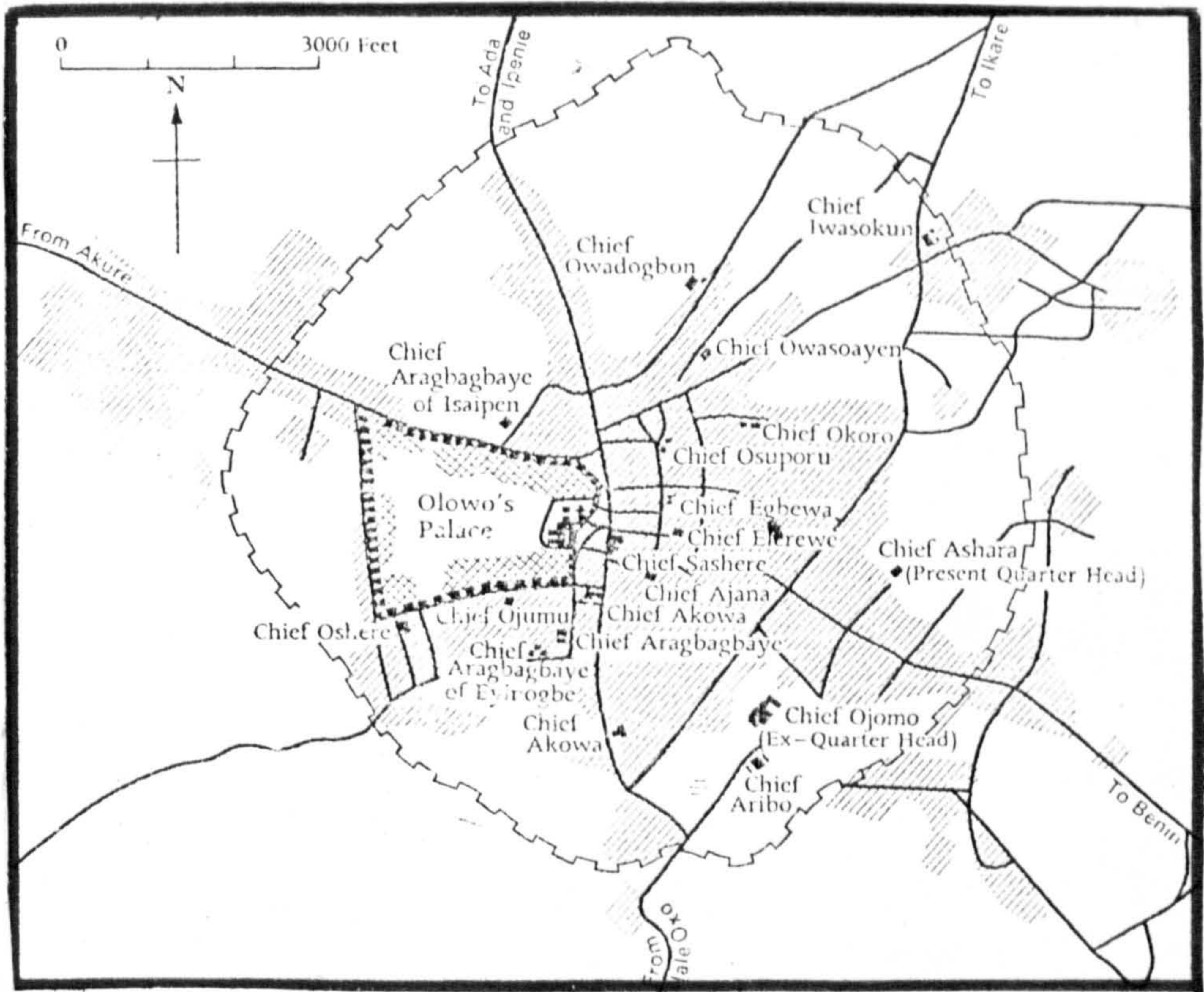


Figure 031 Town Plan Of Owo Showing Distribution Of Inner Council Chief's Compounds.

Within the modern day context and an aided self-help housing strategy, the compound/courtyard house for example, along with some of traditional and informal sector aspects, offers a number of characteristics which would contribute substantially to redressing the housing problems that presently exists. Firstly from a domestic planning viewpoint, it provides a kind of multi-purpose utility area, which to all intents and purposes has a relatively lower financial and building material investment level (in terms of building elements such as walls, roofs foundations etc.) when compared to the western model house. Secondly due to its 'focusing' characteristic, the courtyard couple with the traditional process of dividing the duties amongst the members of the compound and community from the youngest to the oldest

acts as a 'classroom', thus allowing individuals to acquire a wide knowledge of the affairs of the compound and community by the time they are adults (Aradeon, 1980 at pp.222-254). Thirdly and as a development of the above two points, the compound/courtyard also provides the fundamental and basic 'arena' on which the socio-organisational hierarchy of an aided self-help strategy can be built (see chapter 6.).

Thus one cannot help but conclude that one of the major reasons for the haphazard manner in which Lagos is and has been administered is the lack of consultation with and failure to take account of the requirements of the informal and traditional sectors. The greatest tragedy of this maladministration is the almost total disregard (bordering on contempt) for the centuries of urban tradition inherent in the peoples of south-western Nigeria. A tradition which Okin (1968) believes will be significant in the shaping of the future African urban environment.

PART TWO

Chapter 4.

FIELD STUDY

4.01. Introduction

This field study is made up of five sections:

- i) Definition of objectives.
- ii) Design and Construction of an Instrument to measure variables.
- iii) Construction of the sample.
- iv) Implementation and Data Collection.
- v) Report and Analysis.

4.02. Definition of Objectives

The primary objectives of this study are:

- i) To identify the household characteristics in selected areas.
- ii) To identify the nature of the household's dwelling and general housing environment in these same areas.
- iii) To ascertain the household's housing needs and priorities in terms of extensive and intensive degrees of satisfaction.
- iv) To explore the relationships between the above mentioned aspects with a view to giving some support to the proposition of a number of housing sectors as reflected by the areas selected.

4.03. Design and Construction of a Instrument To Measure Variables

The study of any group of households in its residential setting has been universally characterised by the great diversity of research methods employed. In different field studies informal interviewing, use of informants, participating and non-participating observation, sociometry, standardised interviewing, content and documentary

analysis, comparative and historical analysis, enumeration and field experimentation have all been used either individually or in a variety of combinations to obtain the required data. Such a multitude of diverse techniques is employed because of the complexity of the subject matter i.e., the householders, their community and their environment. In essence these various techniques supplement one another and it is through the combination and integration of the diverse data they yield that the researcher is able to construct a more coherent picture of the group under study.

However, the choice of a particular method to be used in a specific situation depends largely on the type of information required, the degree of accuracy and sophistication needed from the collected data, the uses for this data, the characteristics of the respondents and the availability of resources (length of time available for the study, manpower availability e.g the number of field assistants, finance etc.).

The surveying methods initially proposed are described as follows:

a) Respondent household characteristic survey

The main objective of this method is to establish the nature of such aspects as household composition, age, sex, marital status, income, occupation, education level, etc. which when analysed and examined in relation to other surveys illuminate household variations and trends.

b) Observation of respondents and respondents' environment.

The purpose of observation is to perceive the nature and extent of significant inter-related elements within the complex social structure, cultural patterns or human conduct and perhaps to provide important design data and guidance for architects, planners and the housing authorities of the future. Observations can extend from simply studying the use of indoor and outdoor dwelling spaces (including the

frequency, duration and pattern of the inhabitants' behaviour, the siting of children's playgrounds, and the adequacy or otherwise of parking and storage facilities) to the noting of furniture arrangements within the dwelling units. However, observation methods are subject to all the criticisms that are usually levelled at such techniques. For instance, those people that were observed were not a truly representative sample of the whole population of the district under study, also the observers are subject to personal bias and distortion and therefore the reliability of their findings must be open to some question. Thus, this technique is mainly limited to the descriptive base of the field study and must be supplemented by a more systematic, scientific and quantifiable method if the distortions created by the vagaries surrounding it are to be reduced. In attempting to redress this situation, multiple-choice questions were used.

c) Opinion Survey

The main objective of this method is to ascertain the respondent household attitudes regarding their housing needs (discussed later). The method is such that it pre-supposes that knowledge about household housing needs is best expressed in terms of the opinions of the householders. Householders' views concerning features of the dwelling units they occupy and various aspects of their housing environment (such as location) were obtained. Such surveys can not only give a better understanding of what the householders believe they want but can also highlight the degree of importance which they attach to these needs. Two areas of study cover this:

- (i) the 'satisfaction' survey, and
- (ii) direct trade-off games.

With the 'satisfaction' survey the users are simply asked to give their opinion on a number of alternative degrees of satisfaction, but,

as with the observation survey method this also has some drawbacks in that although it does quantify the degree of satisfaction that a particular respondent may give for each of the variables, the satisfaction survey also tends to supply largely open-ended hypothetical information. The direct trade-off survey on the other hand, is built on compromises or exchanges between a multiplicity of goals which are often mutually exclusive and reflect the need or willingness to give up one thing in order to gain another which might possibly be of more importance (Robinson et al., 1975 at pp.79-118). However, like the other survey methods discussed above the direct trade-off approach also has a number of drawbacks. These are that it is a technique which is rather complex for respondents, it is expensive, lengthy and cumbersome to administer and too susceptible to inconsistencies (National Economic Development Office, 1977 at p.2).

Therefore, in designing the questionnaire a number of these aspects had to be resolved at the outset. These were essentially aspects which "revolve in ever-decreasing circles around the size of the survey form", which J. F. Sizer (1984) has described as attempting to hit a moving target, as the factors influencing the design of the form are so intertwined that modification of one has knock-on consequences on the others. In addition to those mentioned above, these factors include time-tabling, the number of surveyors, the surveyors' skills, computing and desk counting services, the survey technique utilised, the nature of the questions, the budget and the aims of the survey.

Having established a preliminary relationship between the above mentioned factors, the next problem was the choice of the survey instrument. There are essentially three instruments or measures for accessing the data required.

i) A questionnaire.

ii) A schedule.

iii) A Scale

Unlike a questionnaire the schedule is primarily a cue for putting the questions to the respondent and the questions can then be structured, unstructured or both. However, in this instance the instrument, the questionnaire-schedule, was highly structured so as to save on resources, and the unstructured questions regarding the identification by the respondents of their particular environmental problems were kept to a minimum.

The scale was brought into the 'instrument' in an endeavour to establish a quantifiable dimension with regards to householders' needs and priorities.

In the light of the objectives identified above and the nature of the environment from which the data was being collected, the structure of the instrument was derived from a combination of all three measures indicated.

The 'instrument' was then given a number of test runs on some friends. In addition, discussions as to its comprehensiveness were held with Dr. Oberu Aribiah and Dr. Tade Aina of the Sociology Department, University of Lagos. After these preliminaries, a pilot study was undertaken in the LSDPC Low Cost Housing Scheme, Dolphin Phase 1 at Anikantamo. From this and the discussions a number of modifications were made to the instrument.

With hindsight, this pilot study could well have been undertaken in all three study areas as, during the survey each area displayed its own particular idiosyncrasies. However, given that one of the objectives of the study was to highlight the hypothesis that different settlements exhibited differing household and environmental characteristics as well as needs and priorities, an instrument structured specifically for each settlement may have made this

important aspect less obvious.

Originally the instrument was divided into four major parts:

- a) a household characteristics survey,
- b) a household housing environment survey,
- c) a household satisfaction survey and
- d) a household dwelling plan survey.

However, an issue which did not arise during the pilot survey was that of recording the plan layout of the respondents' dwellings. Due to the non-architectural background of the interviewers (sociology students) each interview time was excessively long. When conducting an interview without having to do the layouts over twenty minutes could be saved on every interview. Given the very limited resources available, a completion time of approximately forty five minutes per interview and the lack of the appropriate layout plans, this section was regrettably deleted from the instrument and consequently substantially more instruments have been completed. Overall though, the pilot study was a worthwhile undertaking, as it initiated the development of interviewing techniques and questionnaire layout that not only speeded up the interview period but also made the respondents more co-operative and forthcoming with data.

Another aspect also highlighted by the undertaking of the pilot survey was the type of questions asked. Owing to the nature and size of the instrument and the responsive abilities of the households with regards attitude on scales of preference as well as the limited resources available for study, especially time and manpower, most if not all the questions were multiple choice or pre-coded format. In addition to this and in order to help overcome initial reservations by the respondent households towards the 'strangers' asking questions about their private lives, the survey began by asking the householders about the degree of satisfaction they had towards their housing

environment. After that, came questions about the kind of householder's housing environment followed by questions about the composition of the household's, leaving the very 'thorny' and embarrassing question of income till the last.

4.04. Construction of Sample

Customarily, surveys are administered to a sample of the population under study. This is necessary where the population is very large and a sample of it is taken to provide answers to the point at issue. In the design of a survey sample, it is best to assume that households are somewhat different from one another in attitude and behaviour even if the extent of the difference is unknown or introduces an unanticipated bias into the findings. As a consequence, the data and findings based on the sample may differ systematically from the information that would have been obtained from the entire group. The accuracy of a sample survey is (though not necessarily always) dependent on the size of the sample. Sometimes under conditions of high homogeneity, it makes little difference which part of the whole is selected for the sample and almost any sample irrespective of size is as good as another.

There are in essence two kinds of sample:

- i) Quota sampling.
- ii) Probability or random sampling.
- i) Quota Sampling

This sampling technique is based on the notion that if you want to know something about a population, you can go and ask someone on the street. But there is no way of knowing whether or not the people selected are at all representative. For instance they may just be passing through the area. At best, quota controls can be introduced based on the researcher's knowledge of the population and the

accompanying households that satisfy the stated criteria.

ii) Probability or Random Sampling

The use of statistical methods which rely on the estimation of a core unit of the population is usually referred to as probability or random sampling. There are a number of probability-random sampling procedures that can be used for population sampling and estimation, namely: - random sampling, stratification sampling, clustering and multi-stage sampling, varying probability sampling, multi-phase sampling. These increase in accuracy in the order listed.

The method chosen for this study is essentially a stratified sampling method. Stratification does not imply any departure from the principle of randomness, all it means is that, before any selection takes place, the population is divided into a number of strata then a random sample is selected within each stratum. In many developing cities, Lagos included, the ability to establish groups of the population according to religion, sex, age, rental, etc., by 'frames', ie., lists of population according to the descriptive criteria given above, is in most cases just not feasible. Thus, an alternative process involving the use of photo-maps or survey maps showing the dwellings or buildings can be used as a substitute. The random selection of households can then be achieved by either overlaying a grid on the maps and choosing the dwelling, say every other grid block or by choosing the dwellings randomly (on the ground) say every sixth dwelling after the streets themselves have been chosen randomly from the map as was the case in this survey. This still follows the probability method (to a degree), as each building has had an equal chance of inclusion and hence each household of being surveyed.

The random sample selection is a sampling procedure in which the units of households are chosen individually and directed through a random process in which each unselected household unit has the same

chance of being selected as every other unit. However, as mentioned earlier the estimate derived from a random sample is not as accurate as a complete enumeration or census, especially given the heterogenous character of the Lagos residential environment. The difference between the household estimates from different samples and the household value is called 'the sampling error' and is usually expressed in terms of a standard error. The standard error is therefore a measure of the variability (around the household value) of the household estimates from a repeated sample. In simple terms, it gives a clear notion of how and with what probability an estimate based on a sample departs from the value that would have been obtained with a complete census (Warwick and Lininger, 1975 at p.75). In practice though, the researcher usually has only one sample to work from, and therefore only one household estimate available for a given variable. The problem then is how to determine the reliability of the estimate of the household's mean, based on a single sample. The standard error is in fact the key to the measurement of the reliability of the estimate of a population statistic.

One theory on sampling has developed equations that can estimate the standard error of the mean based on the data from only one survey sample. These equations are based on the knowledge that variation around the household mean, namely the width of the normal curve, increases as the sample size decreases. In other words the larger the sample size, the smaller the spread of the sample mean around the household mean and hence the assertion that larger samples are more reliable. This point has critical implications in calculating the reliability of household estimates in the study, for the smaller the expected spread of the sample mean, the smaller the chance of error between the household estimate and the household value will be.

The practical implication of this is that in most surveys the

absolute size of the sample is of much greater relevance than its proportionate size. For example, increasing the sample from 1 per cent to 10 per cent of the population reduces the proportionate size factor by the square root of $N-n/N$, ie, by about 5 percentage points, from 0.99 to 0.94; whilst, increasing the absolute sample size, say from 50 to 250 households reduces the corresponding multiplying factor by the square root of $1/N$, that is by over half, from 0.14 to 0,06 (ibid.:94). Thus, given resource restrictions such as, interalia, lack of manpower and finance, every effort should be made to draw a large enough sample in order to make the chance of error as small as possible.

The difficulty comes when a household is out or refuses to answer. This creates a bias. Although all the interviewers were strongly urged to call again in order to persuade all the respondents to answer all the questions (even though the respondents were assured that the information was confidential and that their names would not be taken if they so wished) some respondents simply refused to answer. This was particularly so for all three settlements on such issues as neighbourly relations, age and income. Rather than drawing up a completely new sample so that those newly chosen would have equal probability of selection, the occupant of the next door flat - as was the case at Dolphin Phase 1 or the next door room of the rooming houses as in Maroko and Isale-Eko was interviewed. Although less accurate, this is nevertheless a fairly acceptable procedure (Hooper, 1984 at p.7).

The sample constructions for the areas under survey were slightly varied in order to deal with the differing environmental settings. For Maroko, where rooming houses predominate, the sample construction was based on one room per rooming house for every sixth rooming house per street. This involved counting three plots on one side of the street

and then crossing directly over (as close as possible) and counting another three plots before entering the sixth rooming house. Then the occupant of the second or third room on either side of the corridor was interviewed depending on whether the respondent was in. If the occupant was not in the remaining rooms were visited until a respondent was found. If it was not a rooming house but a single family house a member of the household was interviewed and if this was not possible the adjacent house was substituted. This same procedure was carried out in Isale-Eko.

For the LSDPC low cost housing scheme, Dolphin Phase 1, two and three bedroom flats constituted the nature of the dwelling units. A sample construction of one flat per floor of every third building was used. In practice this meant that roughly three out of eighteen or every sixth flat occupier was interviewed. If the respondent household was not available the opposite flat was used instead. If, in turn there was no response here, a flat on the same floor on the building on either side was substituted.

By its very nature the housing environment in Lagos (as discussed in earlier chapters), is one that can be divided into a number of sectors, viz., a modern sector and informal sector, which has for the purposes of this study been further divided into informal-traditional and informal-popular sectors. To this end the areas chosen for the study reflect this stratification. The informal-popular sector settlement chosen for this survey was Maroko - study area 1, Dolphin Phase 1 -study area 2 was used for the modern sector settlement and the informal-traditional sector settlement was Isale-Eko - study area 3 (fig 032.).

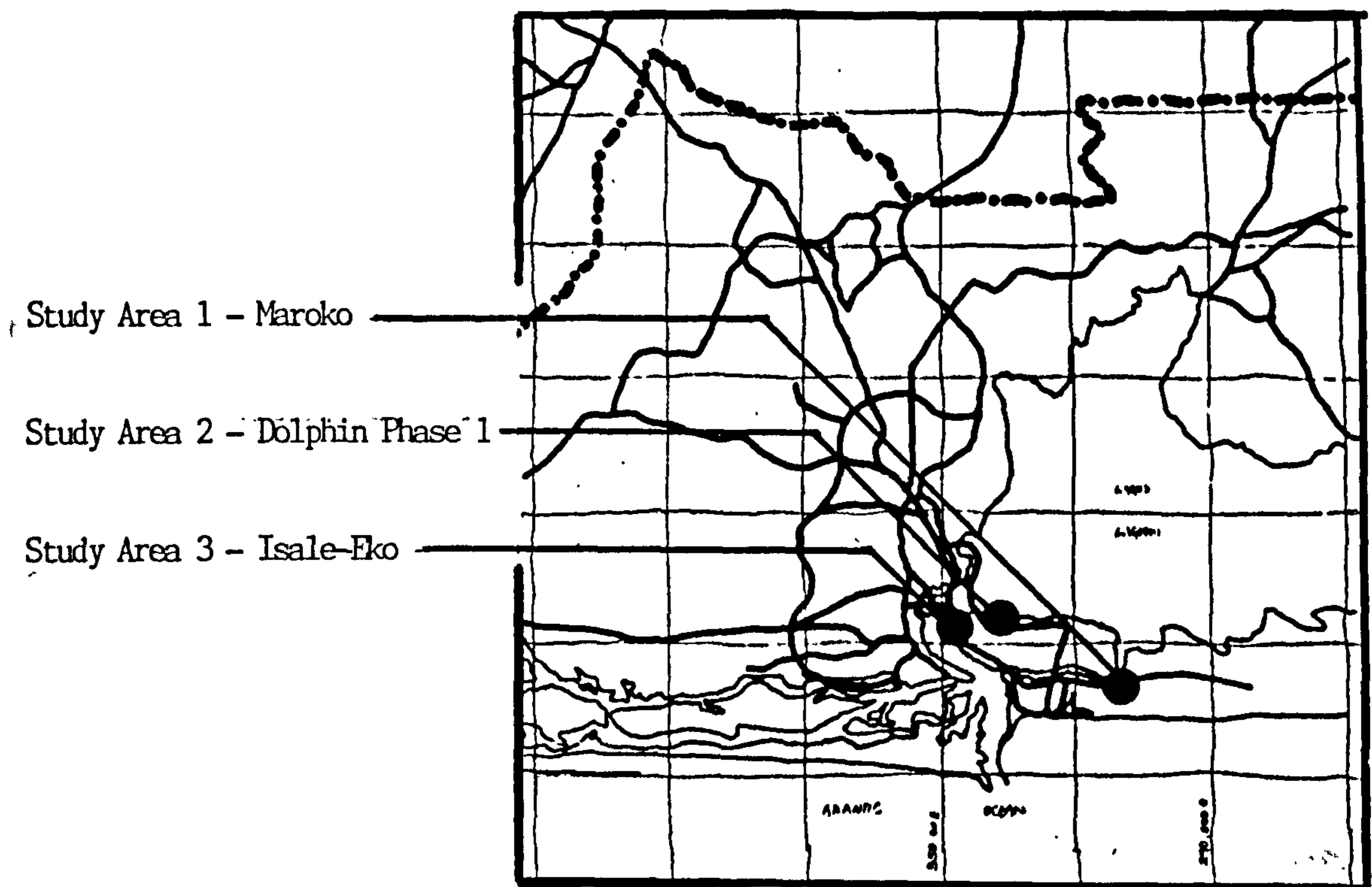


Figure 032. Locations Of Study Areas In Lagos.

While no claim is made as to the finite existence of the various housing sectors or that there is total homogeneity within each sector, there is no evidence from existing data that any other areas would have been more appropriate. Although it can be argued that surveying more sub-sectors would have done more justice to the complexities of the city, it must be stressed that the realities of working in Lagos dictate rapid intuitive decision-making rather than lengthy and time consuming computer aided analysis (even if available) at the sampling stage. The rarity of data frames in African cities as a whole is an additional complication in the difficulties involved not only in collecting the data itself but also in gathering the initial data required to formulate a sample frame for a data collection process. Therefore, statistical purists are requested to muffle their objections to what may appear to be a somewhat cavalier method of sample design.

4.05. Study Area Sample 1. - Maroko

Maroko, traditionally regarded as a low income community, is located adjacent to the east of the exclusive residential neighbourhood of Victoria Island (fig 033.). It offers relatively few employment opportunities, particularly in the modern sector such as industry or offices. Its prominence and expansion has in essence been attributed to its use as a bridghead by newly arrived migrants and as a decantment area for displaced persons from other parts of Lagos. This is a consequence of the extensive development projects that have taken place in and around the city over the last twenty to thirty years.

The pre-1940 inhabitants of Maroko were known as the Maroko-Orila whose main occupation was fishing. Over the years, as the settlement expanded they have become the minority population and fishing a minor employment sector. Among the first group to be resettled in Maroko were the inhabitants of Ikoyi-Tedo, who were displaced as a result of the road construction programme of the early 1950's. The next wave of inhabitants to be resettled were from 'Kefi bus stop', - this displacement was an outcome of the swamp reclamation programme that took place in 1956.

Other inhabitants from Ikoya and the surrounding villages were also resettled in Maroko by the LEDB just prior to independence in 1960. A large number of these inhabitants (according to information from some of the respondents) were issued with temporary leases and given permission to build temporary houses with a 30 grant. After this period but before the squatter settlement grew up on Bar Beach adjacent to Kuramo Waters a number of other groups, notably the Ile-Ekpese were also settled in Maroko, but unlike the previous groups they were not compensated for the disruption to their lives.

Figure 033. Aerial Photo Map Of Study Area 1 - Maroko.

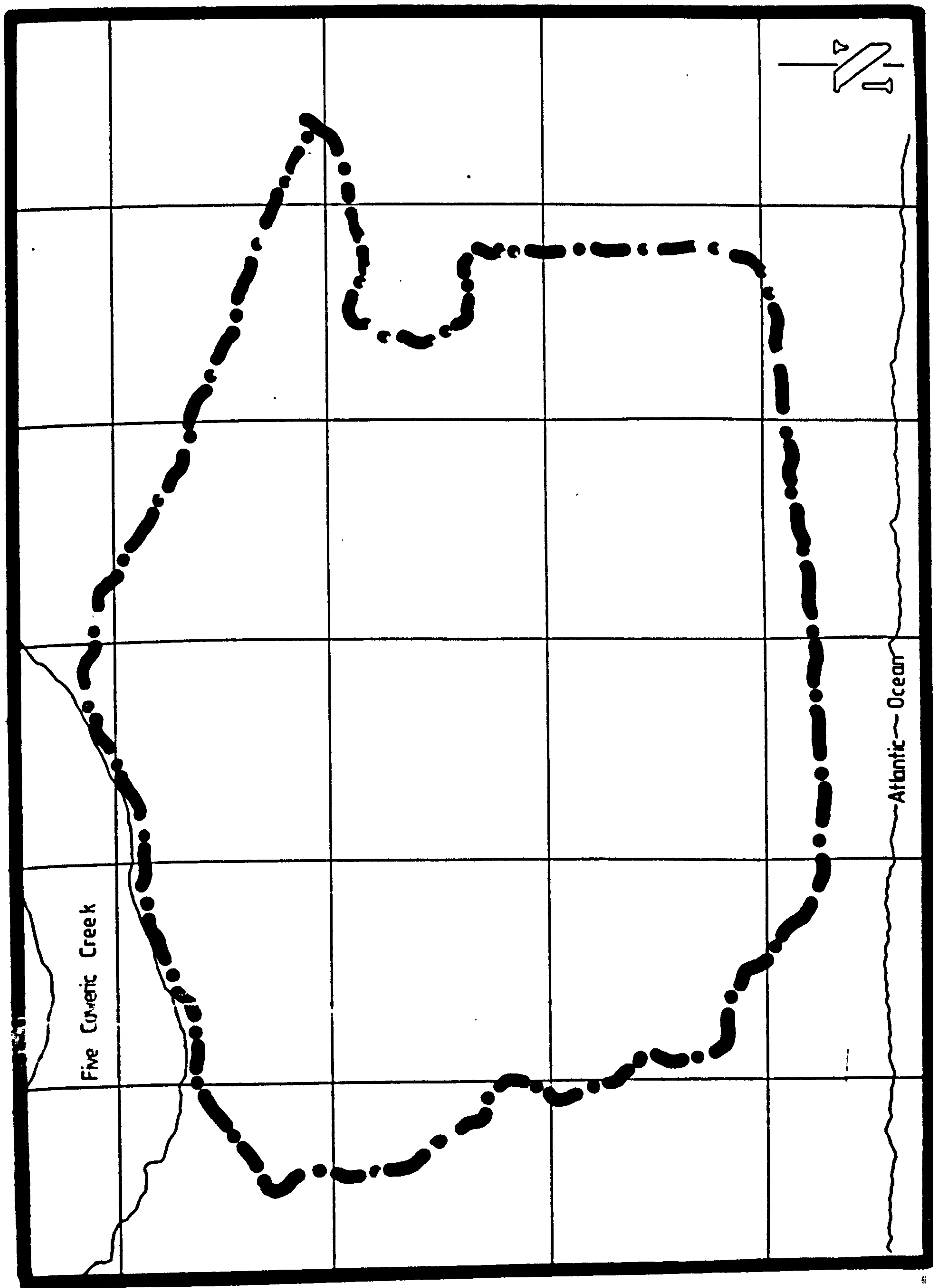
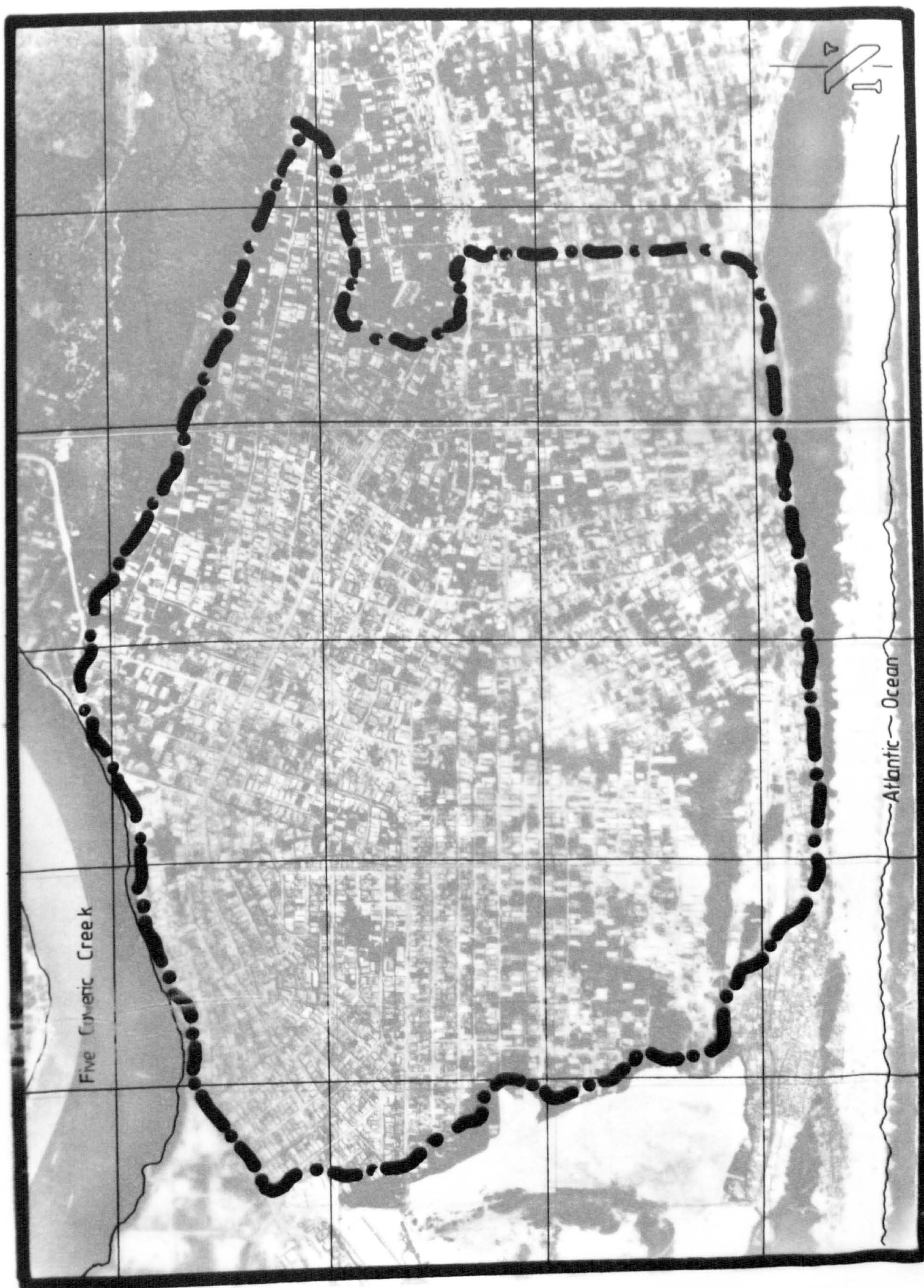




Figure 033. Aerial Photo Map Of Study Area 1 - Maroko.



During the Muritala Muhamed regime (1975-1976) the then owners of the land, the Oniru Chieftancy Family became embroiled in litigation over the development of the land with the Government. The Oniru family lost the case and Lagos State took 'control' of the land. An outcome of this situation is that the land now has a kind of 'dual ownership', that is, although the Government owns the land on paper and derives tenement rates of ₦50, up to 95 per cent (according to sources) of the 'land dealings' have to be done with the consent of the Oniru family. Furthermore and according to a number respondents, some landlords pay two tenement rates, one to the Oniru Family and one to the State Government.

By the 1980's Maroko had grown from a settlement of approximately 20,000 inhabitants in 1958 to 120,000 inhabitants. This 600 per cent increase in the population has not only been the product of the decanting process but also of the influx of migrants during the period of rapid economic expansion. Up until 1964 the population was put at 25,000 inhabitants. By the mid seventies it had increased to 70,000 inhabitants after which it practically doubled in less than seven years. Also contributing to this expansion and attraction to Maroko (even with its lack of public services) was the sizeable Lagos road building programme, which brought Maroko 'closer' to the commercial centres of Lagos.

As is the case with most of Lagos, the predominant house type in Maroko is the rooming house. With an overall population density of 318 persons per hectare and a gross residential density of 334 persons per hectare (table 020.). This density differential is also reflective of the average number of persons per residential structure put at 25 persons as against 41 for the mean of metropolitan Lagos in 1976.

Table 020 . Housing Characteristics of Maroko, 1976.

	Qualitative Land Use Survey	Urban Fringe Survey	Total
Total Area	514	1,217.2	1,731.2
Builtup Area	234	51.5	285.5
Gross Res. Area	222	49.9	271.9
% Res. Area in Builtup Area	94.9%	95.9%	95.1%
Estimated Population	77,600	13,300	90,900
Gross Population Density/Hectare	331	258	318
Gross Residential Density/Hectare	350	267	334
Number of Houses	3,117	533	3,650
Number of Inhabitants Per House	24.9	24.9	24.9
Population Per Total Area Density/Hectare	151	11	11

Source: Qualitative Land Use Survey 1976 United Nations Development Project.

Urban Fringe Land Use Survey 1979 United Nations Development Project.

In terms of existing planning and building regulations in effect in metropolitan Lagos, Maroko constitutes an illegal development even though the Government is collecting tenement rates from the landlords. It is almost devoid of basic services such as piped water, waste disposal, drainage and graded roads as well as being independently served by private transport, electrical, water and market facilities.

Its geological characteristics are much the same as most of Lagos Island would have been at the turn of the century. Below the two to

three metre level the ground consists essentially of peat, which was put down during the establishment of mangrove swamps, a lot of which still exist especially around the peripheral areas. Over the years these swamps have been filled or drained 'casually' with debris, refuse and sand during the expansion of the settlement. Maroko is still little over a metre above sea level and as a consequence it is sometimes completely submerged by high tides. During the rainy season many of the roads are impassable and houses are flooded (fig. 034.)



Figure 034. Flooding caused by heavy rainfall and poor drainage.

4.06. Study Area Sample 2. - Dolphin Phase 1.

The land at present occupied by the housing estate under study was, until the construction of the ring expressway (that serves Lagos Island and its three bridges), part of the Lagos lagoon. With the reclamation of the lagoon in 1976, a new strip of land was created; this stretches from the area of Isale-Eko in the northern part of the island, through Ebute-Ero, Idumagbo, Anikantamo, Okepopo, Odunfa,

Figure 035. Aerial Photo Map Of Study Area 2 - Dolphine Phase 1

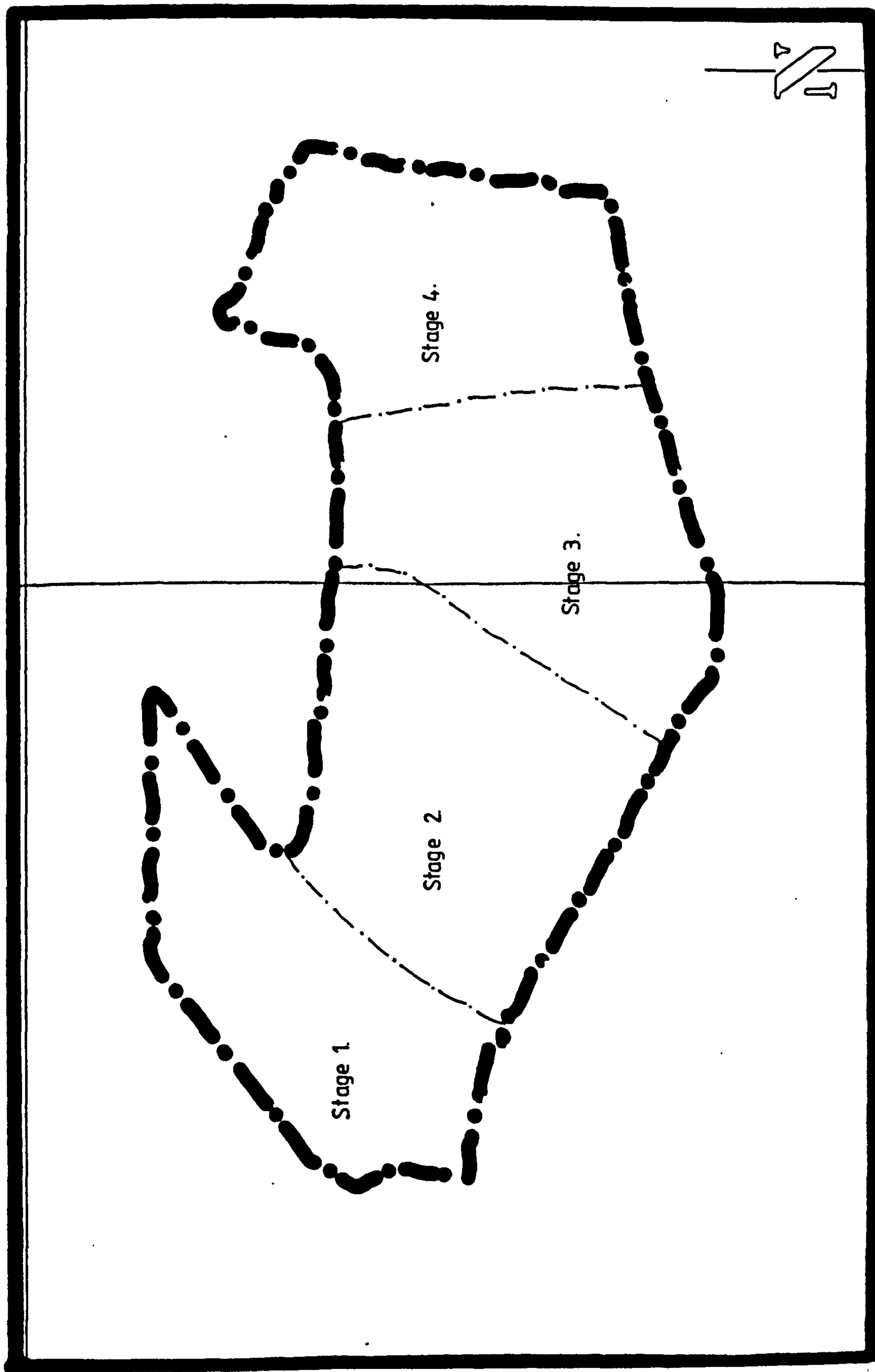
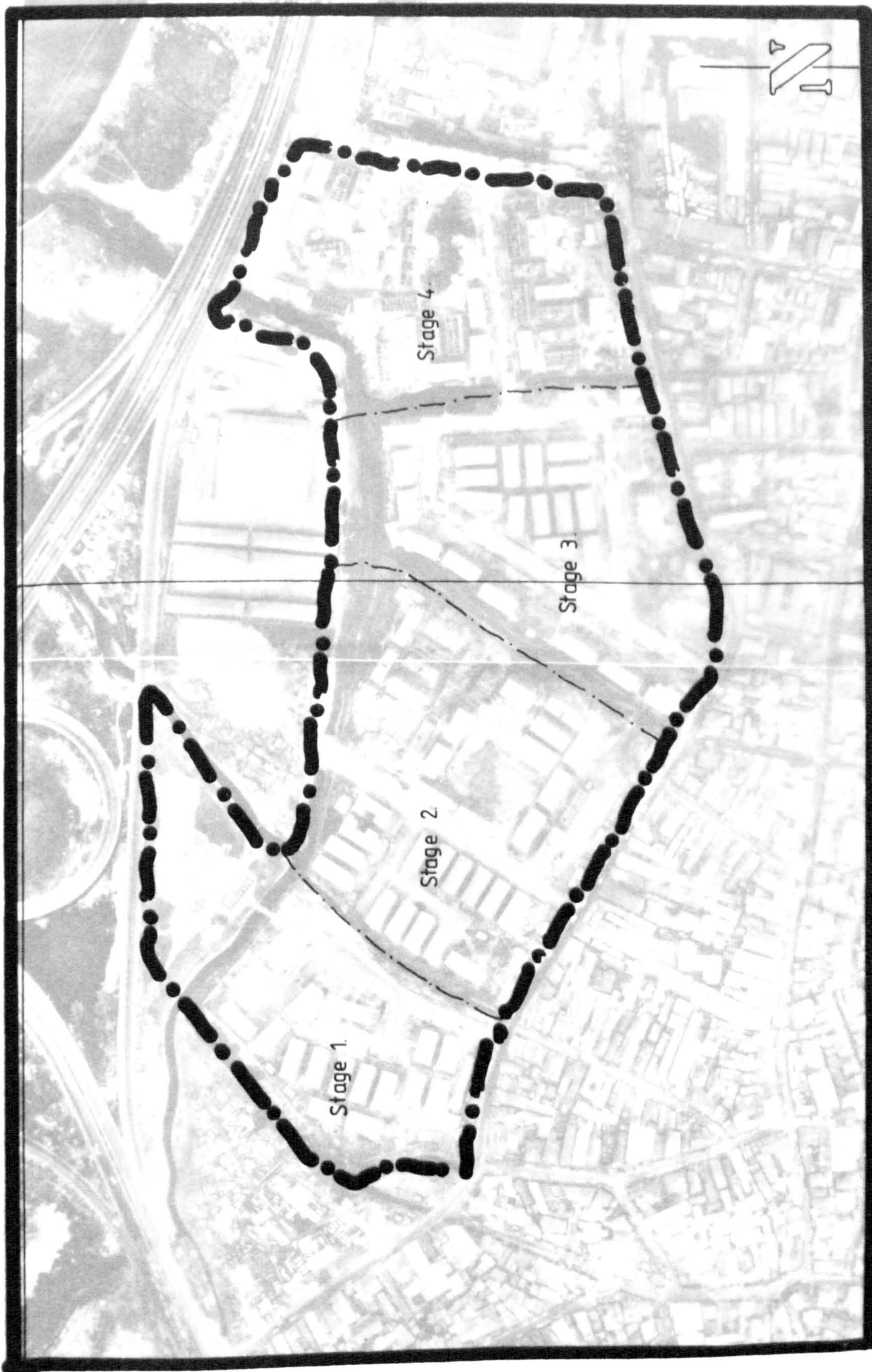




Figure 035. Aerial Photo Map Of Study Area 2 - Dolprine Phase 1



Omididun, Epetedo, Ilubirin Abari and Simpson Street to the Inner Crescent area of Ikoyi. This area (fig 035.) became known as the Dolphin Scheme and is presently the largest of the committed and approved projects that was outlined under the Third National Development Plan (1975 - 1980), with most of the reclaimed residential land being allocated to low to medium density, high income residential use.

The general elections of 1979 saw the arrival of a civilian Government and the revocation of the original 315 plot allocations. The land acquired by the Government was re-allocated (to meet the electoral promises made during the run-up to the elections) for high density housing for the low-income groups of the metropolis. The new low cost housing area of the Dolphin Scheme was divided into two parts.

- i) Phase 1, - Anikantamo (Dolphin 1).
- ii) Phase 2, - Ijeh (Dolphin 2).

The first phase (74 hectares) of the project was intended to provide high density housing with the necessary amenities as a decantment area for displaced persons from the Isale-Eko urban development project. The second phase (167 hectares) located on the reclaimed land adjacent to the Ikoyi Island residential area was intended to provide 287 plots, both for low and middle income households near the McGregor Cannal while 315 plots of land for upper income groups at low density were to be provided (Agoro-Kesington, ndp at pp.1-5) adjacent to the Ikoyi residential areas. The proposed population for both phases was for 20,000 persons with a gross residential density of 133 persons per hectare.

The cost of reclaimed land increased from ₦35,000 to ₦50,000; these figures are based on costs shown for reclaiming land in the original Dolphine Scheme report and modified by recent experience in the

metropolitan areas. In addition to this, site formulation costs of up to ₦120,000 per hectare were anticipated for roads, drainage and essential public facilities. At this level the cost of the developed land was put at approximately ₦170,000 per hectare. With this very expensive land value (especially as the land was so close to the commercial centre of the city) and the added expense of re-allocation costs for low income households, the previously low density proposal was amended to support a higher population at increased residential densities. The Lagos Island portion of the scheme was developed to support a gross residential density of 1,000 persons per hectare and the tract between the ring road and the access to the Federal Secretariat was also developed in order to support a gross residential density of 750 persons per hectare. The portion of land to the east of the access to the Secretariat was developed at a residential density of 500 persons per hectare and the total projected population for the scheme increased to 112,000 (38,000; 56,000; 16,000 respectively) as against the initial 20,000 inhabitants.

Before the designs were even drawn up squatters moved on to the land (in 1981) and a shanty town developed. This fact coupled with the need to meet electoral promises, provided the added impetus to hasten the completion of the house construction programme. By 1982, out of the total 120 apartment blocks planned for Phase 1, 118 had begun to be built on site, and 107 had been completed. The dwellings consisted of a mixture of two and three bedroom flats in three storey walk-up apartment blocks (fig 039.). Each flat consisted of a living-dining area, kitchen, shower room and toilet, plus bedrooms (fig 036. & 037.). To keep the cost per dwelling down only the rudimentary finishes were provided. Both the inside and outside walls remained unplastered. The electrical and plumbing fixtures were similarly kept to a minimum.

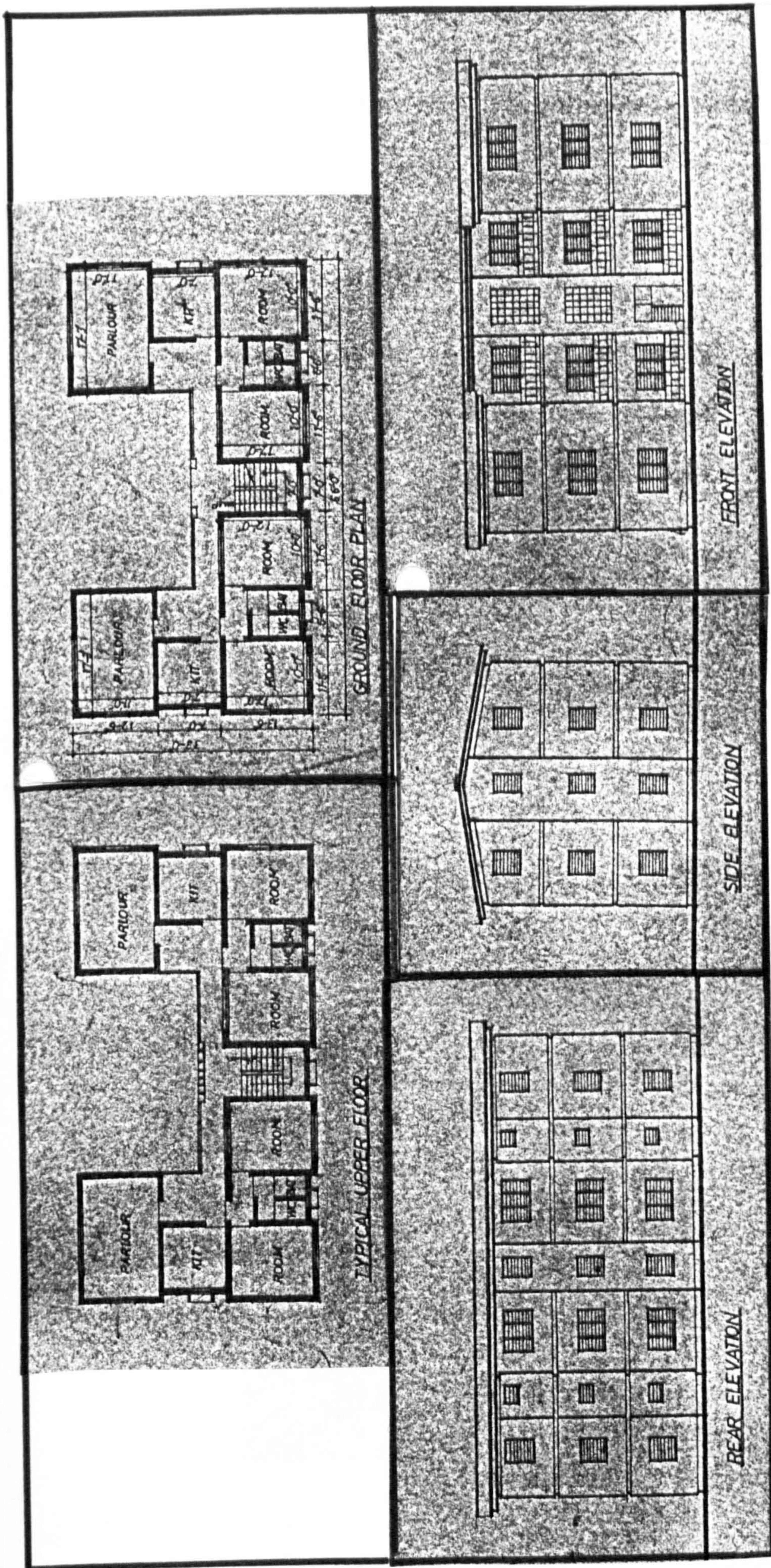


Figure 036. Plans and Elevations of Two Bedroom Flats (Type LC-2A) in Low Cost Housing Estate, Dolphin Phase 1.

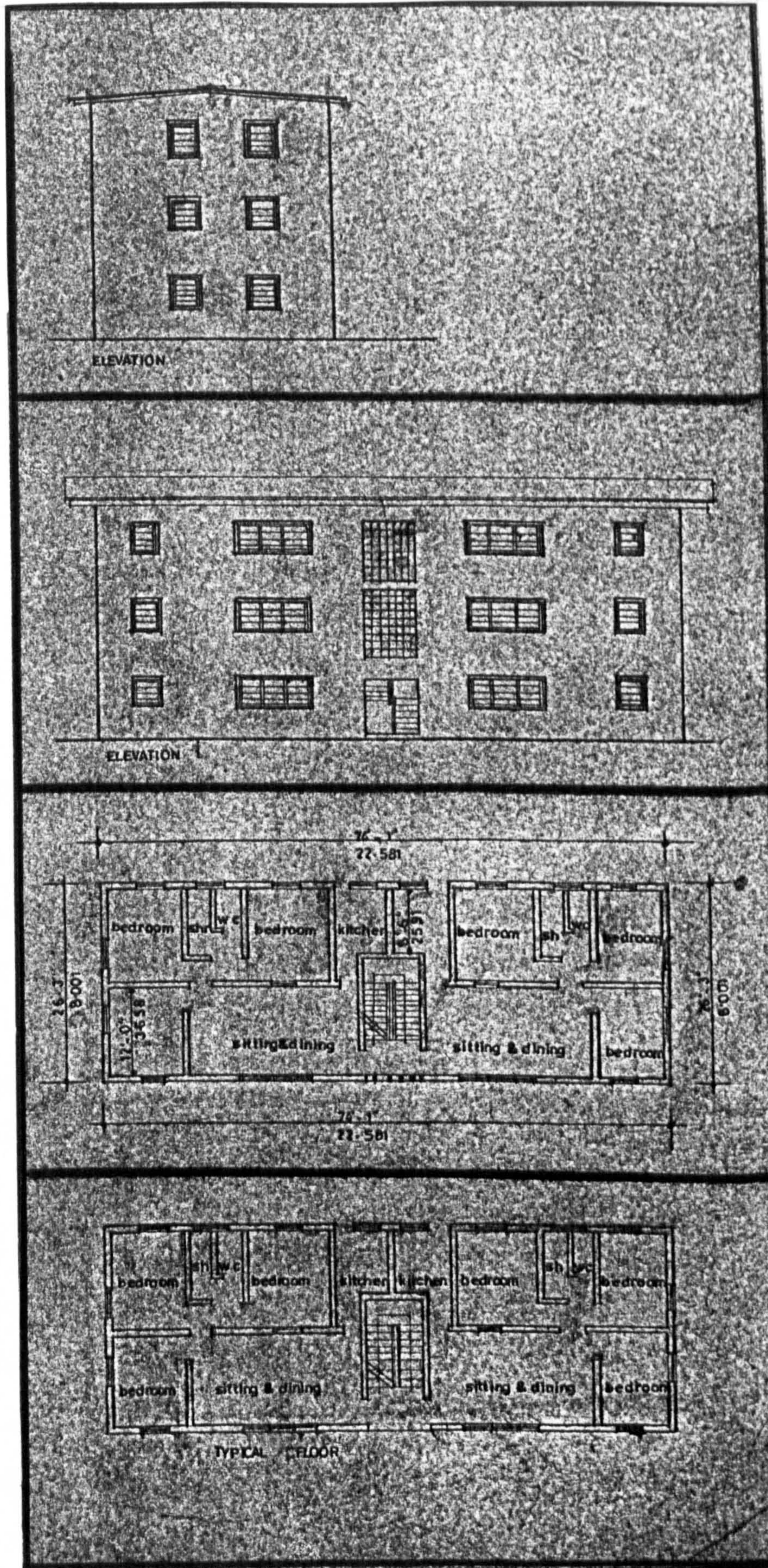


Figure 037. Plans and Elevations of Three Bedroom Flats in Low Cost Housing Estate, Dolphin Phase 1.

4.07. Study Area Sample 3. - Isale-Eko

The area known as Isale-Eko is located to the northwest corner of Lagos Island (fig 038 .). It was first settled by the Yoruba clan known as the Aworis. Legend has it that the land was not settled until about 1660 when Nla one of the sons of Olofin, ruler of the nearby island of Iddo, swam to the island to establish a farm. In time a settlement began to grow and flourish and soon became a safe haven from the inter-tribal wars that were ravaging the region at that time. When contact was made with the Europeans in the 15th century it fast grew into a major trading post between the interior hinterlands and the European markets. With the increase in the trading of slaves in the early 1800's, the town grew substantially in both economic and political terms. So much so that in 1861 the British invaded and established colonial rule.

Despite the large influx of migrants and the imposition of colonial rule Isale-Eko remained relatively unchanged and untouched by the growing prosperity and commercialisation of the rest of the island. This 'fossilisation' was in part attributable to the effect of the dual mandate, direct rule policies and to its geographical location. In practice these policies were aimed at discouraging the mixing of the various social, political, cultural and economic groupings on the island. The policies, combined with the fact that geographically Isale-Eko (before the reclamation programmes) was separated from the rest of the island (at the turn of the century Isale-Eko was more of a peninsula being separated by swamps, creeks and undeveloped land) contributed greatly to its neglect by the colonial administration (Gale, 1979 at pp.11-24) especially with regard to much needed public amenities.

Even today a number of the compounds in Isale-Eko have neither

Figure 038. Aerial Photo Map Of Study Area 3 - Isale-Eko

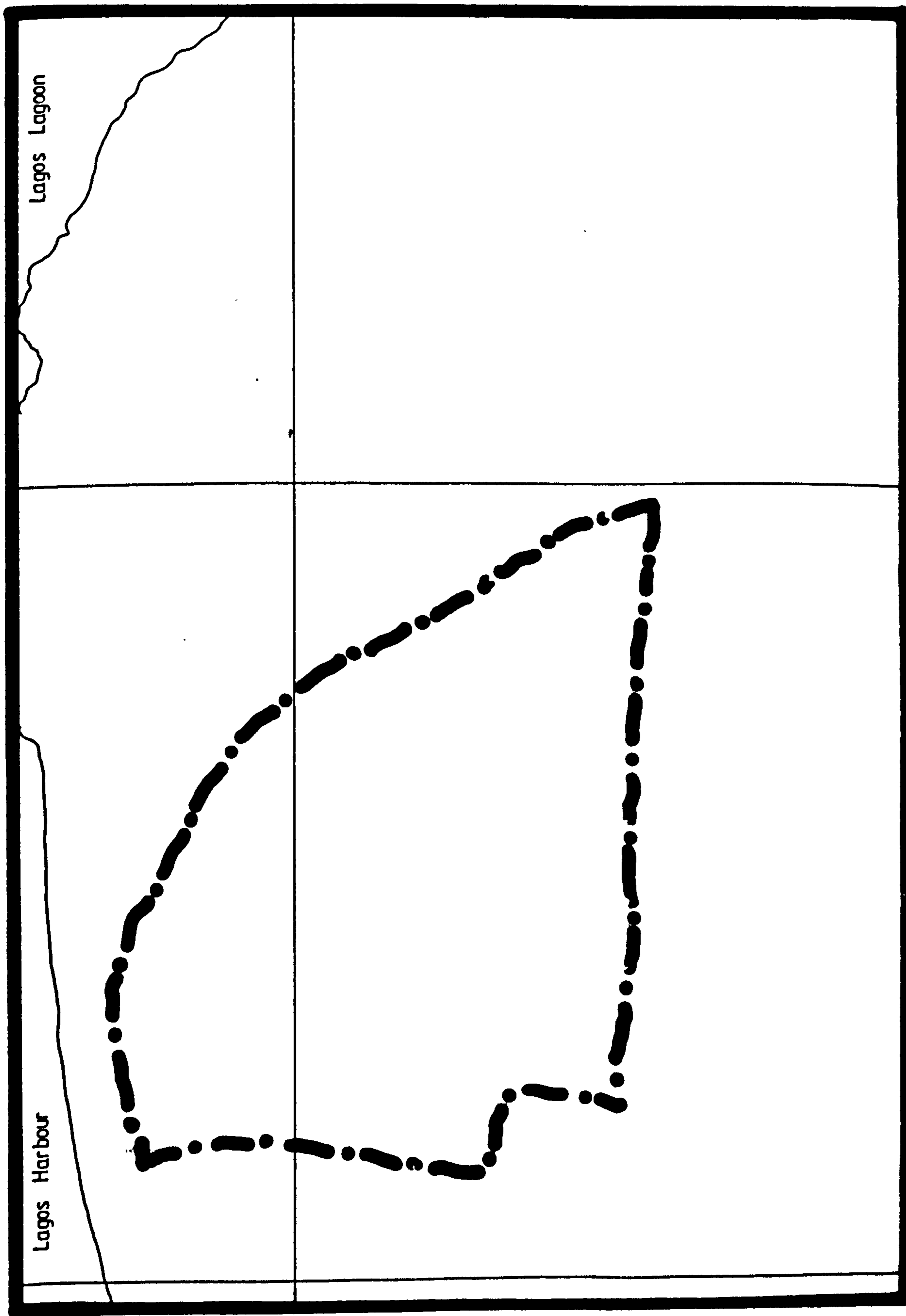
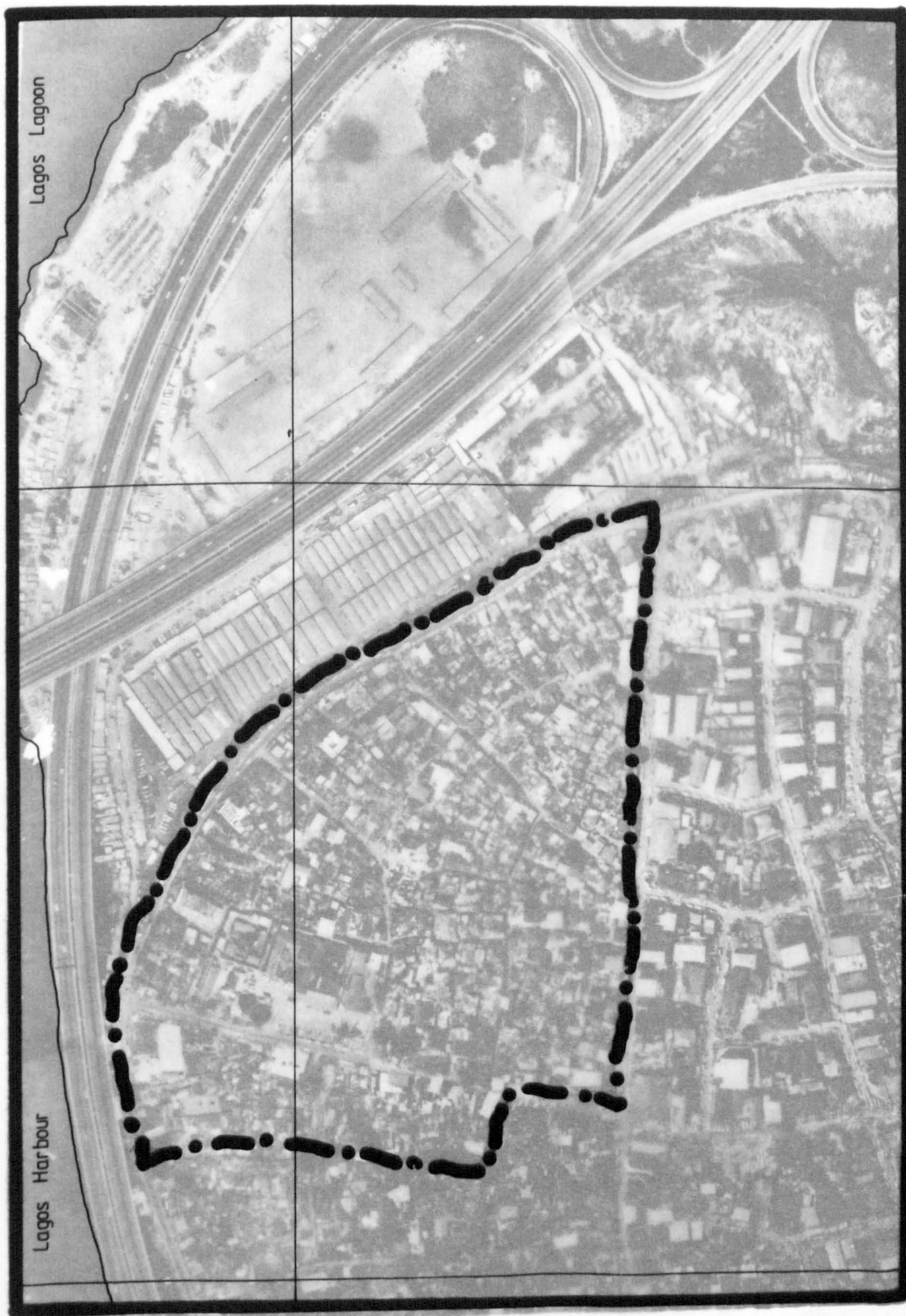




Figure 038. Aerial Photo Map Of Study Area 3 - Isale-Eko



piped water nor a sewage system. The bathroom or lavatory may be a rough shelter of corrugated iron, cobbled together in a corner of the yard with a bucket. In a number of cases water has to be collected from a standpipe in the street and the latrine buckets are collected nightly by the local authority. The lack of any form of water-borne sewage for the city, means that the road-side drains take its place. They are often filled with refuse and during the rainy season overflow with very unpleasant consequences. Isale-Eko has, nevertheless, retained much of its traditional character (both socially and culturally), with the Oba, the Chiefs and lineage heads of Isale-Eko still maintaining their social, political and cultural functions within the community.

Much of the housing stock in Isale-Eko is made up of compound courtyard houses many of which accommodate large numbers of lineage members (see chapter 3.) However, over the years the gradual increase in pressure for accommodation and the loosening of the extended family structure has resulted in the fragmentation of some of the relatively large compounds into many smaller and irregularly shaped sites. Aside from this, much of Isale-Eko (apart from a few minor graded improvements on major roads and drains) still remains environmentally unchanged.

Under the Master Plan of Metropolitan Lagos, Isale-Eko is due for a major urban renewal programme. In 1974, the then Military Governor of Lagos announced an ambitious and grandiose plan for the urban renewal of the traditional core of the Isale-Eko neighbourhood where the Oba of Lagos lives. Part of this modernisation plan involved moving the people of Isale-Eko into transit camps. Although recommendations have been made covering such issues as improved housing, public transport and other public amenities there appear to be no firm proposals as to what, where and when.

4.08. Implementation and Data Collection

Once the survey form has been finally decided, the survey can proceed. Constant monitoring must be maintained on the relationship between the various factors influencing the survey. Amongst these is the quality of the interviewers, who must be and were trained to be able to, undertake the survey. It is a crucial part of the survey as good interviewers produce good results (provided the instrument is in itself viable), and bad ones either produce poor or even false results. For these reasons, two such training programmes were run; one for the sociology students who eventually surveyed Dolphin 1 and Isale Eko and the other for the four residents of Maroko.

For the former set this involved advertising for interviewers to conduct a housing survey in Lagos on the departmental notice board. Applicants were asked to put their names in the space allocated below the advertisement. Once this had been done, the prospective interviewers were themselves interviewed. The aim of this was to ascertain the eligibility of the applicants. This was achieved by determining their understanding of what a housing survey was about - viz. whether they could speak Yoruba (the main language spoken in the survey areas) and whether they would be available for the period of the survey.

The final list was then put up and a date and place were set for role-playing exercises. These involved the short-listed applicants testing themselves in respondent-interviewer roles. This proved very beneficial as they were able to familiarise themselves with the survey instrument and ask any questions they themselves may have had about it. After this the purpose of the survey was explained and a number of tests as to visual awareness, command of Yoruba and social intercourse abilities were carried out. This was very important as it could

determine instantly whether an interview would proceed or would be halted at the outset. By this stage a short-list that had started with sixteen would-be interviewers had been whittled down to five - one of the candidates did not turn up for the survey. Transportation and feeding of the interviewers proved to be a lot more difficult than had been envisaged at the planning stage. This must be seen in the light that the 'odd and even' number plate traffic bye-law which limits the use of cars with odd numbered plates to Monday, Wednesday, Friday and the weekend, and cars with even numbered plates to Tuesday, Thursday and the weekend created a need for two vehicles. This situation was further compounded by two flat tyres, one dead battery and complete electrical failure in one of the vehicles. The preparation of the Maroko interview team was not as protracted as that of the Dolphin Phase 1 and Isale-Eko surveys. Nevertheless, it did have its own peculiarities.

Of the problems encountered by the researcher in the early phases of a field study two major ones are: first, obtaining specific information that will orientate him as quickly as possible to the existing conditions in the community; secondly, making extensive contacts within the community in order to secure a variety of sources of information. The usual solution to this problem has been to hire, charm or induce some person into playing the role of intermediary. The functions of this intermediary can of course be very diverse. Therefore, running concurrent with the organisation of the two interview teams was the need to make contact with local organisers or community leaders, in order to ensure that the survey would not be greeted with hostility by the host communities.

For Maroko, the intermediary was the Reverend Father Alfred Martins, a Roman Catholic priest whose parish Maroko is. Later more intermediaries were found in the persons of some helpful and obliging

residents, who in time assisted with the survey. For Dolphin 1, the interviews were made possible with the help of Mr. S.A. Agoro-Kesington, G. A. Kotun (magistrate of the area), Alhaji N. O. Sekoni and Mr. Giwa as intermediaries. For Isale Eko, Chief Y. B. Taiwo was the intermediary.

For all three areas contact was made several weeks before the survey so that each of the communities was aware of 'strangers' undertaking a survey for a university research project. This was very crucial as Lagosians are generally very wary of 'strangers' coming up to them and asking personal questions. As well as this the survey period coincided with the first anniversary of the military regime's take-over of government following the overthrow of the Shagari civilian administration. Of the three areas surveyed Maroko in particular presented a number of difficulties as a number of the dwellings chosen for the survey had been marked with a giant red cross, a sign that they were due for demolition, and as the inhabitants believed that this survey was a pre-demolition exercise aimed at finally deciding which of them would lose their homes they were initially very reluctant to participate.

Further, without the help of various government departments the kind of historical, spatial and statistical information necessary to understand the specific conditions in the areas under study would have been unobtainable. In addition also to the information on the sort of administrative and financial problems that they are confronted with in these areas has been invaluable.

4.09. Analysis and Report Stage

Introduction

As can be discerned from the views expounded in the earlier parts of this dissertation, housing very much concerns people and the

physical environment in which they live. The interplay of people and environment binds the two entities together within a system in where changes in one generally generate changes in the other. It is, therefore, necessary to understand both these aspects in order to be sensitive to the housing condition of any particular environment.

In the following sections the environment, the respondents and their attitudes towards that environment are treated separately for the sake of clarity. The 'people' dimension is examined first under the section, Household Characteristics, and secondly, the environment is studied under the section, Household Housing Environment. In addition there is a third section in which the needs of the people (section 1) in terms of their attitude towards their housing environment (section 2) is ascertained. It must not be forgotten, however, that the contents of the three sections also form part of a single issue.

Analysis Technique

As mentioned earlier one of the chief influential factors in a survey, is the analysis of the data and the process by which that analysis is to be done. In this case, although further modifications would have been desirable, the analysis process was in the main undertaken with the aid of a computer (the KL 10), to run the Statistical Package for Social Sciences program (SPSS).

The procedure for transferring the raw data from the survey form to the computer was carried out in two stages:

- i) The transfer of the raw data from the survey form to a general coding form. This process was enhanced by the pre-coded structure of the survey form so that all that had to be entered on the coding sheets were numbers. Just prior to this though, all the variable titles and variable categories had to be encoded into variable lists,

variable labels and value labels.

ii) Once this had been carried out the coding sheets were given to the punch card operators, who within a matter of hours spread over a couple of days, had the cards ready to be put into the punch card reading machine. From that machine the data went into the KL 10 computer under a code number and password.

SPSS is an integrated system of computer programs designed for the analysis of social science data. In addition to the usual descriptive statistics such as simple frequency distributions, and cross-tabulations, SPSS contains procedures for simple correlation (for both ordinal and interval data), partial correlation, means and variances for stratified sub-populations, one-way and n-way analysis of variance (including multiple classification analysis tables), multiple regression, discriminant analysis, scatter diagrams, factor analysis, canonical correlations, and Guttman Scaling (Norman et.al., 1975 at p.1).

Accompanying the various findings of the field study report is a chart, e.g., Chart 013, which is made up of three sub-charts representing the settlements surveyed. Each of these sub-charts is basically made up of a table and bar graph illustrating the distribution of the findings. The table section of the chart consists essentially of two sub-sections, one listing the categories of the subject matter and the other containing the distribution results of the categories in numerical terms. This distribution sub-section is further divided into two parts. Although not applicable to all the findings, this division reflects the level of 'breakdown' in the categorisation of the subject matter. Taking income as an example, - the subject matter: under part A the respondent income distribution is classified into three categories, High (over #10,800), Middle (#3,600 to #10,800) and Low (under #720 to #3,600); while under part B .

the respondent income distribution covering the same range is divided into seven categories, under ₦720, ₦720 to ₦1,200, ₦1,200 to ₦2,800, ₦2,800 to ₦3,600, ₦3,600 to ₦6,000, ₦6,000 to ₦10,800 and over ₦10,800. These two parts can in turn be divided into two sub-parts under the titles, 'absolute number' (Absol. No.) and 'adjusted frequency' (Adjust. Freq.), the absolute number column(s) in essence represent(s) the number of respondents in each category, whilst the absolute frequency(ies) represent(s) the percentatage distribution across the categories. These figures, however, exclude those repondents who come under the categories of 'not applicable' or 'no response'. The intials, v.c. (valid cases) and m.c. (missing cases) located below each table highlight this aspect.

I Household Characteristics

A. Personal Data

The respondent is here regarded as the individual with whom the interview was carried out. In all cases the head of household was asked for and invited to help and participate in the interview. However, under certain circumstances this was not possible and another member of the household was interviewed usually the spouse(s) or an adult child. If none of these was available the next household option was taken (see p.167).

i) Respondent Sex (chart 001.)

Given that a greater proportion of the respondents were household heads (below), all three areas exhibited a pre-dominance of male respondents. This is in essence indicative of the patriarchial nature of Nigerian society. Maroko exhibited the highest proportion of male respondents accounting for 95.5 per cent of the respondents. On the other hand both the Dolphin and Isale-Eko areas exhibited a lower percentage of male to female respondents accounting for 88.4 per cent

Chart 001. Household Head

A		B			
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories
			97.4	152	respondent
			2.6	4	other
			95.5	149	male
			4.5	7	female
			93.0	145	respondent - male
			4.5	7	respondent - female
			0.6	1	father
			0.0	0	mother
			1.9	3	relation - male
			0.0	0	relation - female
			0.0	0	other
V.C. = 156		m.c. = 1		10 20 30 40 50 60 70 80 90	

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories
			86.7	106	respondent
			13.3	16	other
			88.4	107	male
			11.6	14	female
			77.7	94	respondent - male
			9.0	11	respondent - female
			5.8	7	father
			2.5	3	mother
			5.0	6	relation - male
			0.0	0	relation - female
			0.0	0	other
V.C. = 121		m.c. = 1		10 20 30 40 50 60 70 80 90	

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories
			81.5	106	respondent
			18.5	24	other
			83.8	109	male
			16.6	21	female
			68.5	89	respondent - male
			13.0	17	respondent - female
			5.4	7	father
			2.3	3	mother
			10.0	13	relation - male
			0.8	1	relation - female
			0.0	0	other
V.C. = 130		m.c. = 6		10 20 30 40 50 60 70 80 90	

and 83.8 per cent of the respondents respectively. The increase in the proportion of respondent female heads of households (16.6 per cent), especially in Isale-Eko can probably be attributed to the nature of traditional family property among the Yorubas, where family property, especially the house comes under the 'supervision' of the senior member of the family lineage provided they are regarded as capable enough to take on the responsibility. By contrast in Maroko, essentially a new settlement, made up of a sizeable proportion of new and young single person migrant renting households, the female heads of households accounted for a minor 4.5 per cent of the respondents. In the Dolphin area a number of the female head of households (11.6 per cent) were either second wives or separated or divorced women who had applied for and obtained flats.

ii) Respondent Age (chart 003.)

As with the other household characteristics it was conceded that the age distribution of the household head would differ between the three study areas. As such Maroko exhibited a younger age structure distribution than the other two areas, with the Dolphin age structure distribution being somewhere between the other two areas. Considering that thirty-six years of age and below constitutes a young respondent household head, the young household head respondents of Maroko accounted for 50.8 per cent of the respondents while in the Dolphin and Isale-Eko areas this group accounted for 24.0 per cent and 29.9 per cent respectively of the respondents. At the other end of the age range for the over fifty year olds, the age structure distribution is practically reversed. Isale-Eko and Dolphin being dominated by 35.6 per cent and 30.2 per cent of respondent household heads who are over fifty years old. In contrast the over fifty household heads in Maroko who were over fifty years old account for a minor 2.0 per cent of the respondent household heads.

Chart 002. Respondent Household Head's Age

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
middle & over	42	27.7																		
young	105	72.3																		
middle & over	42	27.7	20	3	over 50 yrs															
			9.9	15	46 - 50 yrs															
			15.8	24	41 - 45 yrs															
			18.4	28	36 - 40 yrs															
			16.5	25	31 - 35 yrs															
young	105	72.3	20.4	31	26 - 30 yrs															
			13.2	20	21 - 25 yrs															
			0.7	1	under 20 yrs															
V.C. = 152				m.c. = 5		10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
middle & over	61	58.7																		
young	43	41.3																		
middle & over	61	58.7	30.8	32	over 50 yrs															
			10.6	11	46 - 50 yrs															
			17.3	18	41 - 45 yrs															
			17.3	18	36 - 40 yrs															
			12.5	13	31 - 35 yrs															
young	43	41.3	9.6	10	26 - 30 yrs															
			1.9	2	21 - 25 yrs															
			0.0	0	under 20 yrs															
V.C. = 104				m.c. = 8.		10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
middle & over	61	58.7																		
young	43	41.3																		
middle & over	61	58.7	35.6	37	over - 50 yrs															
			9.6	10	46 - 50 yrs															
			13.5	14	41 - 45 yrs															
			11.5	12	36 - 40 yrs															
			8.7	9	31 - 35 yrs															
young	43	41.3	12.5	13	26 - 30 yrs															
			7.7	8	21 - 25 yrs															
			1.0	1	under 20 yrs															
V.C. = 104				m.c. = 32		10 20 30 40 50 60 70 80 90														

Chart 003. Respondent's Age

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
middle & over	42	27.6																		
young	110	72.4																		
middle & over	42	27.6	2.0	3	over 50yrs															
			9.8	15	46 - 50yrs															
			15.8	24	41 - 45yrs															
			18.4	28	36 - 40yrs															
			18.4	28	31 - 35yrs															
young	110	72.4	21.8	33	26 - 30yrs															
			13.2	20	21 - 25yrs															
			0.6	1	under 20yrs															
V.C. = 152				m.c. = 5		10	20	30	40	50	60	70	80	90						

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
middle & over	68	56.7																		
young	52	43.3																		
middle & over	62	56.7	29.0	35	over 50yrs															
			11.7	14	46 - 50yrs															
			16.0	19	41 - 45yrs															
			16.6	20	36 - 40yrs															
			11.7	14	31 - 35yrs															
young	52	43.3	8.3	10	26 - 30yrs															
			4.2	5	21 - 25yrs															
			2.5	3	under 20yrs															
V.C. = 120				m.c. = 2		10	20	30	40	50	60	70	80	90						

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
middle & over	66	49.6																		
young	67	50.3																		
middle & over	66	49.6	30.8	41	over 50yrs															
			7.5	10	46 - 50yrs															
			11.3	15	41 - 45yrs															
			10.6	14	36 - 40yrs															
			7.5	10	31 - 35yrs															
young	67	50.3	15.0	20	26 - 30yrs															
			13.5	18	21 - 25yrs															
			3.8	5	under 20yrs															
V.C. = 133				m.c. = 3		10	20	30	40	50	60	70	80	90						

iii) Respondent Educational attainment (chart 005.)

Surveys on literacy in Lagos during the late 1960's showed that 23 per cent of male adults and 58 per cent of female adults received no education compared with 47 per cent of males and 63 per cent of females in Ife, and 71 per cent of males and 92 per cent of females in Oyo (Morgan, 1975). Although Lagos compares favourably with other states in the nation, state education among adults reflects the extremely low levels of western-style education available to the population at large. In addition to this, the education of adult women appears to have been left out of the educational system. This is essentially the outcome of a lack in infrastructure or curricula, teaching materials and trained personnel which in turn are a result of low expenditure on adult education, which only accounts for 2 per cent of capital expenditure on education (Blueprint, 1979 at p.113).

Educational attainment, especially that of the household head plays a very important part in determining the nature of the household and its housing environment. As with the aspect under investigation the distribution of educational attainment in the three areas studied is quite divergent. In Maroko and Isale-Eko the proportion of the post-secondary respondents is relatively smaller at 7.9 per cent and 8.8 per cent respectively when compared with the 23.8 per cent of the respondents in the Dolphin area. This variation in the higher reaches of the educational attainment system highlights the influence that education (aside from the co-related employment and income aspects) especially post-secondary and secondary education has on the respondents when attempting to access modern housing areas. These two attainment levels combined account for some 70.3 per cent of the respondents in the Dolphin study area while a similar distribution accounts for 36.2 per cent and 32.1 per cent of the respondents in Maroko and Isale-Eko respectively.

Chart 004. Respondent Household Heads Educational Attainment

A		B				uneducated														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
post sec.	12	7.9																		
sec.	55	36.2																		
prim.	68	44.7																		
none	16	10.5																		
post sec.	12	7.9	0.7	1	completed post sec.															
			7.2	11	uncompl. post sec.															
sec.	55	36.2	28.3	43	completed sec.															
			7.9	12	uncompleted sec.															
			28.3	43	completed elem.															
prim.	68	44.7	5.9	9	uncompleted elem.															
			10.5	16	koranic only															
none	16	10.5	10.5	16	not educated															
V.C. = 152				m.c. = 5		10 20 30 40 50 60 70 80 90														

						educated														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
post sec.	24	23.8																		
sec.	47	46.5																		
prim.	19	18.8																		
none	11	10.9																		
post sec.	24	23.8	22.8	23	completed post sec.															
			1.0	1	uncompl. post sec.															
sec.	47	46.5	35.6	36	completed sec.															
			10.9	11	uncompleted sec.															
			10.9	11	completed elem.															
prim.	19	18.8	5.9	6	uncompleted elem.															
			2.0	2	koranic only															
none	11	10.9	10.9	11	not educated															
V.C. = 101				m.c. = 21		10 20 30 40 50 60 70 80 90														

						iscale = ed														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
post sec.	9	8.8																		
sec.	33	32.0																		
prim.	44	42.7																		
none	17	16.5																		
post sec.	9	8.8	3.9	4	completed post sec.															
			4.9	5	uncomp. post sec.															
sec.	33	32.0	23.3	24	completed sec.															
			8.7	9	uncompleted sec.															
			22.3	23	completed elem.															
prim.	44	42.7	14.6	15	uncompleted elem.															
			5.8	6	koranic only															
none	17	16.5	16.5	17	not educated															
V.C. = 103				m.c. = 33		10 20 30 40 50 60 70 80 90														

Chart 005. Respondent's Educational Attainment

A		B				مدرسة														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
post. sec.	12	7.7																		
sec.	57	36.3																		
prim.	71	45.5																		
none	16	10.3																		
post sec.	12	7.7	0.7	1	completed post sec.															
			7.0	11	uncomp. post sec.															
sec.	57	36.5	28.8	45	completed sec.															
			7.7	12	uncompleted sec.															
			28.8	45	completed elem.															
prim.	71	45.5	5.8	9	uncompleted elem.															
			10.9	17	koranic only															
none	16	10.3	10.3	16	not educated															
V.C. = 156				m.c. = 1		10 20 30 40 50 60 70 80 90														

A		B				مدرسة														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
post. sec.	27	23.3																		
sec.	55	47.4																		
prim.	23	19.8																		
none	11	9.5																		
post sec.	27	23.3	21.6	25	completed post sec.															
			1.7	2	uncomp. post sec.															
sec.	55	47.4	36.2	42	completed sec.															
			11.2	13	uncompleted sec.															
			12.9	15	completed elem.															
prim.	23	19.8	5.2	6	uncompleted elem.															
			1.7	2	koranic only															
none	11	9.5	9.5	11	not educated															
V.C. = 116				m.c. = 6		10 20 30 40 50 60 70 80 90														

A		B				مدرسة														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
post. sec.	15	11.6																		
sec.	50	38.8																		
prim.	45	34.9																		
none	19	14.7																		
post sec.	15	11.6	3.1	4	completed post sec.															
			8.5	11	uncomp. post sec.															
sec.	50	38.8	25.6	33	completed sec.															
			13.2	17	uncompleted sec.															
			20.9	27	completed elem.															
prim.	45	34.9	9.4	12	uncompleted elem.															
			4.6	6	koranic only															
none	19	14.7	14.1	19	not educated															
V.C. = 129				m.c. = 7		10 20 30 40 50 60 70 80 90														

B. Household Data

i) Head of Household (chart 001.)

The head of household in the Nigerian context is crucial in determining the overall characteristic of the household. Furthermore, this individual is essentially the decision maker with regard to major domestic issues and spokesperson when dealing with extra-household situations, for example, extended family matters or negotiations with the authorities.

Of the respondents interviewed in all three areas there was a sizeable response to the question/statement "I am the head of this household". In Maroko this accounted for 97.4 per cent of the respondents, while in the Dolphin and Isale-Eko areas this category accounted for 86.7 per cent and 81.5 per cent of the respondents respectively.

ii) Length of residency (chart 006.)

The length of residency, an important aspect with regards to social and community circumstances showed similar divergent characteristics between the three areas. The Dolphin study area by its very history is a new settlement in which the first inhabitants only began occupying their dwellings in the latter half of 1982. Maroko and Isale-Eko, in contrast to the Dolphin area have a wider distribution of residency categories. Furthermore, the contrast between the two areas in terms of residency distribution is also quite marked. In Maroko only 10.2 per cent of the respondents replied that they had lived in the area for more than 10yrs, while 69.5 per cent of the respondents in Isale-Eko replied that they had lived in the area for more than 10yrs.

iii) Previous Residence (chart 007.)

As indicated above the location of the respondents' previous abode

Chart 006. Respondent's Length of Residency

A		B				unadjusted														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
long	16	10.2																		
medium	46	29.3																		
short	95	60.5																		
long	16	10.2	10.2	16	over 10yrs															
medium	46	29.3	14.0	22	5 - 10yrs															
			15.3	24	3 - 5yrs															
short	95	60.5	43.3	68	1 - 3yrs															
			17.2	27	under 1yr															
V.C. =				m.c. =		10	20	30	40	50	60	70	80	90						

						adjusted														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
long	0	0.0																		
medium	0	0.0																		
short	121	100																		
long	0	0.0	0.0	0	over 10yrs															
medium	0	0.0	0.0	0	5 - 10yrs															
			0.0	0	3 - 5yrs															
short	121	100	47.9	58	1 - 3yrs															
			52.1	63	under 1yr															
V.C. =				m.c. =		10	20	30	40	50	60	70	80	90						

						i scale - adjusted														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
long	94	69.6																		
medium	26	19.3																		
short	15	11.1																		
long	94	69.6	69.6	94	over 10															
medium	26	19.3	11.1	15	5 - 10															
			8.2	11	3 - 5															
short	15	11.1	5.9	8	1 - 3															
			5.2	7	under 1															
V.C. =				m.c. =		10	20	30	40	50	60	70	80	90						

Chart 007. Location of Respondent's Residence Before the Present Abode

A		B																				
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unclassified																
			21.2	32	here																	
			7.9	12	lagos island																	
			13.9	21	agegunle																	
			11.2	17	surulere																	
			4.0	6	kirikiri																	
			19.4	29	mushin																	
			10.5	16	yaba																	
			3.3	5	palmgrove																	
			8.6	13	outside lagos																	
V.C. = 151				M.C. = 6		10 20 30 40 50 60 70 80 90																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	classified																
			0.0	0	here																	
			82.0	100	lagos island																	
			1.6	2	agegule																	
			4.1	5	surulere																	
			0.0	0	kirikiri																	
			0.8	1	mushin																	
			2.4	3	yaba																	
			0.8	1	palmgrove																	
			8.2	10	outside lagos																	
V.C. = 122				M.C. = 0		10 20 30 40 50 60 70 80 90																

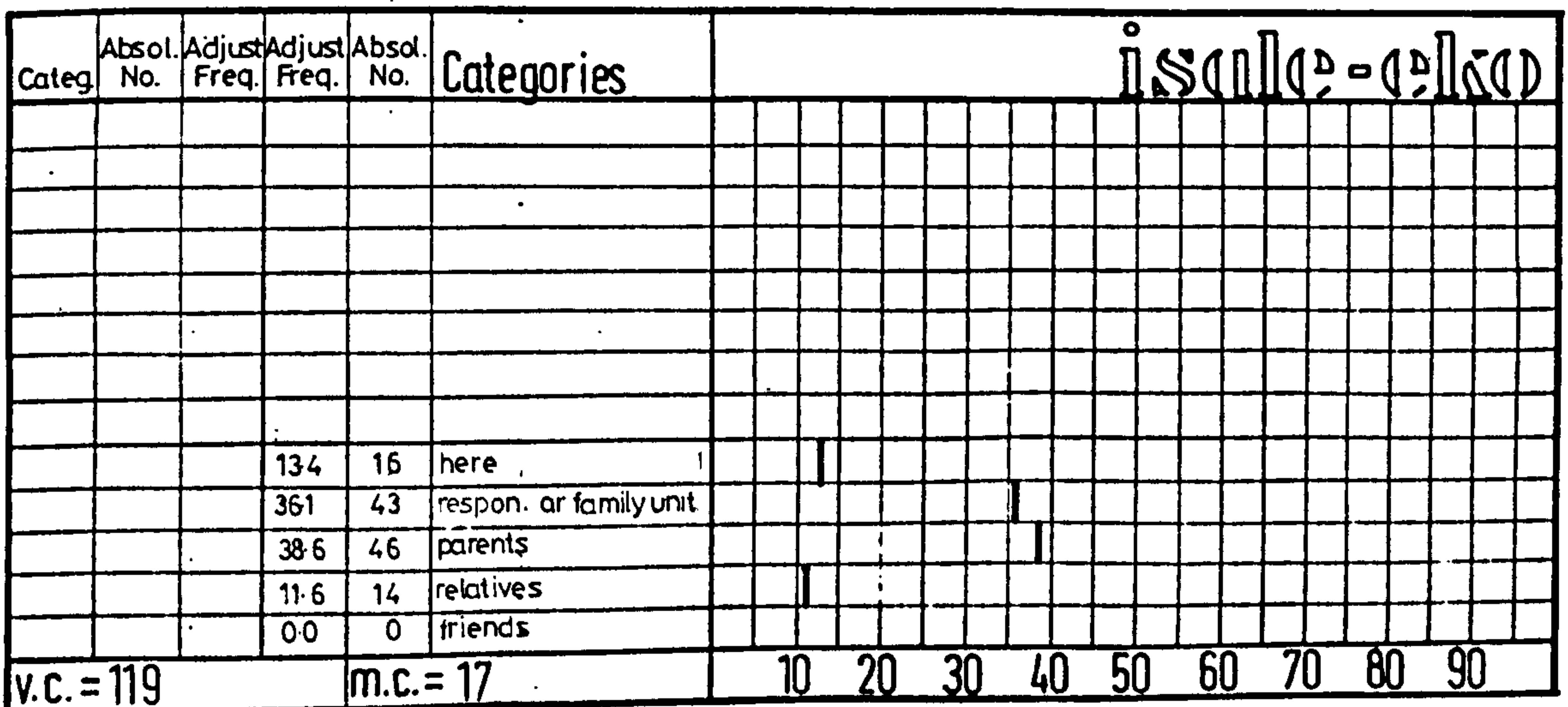
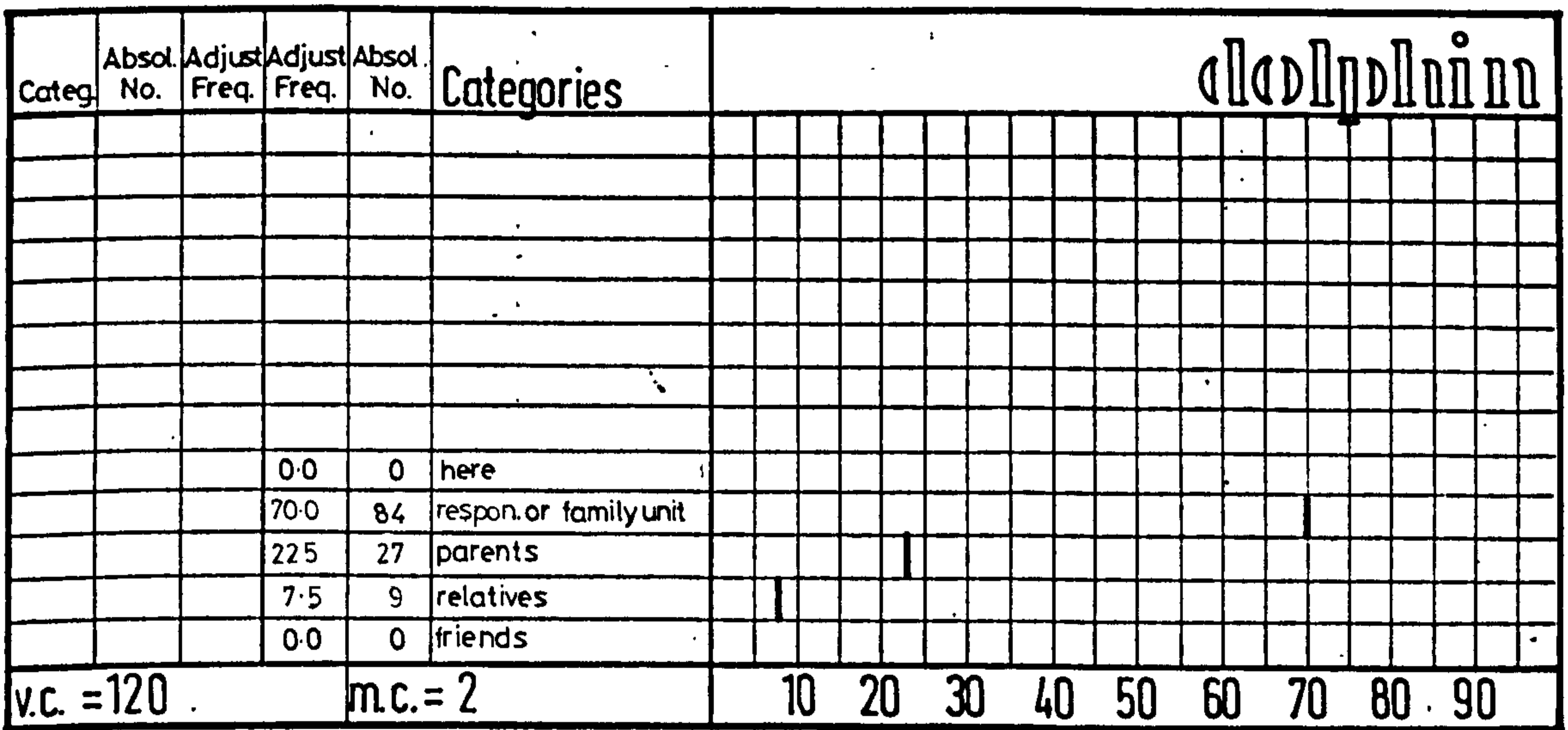
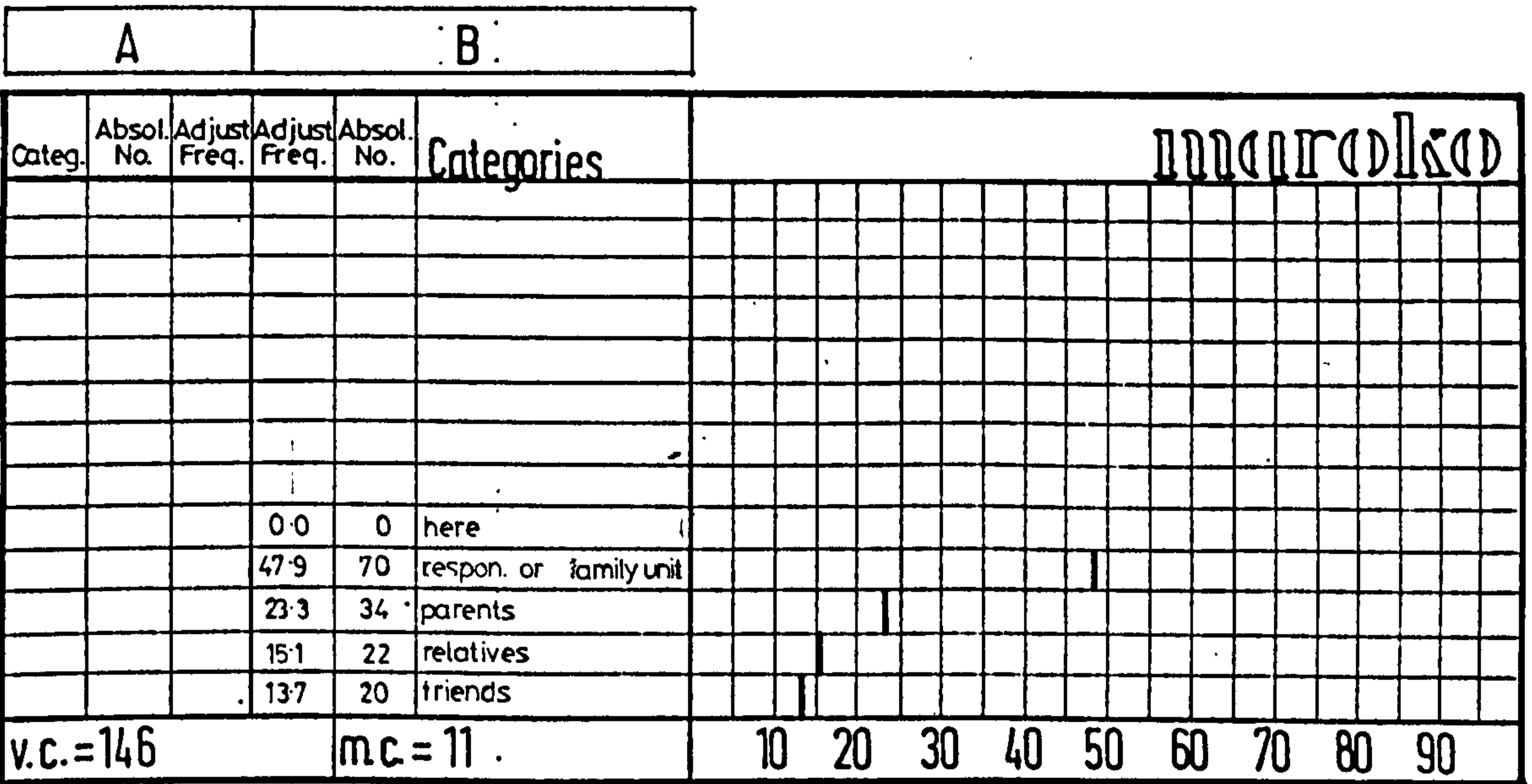
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	classified - other																
			22.8	29	here																	
			63.7	81	lagos island																	
			1.6	2	agegunle																	
			2.4	3	surulere																	
			0.0	0	kirikiri																	
			0.0	0	mushin																	
			1.6	2	yaba																	
			0.8	1	palmgrove																	
			7.1	9	outside lagos																	
V.C. = 127				M.C. = 9		10 20 30 40 50 60 70 80 90																

may be indicative of the type of employment the household head undertakes. Both Isale-Eko and Dolphin respondents exhibited a high and dominant Lagos Island origin, accounting for 86.5 per cent (including Isale-Eko) and 82.0 per cent of the respondents. Maroko, in contrast with the other two areas exhibited a wider distribution of respondents previous abodes, with respondents from Lagos Island accounting for 12.0 per cent of the respondents. The greater proportion, apart from those who said they were from Maroko (21.2 per cent) were from mainland Lagos, with Ajegunle, Surulere, Mushin and Yaba accounting for 13.9 per cent, 11.2 per cent, 19.4 per cent and 10.5 per cent respectively, of the respondents. This sizeable mainland contingent could in many ways be a consequence of the 'improved' locational aspect of Maroko since the late 1970's and is further reinforced not only by the findings above but also by the fact that Maroko has expanded rapidly from 70,000 inhabitant to 120,000 over the last seven or so years.

iv) With Whom Were You Residing (chart 008.)

Reflective of the above observations is the influence of whom if anyone is in residence with the household. In Maroko 47.9 per cent of the respondents lived alone. Nevertheless 23.3 per cent of the respondents had been living with their parents before moving to their new accommodation. Likewise but for different reasons, the Dolphin respondents exhibited a similar distribution characteristic. A sizeable 70.0 per cent came from their previous accommodation on Lagos Island, with a relatively small 22.7 per cent coming from accommodation with their parents. By contrast Isale-Eko exhibited a characteristic reflective of the social mechanics of this community; although 36.1 per cent of the respondents had lived by themselves, 13.4 per cent had been born and raised in their present accommodation. In addition to this the remaining 50 per cent of the respondents had

Chart 008. With Whom Were You Residing Before Present Situation

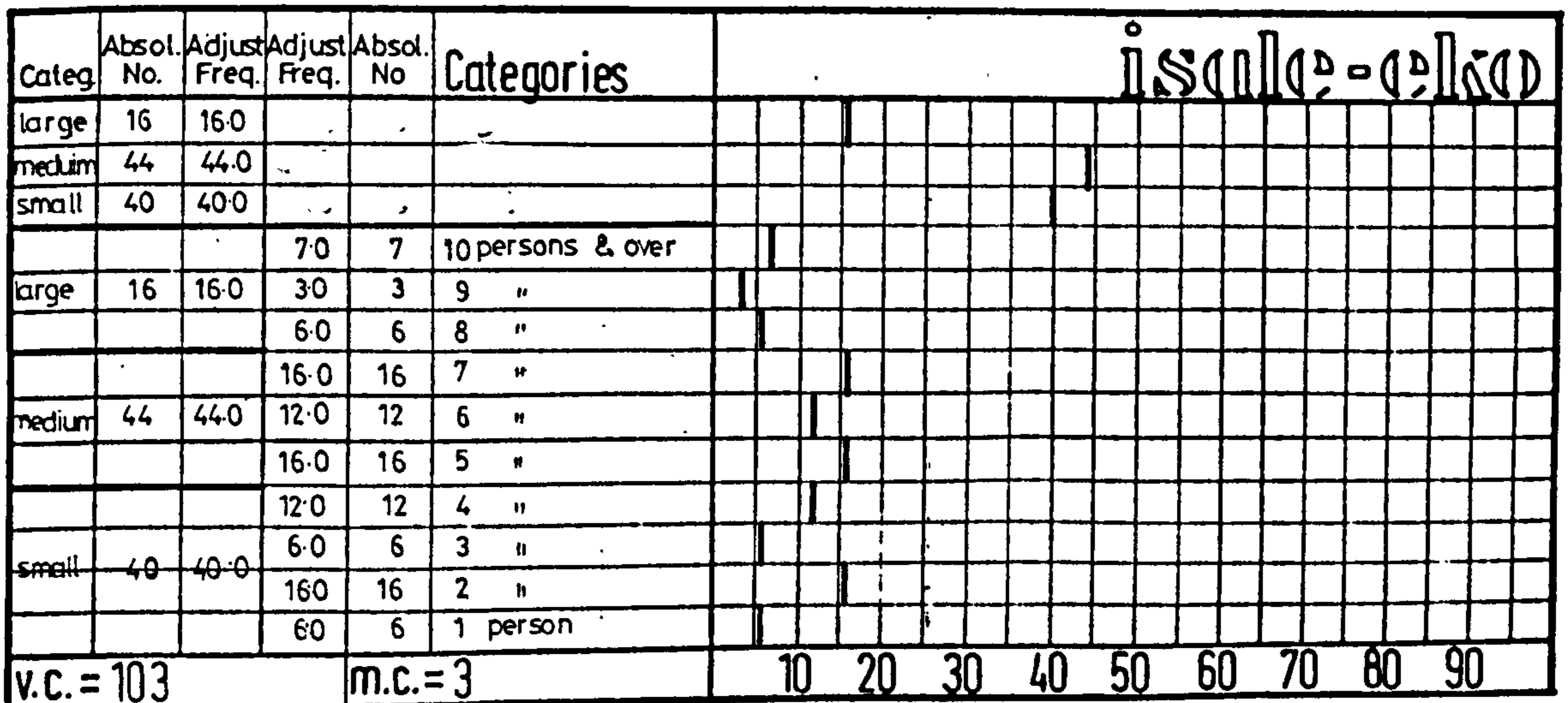
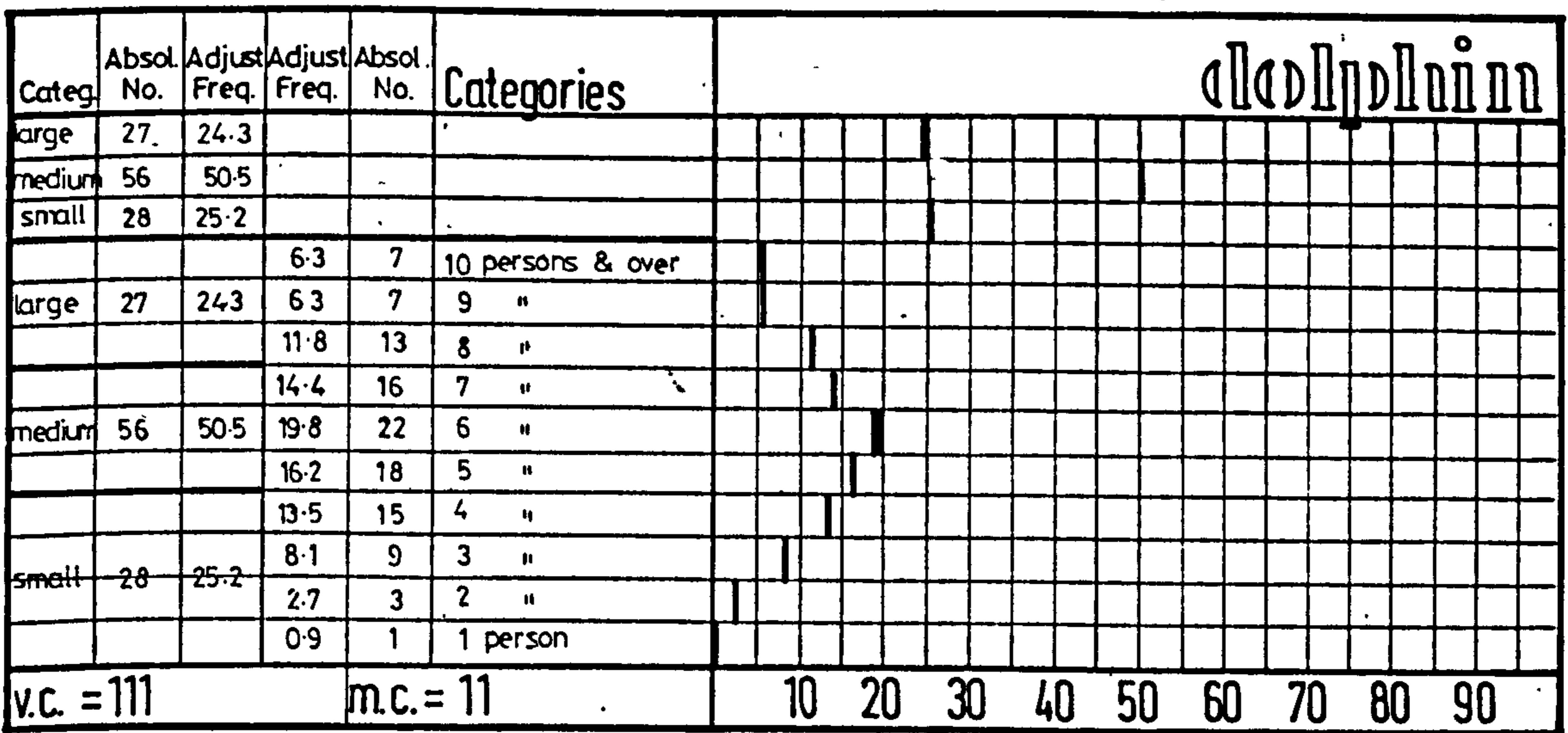
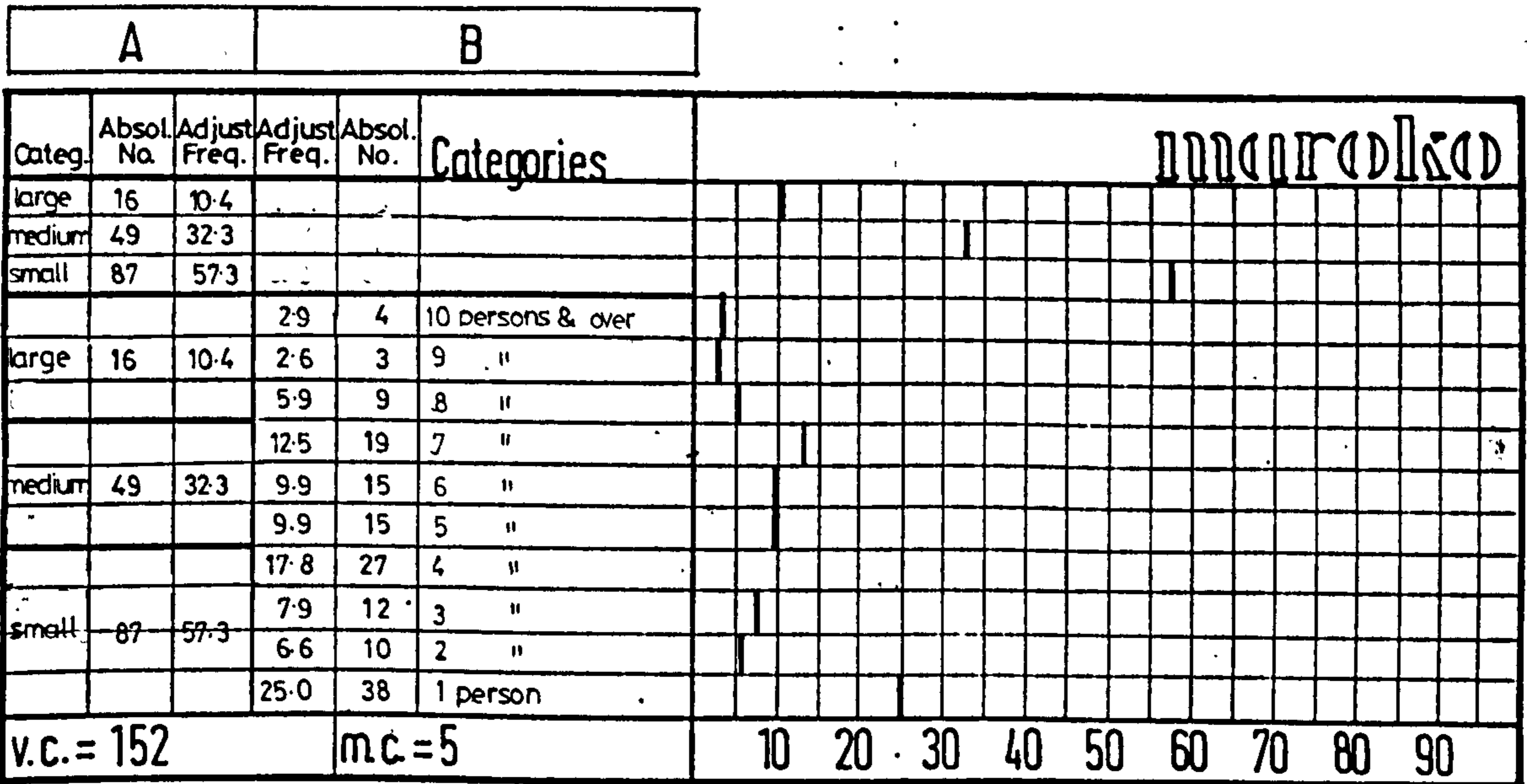


either been previously living with their parents (38.6 per cent) or with other relatives (11.9 per cent).

v) Household Size (chart 009.)

As chart graphically illustrates, the household size distribution between the three areas differ quite substantially. Maroko is in the main dominated by the small household consisting of up to four people, this accounts for 57.3 per cent of the respondent households of up to seven persons and over ten persons account for 10.4 per cent and 32.3 per cent of the respondent households. This when co-related with other aspects such as length of residency, age and education strongly indicates the newly arrived migrant characteristic of this kind of informal settlement. Contrastingly the Dolphin area exhibited a household size distribution where the small, medium and large households accounted for 25.2 per cent, 50.5 per cent and 24.3 per cent respectively of the respondent households. Contrary to expectation, Isale-Eko exhibited a household size distribution for small, medium and large households of 40 per cent, 44 per cent and 16 per cent respectively of the respondent households. This in part could be attributed to the nature of the sample with regard to tenure, for 54.5 per cent of the respondents were tenants rather than members of an extended family ownership. Furthermore, account must be taken of the traditional social process of sending children to stay with relatives in other parts of the city (given the population and residential densities) until such time as there is room for them in the parents' home or they can fend for themselves. Various studies have shown that some compounds in this community are made up of large extended families, with sometimes as many as 300 members of several generations and branches of the lineage residing in the compounds of the family land.

Chart 009. Respondent Household's Size



C. Employment

i) Type of Employment (chart 010.)

Aside from the educational and income aspects (all of which are strongly related) type of employment constitutes a very important influence on the type of housing environment one lives in. Surprisingly though both the Maroko and Dolphin areas exhibited a similar proportion of respondents employed in the civil service sector, namely, 30.5 per cent and 34.8 per cent respectively, with only 16.4 per cent of the respondents in Isale-Eko stating that they were employed in the Civil Service. Apart from this the employment distribution diverges, with only 20.5 per cent of Maroko respondents being self-employed. For the Dolphin area this proportion increased to 34.8 per cent self-employed respondents; this sizeable proportion is accounted for by the fact that a great majority of the inhabitants had moved from accommodation on Lagos Island where they had been previously self employed less than 5 minutes from the area.

In marked contrast to the other two areas Isale-Eko, exhibited a sizeable proportion at 59.5 per of self-employed respondents. Apart from the fact that Isale-Eko is a centre of trade and that a great proportion of the Isale-Eko respondents had resided in the area for many years, this finding is also due to the other social characteristics that may have precluded a number of the respondents from being employed in the modern sector, such as education. Not surprisingly Maroko with its low employment facilities accounted for 20.5 per cent of its respondents as self employed. In addition, the proportion of unemployed respondents was also quite high standing at 20.5 per cent, as compared with the Dolphin and Isale-Eko areas which had 10.4 per cent and 8.6 per cent respectively of their respondents unemployed.

Chart 010. Respondent's Employment

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unemployed														
v.c. = 151				m.c. = 6																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	employed														
v.c. = 115				m.c. = 7																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	in scale - employed														
v.c. = 116				m.c. = 20																

ii) Number of Household Members Employed (chart 011.)

Although essentially determined by the size of household, the number of household members employed may influence the nature of the housing environment in which the household finds itself. Maroko is dominated by the 'one employed member household', accounting for 72.8 per cent of the respondent households, as well as 19.4 per cent of the zero number of employed household members. The Dolphin and Isale-Eko areas show a very similar distribution with regard to the number of members of the household in employment. As such, 50.6 per cent and 47.6 per cent of the respondent households in Dolphin and Isale-Eko respectively, were 'two employed member households', with the 'three and one employed member households' accounting for 16.9 per cent and 27 per cent and, 14.3 per cent and 27 per cent of the respondent households in Dolphin and Isale-Eko respectively.

iii) Transportation to Place of Employment (chart 012.)

The question of transportation to the place of employment is reflective of a number of factors, and is in the main, dictated by the nature of the employment. In Maroko which lacks modern employment facilities such as factories and offices a majority of workers who are low income wage earners use public transportation as the main means of conveyance to their place of employment (35 per cent). The remaining respondents were relatively evenly distributed among the other modes of transport. Those who walked or cycled to work tended to be employed as domestic help in the private sector on Ikoyi or Victoria Island. In the Dolphin area, the mode of transport is dominated by the car. This aspect which only accounted for 18.8 per cent of the respondents in Maroko accounts for a sizeable 68 per cent of the respondents' mode of transport, - 36 per cent of the respondents used their own cars. The relatively good locational aspect of the estate also meant that 12.6 per cent of the respondents were able to walk to their place of

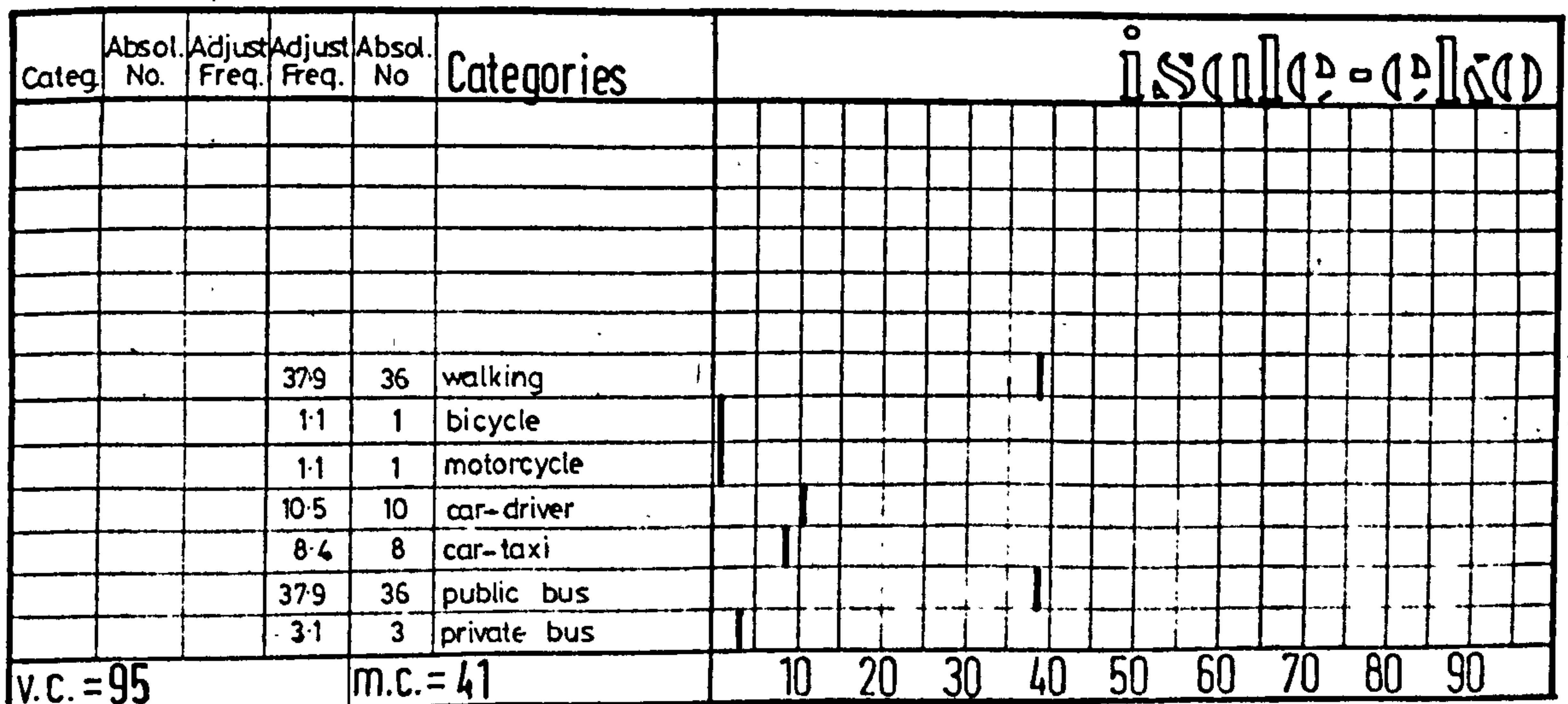
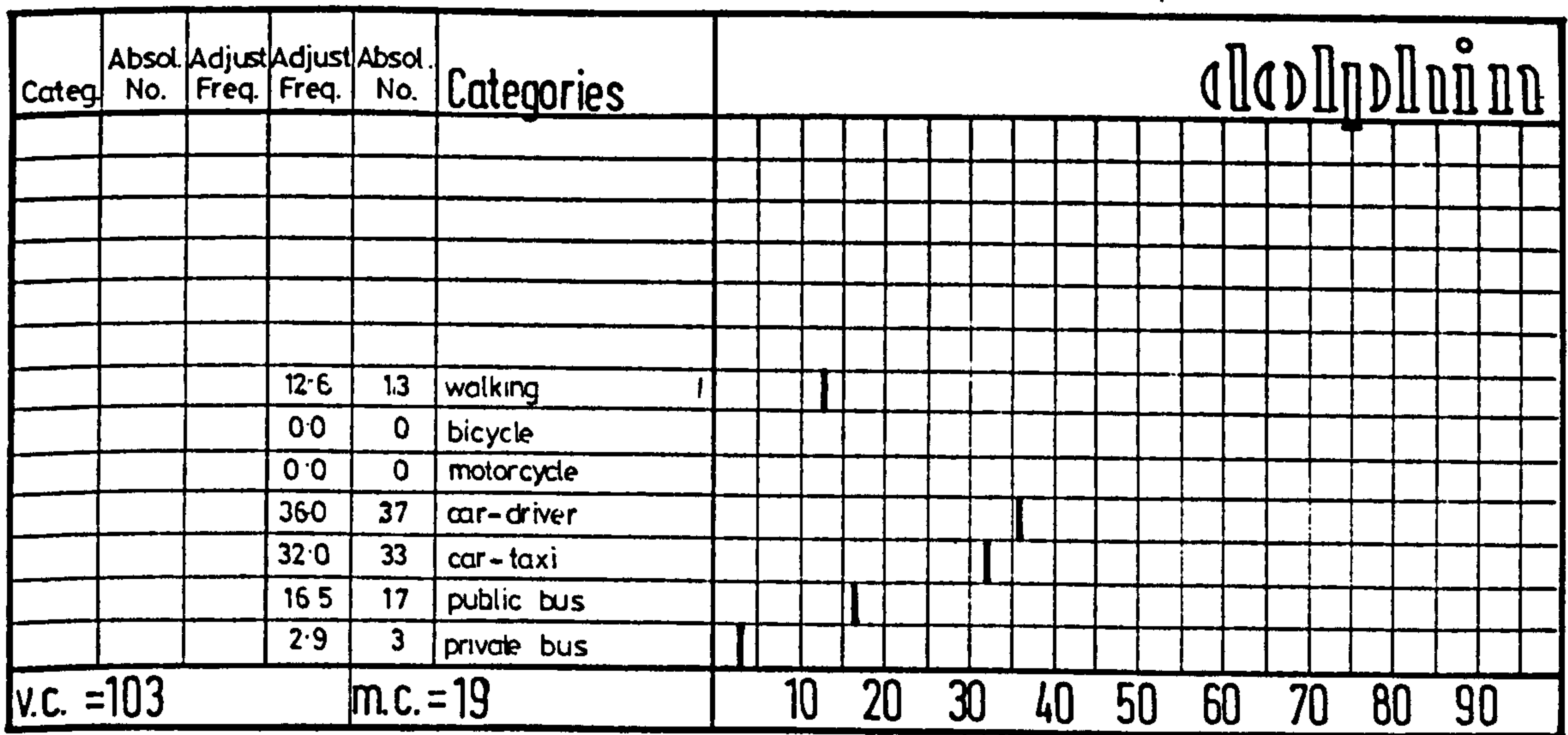
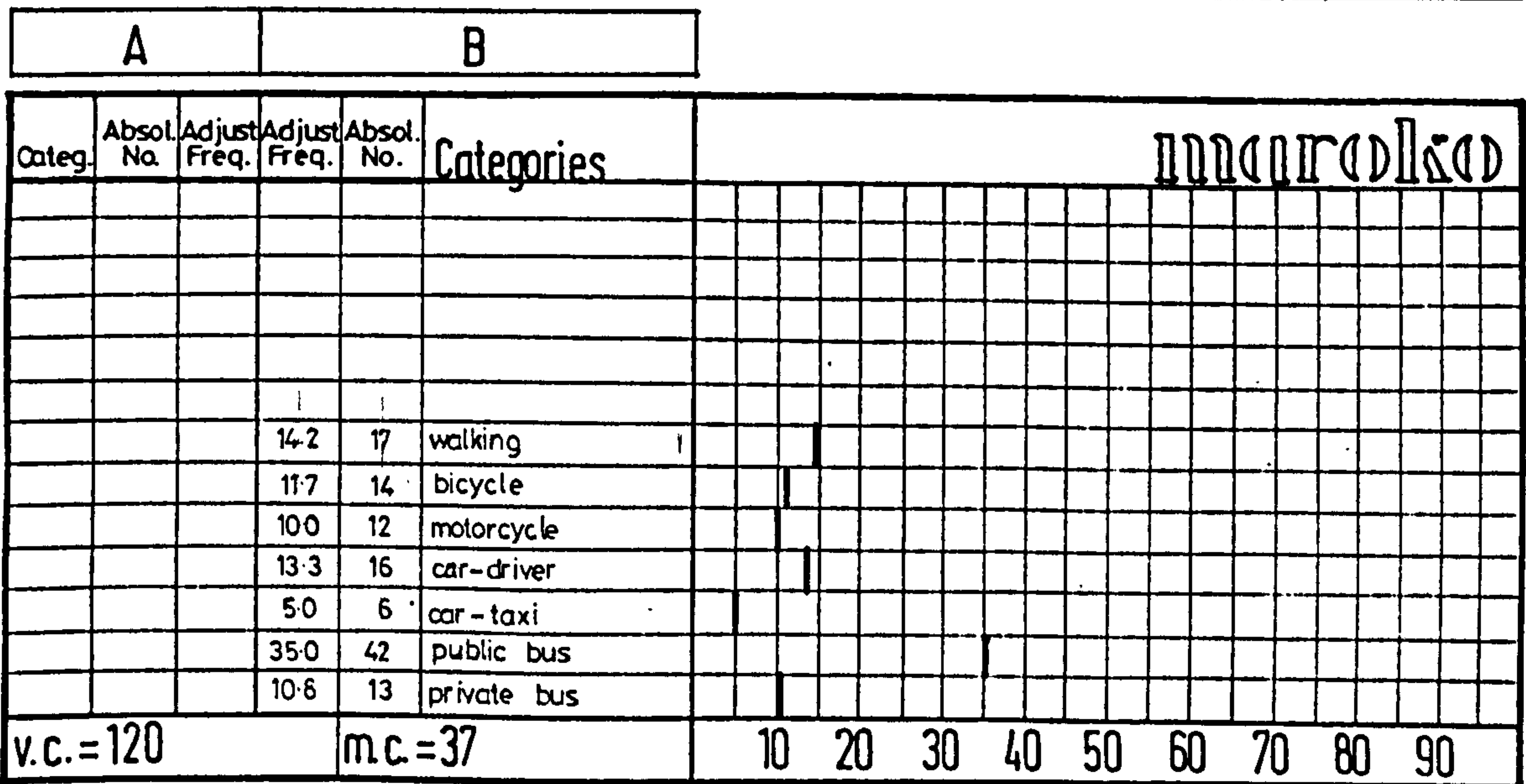
Chart 011. Number of Respondent Household Members in Employment

A					B									
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Individuals								
			0.0	0	7 persons & over									
			0.0	0	6 "									
			0.0	0	5 "									
			1.0	1	4 "									
			0.0	0	3 "									
			6.8	7	2 "									
			72.8	75	1 person									
			19.4	20	none									
v.c. = 103				m.c. = 54		10	20	30	40	50	60	70	80	90

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Individuals								
			0.0	0	7 persons & over									
			0.0	0	6 "									
			2.3	2	5 "									
			1.1	1	4 "									
			16.9	15	3 "									
			50.6	45	2 "									
			27.0	24	1 person									
			2.3	2	none									
v.c. = 89				m.c. = 33		10	20	30	40	50	60	70	80	90

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Individuals								
			0.0	0	7 persons & over									
			1.6	1	6 "									
			1.6	1	5 "									
			6.4	4	4 "									
			14.3	9	3 "									
			47.6	30	2 "									
			27.0	17	1 person									
			1.6	1	none									
v.c. = 63				m.c. = 73		10	20	30	40	50	60	70	80	90

Chart 012. Respondent Household Head's Transportation To Place of Employment



employment. On the other hand Isale-Eko with its high self-employment and ideal locational aspect has 37.9 per cent of its respondents walking to work. Although mode of transport may be attributed to the relatively large proportion of low income earners, ownership of a car in Isale-Eko does pose a number of problems. The street fabric of the settlement inhibits cars from access to all the dwellings and so cars may often have to be parked out of sight of the dwelling. Aside from this, some 37.9 per cent of the respondents use public transport.

iv) Income (chart 013.)

Whichever sector is studied, income is the major influence in the housing equation. Not only is it necessary to examine income in order to assess the resources available to government for its housing functions, but also, and more importantly it is essential to consider how much money the households have at their disposal and how much of it is available for housing costs. At the initial stages it was intended to assess the household and per capita incomes for the three areas in order that some form of affordability criteria for housing as investigated later (see p.214), could be applied to future proposals. The survey originally asked three main questions with regard to this issue.

First, on the income of the head of household from the main occupation. Secondly, the contributions made by the members of the household. Thirdly, the expenditure by the household on such aspects as transport, food, education, clothing, health, etc. This in practice proved to be a lot more difficult than was originally envisaged. It was realised from the pilot study that not only did this part of the questionnaire require a disproportionate amount of time in encouraging the respondents to be forthcoming with information regarding their monthly income and expenditure, but when data was received it was very inconsistent with regard to the question of income against

Chart 013. Respondent's Income

A					B														
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Income													
high	5	3.9																	
middle	23	18.0																	
low	100	78.1																	
high	5	3.9	3.9	5	over ₦10,800														
middle	23	18.0	3.9	5	₦6,000 - ₦10,800														
			14.1	18	₦3,600 - ₦6,000														
			18.7	24	₦2,800 - ₦3,600														
low	100	78.1	52.3	67	₦1,200 - ₦2,800														
			5.5	7	₦720 - ₦1,200														
			1.6	2	under ₦720														
v.c. = 128				m.c. = 29		10 20 30 40 50 60 70 80 90													

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Income													
high	8	9.1																	
middle	40	45.5																	
low	40	45.5																	
high	8	9.1	9.1	8	over ₦10,800														
middle	40	45.5	19.3	17	₦6,000 - ₦10,800														
			26.1	23	₦3,600 - ₦6,000														
			18.2	16	₦2,800 - ₦3,600														
low	40	45.5	16.0	14	₦1,200 - ₦2,800														
			10.2	9	₦720 - ₦1,200														
			1.1	1	under ₦720														
v.c. = 88				m.c. = 34		10 20 30 40 50 60 70 80 90													

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Income													
high	0	0.0																	
middle	12	17.9																	
low	55	82.1																	
high	0	0.0	0.0	0	over ₦10,800														
middle	12	17.9	4.5	3	₦6,000 - ₦10,800														
			13.4	9	₦3,600 - ₦6,000														
			14.9	10	₦2,800 - ₦3,600														
low	55	82.1	47.8	32	₦1,200 - ₦2,800														
			13.4	9	₦720 - ₦1,200														
			6.0	4	under ₦720														
v.c. = 67				m.c. = 69		10 20 30 40 50 60 70 80 90													

expenditure.

In some of the responses expenditure was higher than income and in others the opposite applied. In addition to this the question of income also generated a high 'no' response. As a consequence only the question on main income was pressed and the other two were not asked. In this regard even the 'no' response varied greatly between the three areas. The 'no' response respondents in Isale-Eko accounted for 50.7 per cent of the respondents, while in Maroko and Dolphine 18.5 per cent and 27.9 per cent respectively, of the respondents were 'no' response respondents. With hindsight this problem could perhaps have been overcome by 'hiding' the questions in other parts of the questionnaire. The results, as with others showed a variation in distribution between the three areas, although it must be stated that the relatively high level of 'no' responses may well have distorted the findings. Given this, the income group distributions between the areas does show some consistencies with other co-related aspects. For example, Maroko showed a high 78.1 per cent of its respondents in the low income category with an annual income below ₦3,600 and a low 3.9 per cent of its respondents in the high income category with an annual income of ₦10,800 and over. The middle income category with an annual income of between ₦3,600 and ₦10,600 also accounted for a relatively low percentage of respondents (18.0 per cent). As expected the Dolphin area exhibited a different distribution of household income categories with, the low income category accounting for 45.5 per cent of the respondents while the middle and high income accounted for 45.5 per cent and 9.1 per cent respectively. The Isale-Eko distribution like Maroko's exhibited a relatively high proportion of low income respondents. These accounted for 82.1 per cent of the respondents while the middle and high income groups accounted for 17.9 per cent and zero per cent of the respondents.

v) Affordability of Housing

The importance of income in relation to housing and especially housing affordability is demonstrated below. The study illustrates this point by means of an affordability analysis of the various household income groups in each of the study areas for the LSDPC Dolphin Phase 1 Low Cost Housing Scheme. The technique involves adapting a combination of the following: the principal components of capital cost (mortgage), household income (household head's main occupation) and conditions of repayment (rentage) in order to establish 'abilities to pay' for housing (Wakely, Schmetzer & Mumtaz, 1976 at pp.1-21).

The three parameters of the housing economics equation, in its simplest form are

C_d = initial capital cost of the dwelling (in this case mortgage value)

I = total annual household income (in this case the head of households income from main occupation)

R = annual economic rent (in this case mortgage repayments or 'rentage')

Under usual circumstances C_d —the capital cost of the dwelling represents the initial 'once and for all payment', this covers the cost of the land on which the dwelling is erected and includes all fees relating to its acquisition and/or transfer (registration, taxes, duties, professional services, agents fees etc.) the construction of the building including the designers' and supervisors' fees, installation of services and connection to infrastructural networks: electricity, water and sewage.

The exercise involves two tests of affordability: the first at the mortgage costs for the dwellings at #7,000 and #8,000 for the two and three bedroom dwellings and, the second at the market costs for the dwellings at #19,200 and #23,400 for the two and three bedroom

dwellings respectively. The first test where Cd is #7000 and #8000 represents housing which is highly subsidised, and does not include the deposit of #1,000 and #1,600 for the two and three bedroom units respectively.

R, the economic rent or mortgage repayment is the total sum of recurrent payments necessary to cover the capital costs of the dwelling unit and its preservation in working order. For the purposes of the first test, subsidised rates, interest repayments, maintenance and repair charges are not counted. The second test similarly does not take into account these factors.

Expressed as mathematical components of each other the following equations can be generated.

a. Capital costs of dwelling in terms of years of household income (c).

Where $c = Cd/I$

b. The annual economic rent as a percentage of the capital costs of dwelling (r). Where $R/Cd = r/100$ or $r = Rx100/Cd$

c. The percentage of the household income devoted to rent (p).

Where $R/I = P/100$ or $p = Rx100/I$

As such therefore;

$$\begin{aligned} p &= R/I \times 100/1 \\ &= r \times Cd/I \times 100/100 \\ &= r \times c \end{aligned}$$

From this a table 021. can be drawn up showing the relationship between r and c in terms of p, and from this range of values r and c will ensure that the value p does not exceed 20 per cent. Twenty per cent is generally regarded as the optimum and fairest amount of the household income that should be devoted to rent/mortgage (Dr. Oberu Aribiah). The range for r is between 1 to 20 and for c from 1 to 5.

From the foregoing, another set of tables (022.A+B and 023.A+B) can be

Table No. 021.

$c = \frac{Cd}{I}$ $r = \frac{R}{Cd} \times 100$		Capital Cost of Dwelling Unit Expressed in Years of Total Annual Household Income												
		1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
4	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0	24.0	26.0	28.0	
5	5.0	7.5	10.0	12.5	15.0	17.5	20.0	22.5	25.5	27.5	30.0	32.5	35.0	
6	6.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0	36.0	39.0	42.0	
7	7.0	10.5	14.0	17.5	21.0	24.5	28.0	31.5	35.0	38.5	42.0	45.5	49.0	
8	8.0	12.0	16.0	20.0	24.0	28.0	32.0	36.0	40.0	44.0	48.0	52.0	56.0	
9	9.0	13.5	18.0	22.5	27.0	31.5	36.0	40.5	45.0	49.5	54.0	58.5	63.0	
10	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	
11	11.0	16.5	22.0	27.5	33.0	38.5	44.0	49.5	55.0	60.5	66.0	71.5	77.0	
12	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	
13	13.0	19.5	26.0	32.5	39.0	45.5	52.0	58.5	65.0	71.5	78.0	84.5	91.0	
14	14.0	21.0	28.0	35.0	42.0	49.0	56.0	63.0	70.0	77.0	84.0	91.0	98.0	
15	15.0	22.5	30.0	37.5	45.0	52.5	60.0	67.5	75.0	82.5	90.0	97.5	105.0	
16	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0	96.0	104.0	112.0	
17	17.0	25.5	34.0	42.5	51.0	59.5	68.0	76.5	85.0	93.5	102.0	110.5	119.0	
18	18.0	27.0	36.0	45.0	54.0	63.0	72.0	81.0	90.0	99.0	108.0	117.0	126.0	
19	19.0	28.5	38.0	47.5	57.0	66.5	76.0	85.5	95.0	104.5	114.0	123.5	133.0	
20	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	
21	21.0	31.5	42.0	52.5	63.0	73.5	84.0	94.5	105.0	115.5	126.0	136.5	147.0	
22	22.0	33.0	44.0	55.0	66.0	77.0	88.0	99.0	110.0	121.0	132.0	143.0	154.0	
23	23.0	34.5	45.0	57.5	69.0	80.5	92.0	103.5	115.0	126.5	138.0	149.5	161.0	

$$p = c \times r = \frac{Cd}{I} \times \frac{R \times 100}{Cd} = \frac{R \times 100}{I} = \text{Percentage of Total Annual Household Income Devoted to Rent}$$

set up to show the distribution by household income group as the three settlements under study would be able to afford the various dwellings when Cd has been set. In table 021, , the red line indicates those income categories that can afford the dwelling when p does not exceed 20 per cent for a range of r values between 3 and 10. If the r values are examined in another light, they could be considered as functions of the amortisation/repayment period, for example when r is 3, 4 or 5 an amortisation/repayment period of 33years, 25years and 20years respectively might apply.

From this table can be extrapolated the number and percentage of the population of each settlement that could afford the LSDPC Dolphin Phase 1 low cost housing units on the Government's extremely highly subsidised mortgage terms.

Tables 024. and 025. demonstrate this procedure with regards to the subsidised test.

Tables 026. and 027. demonstrate this procedure for the dwelling units at market value.

From the comparison between the tables it can be seen that the effect of the subsidy is very marked in terms of the percentage of the population that can afford the units at market value. It highlights the fact that in order for the authorities to provide housing for low income groups at a price they can afford the subsidies must be sizeable. But this creates the dilemma that in attempting to provide official legal housing to satisfy the alleged housing need (especially of the low income groups) valueable financial resources which could well be used for providing more housing units are used instead to subsidise a few at the expense of the majority. The desire for a political statement could well be a silent but nevertheless important influencing factor. In addition, this analysis has taken account of the second income generated by the other employed members

Table No. 022.A

Respondent's Affordability of Two Bedroom Flats, Dolphin Phase 1.																	
		720 to 1200	1200 to 2800	2800 to 3600	3600 to 6000	6000 to 10,800	10,800 and over						$I_a = (\#/\text{annum})$				
		1-6	1-1	6-0									Maroko				
		1-1	10-2	13-4	16-0	18-2	18-7	14-1	26-1	19-3	9-0						Dolphin
		6-0	13-4	47-8	47-8	14-9	13-4	4-5	0-0						Isale-Eko		
		under 60	60 to 100	100 to 233	233 to 300	300 to 500	500 to 900	900 and over									
		under 12	12 to 20	20 to 46-6	46-6 to 60	60 to 100	100 to 180	180 and over									
		P = (when Cd = 7000) 2 bedroom															
r	A	B	C	D	E	F	G										
3	29.2	21.9	10.5	6.6	4.4	2.5	1.9										
4	38.9	29.2	14.0	8.8	5.8	3.3	2.6										
5	48.6	36.5	17.5	10.9	7.3	4.7	3.2										
6	58.3	43.8	21.0	13.1	8.8	5.0	3.9										
7	68.1	51.0	24.5	15.3	10.2	5.8	4.5										
8	77.8	58.3	28.0	17.5	11.6	6.6	5.2										
9	87.5	65.6	31.5	19.7	13.1	7.5	5.8										
10	97.2	72.9	35.0	21.9	14.6	8.3	6.5										

r = rent as % cost of dwelling

Monthly Household Income Categories $I_m = (\# / \text{mth})$

Rent: If p is not exceed 20% (model)

$$R = \frac{I \times P}{100} \#/\text{mth}$$

Cd = cost of dwelling to household excluding interest

Income Groups

income groups by 'r' that can afford dwelling

p = percentage of annual income devoted to rent of particular income group at a particular (annual rent as) percentage cost of dwelling

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Table No. 022.B

Respondent's Affordability of Three Bedroom Flats, Dolphin Phase 1.		Annual Household Income Categories $I_a = (\$/annum)$																		
r = rent as % cost of dwelling	r	Household Distribution By Income [Percent]																		
		under 720	720 to 1200	1200 to 2800	2800 to 3600	3600 to 6000	6000 to 10,800	10,800 over	Maroko	Dolphin	Isale-Eko									
		Monthly Household Income Categories $I_m = (\$/mth)$																		
		Rent: If p is not exceed 20% (model)																		
		$R = \frac{I \times P}{100} \#/mth$																		
		Cd = cost of dwelling to household excluding interest																		
		Income Groups																		
		under 720	720 to 1200	1200 to 2800	2800 to 3600	3600 to 6000	6000 to 10,800	10,800 over												
		1.6	5.5	18.7	14.1	3.9	3.9	3.9												
		1.1	10.2	18.2	26.1	19.3	9.0	9.0												
		6.0	13.4	14.9	13.4	4.5	0.0	0.0												
		under 60	60 to 100	100 to 233	233 to 300	300 to 500	500 to 900	900 over												
		12	20	46.6	60	100	180	180												
		under 12	12 to 20	20 to 46.6	46.6 to 60	60 to 100	100 to 180	180 over												
			P = (when Cd = 8000) 3Bedroom																	
		A	B	C	D	E	F	G												
3	33.3	25.0	12.0	7.5	5.0	2.9	2.2	2.2												
4	44.4	33.3	16.0	10.0	6.7	3.8	3.0	3.0												
5	55.5	41.7	20.0	12.5	8.3	4.8	3.7	3.7												
6	66.7	50.0	21.0	15.0	10.0	5.7	4.4	4.4												
7	77.8	58.3	28.0	17.5	11.6	6.7	5.2	5.2												
8	88.9	66.7	32.0	20.0	13.3	7.6	5.9	5.9												
9	100.0	75.0	36.0	22.5	15.0	8.6	6.6	6.6												
10	111.1	83.3	40.0	25.0	16.7	9.5	7.4	7.4												

income groups by 'r' that can afford dwelling

p = percentage of annual income devoted to rent of particular income group at a particular (annual rent as) percentage cost of dwelling

Table No. 023.A

Respondent's Affordability of Two Bedroom Flats, Dolphin Phase 1.		Annual Household Income Categories							Household Distribution By Income [Percent]			Monthly Household Income Categories		
		720	1200	2800	3600	6000	10,800							
		under 720	720 to 1200	2800 to 3600	3600 to 6000	6000 to 10,800	10,800 and over							
		1-6	5-5	18-7	14-1	3-9	3-9							
		1-1	10-2	18-2	26-1	19-3	9-0							
		6-0	13-4	14-9	13-4	4-5	0-0							
		under 60	60 to 100	233 to 300	300 to 500	500 to 900	900 and over							
		under 12	12 to 20	46-6 to 60	60 to 100	100 to 180	180 and over							
		P = (when Cd = 19,200)												
r		A	B	C	D	E	F	G						
3	55.0	41.3	19.8	12.4	8.3	4.7	3.7							
4	106.7	80.0	38.4	24.0	16.0	9.1	7.1							
5	133.3	100.0	48.0	30.0	20.0	11.4	8.9							
6	160.0	120.0	57.6	36.0	24.0	13.7	10.7							
7	186.7	140.0	67.2	42.0	28.0	16.0	12.4							
8	213.0	160.0	76.8	48.0	32.0	18.3	14.2							
9	240.0	180.0	86.4	54.0	36.0	20.6	16.0							
10	266.7	200.0	96.0	60.0	40.0	22.9	17.7							

$I_d = (\# / \text{annum})$

Maroko
Dolphin
Isale-Eko

$I_m = (\# / \text{mth})$

Rent: If p is not exceed 20% (model)

$$R = \frac{I \times P}{100} \# / \text{mth}$$

Cd = cost of dwelling to household excluding interest & land

Income Groups

income groups by 'r' that can afford dwelling

p = percentage of annual income devoted to rent of particular income group at a particular (annual rent as) percentage cost of dwelling

Table No. 023.B

Respondent's Affordability of Three Bedroom Flats, Dolphin Phase 1.		Annual Household Income Categories $I_a = (\#/\text{annum})$									
r = rent as % cost of dwelling	r	Household Distribution By Income [Percent]									
		under 720	720 to 1200	1200 to 2800	2800 to 3600	3600 to 6000	6000 to 10,800	10,800 and over	Maroko	Dolphin	Isale-Eko
	1-6	5.5	52.3	18.7	14.1	3.9	3.9				
	1-1	10.2	16.0	18.2	26.1	19.3	9.0				
	6.0	13.4	47.8	14.9	13.4	4.5	0.0				
	under 60	60 to 100	100 to 233	233 to 300	300 to 500	500 to 900	900 and over				
	under 12	12 to 20	20 to 46.6	46.6 to 60	60 to 100	100 to 180	180 and over				
	Rent: If p is not exceed 20% (model)										
	$R = \frac{I \times P}{100} \#/\text{mth}$										
	Cd = cost of dwelling to household excluding interest & land										
	Income Groups										
	A	B	C	D	E	F	G				
3	97.5	73.1	35.1	21.9	14.6	8.4	6.5				
4	130.0	97.5	46.8	29.3	19.5	11.1	8.7				
5	162.5	121.9	58.5	36.6	24.4	13.9	10.8				
6	195.0	146.3	70.2	43.9	29.3	16.7	13.0				
7	227.5	170.6	81.9	51.2	34.1	19.5	15.2				
8	260.0	195.0	93.6	58.5	39.0	22.3	17.3				
9	292.5	219.4	105.3	65.8	43.9	25.1	19.5				
10	325.0	243.8	117.0	73.1	48.8	27.9	21.7				

income groups by 'r' that can afford dwelling

p = percentage of annual income devoted to rent of particular income group at a particular (annual rent as) percentage cost of dwelling

Table No. 024.

Percentage of Respondents Able to Afford Two Bedroom Flats Dolphin Phase 1. (Subsidized)												
	MAROKO				DOLPHIN				ISALE EKO			
	when p = 20											
	Households who cannot afford the dwelling		Households who can afford the dwelling		Households who cannot afford the dwelling		Households who can afford the dwelling		Households who cannot afford the dwelling		Households who can afford the dwelling	
r	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
3	9	7.1	119	92.9	10	11.3	78	88.7	13	19.4	54	80.6
4	9	7.1	119	92.9	10	11.3	78	88.7	13	19.4	54	80.6
5	9	7.1	119	92.9	10	11.3	78	88.7	13	19.4	54	80.6
6	76	59.4	52	40.6	24	27.3	64	72.7	45	67.2	22	32.8
7	76	59.4	52	40.6	24	27.3	64	72.7	45	67.2	22	32.8
8	76	59.4	52	40.6	24	27.3	64	72.7	45	67.2	22	32.8
9	100	78.1	28	21.9	40	45.5	48	54.5	55	82.1	12	17.9
10	100	78.1	28	21.9	40	45.5	48	54.5	55	82.1	12	17.9

Table No. 025.

Percentage of Respondents Able to Afford Three Bedroom Flats Dolphin Phase 1. (Subsidized)												
	MAROKO				DOLPHINE				ISALE EKO			
	when p = 20											
	Households who cannot afford the dwelling		Households who can afford the dwelling		Households who cannot afford the dwelling		Households who can afford the dwelling		Households who cannot afford the dwelling		Households who can afford the dwelling	
r	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
3	9	7.1	119	92.9	10	11.3	78	88.7	13	19.4	54	80.6
4	9	7.1	119	92.9	10	11.3	78	88.7	13	19.4	54	80.6
5	9	7.1	119	92.9	10	11.3	78	88.7	13	19.4	54	80.6
6	76	59.4	52	40.6	24	27.3	64	72.7	45	67.2	22	32.8
7	76	59.4	52	40.6	24	27.3	64	72.7	45	67.2	22	32.8
8	76	59.4	52	40.6	24	27.3	64	72.7	45	67.2	22	32.8
9	76	59.4	52	40.6	24	27.3	64	72.7	45	67.2	22	32.8
10	100	78.1	28	21.9	40	45.5	48	54.5	55	82.1	12	17.9

Table No. 026.

Percentage of Respondents Able to Afford Two Bedroom Flats Dolphin Phase 1. (Unsubsidized)												
	MAROKO				DOLPHIN				ISALE EKO			
	when $p = 20$											
	Households who cannot afford the dwelling		Households who can afford the dwelling		Households who cannot afford the dwelling		Households who can afford the dwelling		Households who cannot afford the dwelling		Households who can afford the dwelling	
r	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
3	8	7.1	110	92.9	10	11.4	78	88.6	13	19.4	54	80.6
4	92	78.1	26	21.9	40	45.6	48	54.4	55	82.9	12	17.9
5	92	78.1	26	21.9	40	45.6	48	54.4	55	82.9	12	17.9
6	109	92.2	9	7.8	63	71.7	25	28.3	64	95.5	3	4.5
7	109	92.2	9	7.8	63	71.7	25	28.3	64	95.5	3	4.5
8	109	92.2	9	7.8	63	71.7	25	28.3	64	95.5	3	4.5
9	114	96.1	4	3.9	80	91.0	8	9.0	67	100.0	0	0.0
10	114	96.1	4	3.9	80	91.0	8	9.0	67	100.0	0	0.0

Table No. 027.

Percentage of Respondents Able to Afford Three Bedroom Flats Dolphin Phase 1. (Unsubsidized)												
	MAROKO				DOLPHINE				ISALE EKO			
	when $p = 20$											
	Households who cannot afford the dwelling		Households who can afford the dwelling		Households who cannot afford the dwelling		Households who can afford the dwelling		Households who cannot afford the dwelling		Households who can afford the dwelling	
r	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
3	92	78.1	26	21.9	40	45.6	48	54.4	55	82.1	12	17.9
4	92	78.1	26	21.9	40	45.6	48	54.4	55	82.1	12	17.9
5	109	92.2	9	7.8	63	71.7	25	28.3	64	95.5	3	4.5
6	109	92.2	9	7.8	63	71.7	25	28.3	64	95.5	3	4.5
7	109	92.2	9	7.8	63	71.7	25	28.3	64	95.5	3	4.5
8	114	96.1	4	3.9	80	91.0	8	9.0	67	100.0	0	0.0
9	114	96.1	4	3.9	80	91.0	8	9.0	67	100.0	0	0.0
10	118	100.0	0	0.0	88	100.0	0	0.0	67	100.0	0	0.0

Table No. 028.

Respondent's Capital Cost Affordability by Income Groups										
		Annual Household Income Categories						I _a = (#/annum)		
		Household Distribution By Income [Percent]						Maroko Dolphin Isale-Eko		
		Monthly Household Income Categories						I _m = (# / mth)		
		Rent: If p is not exceed 20% (model)						P = percentage of income devoted to rent/mortgage		
		R = $\frac{I \times P}{100}$ - #/mth						Income Groups		
		Cd = (when p = 20)								
r	A	B	C	D	E	F	G			
3	4800	6400	13,333	21,333	32,000	56,000	72,000			
4	3600	4800	10,000	16,000	24,000	42,000	54,000			
5	2880	3,840	8,000	12,800	19,200	33,600	43,200			
6	2,400	3,200	6,666	10,666	16,000	28,000	36,000			
7	2,057	2,743	5,714	9,142	13,714	24,000	30,857			
8	1,800	2,400	5,000	8,000	12,000	21,000	27,000			
9	1,600	2,133	4,444	7,111	10,666	18,666	24,000			
10	1,440	1,920	4,000	6,400	9,600	16,800	21,600			

of the household. All this highlights the fact that a sizeable proportion of the Dolphin and Isale-Eko respondents (unlike those of Maroko) had more than one employed household member.

Finally, table 028. sets out the 'capital' affordability of the various income categories. It immediately highlights the very weak effective demand capability of the low income groups, especially when the costs of the cheapest government dwelling at the unsubsidised rate are contemplated.

Thus, it would appear from the analysis thus far that the majority of the population as represented by the Maroko respondents cannot afford government housing even at the highly subsidised rates. Therefore, it would seem that if policies and programmes are to be more effective in tackling the housing problem of low income households, an approach which recognises the particular housing means and resources of these groups must be developed. Most low income households have of necessity been forced to create a market for themselves in accordance with the effective demand capability of their sector and hence the creation of housing that is officially regarded as slum dwellings and illegal.

D. Concluding Remarks

Although the findings of the household study show a wide diversity of characteristics, they however, coalesce into groups of characteristics associated with each study area, reinforcing the 'access to accomodation' factors (chapter 2). For example, taking the household heads in Maroko (informal sector settlement), they tended to be young, of low educational attainment and income, with short length of residency and relatively small families. Dolphin (modern sector settlement) on the other hand exhibits a somewhat contrary grouping of characteristics, with the household head tending to be middle-aged or

over, of higher educational attainment, high income, having a relatively large family and a length of residency limited only by the age of the estate. The Isale-Eko (traditional sector settlement) characteristic grouping however, appears to straddle these two study areas in that the household heads are generally middle-aged or over, have relatively large families, lengthy residency on the one hand and low income and educational attainment on the other.

The relevance of these groupings with regards to an improvement programme where user-participation is a major element is crucial in that coalescing establishes at least at one level, a common ground on which a consensus regarding the improvements can be reacted.

II. Household Housing Environment

A. Building and Dwelling Environment

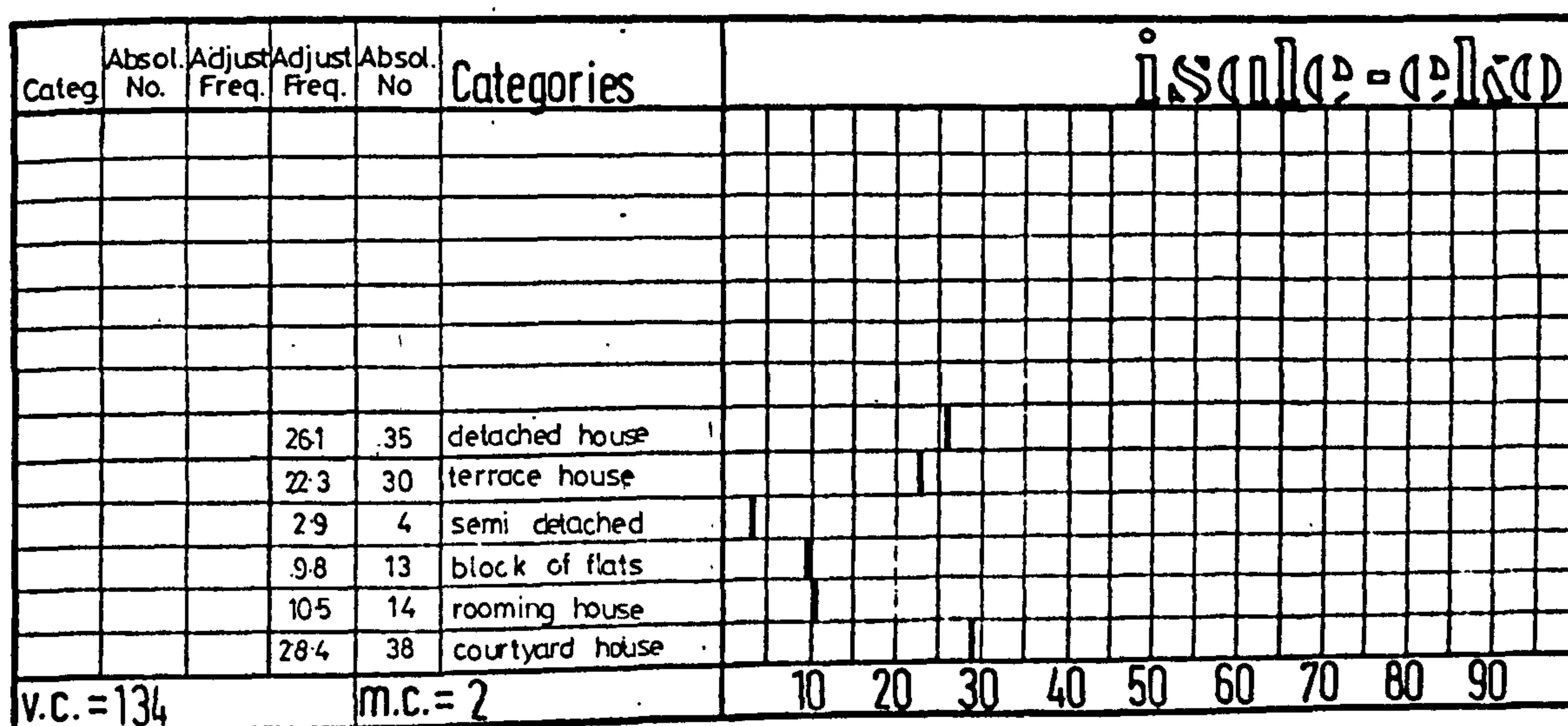
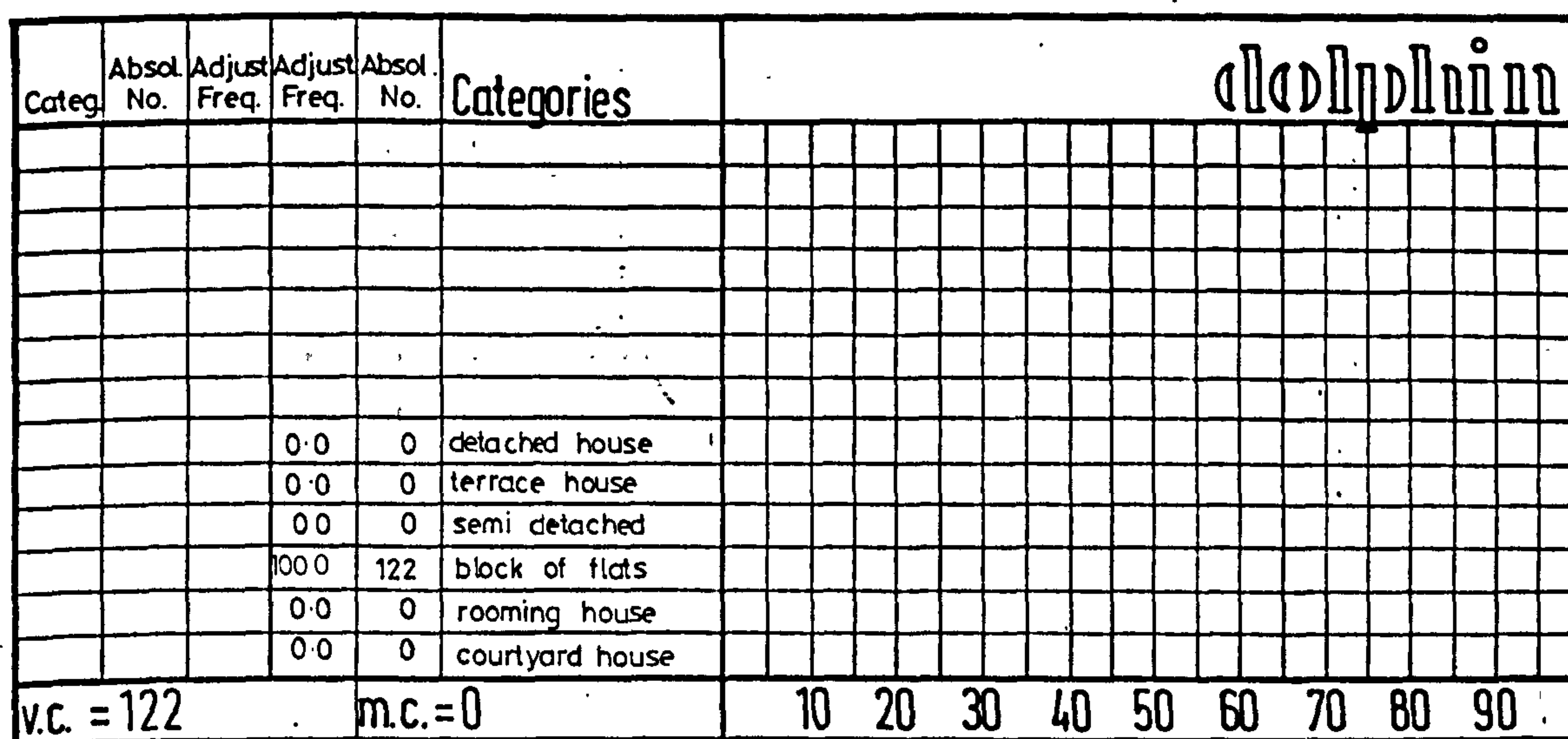
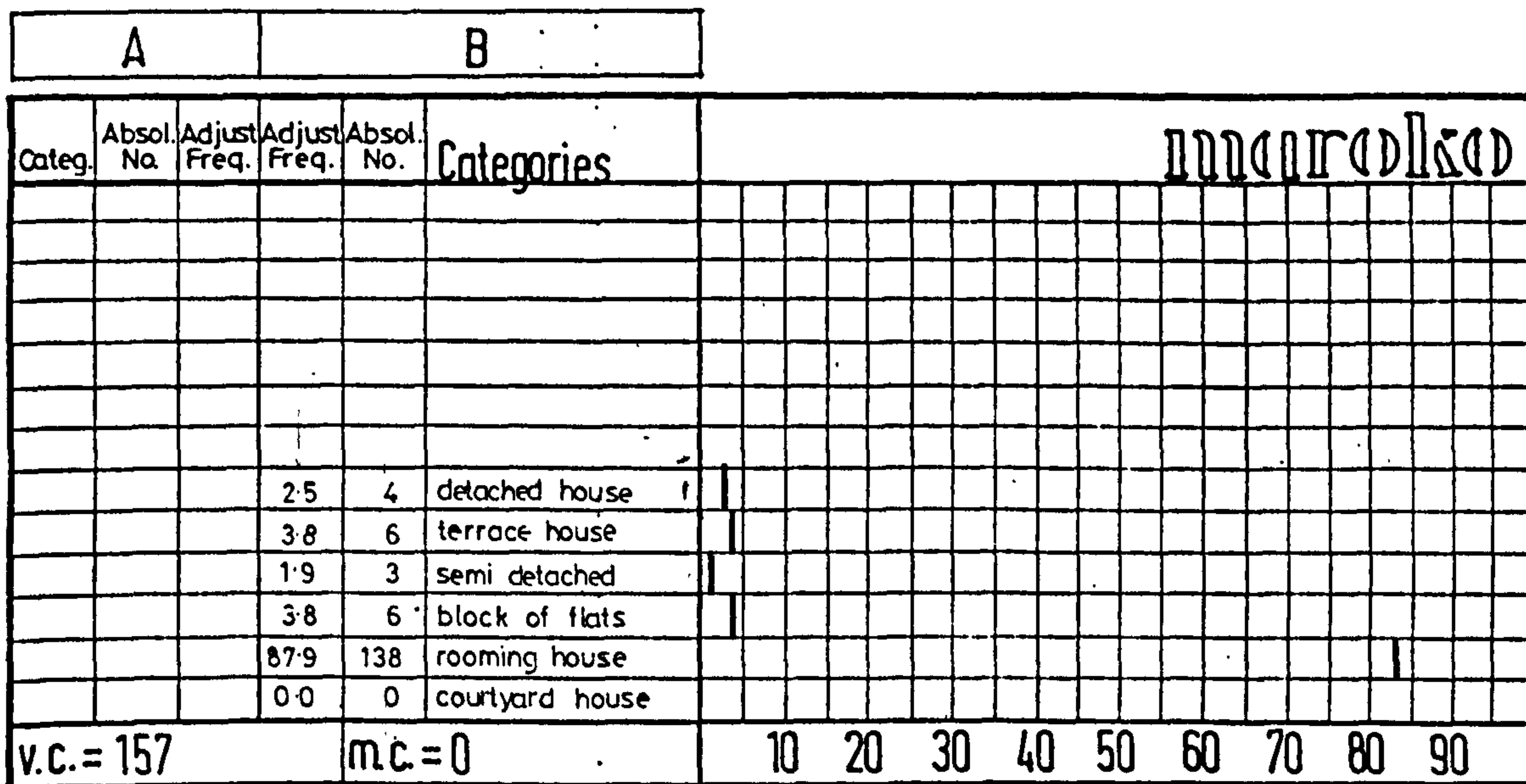
The fact that the Dolphin study area presents itself as a modern sector housing environment, its standardised aspects are well illustrated by the single and repeating bar chart representation in the findings set out below. By contrast, Maroko and Isale-Eko show a much wider distributional structure with regard to their housing environments' building and dwelling characteristics.

1. Building Characteristics

i) Building Type (chart 014.)

In the Dolphin study area, the building type that totally dominates (100 per cent) is the two and three bedroom, three storey walk up apartment (fig 039 .). Maroko, unlike Isale-Eko which has a higher distribution of building types is dominated by the rooming house (fig 040 ..). This type of building accounts for 87.9 per cent of the respondents' buildings. The detached and semi-detached house, terraced house and block of flats account for 25 per cent , 3.8 per cent, 1.9 per cent and 3.8 per cent respectively of the respondent

Chart 014. Respondent's Building Type



building types. In contrast to the other two areas where one building type dominates quite markedly, Isale-Eko has as its building type distribution spread: 28.4 per cent of the respondent households being accommodated in compound-courtyard traditional houses with the remaining 26.1 per cent, 22.3 per cent, 2.9 per cent, 9.8 per cent and 10.5 per cent of the respondent household accommodation building types being of the detached and semi-detached houses, terraced houses, block of flats and rooming house respectively.

The material construction of these buildings are similarly characterised by distributional variations between the study areas except in the categories of roofing and floor finishing materials (chart 015. and 016.). In these cases cement floor finishing and zinc roofing accounts for 88.7 per cent, 92.3 per cent and 94.7 per cent, and 87.9 per cent, 100 per cent and 84.3 per cent of the respondent buildings in Maroko, Dolphin and Isale-Eko respectively. Further data regarding building materials used for construction distribution can be found in Appendix VIII.



Figure 039 Two and Three Bedroom, Three Storey Walk Up Flats

Chart 015. Floor Finish in Respondents Dwelling

A					B															
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iiiiiiiiiiiiii														
v.c. = 155				m.c. = 2																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iiiiiiiiiiiiii														
v.c. = 116				m.c. = 6																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iiiiiiiiiiiiii														
v.c. = 131				m.c. = 5																

Chart 016. Roofing Material of Respondent's Building

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncovered														
v.c. = 157				m.c. = 0		10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	covered														
v.c. = 119				m.c. = 3		10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	insulated														
v.c. = 134				m.c. = 6		10 20 30 40 50 60 70 80 90														

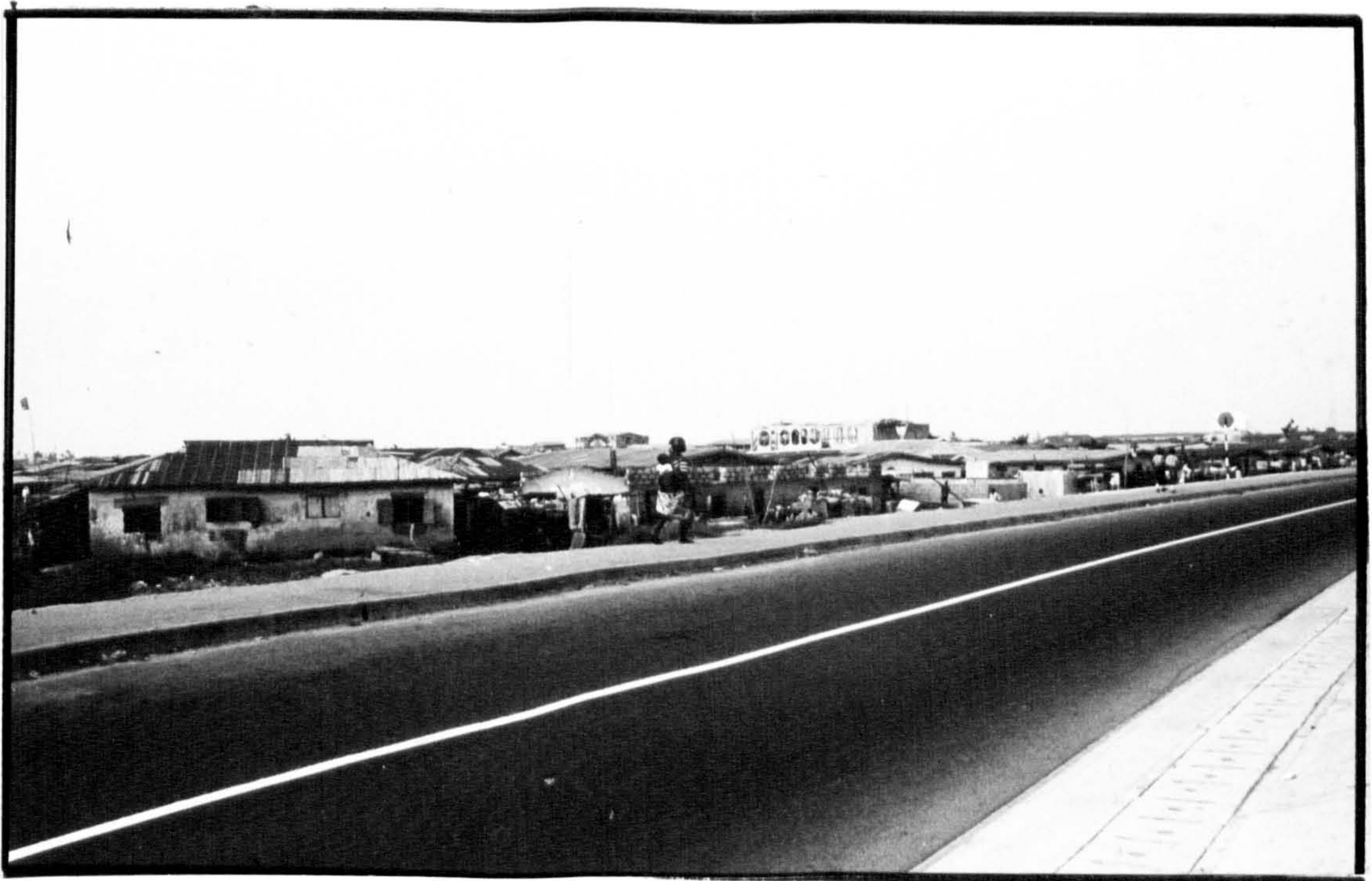


Figure 040. Single Floor Rooming Houses In Maroko.

ii) Building Age (chart 017.)

In theory (from the modern sector point of view) the age of a building plays an important role in determining housing need. The distributional variation of this aspect between the study areas is quite marked. The Dolphin area by did not even exist six years ago and as a consequence does not have any of the respondent buildings over five years of age. Besides this, the fact that modern sector housing estates have dwellings constructed at a similar point and over a similar period in time tends to standardise the age of the buildings. As such 82.1 per cent of the respondent buildings were between two to five years of age, with 14.9 per cent of less than two years of age. In Maroko this building age distribution differed, with 50 per cent of the respondent buildings being of five to ten years of age. Around this category, 25 per cent of the respondent buildings were between two and five years of age and 15.3 per cent of the respondent buildings were of ten to fifteen years of age. The nature of the house types coupled with this age distribution indicates that 65.3 per cent

Chart 017. Buildings' Age by Respondent

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	increased														
v.c. = 72				m.c. = 85		10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	decreased														
v.c. = 67				m.c. = 55		10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	isolate - added														
v.c. = 106				m.c. = 30		10 20 30 40 50 60 70 80 90														

of the respondent buildings were built over the period 1970 to 1980.

In many ways this reflects the the expansion of the Maroko population from the middle of the 1970's onwards in response to the economic expansion over this period and the road construction programme that brought Maroko 'closer' to the centres of employment. In contrast to the above, Isale-Eko has 84 per cent of its respondent buildings over twenty five years old with many being several centuries old, therefore, giving credence to Isale-Eko's claim of being the seat of Lagos's origin.

iii) Number of Floors in Building (chart 018.)

As expected for this kind of housing environment, the Dolphin study area was entirely made up of three storey walk-up apartments. In contrast the single storey buiding type was dominant in the Maroko and Isale-Eko areas, accounting for 93 per cent and 74.2 per cent of the respondent buildings. The two storey building constituted 15.2 per cent and 4.5 per cent of the respondent buildings in Isale-Eko and Maroko respectively. The building comprising three storeys and over accounted for 10.6 per cent and 2.5 per cent respectively, of the Isale-Eko and Maroko respondent buildings.

iv) Number of rooms per Building (chart 019.)

The number of rooms per building distribution as with the other aspect investigated earlier also exhibits inter-settlement variations. As expected for the Dolphin area, the number of rooms per building was standard at either forty two or thirty six (over twenty rooms), which accounted for 88.2 per cent and 11.9 per cent respectively of the respondent buildings. The dominance of the seven to nine room building in Maroko accounted for 37.8 per cent of the respondent buildings which compares similarly with the 31.8 per cent of the respondent buildings in Isale-Eko for the same number of rooms per building category, with the ten to twelve room and thirteen to

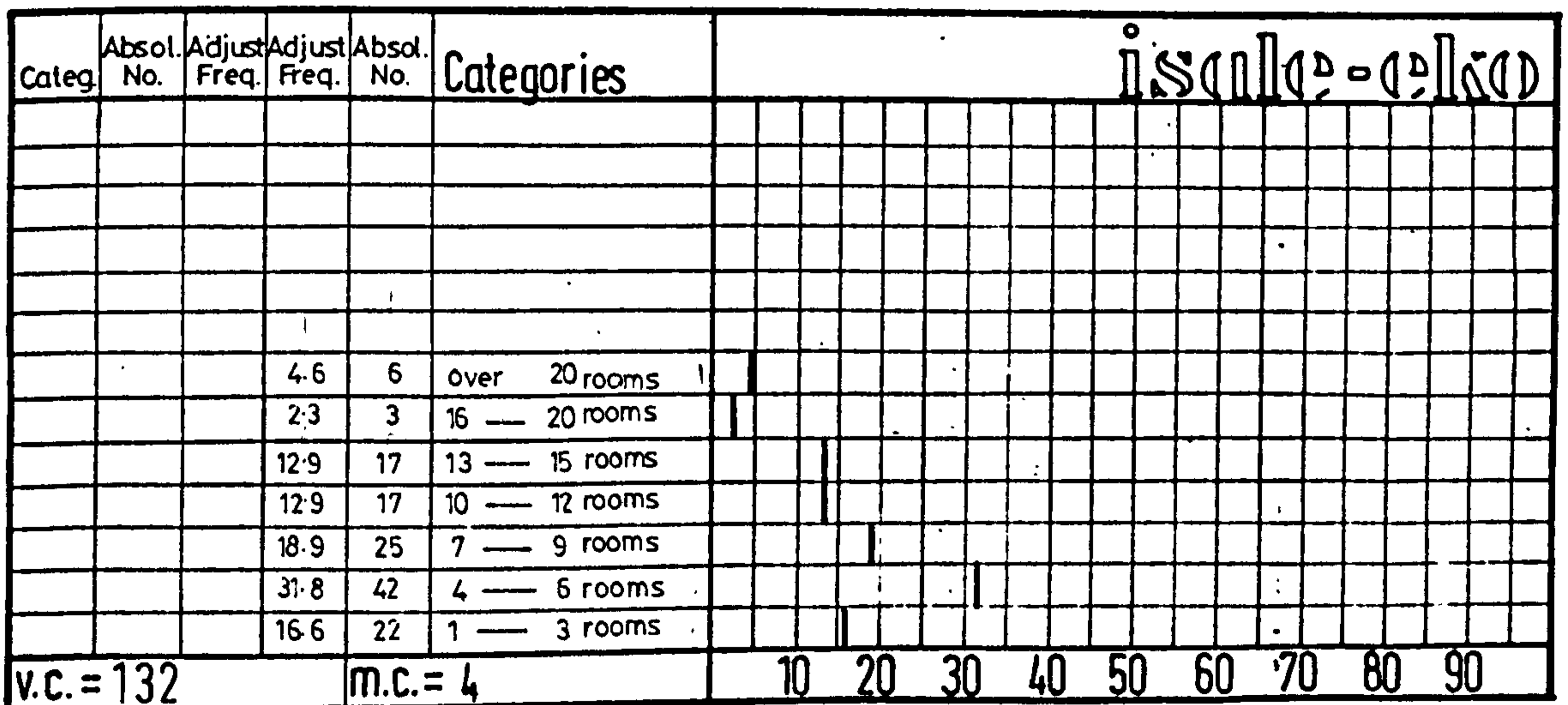
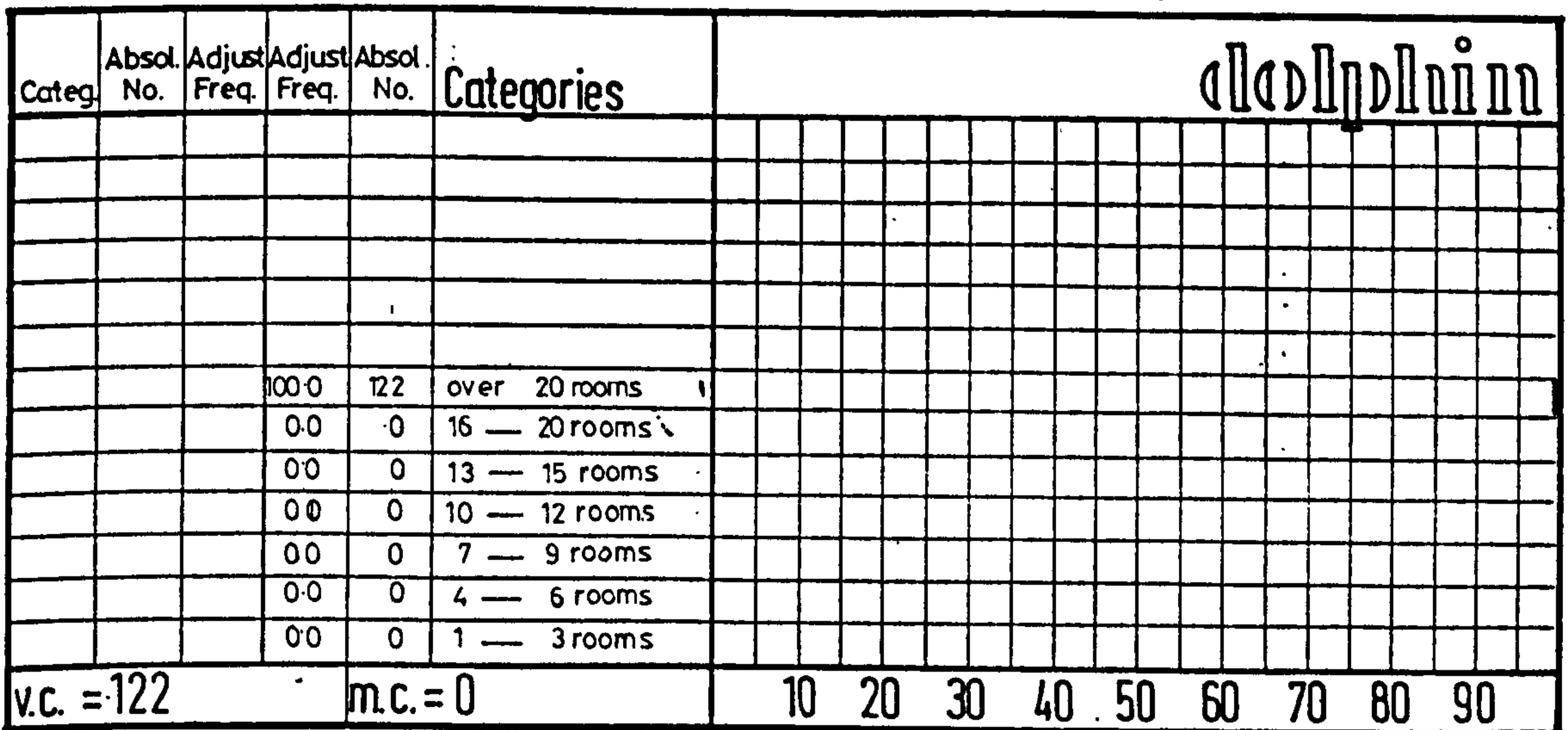
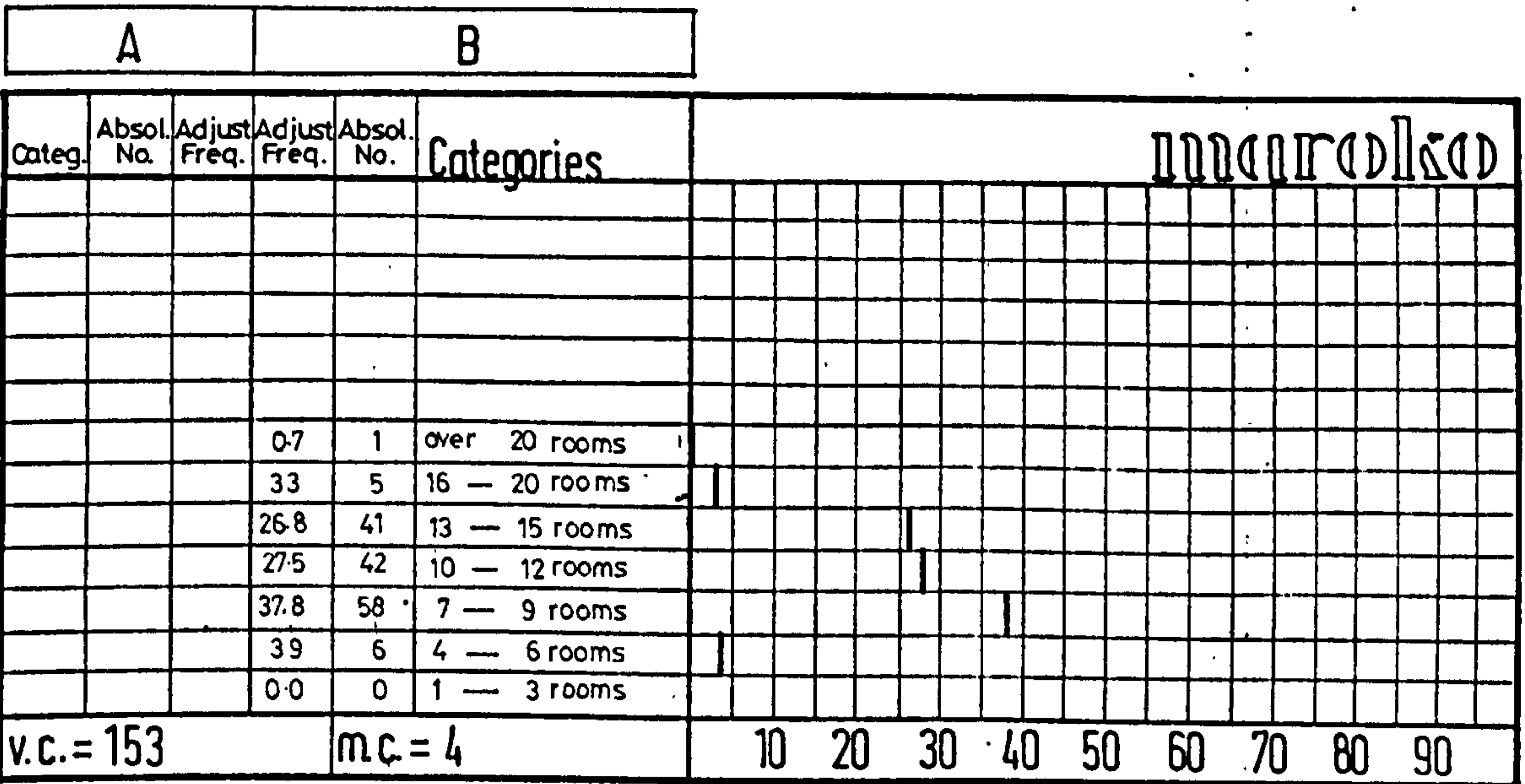
Chart 018. Number of Floors in Respondent's Building

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unadjusted														
				0.0	0	four floors & over														
				2.5	4	three floors														
				4.5	7	two floors														
				93.0	146	single/ground floor														
v.c. = 157				m.c. = 0			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	adjusted														
				0.0	0	four floors & over														
				100.0	122	three floors														
				0.0	0	two floors														
				0.0	0	single/ground floor														
v.c. = 122				m.c. = 0			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	i scale = adjusted														
				3.8	5	four floor & over														
				6.8	9	three floors														
				15.2	20	two floors														
				74.2	98	single/ground floor														
v.c. = 132				m.c. = 4			10	20	30	40	50	60	70	80	90					

Chart 019. Number of Rooms in Respondents Building



fifteen room buildings accounting for 27.5 per cent and 26.8 per cent of the respondent buildings in Maroko and Isale-Eko respectively. Unlike Maroko the distribution of rooms per buildings is wider with the one to three room buildings accounting for 16.6 per cent of the respondent buildings, the seven to nine room buildings accounting for 18.9 per cent of the respondent buildings and the over twenty room building accounting for 4.6 per cent of the respondent buildings. This distribution variation between Maroko and Isale-Eko is probably reflective of the nature of the growth of the settlement. Isale-Eko (unlike Maroko which is in essentially a rooming house settlement) is a traditional settlement whose large compounds have tended to break up into small irregularly shaped compounds because of population pressures and loosening of kinship ties.

v) Buildings' Use other than Residential (chart 020.)

The use of a building for non-residential activities is, in many ways dependent on its location. For instance, the landlord or for that matter the tenant may let or sub-let the front room(s) on the ground floor of his property for commercial use, eg., as a shop, beer parlour or warehouse. As expected, the when compared to the other two study areas, Dolphin area had a smaller respondent use of buildings for purposes other than residential. In the main this can be attributed to a number of factors: first the limitations put on landlords as to the use of their dwellings for commercial purposes; secondly, the fact that the buildings do form part of a thoroughfare for the greater neighbourhood; thirdly, only one third of the dwellings were located on the ground floor and fourthly, the location of the entrances of the dwellings relative to the road does not easily lend itself to the use of the living room as commercial premises dependent on passing shoppers. Only 3.6 per cent of the respondent households used one of their rooms for purposes other than residential.

With hindsight, the question of petty-trading carried on close to the building (maybe within the eaves line) should have been considered as a variable of the survey, as a number of dwellings had minor stalls of sorts selling items like cigarettes, fruit and cooked food which were located adjacent to the entrance to the building as illustrated in fig 041. and 042. This is a very important requirement, especially for the low income informal sector households who have great need of a secondary income to boost the total household income. As a consequence of this 'oversight' both Isale-Eko and Maroko, despite the high prevalence of petty trading taking place outside the front of the building, exhibited a high 72.8 per cent and 61.7 per cent of the respondent buildings not being used for purposes other than residential.

Aside from this issue, shops appear to be the dominant 'other user' of the

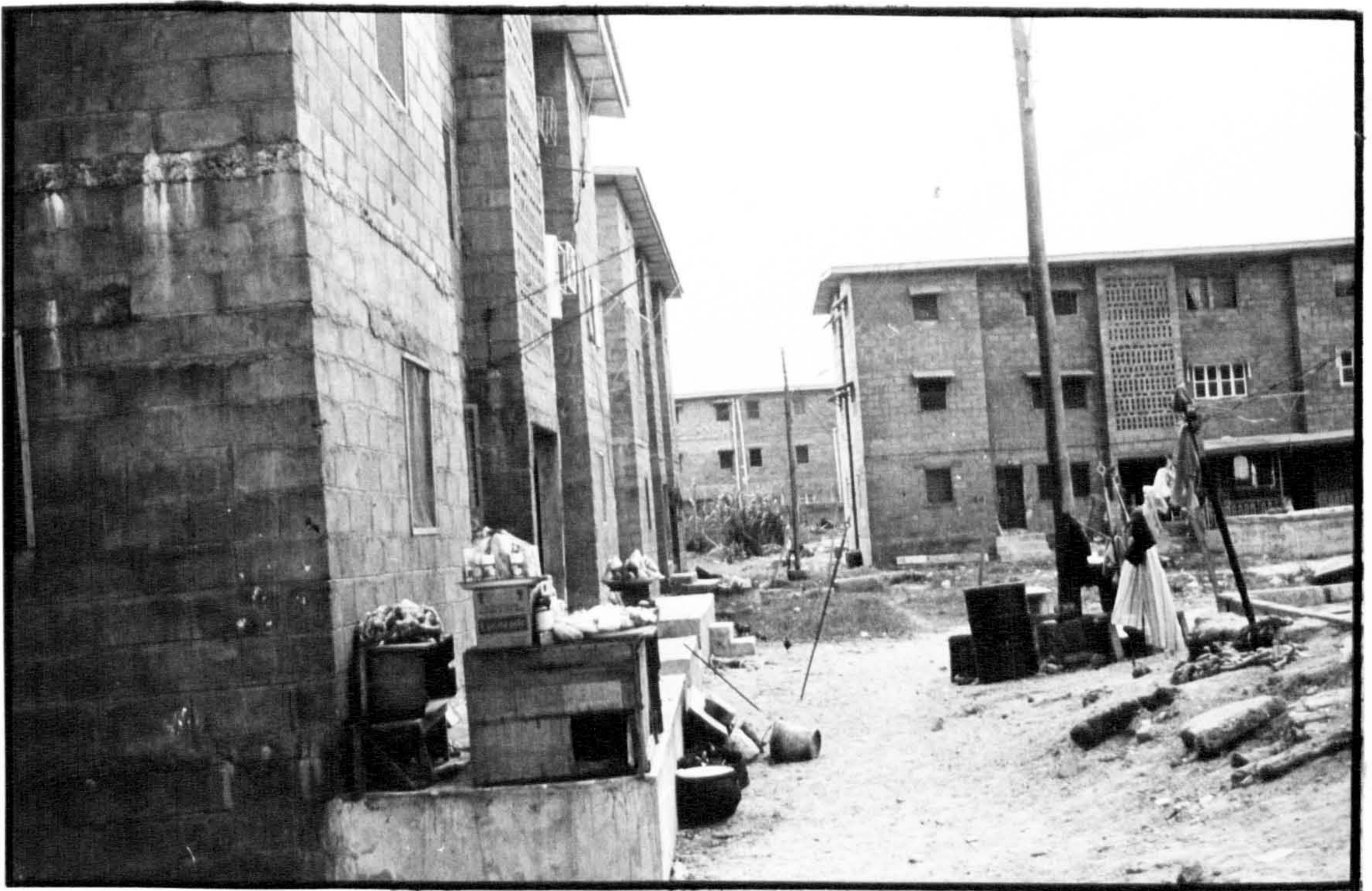
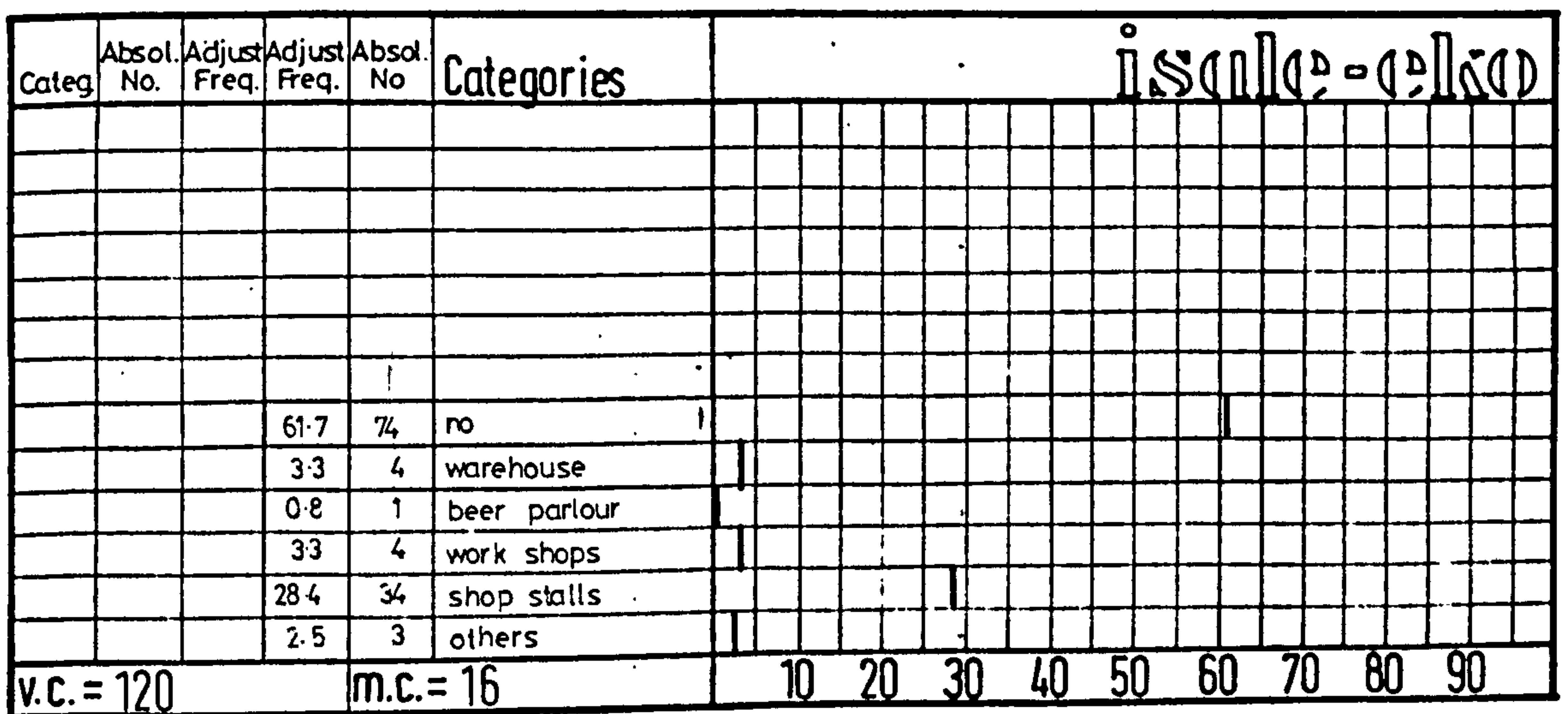
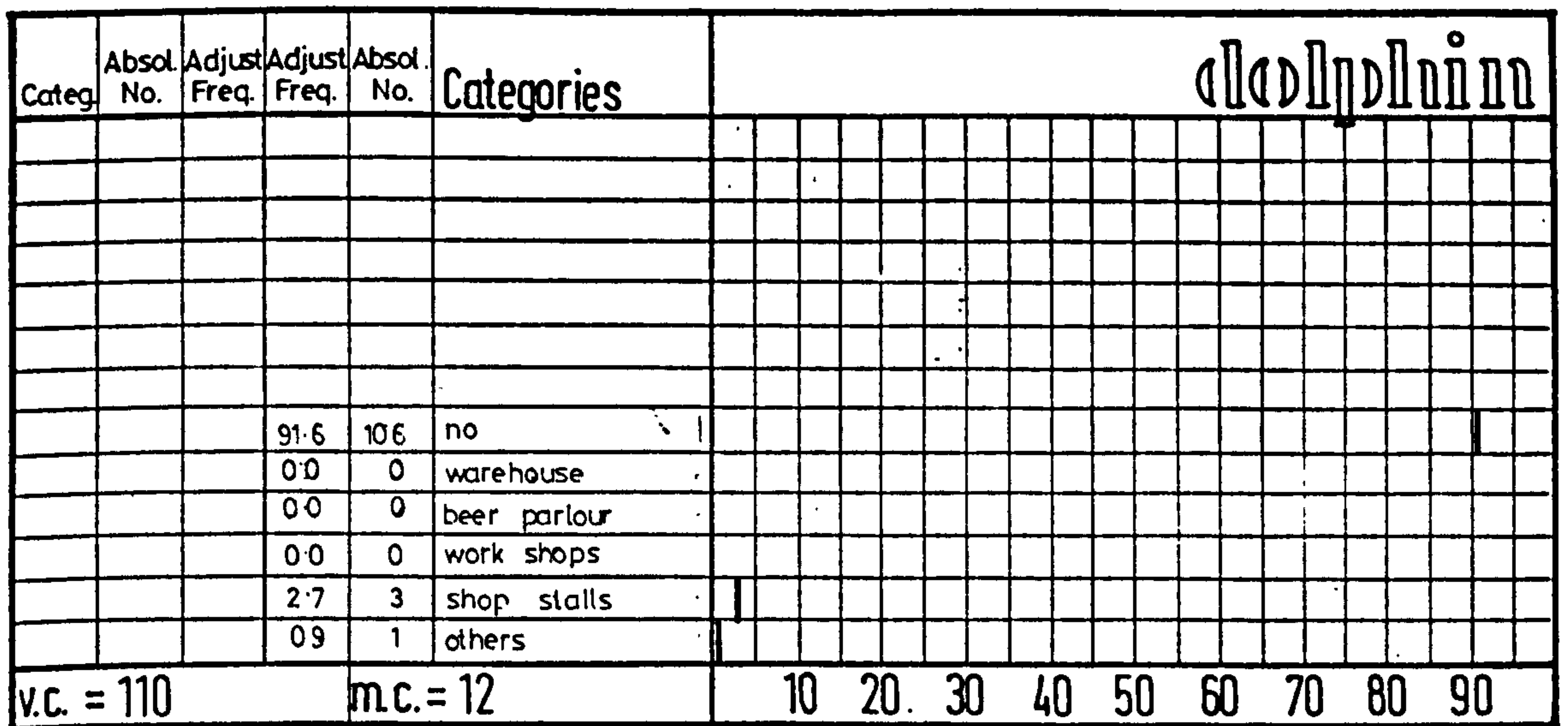
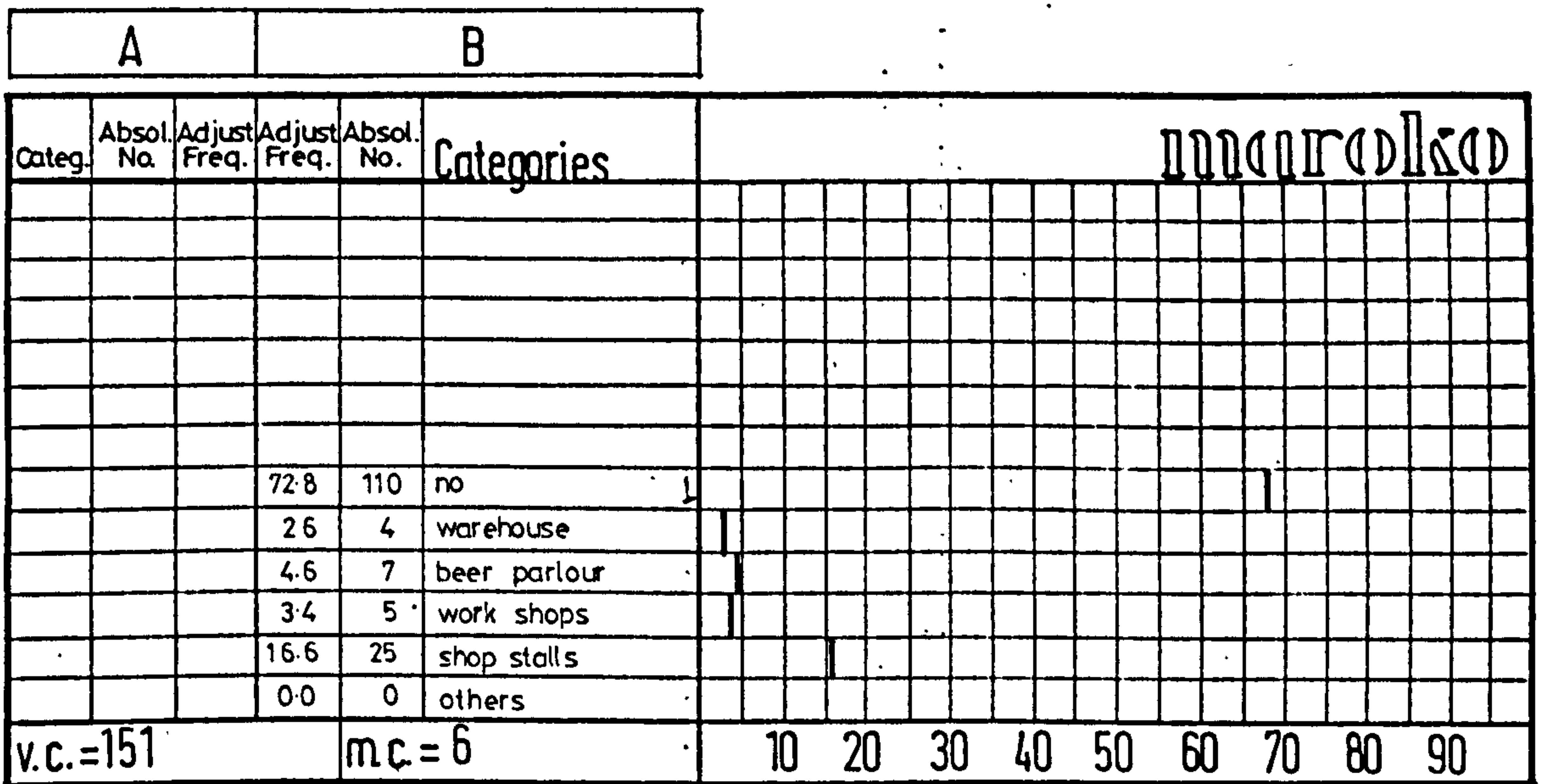


Figure 041. Temporary Petty Trading Stall Adjacent to Apartment Block, Dolphir. Phase 1.

buildings. Of the respondent buildings in Maroko and Isale-Eko, 16.6 per cent and 28.4 per cent respectively, were used for purposes other

Chart 020. Use of Respondent's Building Other than Residential



than residential.

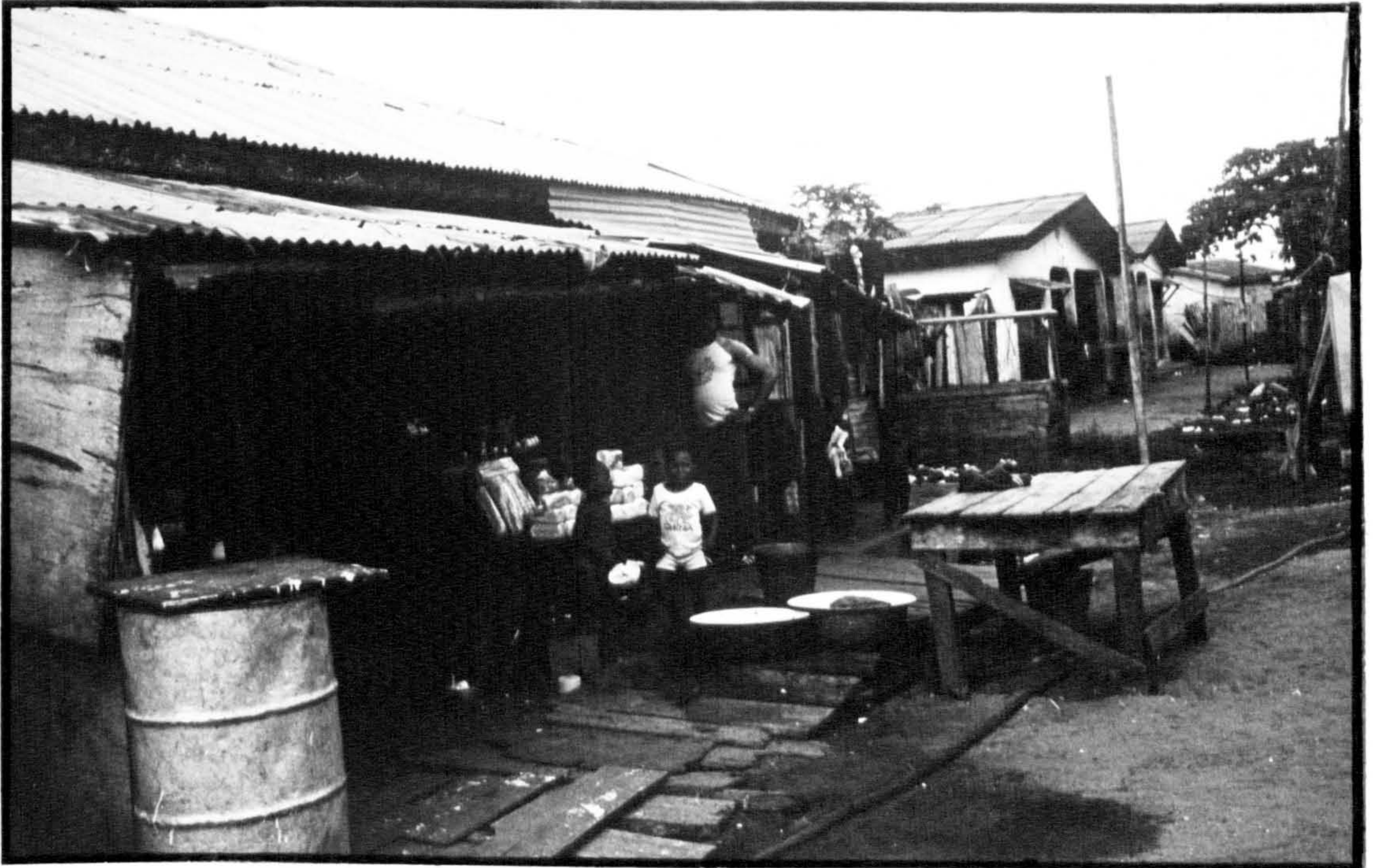


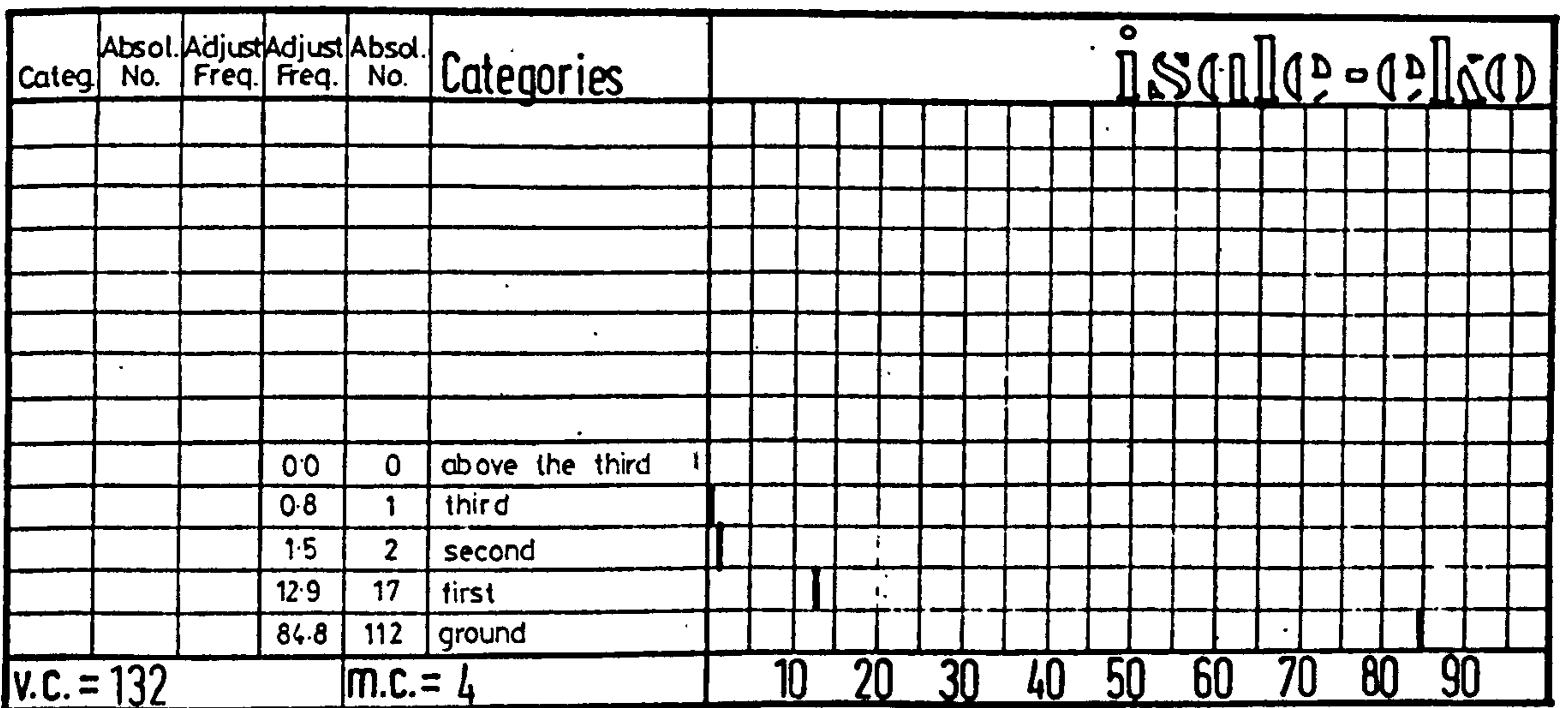
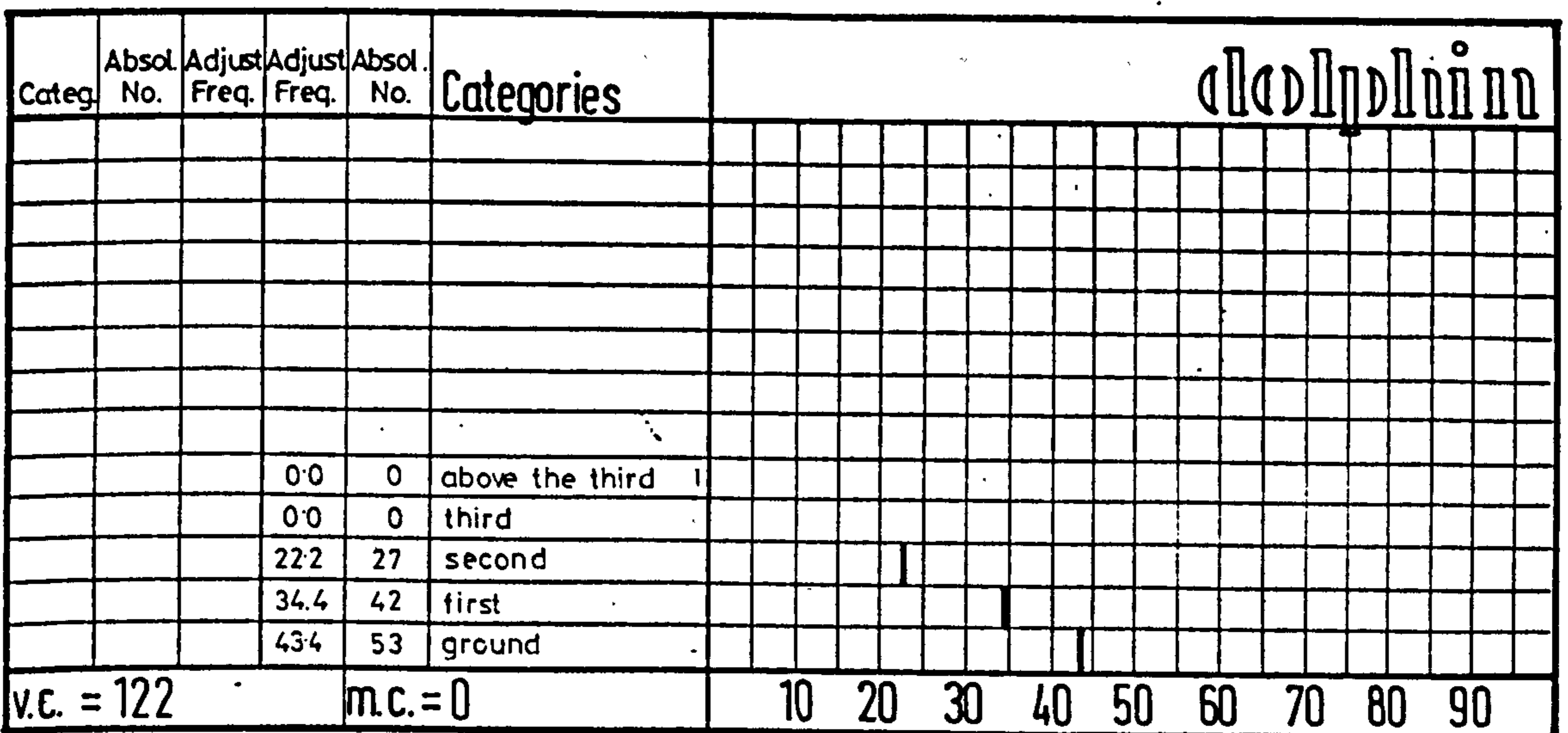
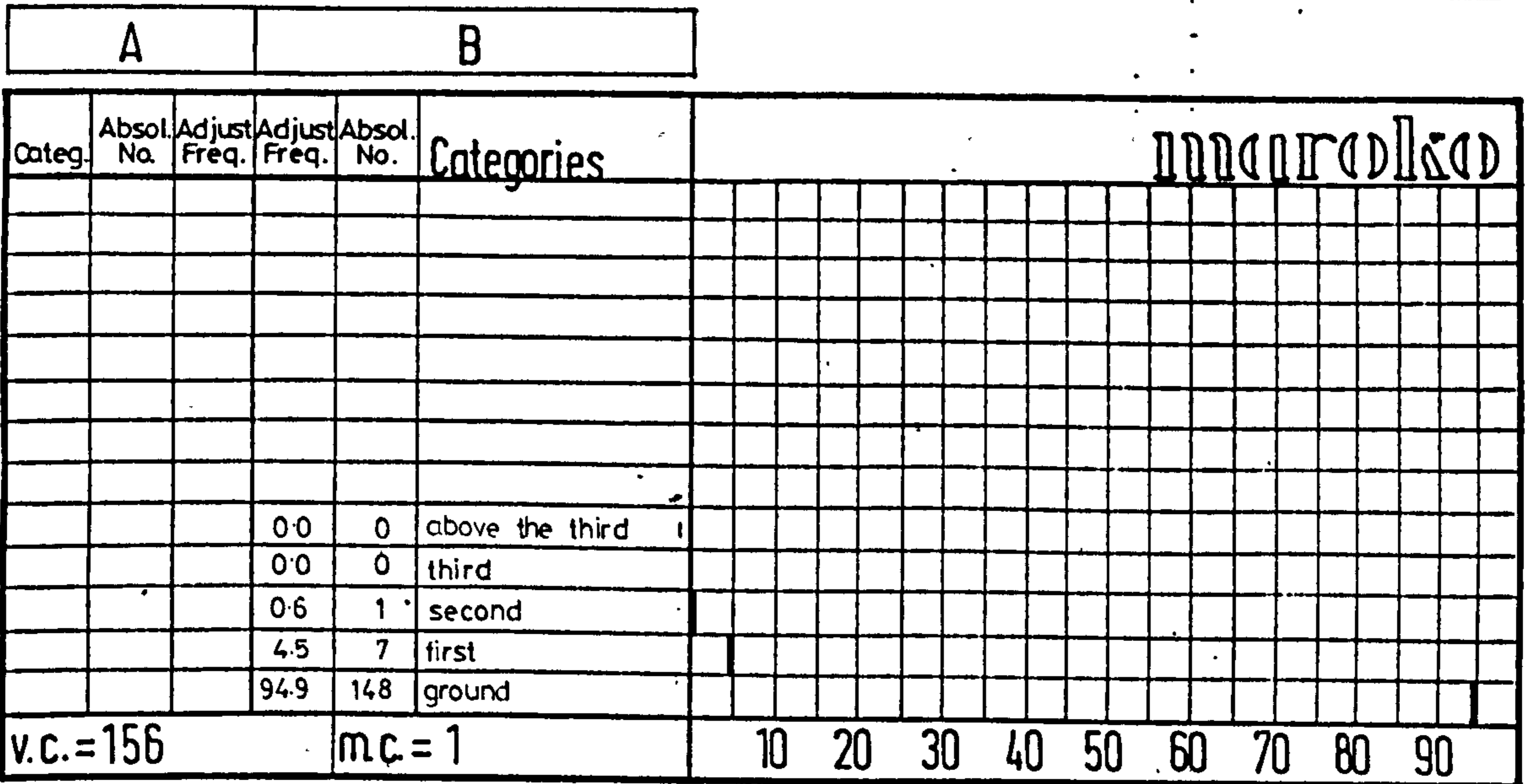
Figure 042. Temporary Petty Trading Stall in Front of Rooming House, Maroko.

2. Dwelling Characteristics

i) Floor Level of Dwelling Unit (chart 021 .)

By the determining single storey building characteristic, the proportion of dwelling units located on the ground floor, especially in the Maroko and Isale-Eko study areas accounted for the high 94.9 per cent and 84.8 per cent of the respondent dwelling floor level. Of the said same areas 4.5 per cent and 12.9 per cent of the respondent dwelling units were located on the first floor. In the Dolphin area, where it had been planned that there should be an even distribution of dwelling units between the three floor levels, 43.4 per cent, 34.4 per cent and 22.2 per cent of the respondent dwellings were located on the ground, first and second floors respectively.

Chart 021. Floor Level of Respondent's Dwelling Unit.



Charts 022. Number of Rooms in Respondent's Dwelling Unit

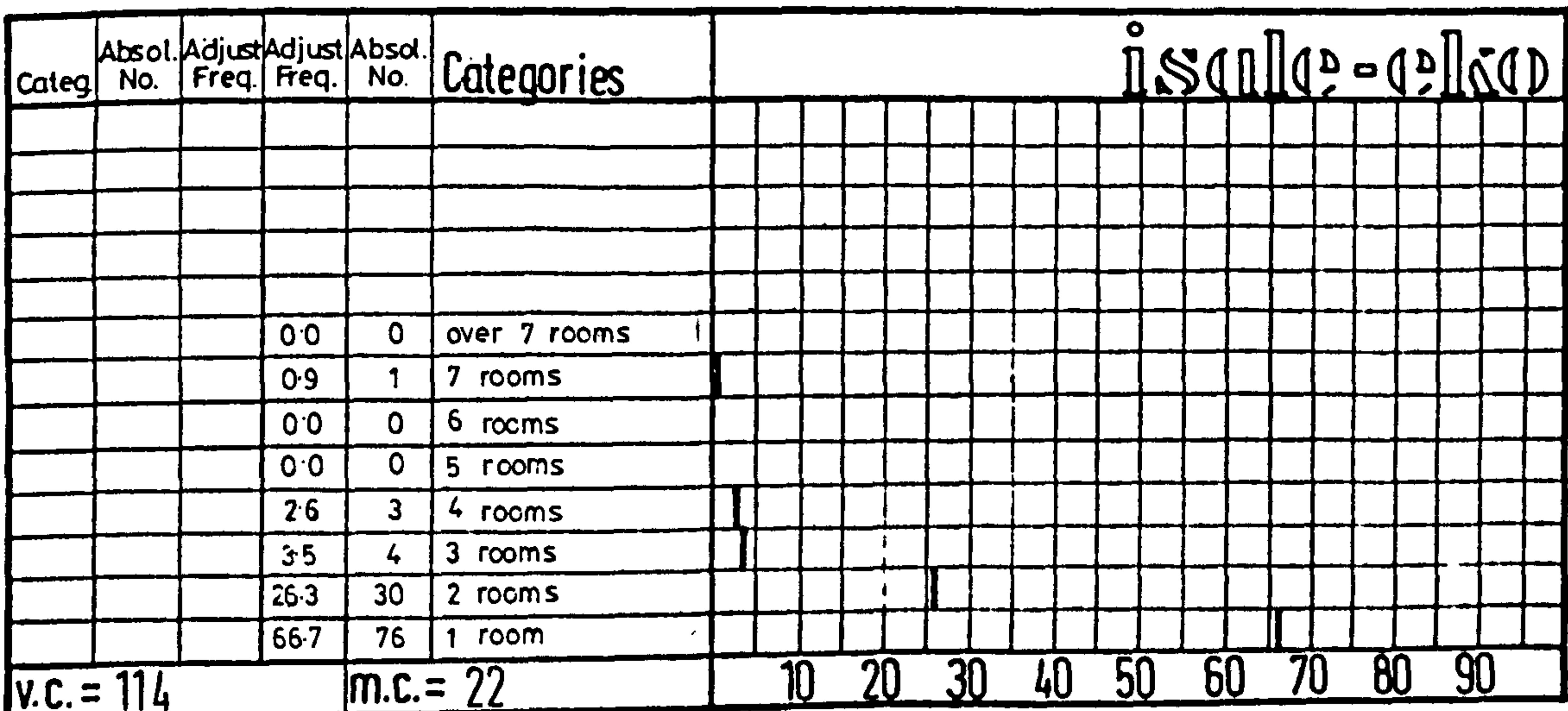
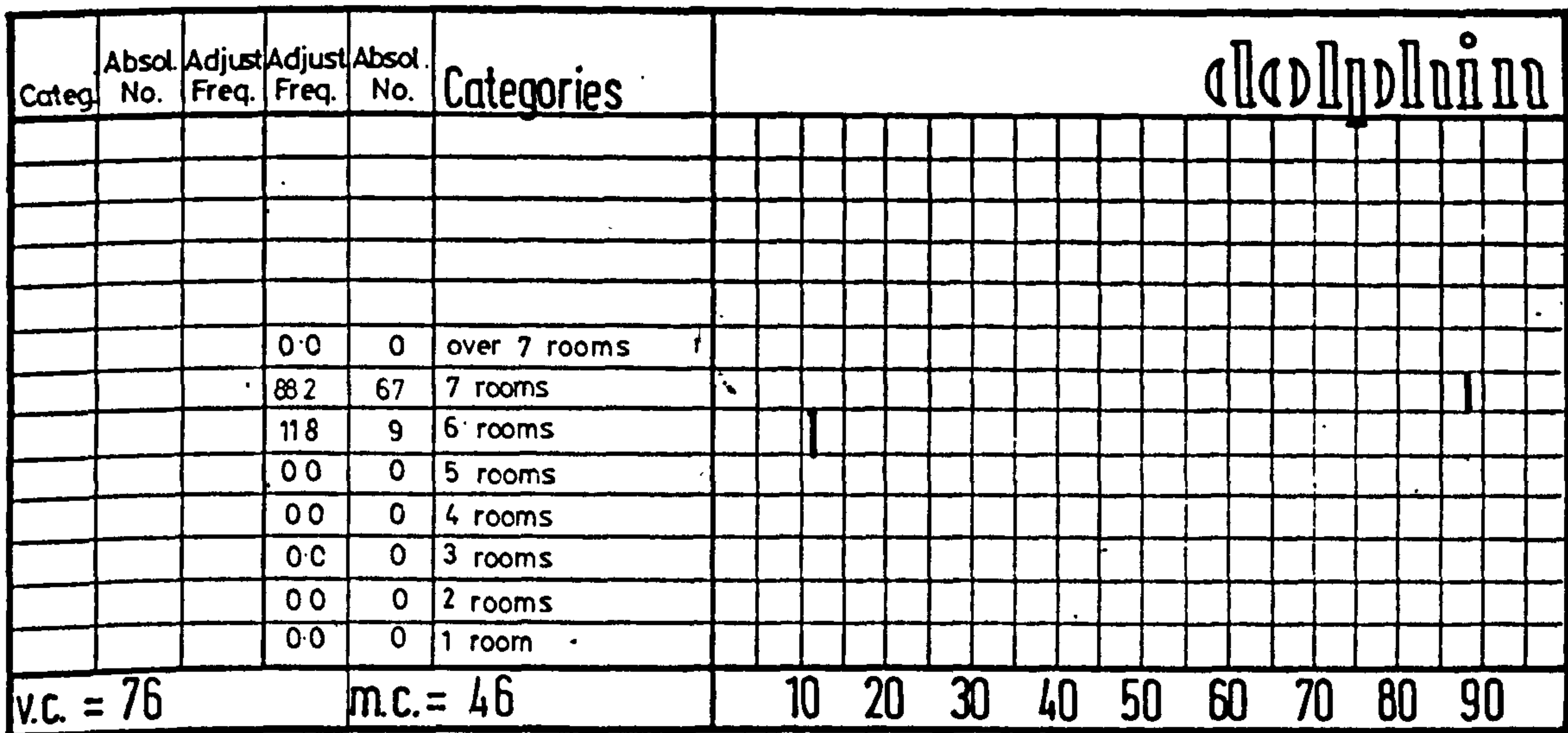
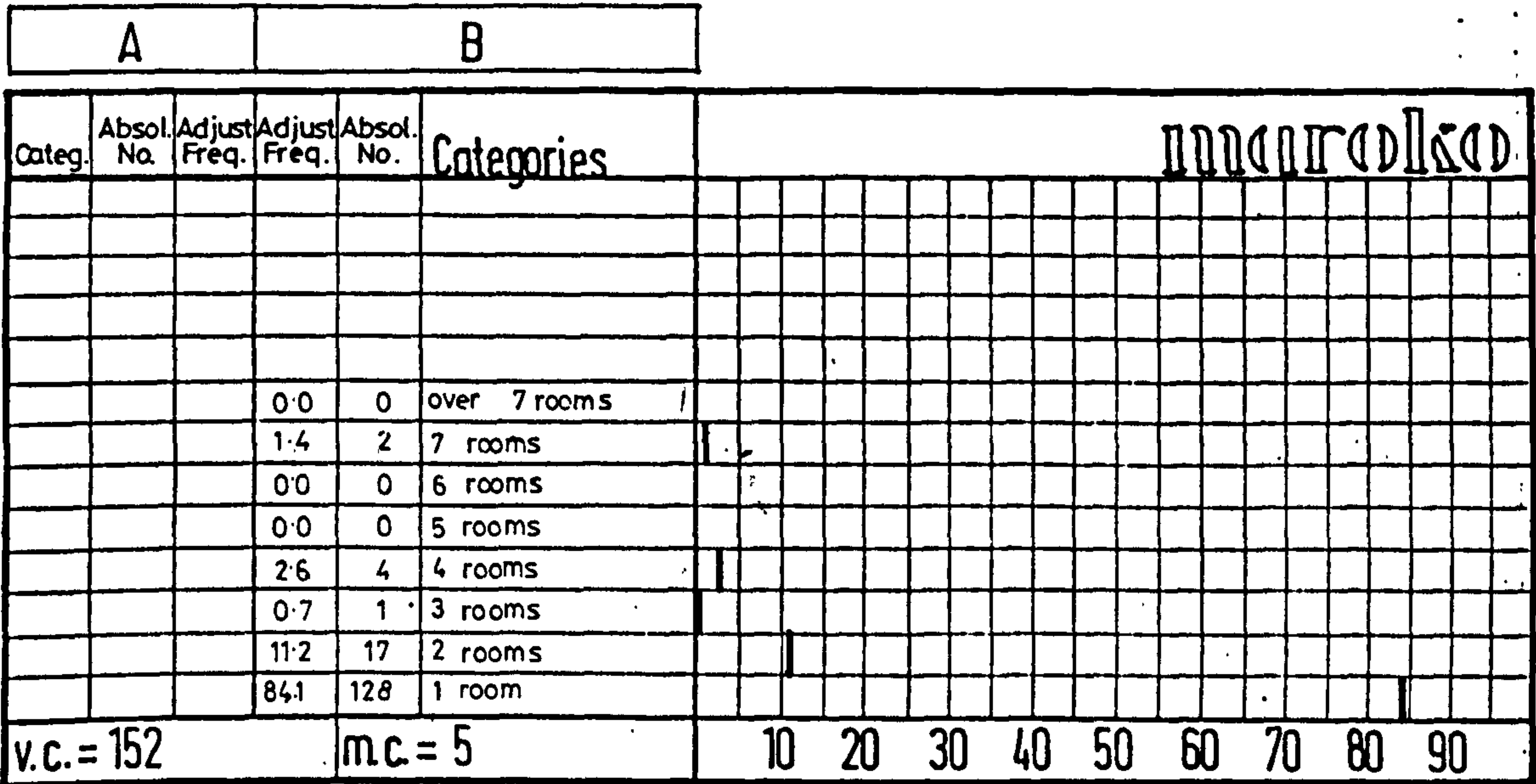
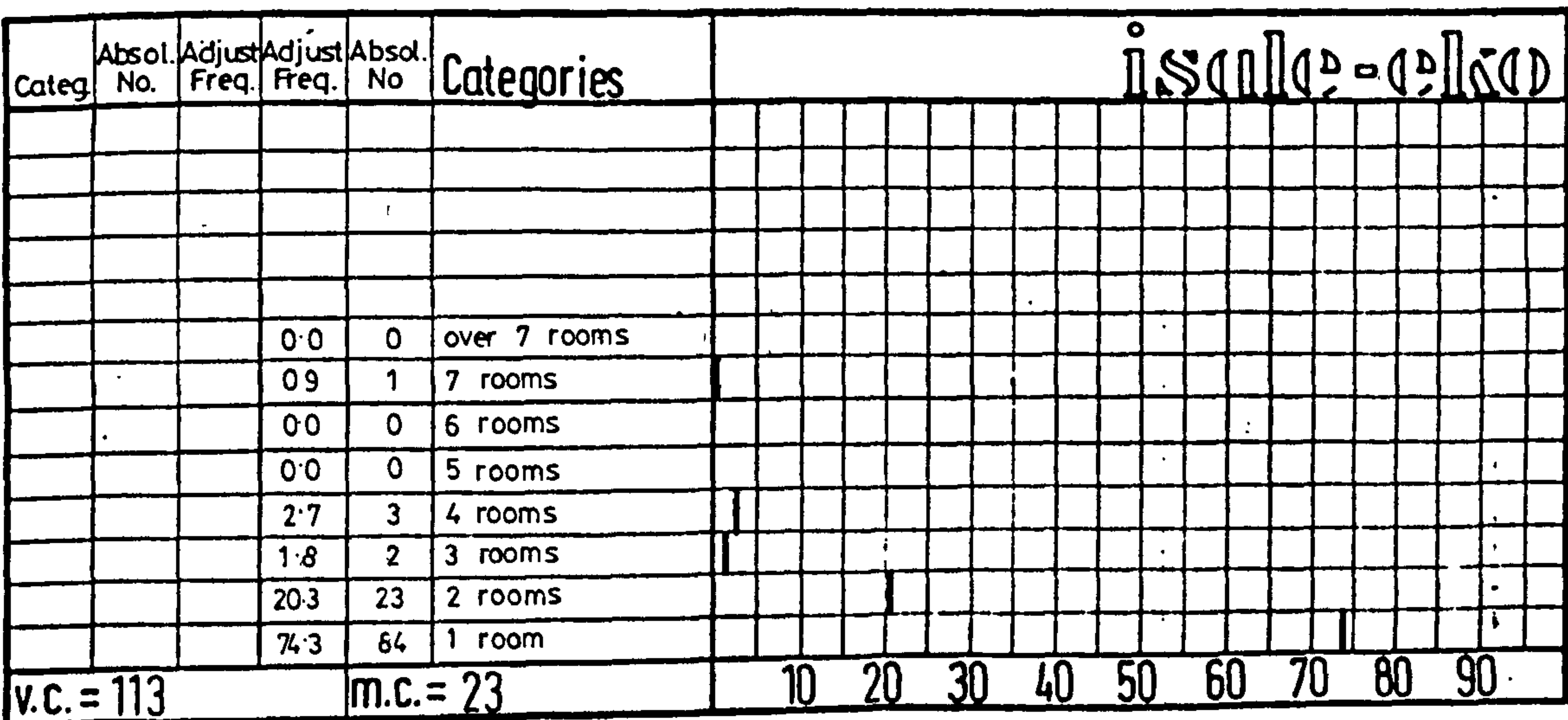
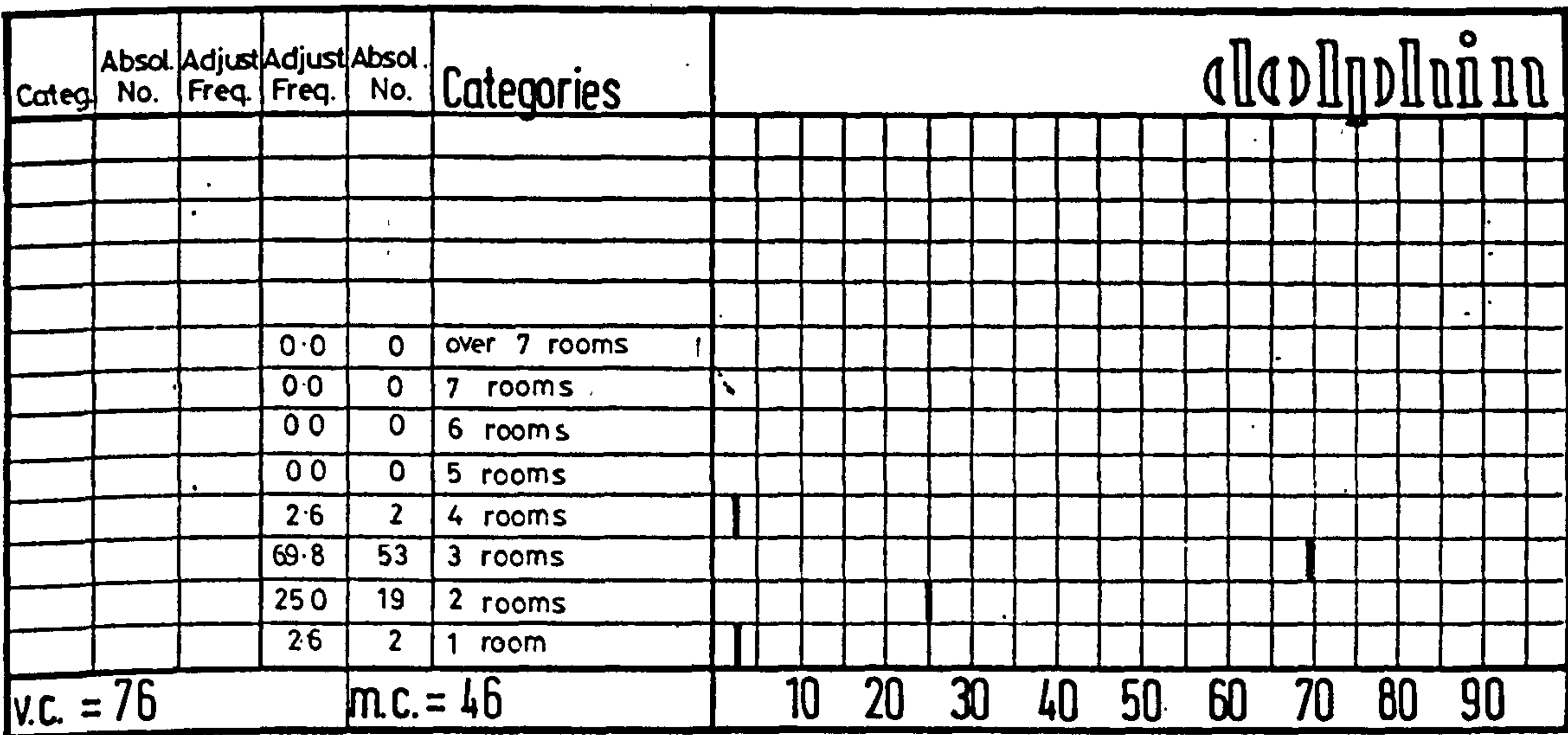
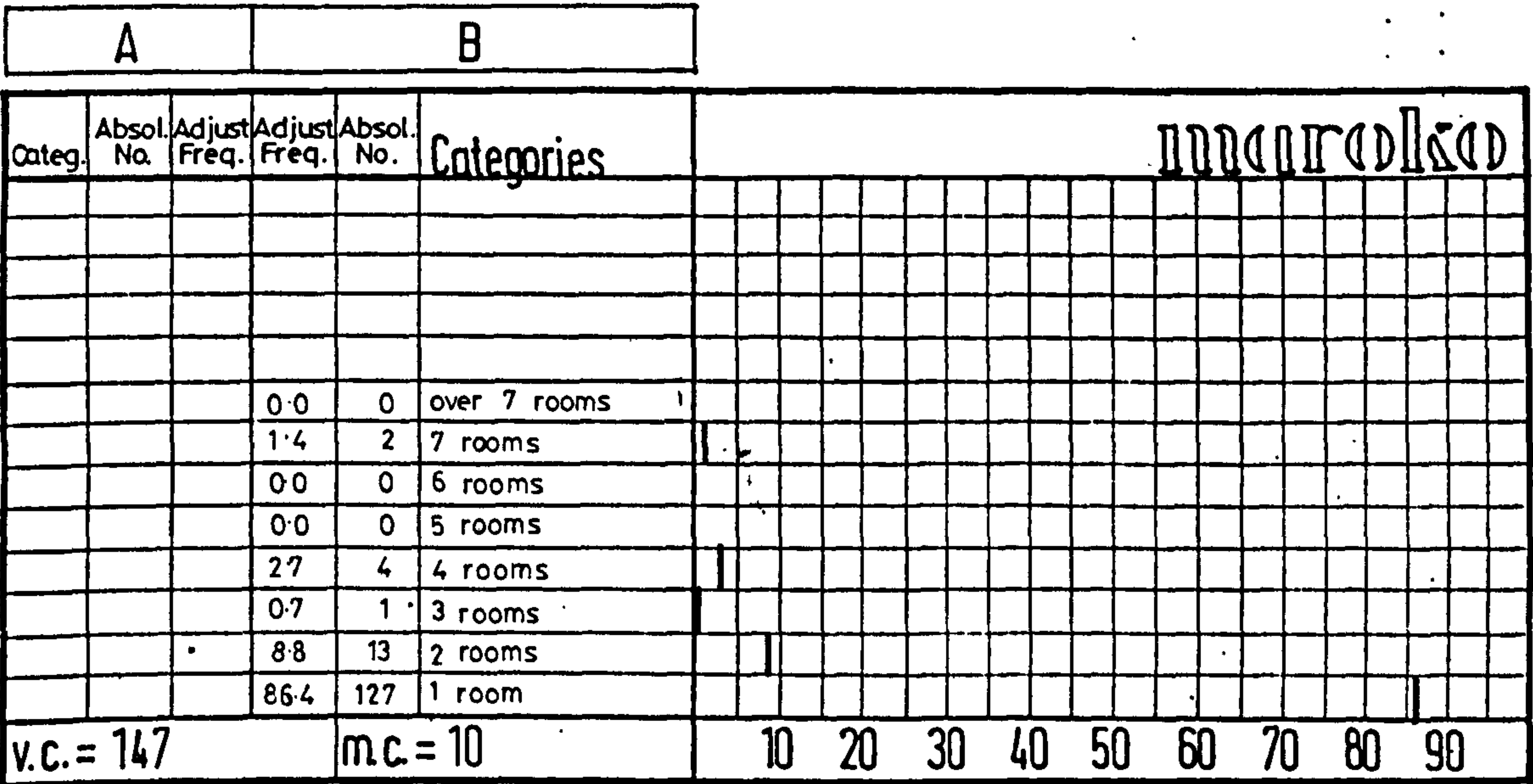


Chart 023. Number of Rooms in Respondents Dwelling Unit Used for Sleeping



ii) Number of Rooms per Dwelling (Chart 022.)

Of the six and seven room apartments in the Dolphine area, the room per dwelling distribution accounted for 88.2 per cent and 11.2 per cent respectively of the respondent dwellings. In both Maroko and Isale-Eko, the one and two room dwelling unit accounted for 84.1 per cent and 66.7 percent, and 11.2 per cent and 26.3 per cent respectively. The three and four room dwelling units accounted for 0.7 per cent and 2.6 per cent, and 3.5 percent and 2.6 percent respectively.

3. Dwelling Utilities

This section deals with the respondent household access to utilities and is primarily concerned with kitchens, bathrooms, toilets, water supply and electrical supply.

i) Source of Water Supply (chart 024.)

The supply of water in sufficient quantities and of adequate quality probably constitutes the most important domestic utility. While purity is important for health and hygiene it is generally accepted that quantity (65.6 litres per person per day) is the most important priority for survival - distance may also come into play where there is no on-site supply. In Nigeria this supply is extremely poor with respect to all three dimensions. In the country at large the urban water schemes coverage is put at about 63 per cent of the urban population in 1978 (ILO Technical Paper 3. Table 25.). Although coverage of water supply in Lagos is reported to be as high as 94 per cent, water shortages are very common with many families and private industry relying on sub-standard wells, boreholes or purchasing of water from private contractors.

Chart 024. Source of Water Supply for Respondents' Household

A		B																			
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncolored															
v.c. = 152				m.c. = 5																	

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	colored																
v.c. = 120				m.c. = 2																		

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iscale-colored																
v.c. = 133				m.c. = 3																		

Table 029. Coverage of Water Supply

	Population	Percentage of Population Served	Population Served By Pipe Water
Nigeria	68.13	68	16 million
Lagos	4.5	94	2 million

Source. Ministry of Works Resources: ILO Technical Paper 3. Table 25 (Population estimates very rough).

In addition to the shortages, the quality of the water supplied is also poor, with about 30 per cent coming from ground water sources which are subject to pollution from septic tanks and pit latrines.

The present system of a treated and disinfected piped water supply began in 1910 with the construction of treatment works at Iju, approximately 27 kilometres north of Lagos Island. Over the succeeding decades the plant's capacity increased from 27 ml/d (million per day) to 204 ml/d between 1943 and 1973. However, due to the capacity of the distribution arteries the operating capacity of the system is limited to 159 ml/d.

During the 1970's a crash programme was embarked upon with the construction in 1975 of the Isari Waterworks on the River Owo, with a capacity of 18 ml/d. Although this gives the two plants a combined total of 222 ml/d it is still insufficient for the requirements of the city. With average demand put at about 486 ml/d including distribution losses of 44 ml/d (Master Plan Project Unit, 78) and supply including ground water withdrawal of 70 ml/d for 1976 (Kampax-Kruger and Schwed Associates, 1978) and 177 ml/d from the water works, the estimated shortfall in coverage at 65.6 l/p/d can be put at 219.9 ml/d, a shortfall of 45.

In overcoming the limitations of this system, elevated service tanks have been constructed in various parts of the city to provide water for localised peak demand. These tanks are designed to float on

the system by filling in times of low demand and discharging to maintain flows during times of peak demand. However, due to the relatively low working pressures of these tanks they rarely operate as planned.

Of the three study areas Maroko exhibited the greatest variety in terms of source of water supply (chart 024.). In the main this can be attributed to the fact that pipe borne water from the water works does not come to Maroko, even though numerous efforts have been made to bring piped water to Maroko over the years. The most notable of these attempts was that of a politician who arranged a tap from a rubber hose pipe that was laid under the lagoon from Ikoyi in order to gain electoral advantage. However, this tap, apart from providing a battleground for those trying to get water, was continually abused and left running when not in use. Subsequently it was for some reason mysteriously cut. The outcome of all this is that 66.4 per cent of the respondents in Maroko buy their water from private sellers (fig 044.), who in turn purchase their water from tankers. A further 25 per cent of the respondents claimed that their source of water was from a well or borehole (fig 045.). In Dolphin and Isale-Eko all the respondents except 3 per cent in Isale-Eko received their water supply by pipe.

ii) Location of Piped Water Supply (chart 025.)

As with the source of water supply, the location also varied between the three areas. Practically all the respondents in the Dolphin area had piped water to their dwelling. The only problem expressed with regards to this was, that, as a consequence of the low water pressure a few respondents on the first floor, and nearly all on the second floor, did not receive any water until about midnight. This supply itself only lasted for several hours before it dried up. To combat this a number of households, especially those on the upper

floors have constructed individual water towers (fig 043 .). This then allows the household to collect water in raised water tanks during the hours of darkness for consumption when it is required, without having to consumption the tap at the side of the building. Relative to the other two areas, the locational distribution of piped water in Isale-Eko was wider, with 9.3 per cent of the respondents having piped water to the inside of their dwelling unit. A further 47.2 per cent of the respondents had piped water outside their dwelling unit but inside the building, with 35.7 per cent of the respondents having a piped water supply outside the dwelling unit and the dwelling building but inside the boundaries of the plot. The remaining 7.8 per cent respondents had a piped water supply that was outside the dwelling but less than 100 metres from the plot.



Figure 043. Water Tanks And Towers Provided By Individual Inhabitants To Overcome The Irregular And Low Pressure Water Supply, Dolphin Phase 1.



Figure 044. Tank Of Private Water Seller, Maroko.

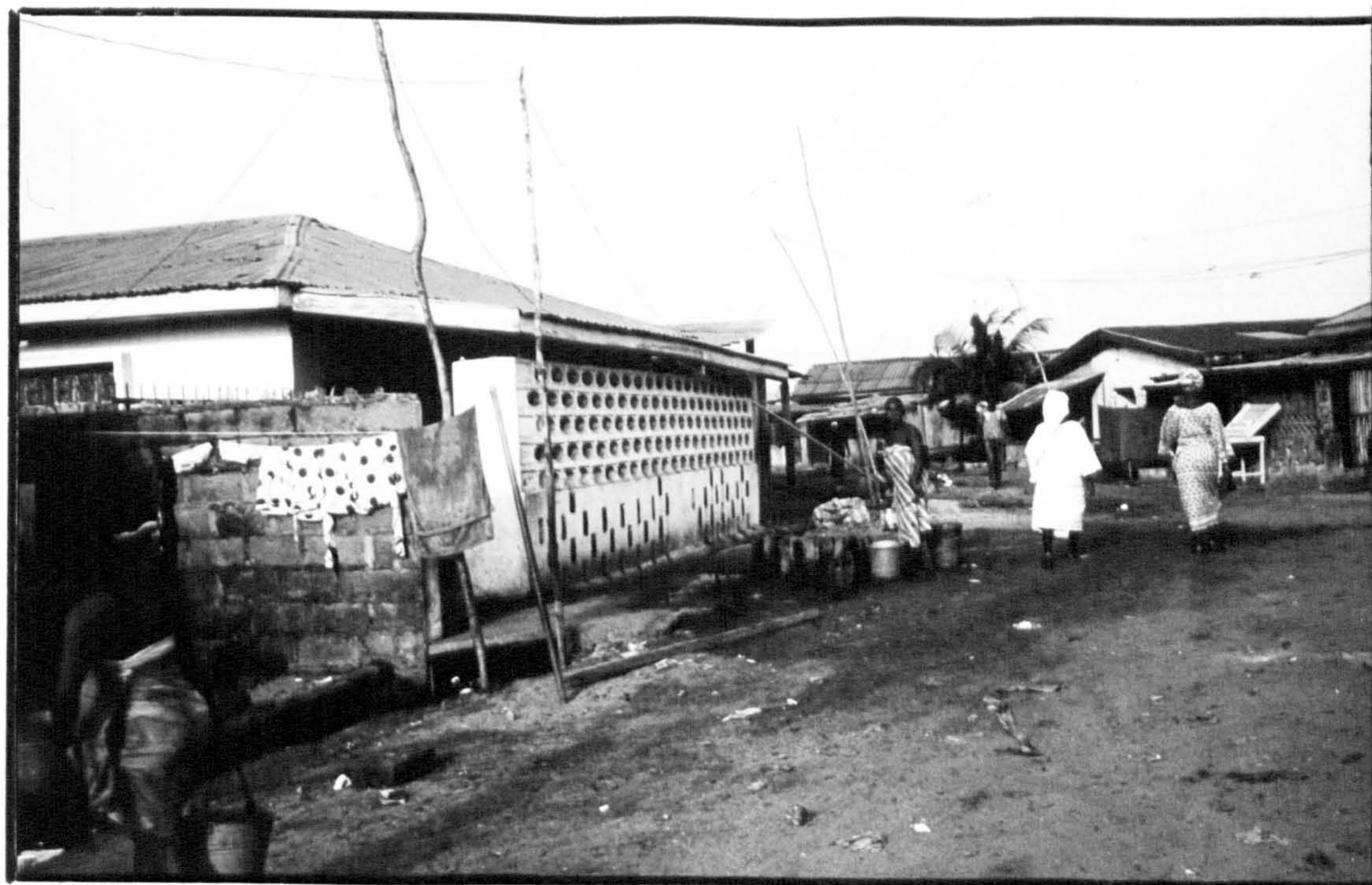


Figure 045. Well Water Source, Maroko.

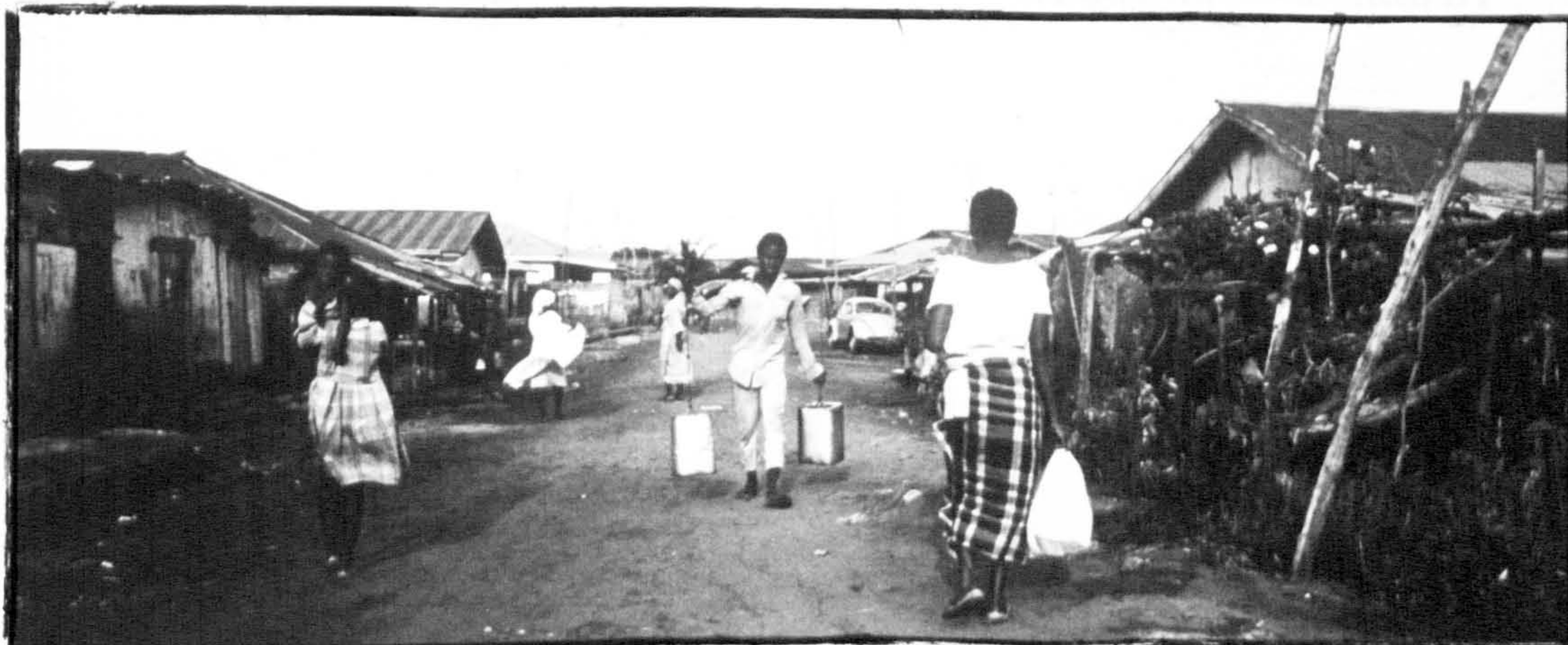


Figure 046 Carrying Water Home From Private Water Seller, Maroko.

Chart 026. Location of Respondent's Pipe Borne Water Supply

A					B															
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	meters														
V.C. =				m.c. =				10	20	30	40	50	60	70	80	90				

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	meters														
V.C. = 121				m.c. = 1				10	20	30	40	50	60	70	80	90				

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	meters														
V.C. = 129				m.c. = 7				10	20	30	40	50	60	70	80	90				

flo. = floor
 bui. = building
 com. = compound

iii) Bathing Facilities (charts 026 . and 027.)

As expected, the bathing facilities in the Dolphine area dwelling units were standard and consisted of a shower room. Through their own efforts a number of respondents had converted the shower and toilet into a single room with a bath and in all cases the facility was exclusive, in its use to the household of the dwelling unit. In Maroko and Isale-Eko the situation was somewhat different. For the respondents who did not have a piped water supply to the bathroom whether shared or exclusive bathing was carried out with a bucket and cup (fig 048, and 049). In both Maroko and Isale-Eko the exclusive use of a bathroom to the respondent household was applicable in only 2 per cent and 13.2 per cent of the respondent households. The sharing of the bathing facility with other households either on the same floor level or in the same building or compound accounted for 96.6 per cent and 85.2 per cent of the respondent households. 4.3 per cent and 2.3 per cent in Maroko and Isale-Eko stated that they did not have any access to on-plot bathing facilities.



Figure 047. Shower Room, Dolphin Phase 1.

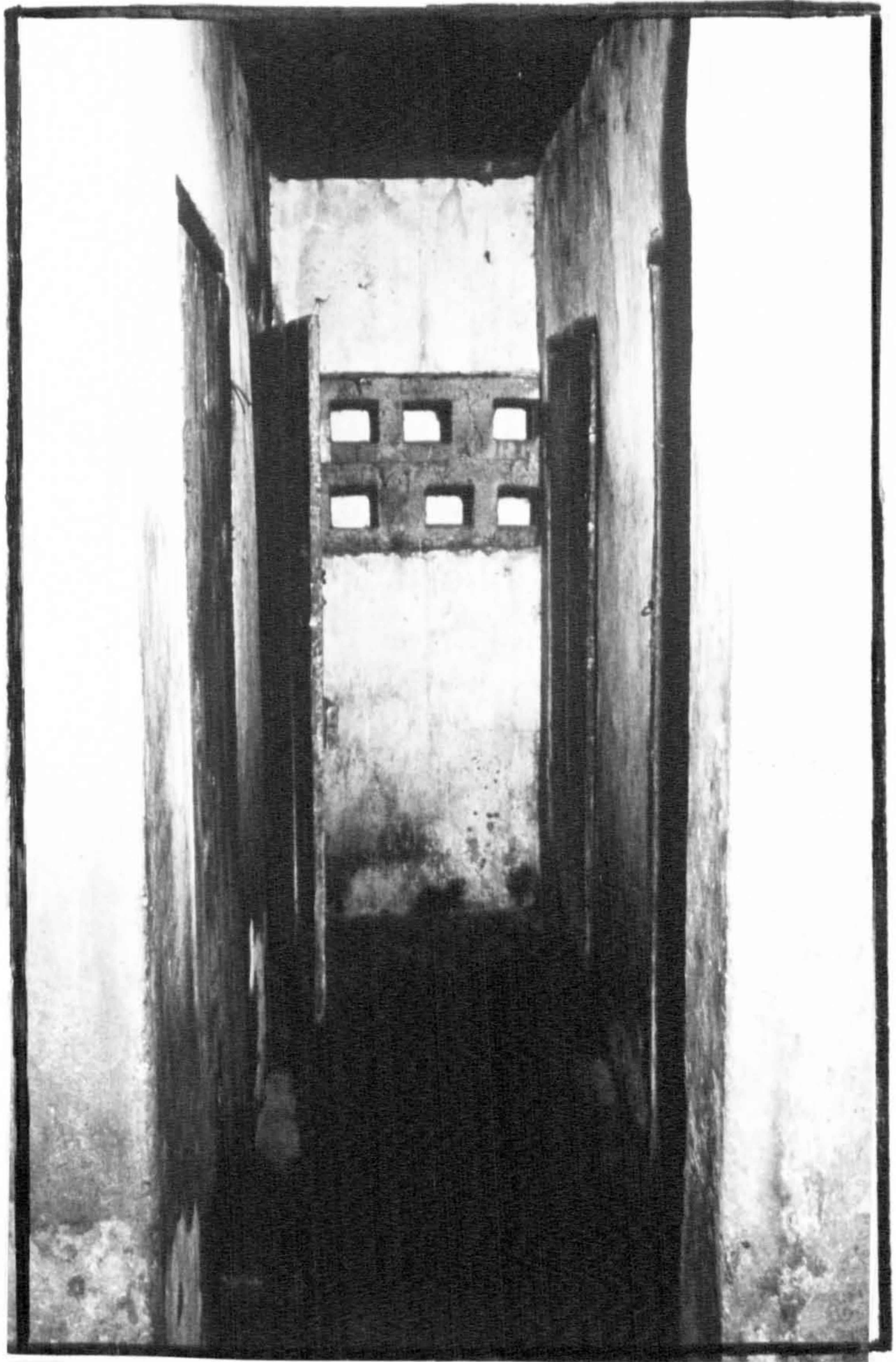


Figure 048, Entrance To Shower
Off Rooming House
Courtyard, Maroko.



Figure 049 Children Bathing Over Open Drain Adjacent To The Road.

Chart 026. Location of Respondents Household Bathing Facilities

A					B																
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage															
			33	3	within dwell. unit																
			4.6	7	outside dwell. but on flo.																
			27.8	42	outside dwell. but in bui.																
			61.6	93	outside dwell. but in com.																
			2.7	4	others																
v.c. = 151				m.c. = 6		10 20 30 40 50 60 70 80 90															

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage															
			100.0	120	within dwell. unit																
			0.0	0	outside dwell. but on flo.																
			0.0	0	outside dwell. but in bui.																
			0.0	0	outside dwell. but in com.																
			0.0	0	others																
v.c. = 120				m.c. = 2		10 20 30 40 50 60 70 80 90															

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage															
			12.8	16	within dwell. unit																
			7.2	9	outside dwell. but on flo.																
			46.0	58	outside dwell. but in bui.																
			34.0	43	outside dwell. but in com.																
			0.0	0	others																
v.c. = 126				m.c. = 10		10 20 30 40 50 60 70 80 90															

flo. = floor
 bui. = building
 com. = compound

Chart 027. Use of Bathroom Facilities by Respondent's Household.

A		B																			
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage															
			2.0	3	exclusive to household																
			7.3	11	shared by floor																
			24.7	37	shared by building																
			50.6	76	shared by compound																
			4.7	7	shared with oth. b & c																
			10.7	16	others																
v.c. = 150		m.c. = 7				10	20	30	40	50	60	70	80	90							

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage															
			100.0	119	exclusive to household																
			0.0	0	shared by floor																
			0.0	0	shared by building																
			0.0	0	shared by compound																
			0.0	0	shared with oth. b. & c.																
			0.0	0	others																
v.c. = 119		m.c. = 3				10	20	30	40	50	60	70	80	90							

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage															
			13.2	17	exclusive to household																
			7.0	9	shared by floor																
			47.2	61	shared by building																
			31.0	40	shared by compound																
			0.8	1	shared with oth. b. & c.																
			0.8	1	others																
v.c. = 129		m.c. = 7				10	20	30	40	50	60	70	80	90							

b. = buildings
 c. = compounds
 oth. = other.

iv) Kitchen Facilities (charts 028., 029. and 030.)

In general in Nigerian society, cooking is usually done outdoors (fig 053.). This is because the preparation and cooking of food is often a long and labourious process. For example, the preparation of pounded yam in the traditional manner necessitates considerable physical exertion and needs plenty of headroom for the long pestle used to mash the yam. Lengthy cooking also produces great quantities of heat that would make cooking indoors, in this warm and humid climate without an effective cooling system, quite unbearable. Thus, cooking is more conveniently carried out in the semi-privacy of the the compound. Traditionally the kitchen is an open-sided room facing inwards to the compound (fig 051.). It would not normally have any water supply or drainage. Cooking is generally done in a sitting position over the hearths. In the Dolphine area 100 per cent of the respondents had a kitchen that was exclusive to the use of the respondent household (fig 052..). In contrast only 20 per cent and 17.3 per cent of the respondent households in Maroko and Isale-Eko respectively had the use of a kitchen exclusive to their household. The use of a shared kitchen or corridor accounted for 96.6 per cent and 82.7 per cent of the respondent household in Maroko and Isale-Eko respectively (fig 050,). The type of kitchen equipment used for cooking was quite similar in all three settlements. The use of a kerosene stove accounted for 83.2 per cent, 73.4 per cent and 88.5 per cent of the respondent households in Maroko, Dolphine and Isale-Eko respectively. The use of firewood for cooking only accounted for 5.2 per cent, 0.9 per cent and 4.1 per cent of the respondents in the same settlements.

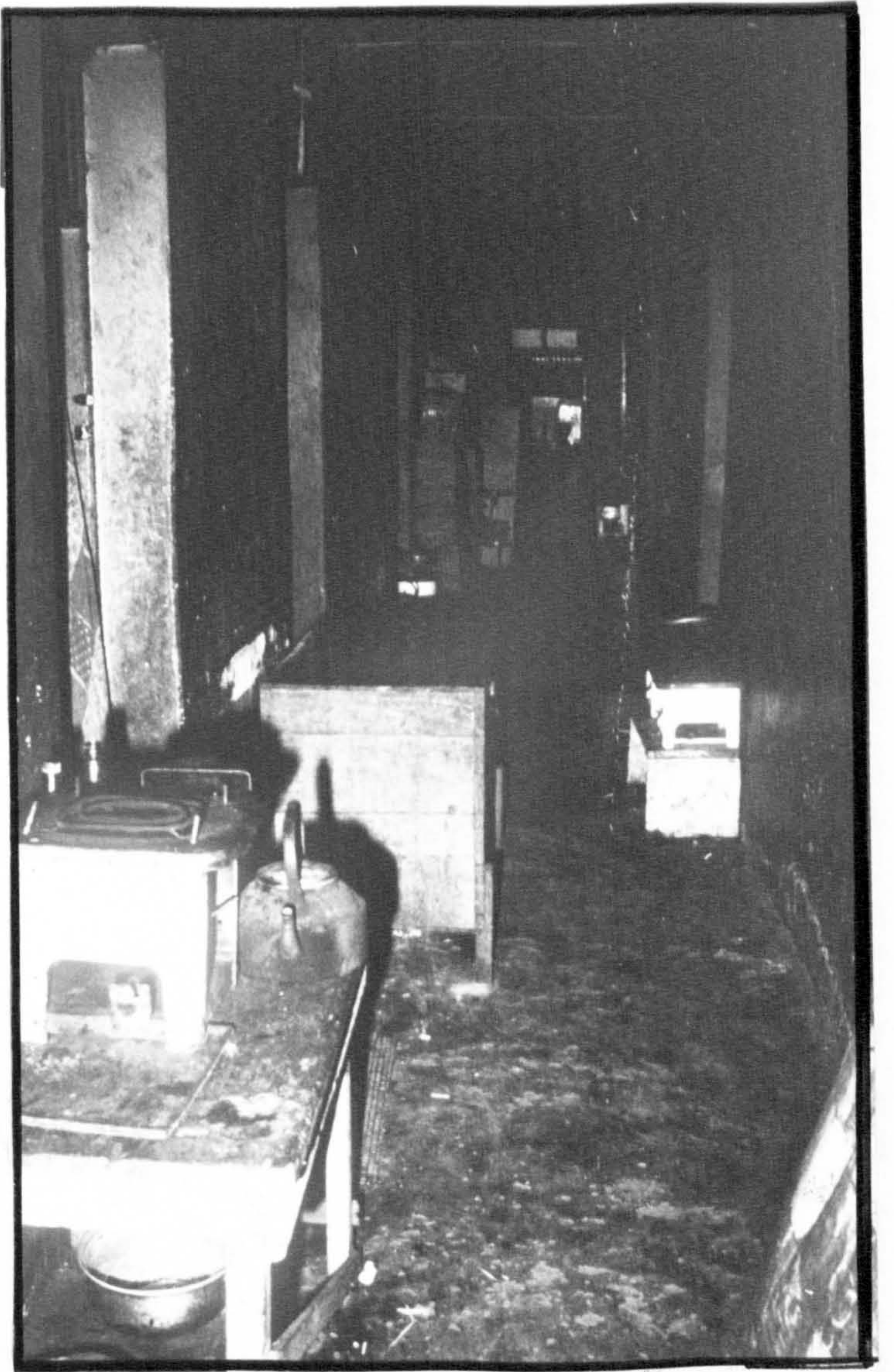


Figure 050. Corridor in Rooming House used as Shared Kitchen, Maroko.



Figure 051. Firewood Cooker in Shared Kitchen off Courtyard at the rear of the Rooming House, Maroko.

Figure 052. Well Serviced Kitchen
Of a Flat in the Low
Cost Housing Estate
Dolphin Phase 1.



Figure 053. Open Air Cooking.

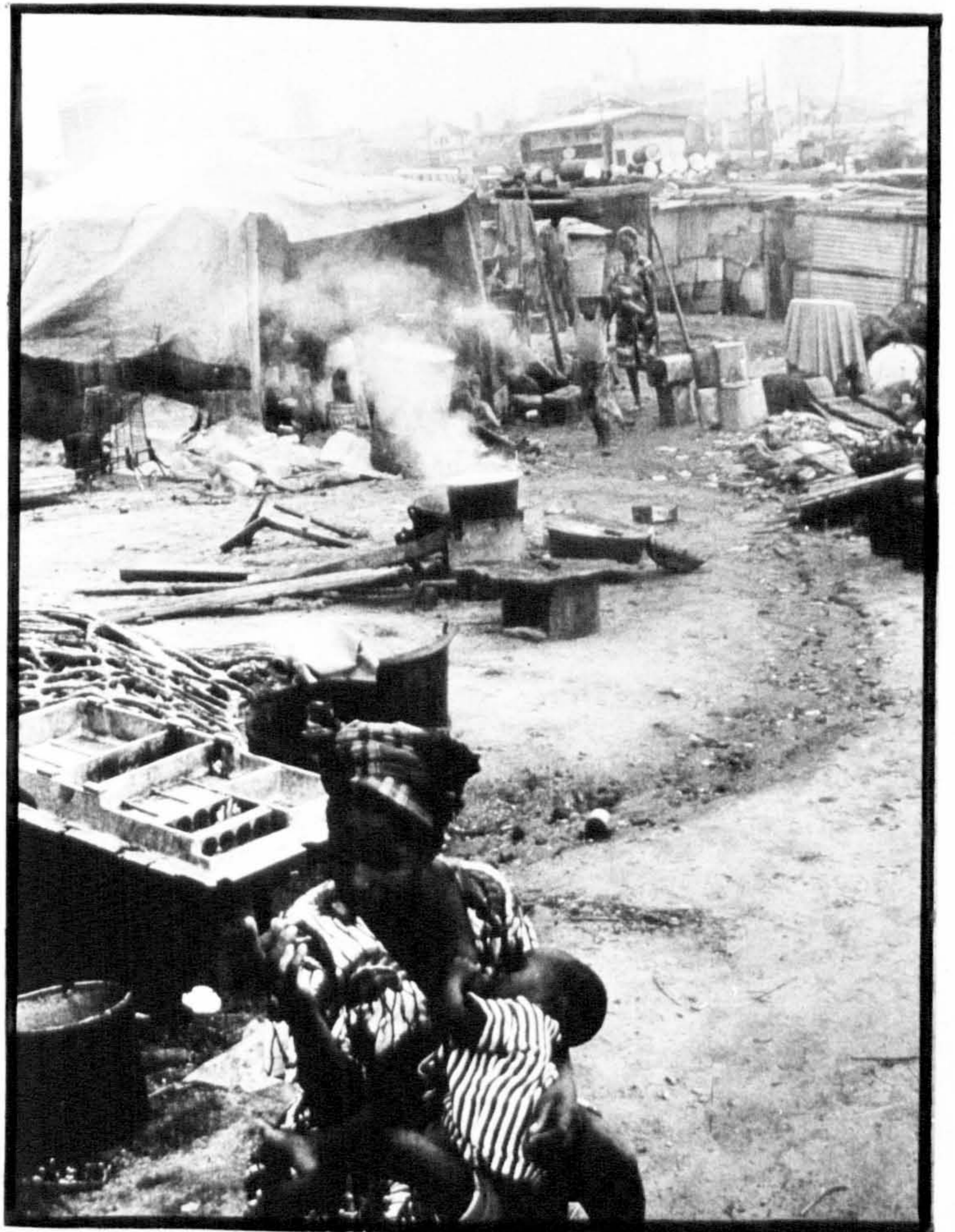


Chart 028. Location of Respondent Households Cooking Facilities

A		B				Percentage									
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	10	20	30	40	50	60	70	80	90	
			39	6	within dwelling unit I										
			6.5	10	in corridor on F.										
			9.1	14	in K. on F. but not in D.										
			13.0	20	in K. in B. but not on F.										
			49.3	76	in K. in C. but not in B.										
			15.6	24	in K. at the back of B.										
			2.0	3	in K. at the front of B.										
			0.6	1	others										
v.c. = 154				m.c. = 3		10	20	30	40	50	60	70	80	90	

A		B				Percentage									
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	10	20	30	40	50	60	70	80	90	
			97.5	115	within dwelling unit I										
			0.0	0	in corridor on E.										
			0.8	1	in K. on F. but not in D.										
			1.7	2	in K. in B. but not on F.										
			0.0	0	in K. in C. but not in B.										
			0.0	0	in K. at the back of B.										
			0.0	0	in K. at the front of B.										
			0.0	0	others										
v.c. = 118				m.c. = 4		10	20	30	40	50	60	70	80	90	

A		B				Percentage									
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	10	20	30	40	50	60	70	80	90	
			7.6	10	within dwelling unit I										
			2.3	3	in corridor on F.										
			6.0	8	in K. on F. but not in D.										
			38.2	50	in K. in B. but not on F.										
			30.5	40	in K. in C. but not in B.										
			11.5	15	in K. at the back of B.										
			0.8	1	in K. at the front of B.										
			3.1	4	others										
v.c. = 131				m.c. = 5		10	20	30	40	50	60	70	80	90	

F = floor
D = dwelling
K = kitchen
B = building
C = compound

Chart 029. Use of Kitchen Facilities by Respondent's Household

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	mmmmmmmmmm														
v.c. = 147				m.c. = 10																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	mmmmmmmmmm														
v.c. = 118				m.c. = 4																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	mmmmmmmmmm														
v.c. = 127				m.c. = 9																

Chart 030. Respondent Household's Cooking Equipment

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	UNCORRECTED														
V.C. = 155				M.C. = 2				10	20	30	40	50	60	70	80	90				

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	CORRECTED														
V.C. = 117				M.C. = 5				10	20	30	40	50	60	70	80	90				

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	SCALE-CORRECTED														
V.C. = 122				M.C. = 14				10	20	30	40	50	60	70	80	90				

v) Toilet Facilities (charts 031 ., 032. and 033.)

Apart from water supply, toilet facilities constitute a major influence in determining the quality of the housing environment. Although there are numerous types of domestic waste systems, three predominate in Lagos:

- a) The Bucket and Pail (Night Soil).
- b) The Pit or Salanga.
- c) The Septic Tank.

Figure ... illustrates the distribution of these throughout Lagos. A sizeable proportion of the population has no access to these and simply relieve themselves whenever they feel the urge in areas such as the harbour front, refuse tips and the sides of the expressway.

a) Bucket and Pail (Night Soil)

This process involves the depositing of human waste (mostly solid) in a bucket or pail. The pails are removed by contractors and emptied into special trucks which then convey the waste to disposal points. From here the waste is dealt with in one of two ways:

- i) By chemical treatment involving the use of oxidation ponds. However, the ponds on Lagos island have stopped operating due to the fact that the construction of the expressway blocked the outlet.
- ii) By simply dumping the waste into the harbour or lagoon.

The main drawback of this system is that it presents a serious health hazard in that the contact with this waste provides the opportunity for rapid spread of water borne diseases. Given the massive increases in waste that must have accompanied the increase in population of the city it is surprising that no epidemic has yet broken out.

b) Pit Laterine (Salanga).

As the title indicates this system simply involves the depositing of waste down a deep hole near or adjacent to the dwelling. When the

pit is full, it is covered over and another pit dug alongside. Since the pits are rarely lined, the liquid percolates out of the pit and pollutes the water in nearby wells.

c) Septic Tank

This system, originally introduced to Lagos in the 1930's, involves the construction of settlement basins where the solid waste in water-borne sewage settles out of the liquid carrier. The liquid can then pass out of the tank into either a lined holding tank and is removed by tanker or it flows into a soakaway pit or perforated pipe which allows the liquid to percolate into the soil. The remaining solids can then be removed on an annual or bi-annual basis depending on the use. Beside its cost, another drawback of this system is that its performance is inhibited by high ground water tables. The findings of the survey undertaken reinforce a number of the sanitation characteristics mentioned above.

In contrast to Maroko and Isale-Eko the Dolphin area showed a very marked difference in that all the respondent households had exclusive access to the use of a flush toilet (fig 054.). However, its use was tempered not only by the shortages of water but also by the fact that a number of the soil waste pipes were connected up to the waste water pipes. In Maroko and Isale-Eko only 4. per cent and 14.8 per cent respectively of the respondent households had exclusive access to toilet facilities, with 95.3 per cent and 85.2 per cent respectively of the respondents in these two areas sharing their toilet facilities with other households. It must be emphasised that these shared toilet facilities are not public but semi-private and are in general 'exclusive' to the households in the building or compound. The type of toilet facility that dominated in Maroko and Isale-Eko, unlike that of the Dolphin area, was the bucket and pail type (fig 055.). This toilet type accounted for 91.1 per cent and 56.8 per cent of the

respondent toilets in Maroko and Isale-Eko respectively. 30.4 per cent of the respondents in Isale-Eko had access to a flush toilet. The pit laterine only accounted for 5.7 per cent and 9.6 per cent of the respondent household toilet facilities in Maroko and Isale-Eko respectively. The other type of toilet facilities used (in the case of Maroko accounting for 1.9 per cent of the respondents) is well described by the phrase 'wrap and throw'. The other category in Isale-Eko accounted for 3.2 per cent of the respondents and involved the use of the private 'public' toilets located precariously on stilts over the lagoon.

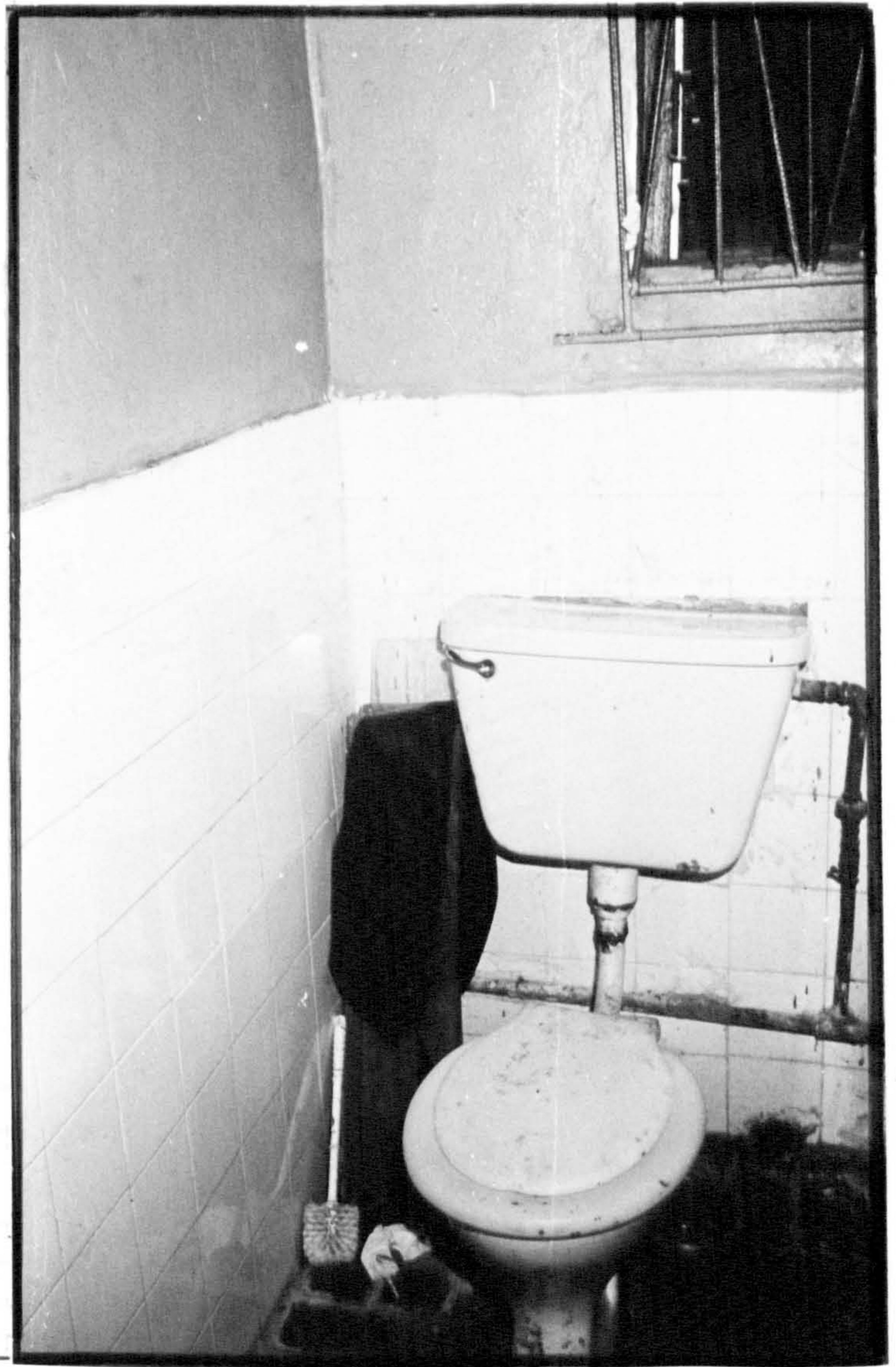


Figure 054. W.C. in Flat,
Doplin Phase 1.

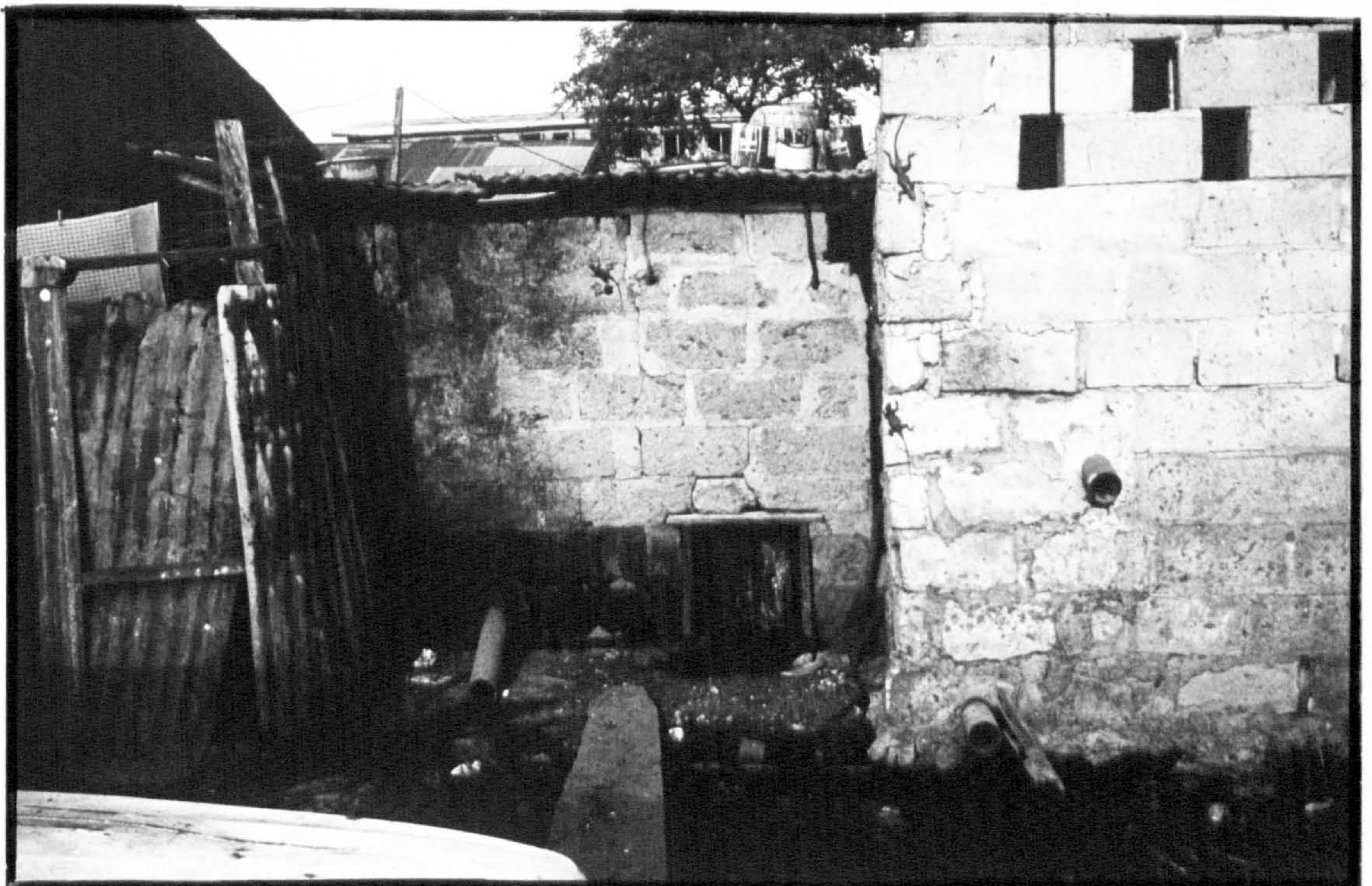


Figure 055. Access Way and Bucket/Pail Toilet, Maroko.

Chart 031.

Location of Respondent's Household Toilet Facilities

A					B															
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	m m m m m m m m m m m m m m m m														
			1.9	3	within dwelling unit															
			5.8	9	outside D. but on F.															
			25.6	40	outside D. but in B.															
			60.3	94	outside D. but in C.															
			1.3	2	other															
			5.1	8	none															
v.c. = 156				m.c. = 1			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	e l e d l p o l n i n n														
			100.0	120	within dwelling unit															
			0.0	0	outside D. but on F.															
			0.0	0	outside D. but in B.															
			0.0	0	outside D. but in C.															
			0.0	0	other															
			0.0	0	none															
v.c. = 120				m.c. = 2			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	i s c a l e - e l n e d														
			8.5	11	within dwelling unit															
			8.5	11	outside D. but on F.															
			45.3	60	outside D. but in B.															
			33.1	43	outside D. but in C.															
			0.0	0	other															
			4.6	5	none															
v.c. = 130				m.c. = 6			10	20	30	40	50	60	70	80	90					

D. = dwelling unit
 F. = floor
 B. = building
 C. = compound

Chart 032. Use of Toilet Facilities by Respondent's Household

A		B				mccrclko									
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories										
			4.0	6	exclusive to household										
			4.0	6	shared by floor										
			24.8	37	shared by building										
			63.1	94	shared by compound										
			3.4	5	shared by other B & C.										
			0.7	1	others .										
v.c. = 149				m.c. = 8		10	20	30	40	50	60	70	80	90	

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	clcdlyolainn									
			99.2	118	exclusive to household										
			0.8	1	shared by floor										
			0.0	0	shared by building										
			0.0	0	shared by compound										
			0.0	0	shared by other B & C.										
			0.0	0	others										
v.c. = 119				m.c. = 3		10	20	30	40	50	60	70	80	90	

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iscale-elko									
			14.8	19	exclusive to household										
			6.3	8	shared by floor										
			48.4	62	shared by building										
			28.9	37	shared by compound										
			1.6	2	shared by other B & C.										
			0.0	0	others										
v.c. = 128				m.c. = 8		10	20	30	40	50	60	70	80	90	

Chart 033. Respondent Household's Toilet Facility

A		B				mmccrcccllcc														
Categ.	Absol. No.	Adjust Freq.	Adjust Freq.	Absol. No.	Categories															
			1.3	2	flush															
			5.7	9	pit laterine															
			91.1	143	bucket & pail															
			19	3	others															
v.c. = 157		m.c. = 0				10 20 30 40 50 60 70 80 90														

A		B				lcccllcccllcc														
Categ.	Absol. No.	Adjust Freq.	Adjust Freq.	Absol. No.	Categories															
			99.2	116	flush															
			0.0	0	pit laterine															
			0.0	0	bucket & pail															
			0.8	1	others															
v.c. = 117		m.c. = 5				10 20 30 40 50 60 70 80 90														

A		B				i.sccclcc-cllcc														
Categ.	Absol. No.	Adjust Freq.	Adjust Freq.	Absol. No.	Categories															
			30.4	38	flush															
			9.6	12	pit laterine															
			56.8	71	bucket & pail															
			3.2	4	others															
v.c. = 125		m.c. = 11				10 20 30 40 50 60 70 80 90														

vi) Electricity Supply—Lighting (chart 034.).

Electricity supply in Nigeria takes two forms: (a) from the electrical authority or (b) privately generated. Of the total electricity output in Nigeria (3,266 GWH) Lagos accounts for 46 per cent (1,506 GWH). The apportionment of this supply between residential, commercial and industrial users is roughly 44 per cent, 29 per cent and 27 per cent respectively. Although electricity supply has increased substantially from 46 MW in 1953 to 1,584 MW in 1979, many areas of the city still suffer from persistent cuts for more than three consecutive days whilst twenty-four hour power failures are not uncommon. Interruptions and fluctuations in current have both contributed to these failures - a consequence of transformer burnouts due to the inadequacies of distribution, transformer capacity or disproportionate load shedding even though the average loading per distribution transformer is put at 60 per cent (Motor-Colombus, 1980).

As expected, the power supply for lighting in the Dolphin study area was provided officially by the Nigerian Electricity Power Authority (NEPA). Isale-Eko was similarly supplied with electrical power, 97.6 per cent of the respondents were connected up to the NEPA supply and 0.8 per cent claimed that they were illegally connected up, while 1.6 per cent said they used candles and paraffin lamps as their source of power for lighting. In Maroko the outright lack of NEPA supplied electricity demands that an alternative means of power be found. As such, 69.4 per cent of the Maroko respondents used paraffin lamps as their source of power for lighting. Private generation of electricity (fig .056.), that is sold at about 15kobo per bulb per night accounted for 25.2 per cent of the respondents' power supply for lighting. Of these respondents, 2.7 per cent claimed that they did not have any form of lighting whatsoever in their dwellings.

Chart 034. Lighting in Respondents' Dwelling

A					B															
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unclassified														
			27	4	none															
			27	4	candle															
			694	106	paraffin															
			00	0	electric - legal															
			00	0	electric - illegal															
			252	38	electric - private															
			00	0	others															
v.c. = 151				m.c. = 5			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	classified														
			00	0	none															
			00	0	candle															
			00	0	paraffin															
			1000	116	electric - legal															
			00	0	electric - illegal															
			00	0	electric - private															
			00	0	others															
v.c. = 116				m.c. = 6			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iscale = elko														
			00	0	none															
			08	1	candle															
			08	1	paraffin															
			97.6	128	electric - legal															
			08	1	electric - illegal															
			00	0	electric - private															
			00	0	others															
v.c. = 131				m.c. = 5			10	20	30	40	50	60	70	80	90					

vii) How Dwelling Compares with Previous Abode (chart 035 .)

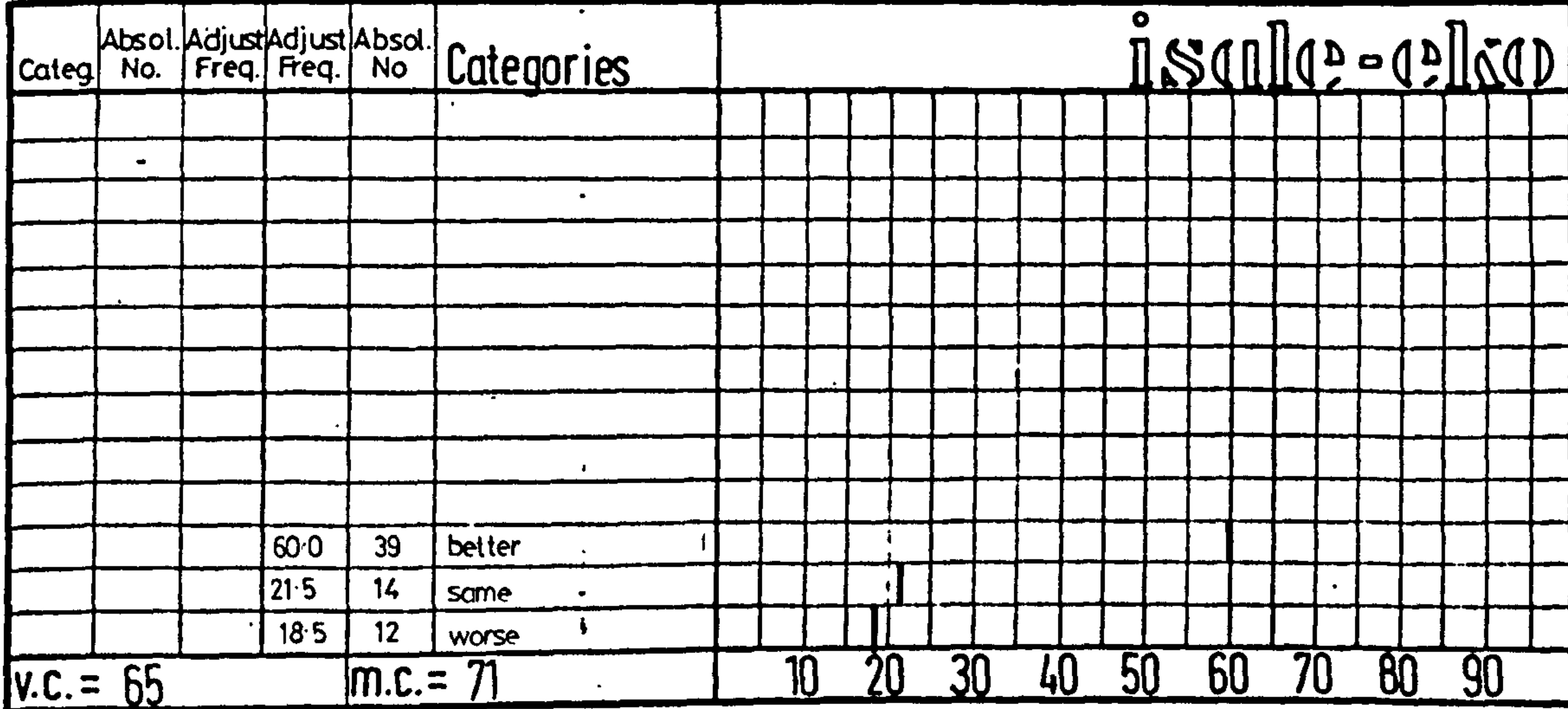
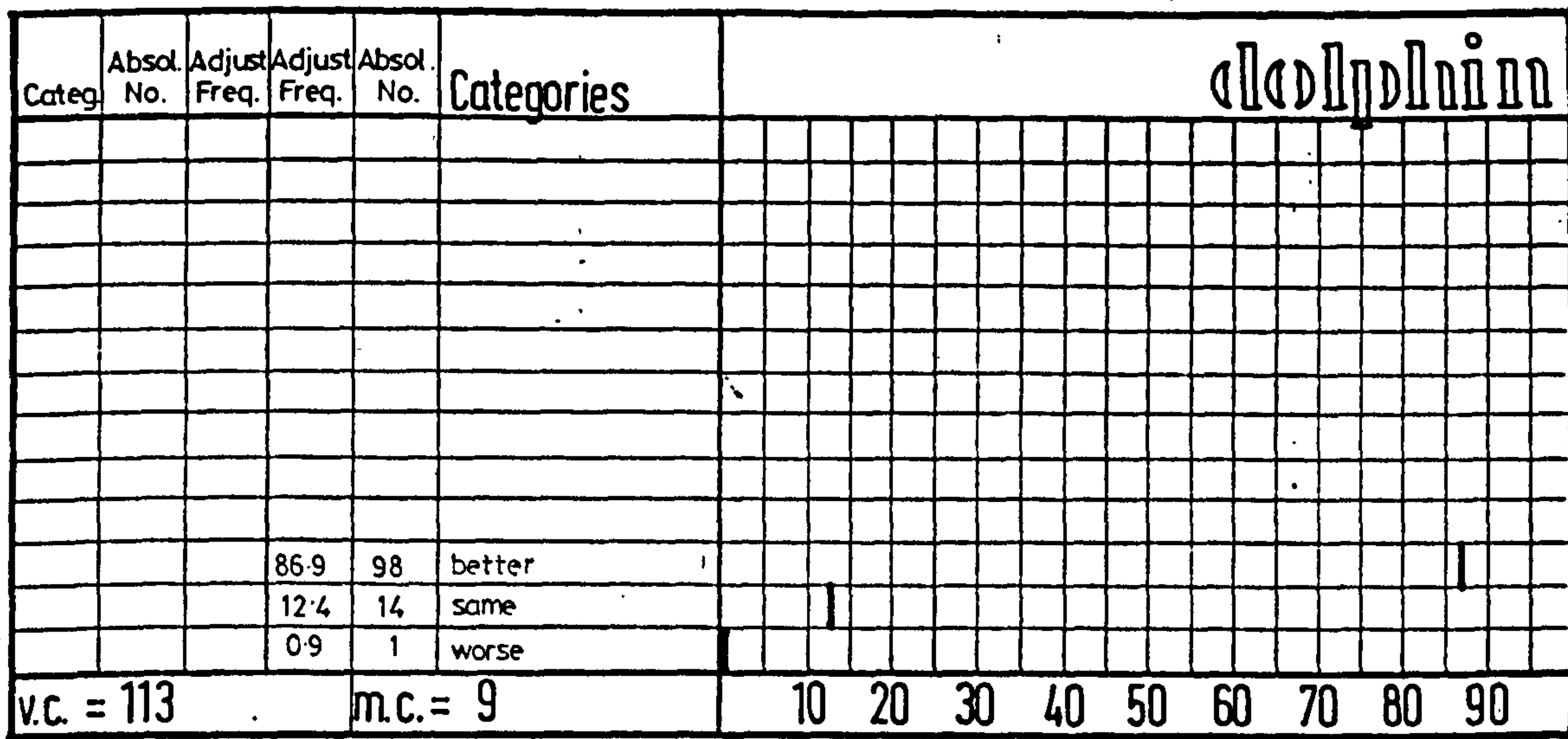
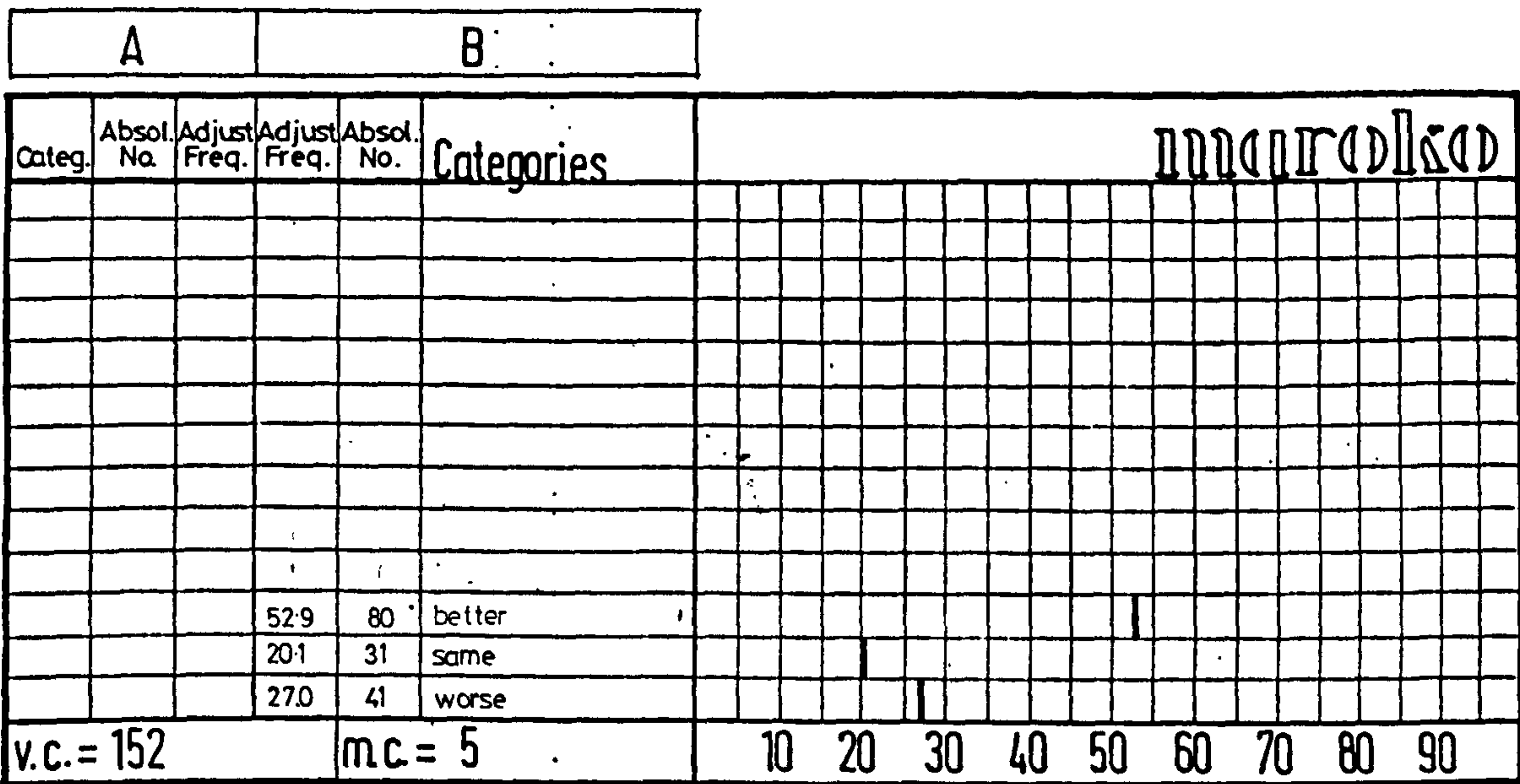
The question of whether one housing environment is better than another is an issue that varies from individual to individual. It no doubt depends on whether the housing needs as the individual perceives them satisfy what he or she expects and whether the housing contributes to the meeting of the overall needs of the individual. In all three cases a majority of the respondents claimed that the present housing environment in which they found themselves was better than their previous dwelling, this accounted for 52.9 per cent, 86.7 per cent and 60.0 per cent of the respondents in Maroko, Dolphin and Isale-Eko respectively. Those respondents who felt that it was much the same accounted for 20.1 per cent, 12.4 per cent and 21.5 per cent respectively in the same settlements. Those respondents who felt that their present housing environment was worse accounted for a sizeable 27.0 per cent of respondents in Maroko, 0.9 per cent of the respondents in Dolphin and 18.5 per cent of respondents in Isale-Eko.



Figure 056. Private Electricity Power Lines, Maroko.

Chart 035.

How Does Respondent's Present Dwelling Compare To Previous Abode



4. Ownership and Rentage

Tenure (chart 036.)

The tenure distribution, like other aspects already investigated exhibits a variety of marked differences. Maroko, in keeping with its overall nature is dominated by 87.7 per cent of its respondents being tenants. Owner occupation and family ownership account for 10.4 per cent and 0.6 per cent of the respondent tenure standing. As a result of government policy, with cheap mortgages being given to encourage owner occupancy, Dolphin still had a number of flats with rooms rented out. Of the respondent households in this area 0.8 per cent were tenants with 5.9 per cent of respondents claiming family ownership. Contrary to expectation and due most probably to a free sample selection, Isale-Eko exhibited a high 54.5 per cent of its respondents as tenants, with family ownership and owner-occupied dwellings accounting for 26.9 per cent and 18.6 per cent respectively and 45.5 per cent of the respondents collectively.

ii) Rentage (chart 037 .)

The term rentage is derived from a combination of the words, rent and mortgage. The fact that the households do not own the apartments outright classifies the mortgage repayments as an alternative form of rent. The rentage distribution between the three study areas shows some close similarities. The categories of low, medium and high rentage are based on the notion that 20 per cent of the income is about the right amount to be allocated to this aspect. This then is reflective of the income grouping discussed and categorised earlier. Both Maroko and Dolphin exhibit relatively high low rentage, accounting for 96.4 per cent and 97.8 per cent respectively, with the medium rentage accounting for 3.6 per cent and 2.2 per cent of the respondents. Isale-Eko had a sizeable low rentage reponse of 88 per

Chart 036. Tenure

A B

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unadjusted														
v.c. = 138				m.c. = 19.																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	adjusted														
v.c. = 119				m.c. = 3																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	i-scale-adjusted														
v.c. = 134				m.c. = 2																

Chart .037. Rent-age

A B

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Income														
high	0	0.0																		
medium	5	3.6																		
low	133	96.4																		
			0.0	0	over \$300															
high	0	0.0	0.0	0	\$251 — \$300															
			0.0	0	\$201 — \$250															
			0.7	1	\$151 — \$200															
medium	5	3.6	0.0	0	\$101 — \$151															
			2.9	4	\$76 — \$100															
			5.8	8	\$51 — \$75															
low	133	96.4	52.9	73	\$26 — \$50															
			37.7	52	under \$25															
v.c. = 138				m.c. = 19			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Income														
high	0	0.0																		
medium	1	2.2																		
low	44	97.8																		
			0.0	0	over \$300															
high	0	0.0	0.0	0	\$251 — \$300															
			0.0	0	\$201 — \$250															
			0.0	0	\$151 — \$200															
medium	1	2.2	0.0	0	\$101 — \$150															
			2.2	1	\$76 — \$100															
			8.9	4	\$51 — \$75															
low	44	97.8	88.9	40	\$26 — \$50															
			0.0	0	under \$25															
v.c. = 45				m.c. = 77			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Income														
high	3	4.5																		
medium	5	7.5																		
low	58	88.0																		
			1.5	1	over \$300															
high	3	4.5	1.5	1	\$251 — \$300															
			1.5	1	\$201 — \$250															
			1.5	1	\$151 — \$200															
medium	5	7.5	3.0	2	\$101 — \$150															
			3.0	2	\$76 — \$100															
			4.5	3	\$51 — \$75															
low	58	88.0	19.8	13	\$26 — \$50															
			63.7	42	under \$25															
v.c. = 66				m.c. = 70			10	20	30	40	50	60	70	80	90					

cent of the respondents. Its medium rentage accounted for 7.5 per cent of the respondents and unlike Maroko and Dolphin it showed a high rentage category accounting for 4.5 per cent of the respondents.

B. Neighbourhood Amenities

Within the urban environment the provision of amenities plays a very important role in the overall functioning of the environment. Although the range of amenities is wide this study has, due to the lack of resources (time and finance) been confined to the provision or otherwise of facilities such as refuse collection, safety and security, shopping, hospitals, schools, religious affiliations, post offices, recreation areas, access and drainage.

i) Refuse Collection (chart 038 .)

The management of solid waste as elsewhere in the world in Lagos essentially involves two stages. The first entails collecting the waste and the second processing it. However, this process appears to have had little effect in dealing with the now legendary refuse problem of Lagos. A major contributory factor to this situation is the fact that the massive backlog of refuse to be collected is in part the outcome of refuse which is not containerised. According to Powell Duffryn Pollution Control Ltd.'s report (1978), the shortfall of refuse collection is estimated at 170,000 tons per annum or about 35 per cent.

At present the need for high manpower skills and the high level of maintenance has led to the generally accepted low performance of the incinerators that now stand around Lagos. The alternative method widely used is landfill. This involves disposing of solid waste on land by spreading and compacting it and then covering it over. However, due to poor management this process was accounting for only 360,000 tons per annum by 1979.

Although a municipal refuse disposal department does exist, all three study areas exhibited a sizeable proportion of their respondents lacking any form of domestic refuse collection by the municipality. On-plot collection accounted for 5.8 per cent, 15.3 per cent and 8.2 per cent of the respondents in Maroko, Dolphin and Isale-Eko. Those respondents who said that they did not have any form of refuse disposal whatsoever accounted for 85.4 per cent, 19.5 per cent and 50 per cent respectively in the areas under study. The marked variation in refuse collection between Maroko and the other two areas is in the main attributed to the fact that Maroko is regarded as an illegal settlement and therefore does not justify the provision of a public collection service. Most of the domestic refuse is either simply thrown over the fence on to neighbouring plots or abandoned on any vacant site around the settlement (figs 059 . and 060.). On the other hand Dolphin and Isale-Eko, although lacking any substantial on-plot collection (which, in the case of Isale-Eko is hampered by the inaccessibility of the area to refuse collection vehicles) are served with official communal disposal points (fig 058.). The system for the Dolphin and Isale-Eko areas accounted for 41 per cent and 64.3 per cent of the respondents' refuse disposal system. The relatively lower claim by the respondents that they lacked any refuse disposal facilities in these areas is further reinforced by the fact that the main refuse tip for Lagos Island is located adjacent to and between these two areas (fig 057.). Many of the respondents actually stated that the children of the household were responsible for taking the household refuse to this tip.

Over the last year Lagos has, under the governorship of Group Captain Gbolahan Mudashiru been subjected to a clean-up purge. The rigid regime of street cleaning, yard sweeping, rubbish collection and drain dredging has made the city practically unrecognisable. Every

Saturday the streets of Lagos are attacked by swarms of Civil Servants detailed to clean the city and sometimes cars are temporarily requisitioned to carry rubbish to the nearest tip. In fact the dropping of litter has now become an arrestable offence and individuals can be prosecuted for not keeping their houses and compounds clean.



Figure 057. Main Refuse Tip Serving Lagos Island.



Figure 058. Overloaded Communal Refuse Container.



Figure 059 Refuse Tip On Vacant Land, Maroko.

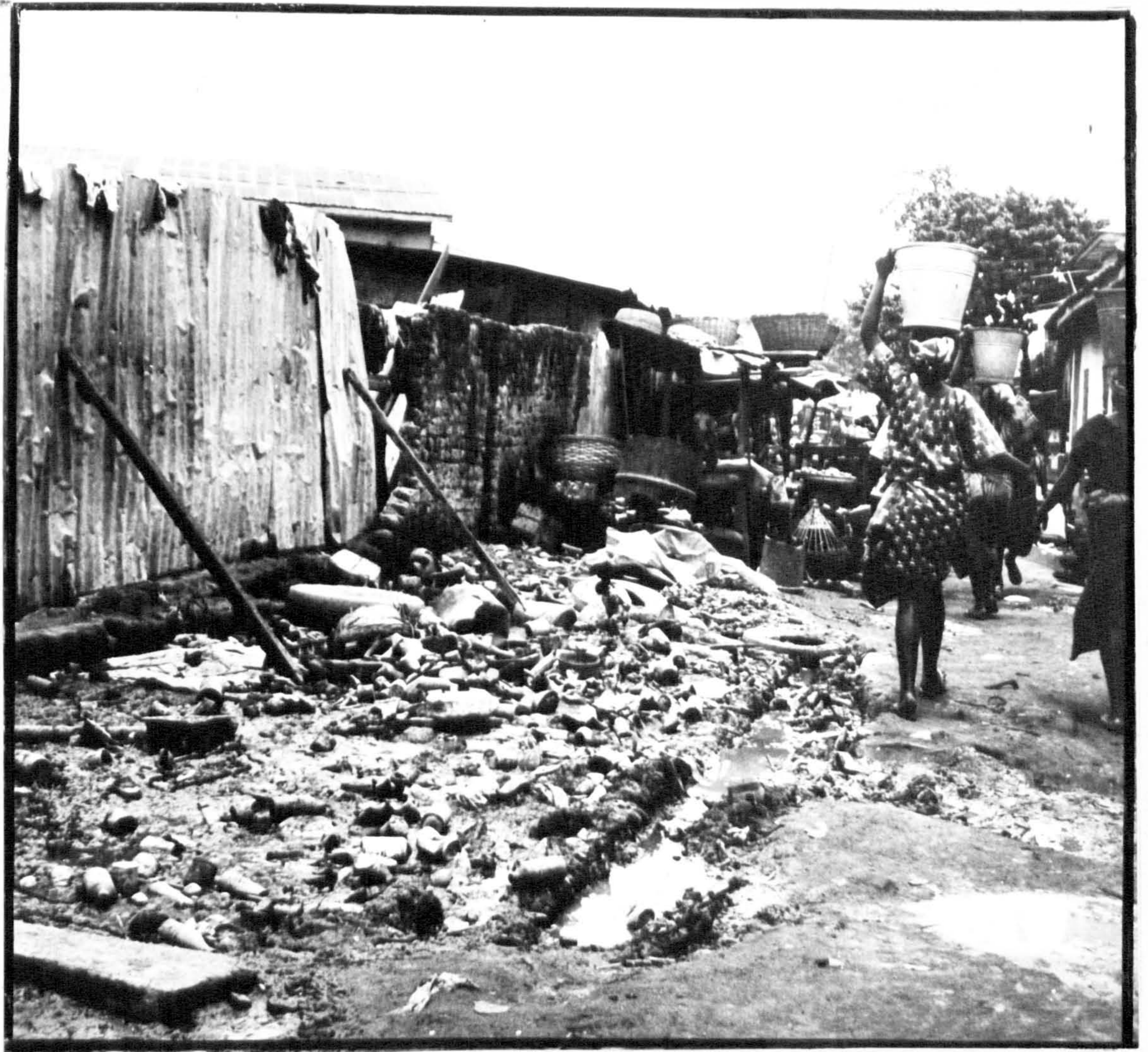


Figure 060 Refuse Obstructing Footpath, Isale-Eko.

Chart 038. Refuse Collection-Disposal

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncollected														
v.c. = 156; 99.4%					m.c. = 1; 0.6%					10	20	30	40	50	60	70	80	90		

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
v.c. = 118; 96.7%					m.c. = 4; 3.3%					10	20	30	40	50	60	70	80	90		

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
v.c. = 134; 98.5%					m.c. = 2; 1.5%					10	20	30	40	50	60	70	80	90		

ii) Safety and Security (charts 039 ., 040., 041. and 042.)

Lagos is well known for its high crime rate and so the safety and security of the environment is an important factor for many households, especially for those in the higher income groups and modern sector housing areas. In all three areas a sizeable proportion of the respondents claimed that they did not have any police patrols passing their dwellings, and this accounted for 32.2 per cent, 52.6 per cent and 37.3 per cent of the respondents in Maroko, Dolphin and Isale-Eko. Of the respondents that did have police patrols passing their dwellings 51.6 per cent, 24.6 per cent and 17.5 per cent for the above areas claimed that they did so on an irregular basis. Those households that claimed they did have regular police patrols passing their dwellings accounted for 16.2 per cent, 22.8 per cent and 45.2 per cent of the respondents in the above areas respectively.

This situation is further compounded by the limited amount of street lighting that exists. In Maroko, as a consequence of its illegal status, street lighting except that from the dwellings is practically non-existent. This state of darkness accounted for 92.9 per cent of the respondent households which did not have any form of lighting on the street in front of their dwelling - possibly more an outcome of the lack of officially supplied electricity. In the Dolphin area this situation was modified, although the question whether the street lighting was regular, varied throughout the settlement. In Stages 1 and 2, street lighting was on a regular basis provided the mains electrical power was on. By stage 3 street lights had been fitted but they had yet to be connected to the mains. Stage 4 and the annexe to stage one were entirely without street lighting at the time of the survey, but that was one of the top priorities of the two sub-comunities. The street lighting in the Dolphin estate was provided

through the efforts of the landlords' associations. This then accounted for stages of street lighting that had been provided. Concerning the estate at large, 40.9 per cent of the respondents had no street lighting, 26.1 per cent had irregular lighting and 33 per cent had regular lighting. Isale-Eko had a street lighting condition similar to that of Maroko. Those households which claimed they did not have any street lighting accounted for 72.4 per cent of the respondents. This was especially applicable to those respondent households who lived off the main thorough fares. Those households which claimed they had irregular street lighting accounted for 20.5 per cent of the respondents. Only 7.1 per cent of the respondents claimed they had regular street lighting.

Efforts to improve the security situation by the provision of security fencing differed between the three study areas. In both Maroko and Isale-Eko the lack of any form of security fencing accounted for some 57.6 per cent and 85.5 per cent of the respondents. The lack of security fencing can be attributed to various reasons. In Maroko the fact that most of the respondents were tenants who did not have the landlord living on 'site', mitigated the lack of responsibility with regards to this issue. In Isale-Eko the very close and compact nature of the settlement combined with the 'courtyard' effect of the compounds probably does not necessitate a security fence. The relatively small percentage of respondents in the Dolphin study area without any security fencing is accounted for by those respondents in the Stage one annexe where there was no fencing at all. The provision of security fencing (masonry) to replace the existing fencing (wire) put up by the authorities was the responsibility of the residents who, through the Landlords' Association were attempting to improve the security fencing throughout the estate.

To further improve the safety and security aspect of the

environment, sizeable proportions of the respondents in all three areas had organised the hiring of nightguards. This applied either on a street-by-street basis as in the case of Maroko and Isale-Eko or a phase-by-phase basis for the Dolphin estate. Up to 66.7 per cent, 52.7 per cent and 56.4 per cent of the respondents in Maroko, Dolphin and Isale-Eko respectively contributed to a nightguard fund. Only 5.5 per cent, 0.9 per cent and 2.6 per cent of the respondents in the above respective areas actually participated in the nightguard duty scheme. As an added precaution practically every respondent in the Dolphine estate had security gates fixed to their front doors (fig 061 .).

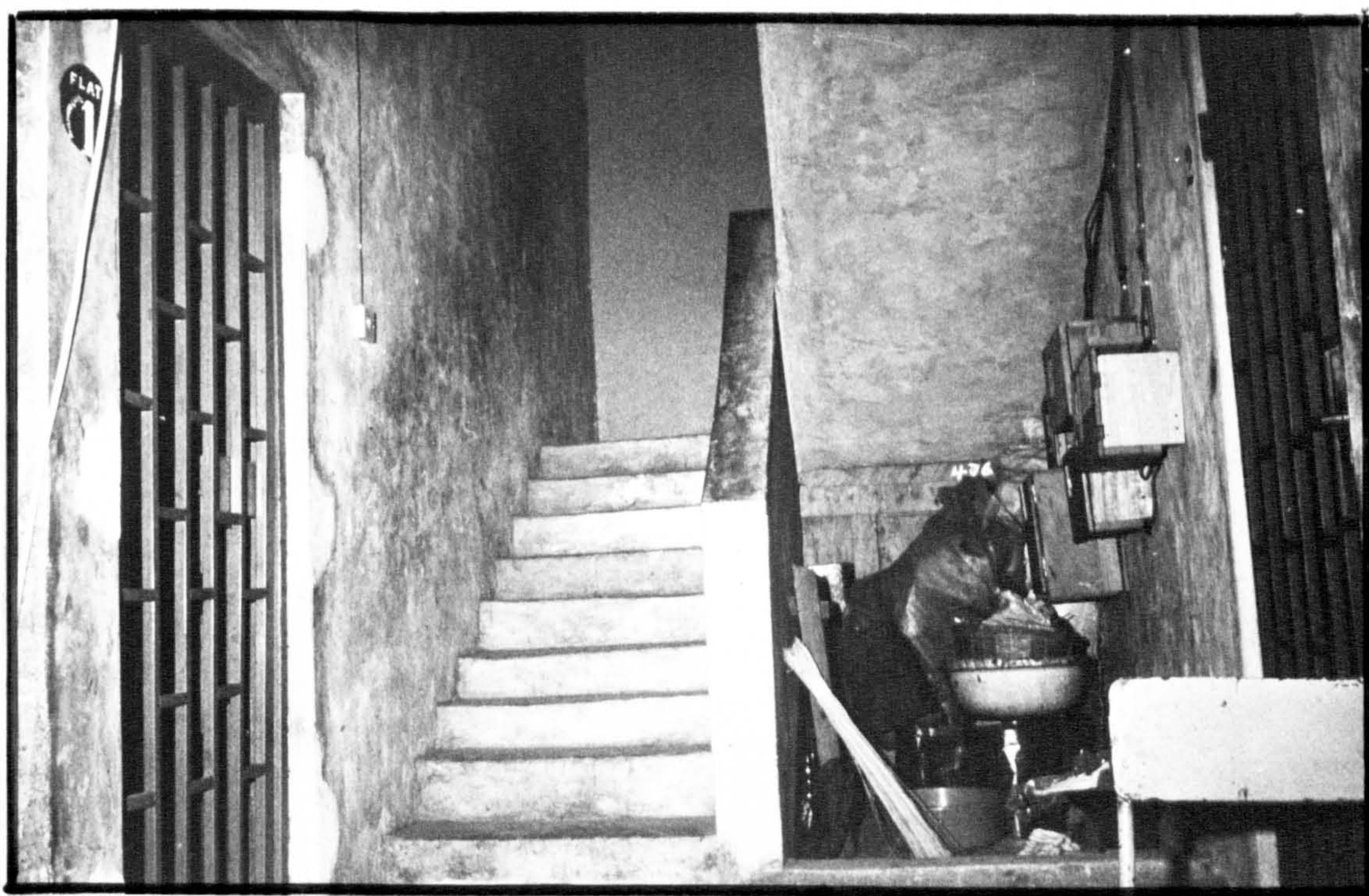


Figure 061. Anti-Burgular Doors to Flats, Dolphin Phase 1.

Chart 039. Police Patrols

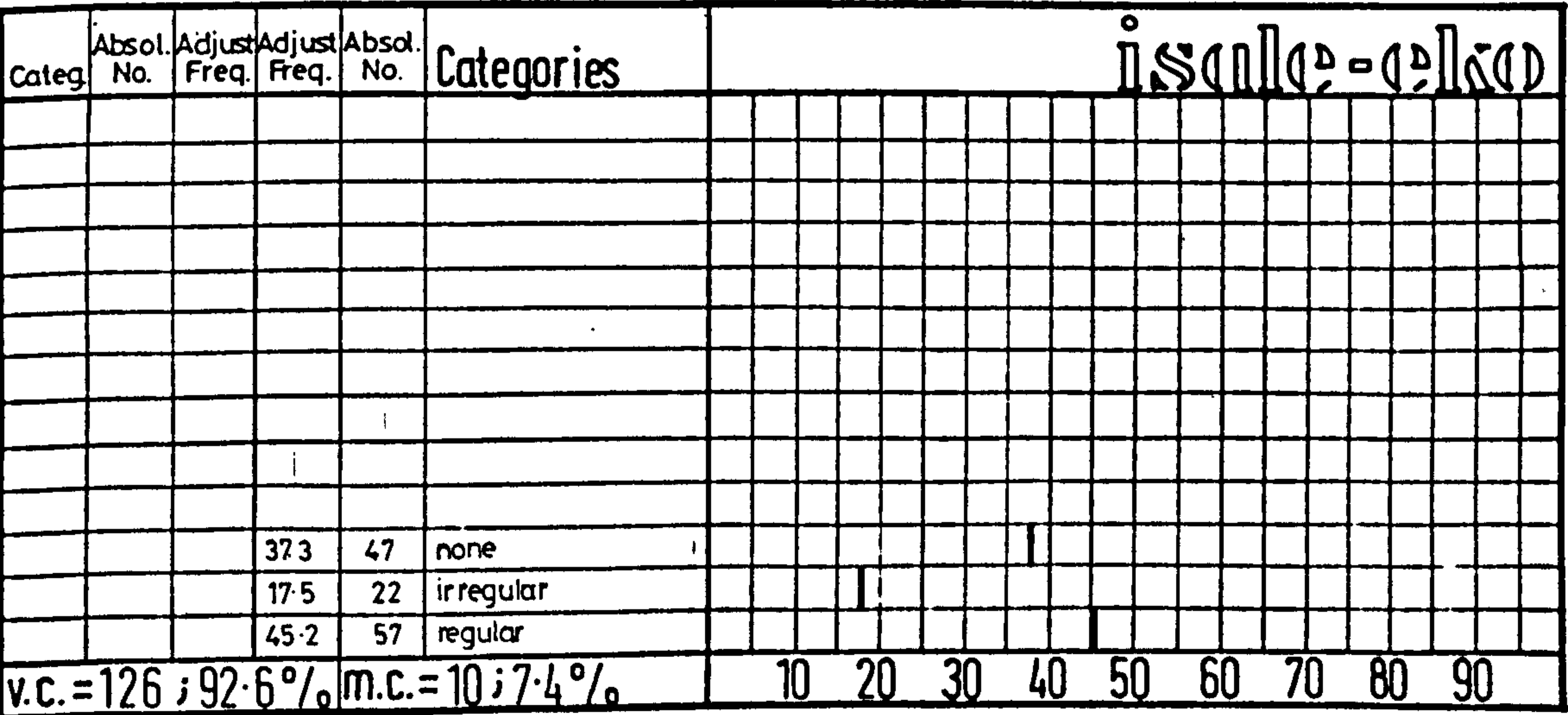
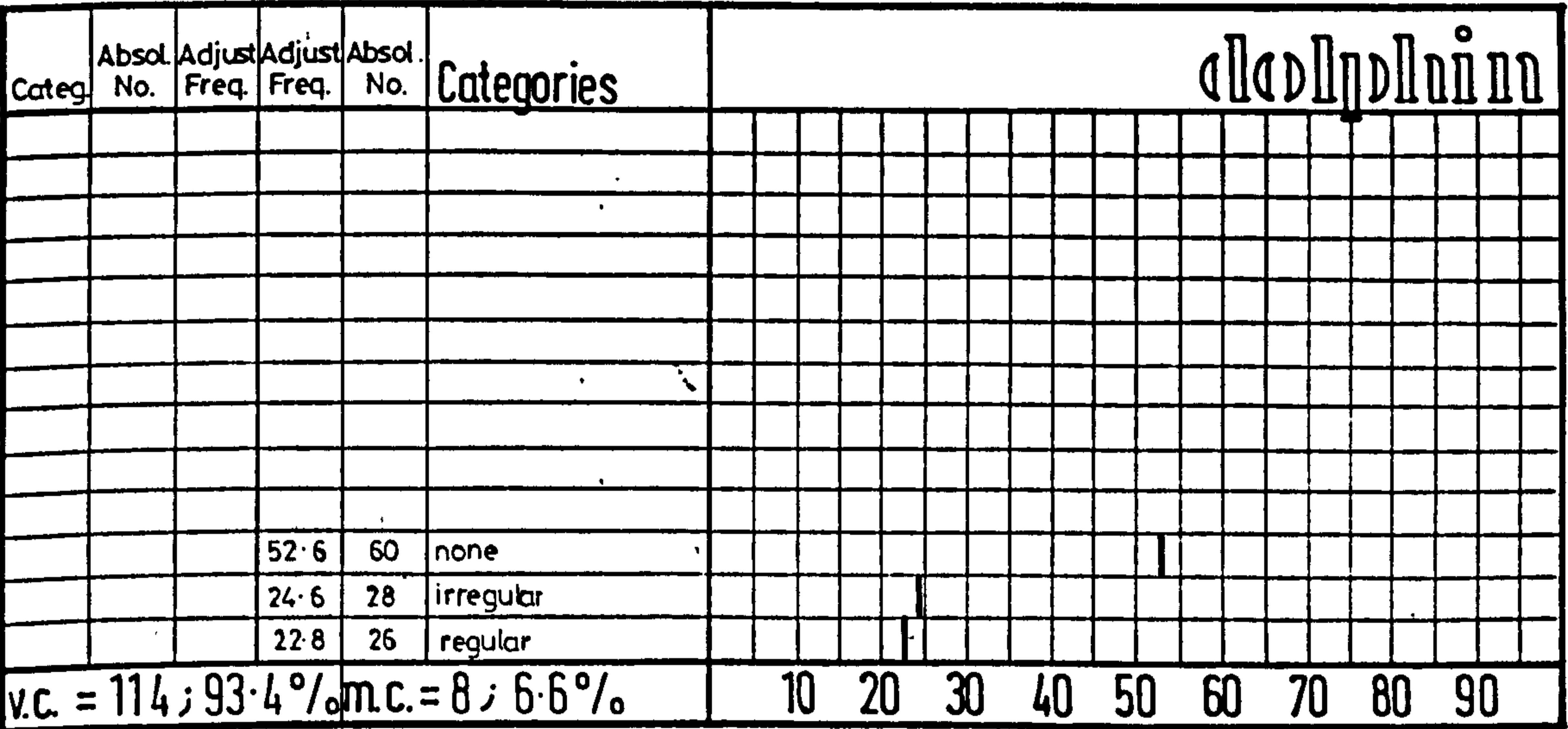
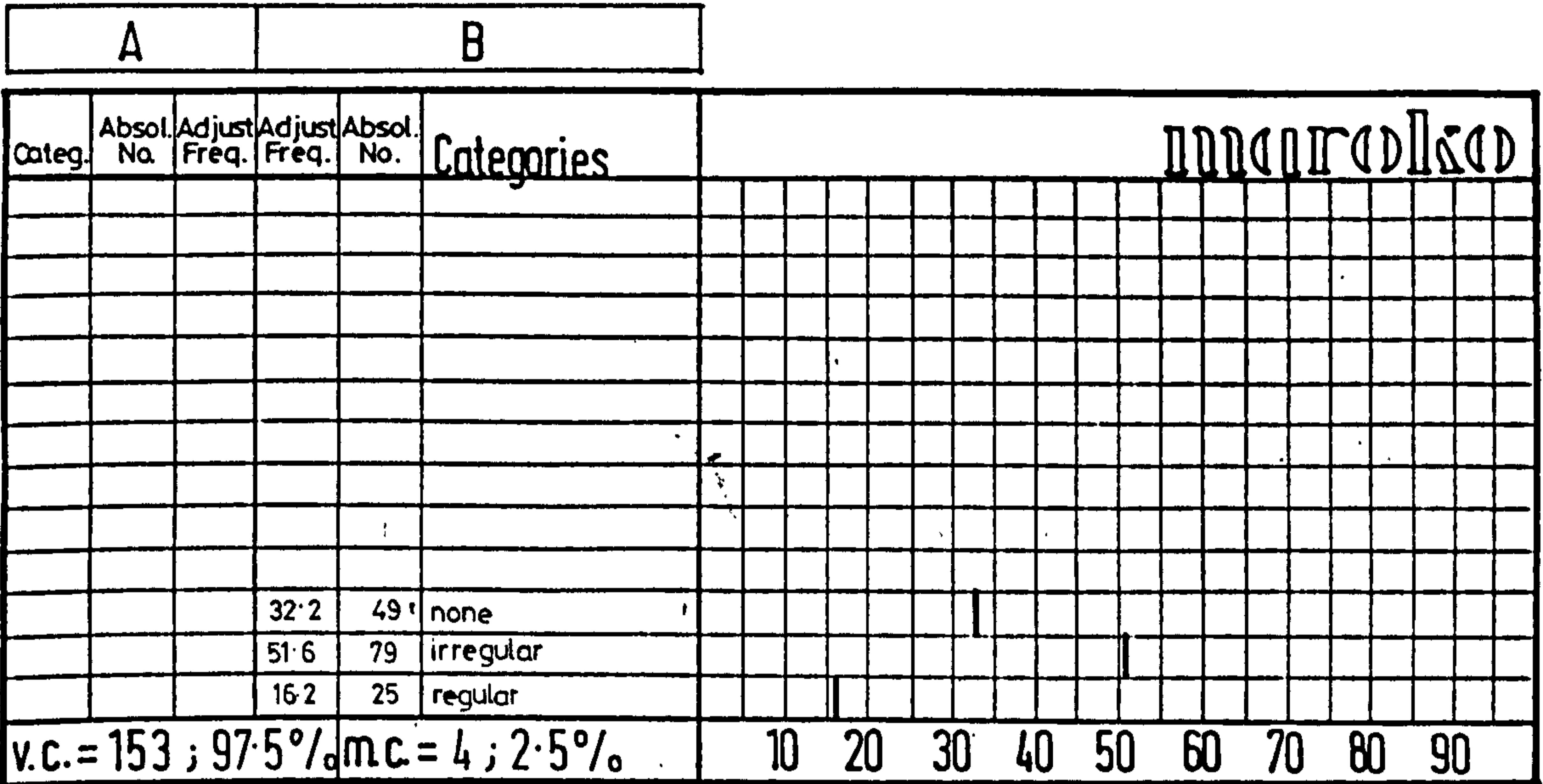


Chart 040. Street Lighting

A B

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncolored														
v.c. = 154 ; 98.1%		m.c. = 3 ; 1.9%				10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	colored														
v.c. = 115 ; 94.3%		m.c. = 7 ; 5.7%				10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iscale-colored														
v.c. = 127 ; 93.4%		m.c. = 9 ; 6.6%				10 20 30 40 50 60 70 80 90														

Chart 041. Security Fencing

A	B
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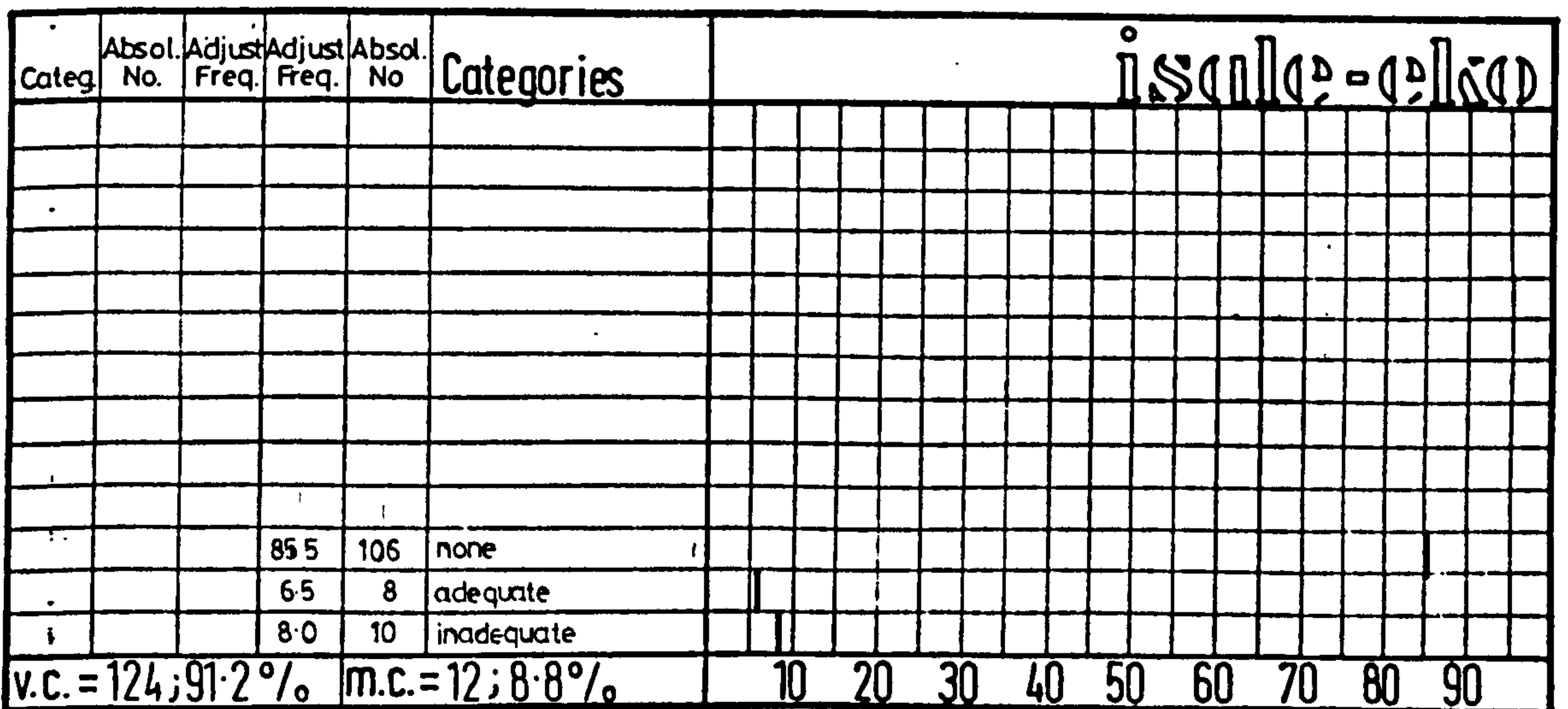
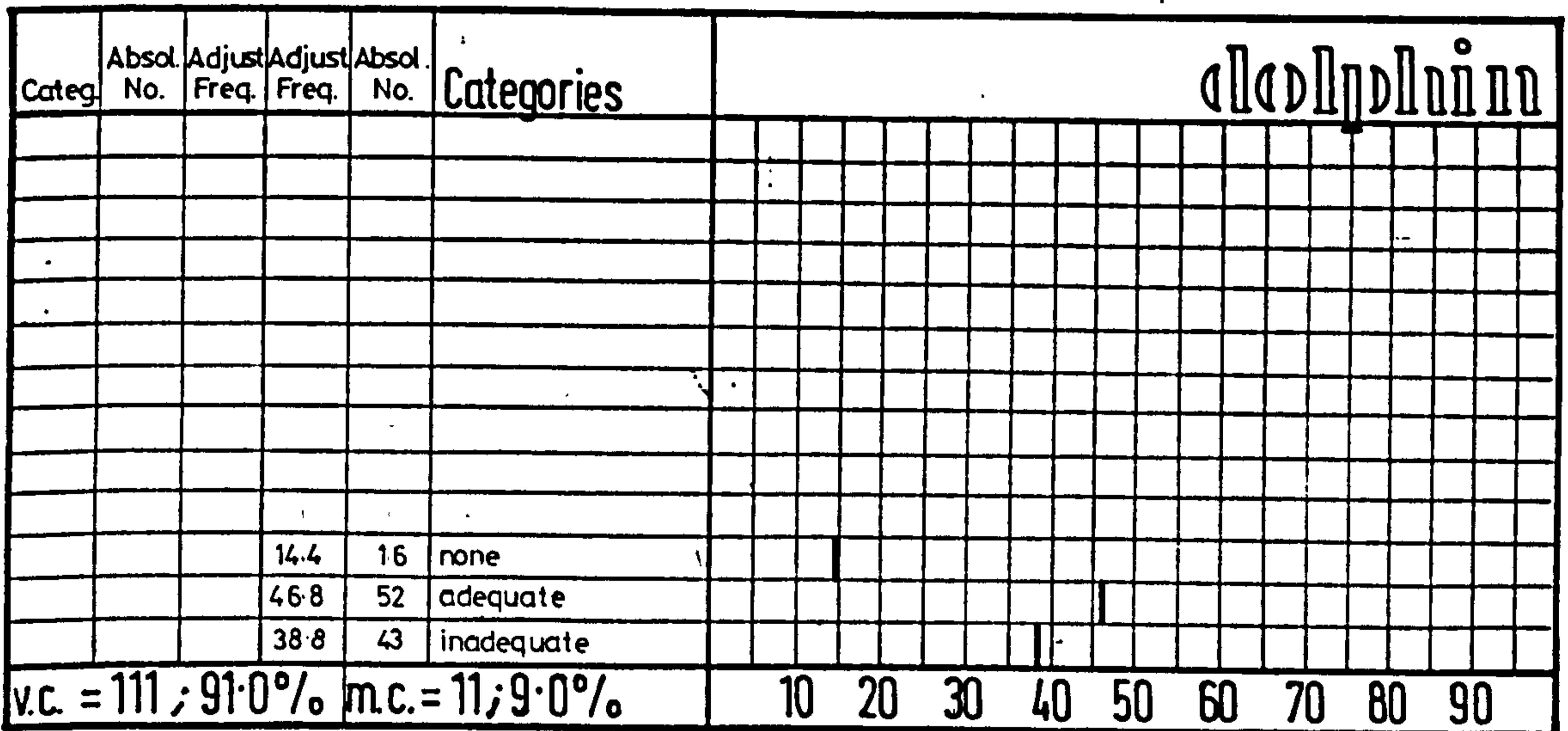
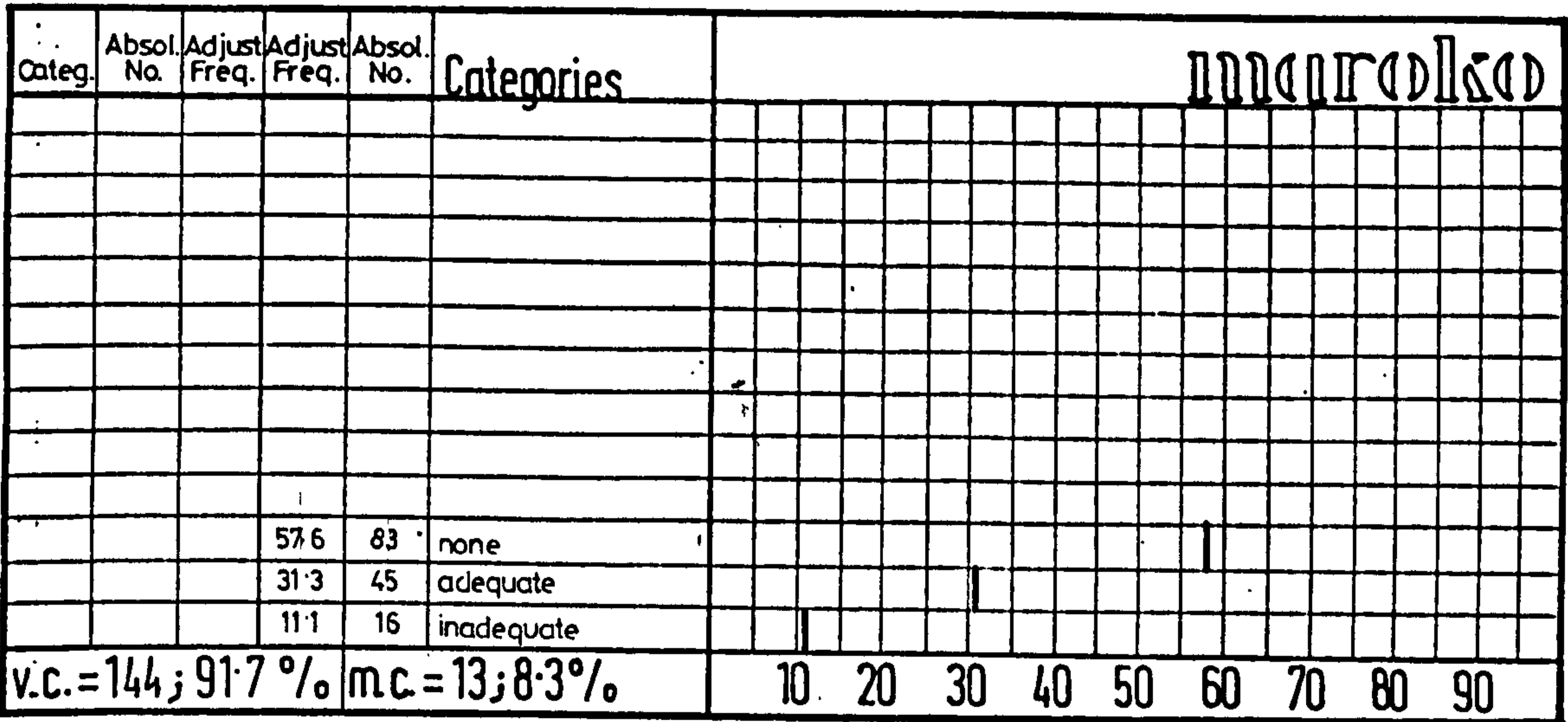
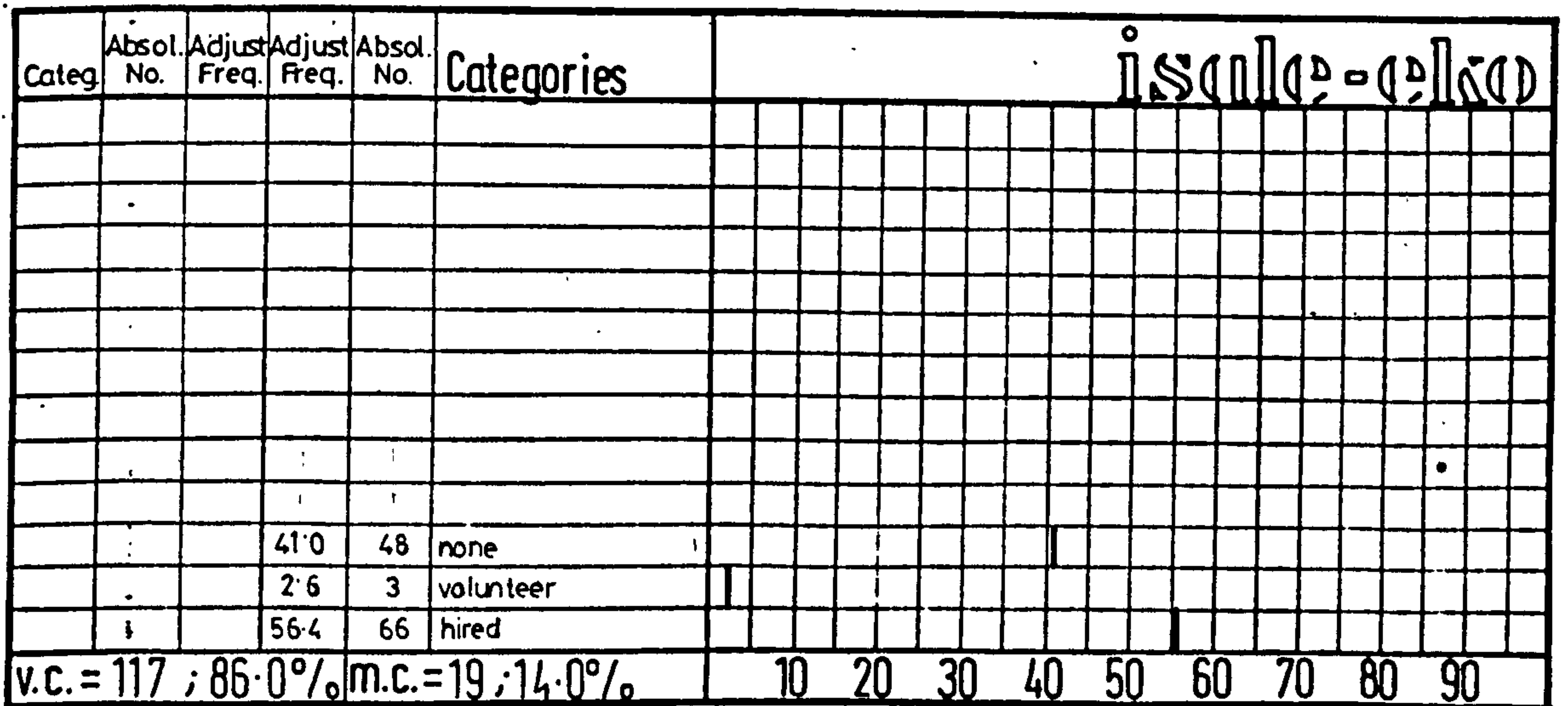
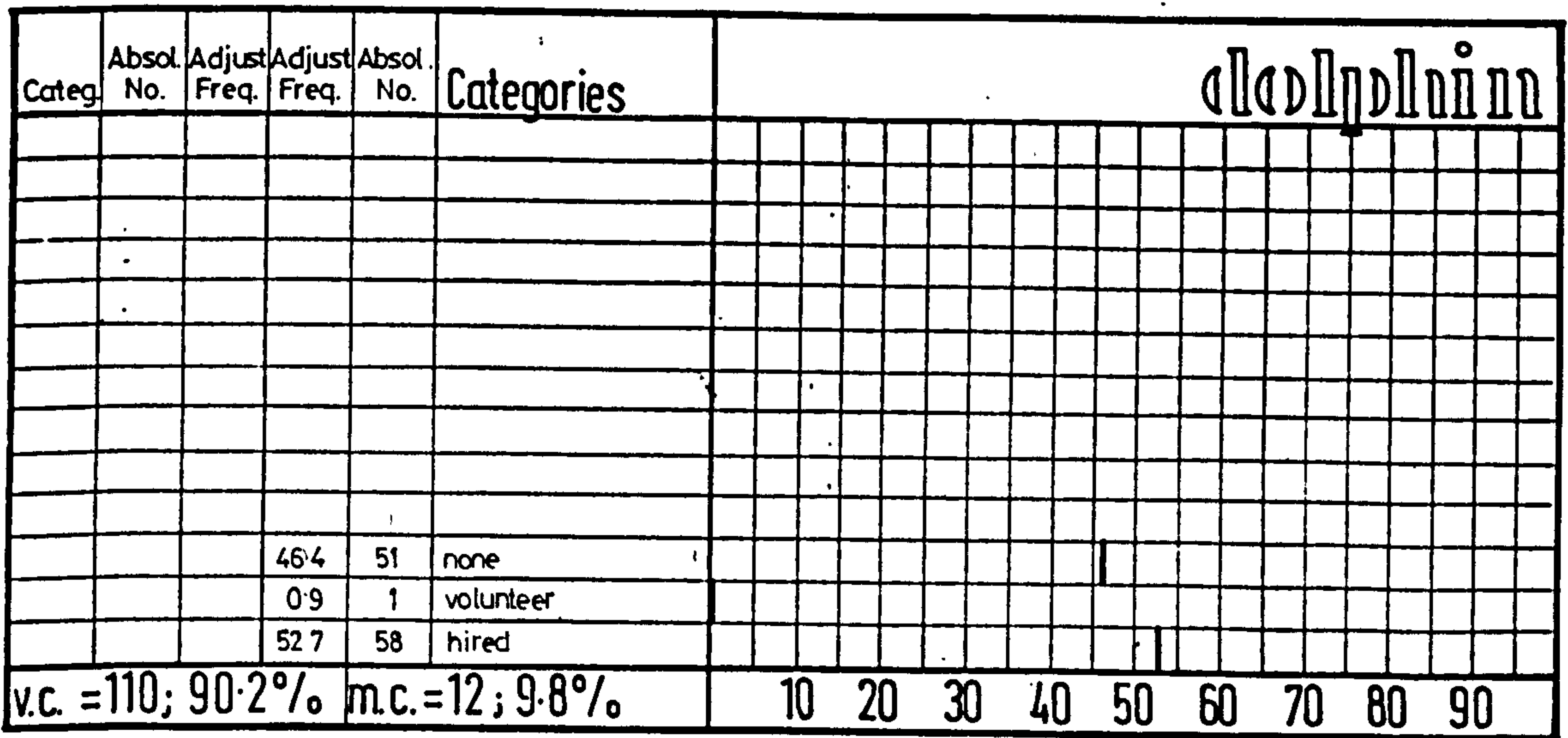
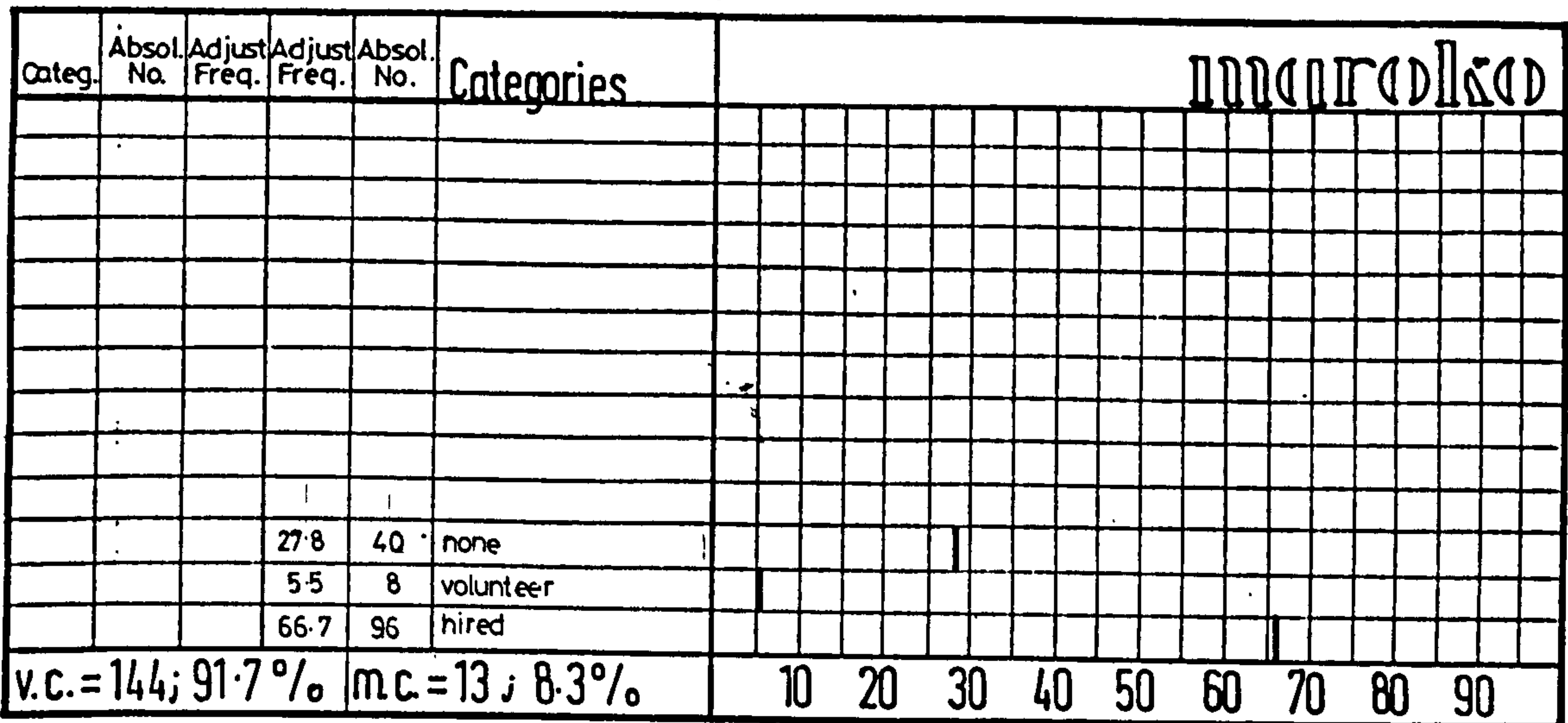


Chart 042. Nightguards

A B



ii) Shopping for Daily Needs (chart 043'.)

The requirement of food and other domestic items for daily needs necessitates that shopping facilities should be accessible to the households within a settlement. The nature of this facility utilised by the households differs according to the location and the type of goods needed. The location of Isale-Eko and Dolphin, adjacent to Sandgros and Jankara markets accounts for the 80.9 per cent and 65.8 per cent of the respondents' shopping needs in these respective areas. Maroko has three main markets. The official 'under-cover' market (fig 062.) to the south of the settlement is rarely used, although this could be attributed to official influence i.e., rent has to be paid on the stalls. Its location is well off the main access routes through the settlement. The second market although somewhat small is located towards the centre of the settlement, abuts a main thoroughfare and provides a centre of activity. The third and largest market is unofficial and 'open-air'. It runs along the main access route from the Victoria Island end of the settlement into Maroko. The users of these markets, however, account for only 19.1 per cent of the place for daily shopping needs. The majority of them (55.2 per cent) claimed that most of their shopping was done from fixed road-side stalls (fig 064.) while purchases from street hawkers accounted for 22.8 per cent (fig 063.). Purchases from roadside stalls for daily needs accounted for 26.5 percent and 10.8 percent of the respondents in Dolphin and Isale-Eko respectively. Shopping from western style shopping centres e.g., Falomo or the Marina for the three areas accounted for a small 2.9 per cent, 2.6 per cent and 0.7 per cent of the respondents in Maroko, Dolphin and Isale-Eko respectively.



Figure 062 Official Market Stalls, Maroko.



Figure 063 Unofficial Market.



Figure 064 Permanent Road-side Shops.

Chart 043. Respondent's Daily Needs Shopping Facility

A					B													
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unadjusted												
v.c. = 136 ; 86.6%					m.c. = 21 ; 13.4%					10	20	30	40	50	60	70	80	90

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	adjusted												
v.c. = 117 ; 95.9%					m.c. = 5 ; 4.1%					10	20	30	40	50	60	70	80	90

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	scale = adj.												
v.c. = 131 ; 96.3%					m.c. = 5 ; 3.7%					10	20	30	40	50	60	70	80	90

iv) Medical Facilities (chart 044 .)

Compared to countries of similar per capita income Nigeria has a very poor health status, with its life expectancy put at between 42 and 45 as compared to about 61 for other middle income countries (UNFPA, 1979). In the main this rate can be attributed to very high infant mortality rates especially for the under fives. In 1969 infant mortality accounted for over half the deaths in Lagos. Although precise information is not available, the overall rate of mortality for children under five is estimated at about 150 per 1000.

Although the health coverage of the population of the country at large is put at about 25 per cent (Fourth NDP, 1980 at p.75) this is biased towards the urban areas and is the outcome of the trend for curative medicine via the construction of hospitals. At a national level the aggregate for the doctor and registered nurse/population ratio is 1:11,000 and 1:3,600 respectively. In this account Lagos highlights urban bias as it accounts for more than 90 per cent of all the registered practitioners, 67 per cent of all State hospitals and clinics and 72 per cent of all private clinics (Arowolo, 1979).

The type of medical facilities utilized by the respondents in all three areas were of a multiple nature. When asked specifically what type of facility was used most frequently, private clinics appears to pre-dominate except for those respondents in Isale-Eko. Even so, private medical facilities accounted for 31.9 per cent of the respondents in this area. The use of private medical facilities in Maroko and Isale-Eko accounted for a majority 50.7 per cent and 53.0 per cent respectively. The dominant use of private facilities by respondents in these two areas was in the main attributed to a number of reasons, first, the medical services offered by the employer, secondly distance, especially in the case of the Maroko respondents

Chart 044. Medical Facility Used By Respondent Household

A					B																
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unadjusted															
			19.9	27	public hospital																
			50.7	69	private clinic																
			14.0	19	pharmacist																
			11.0	15	native doctor																
			2.9	4	spiritual healer																
			1.5	2	other																
v.c. = 136 ; 86.6%					m.c. = 21 ; 13.4%					10	20	30	40	50	60	70	80	90			

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	adjusted															
			47.0	39	public hospital																
			53.0	44	private clinic																
			0.0	0	pharmacist																
			0.0	0	native doctor																
			0.0	0	spiritual healer																
			0.0	0	other																
v.c. = 83 ; 68.0%					m.c. = 39 ; 32.0%					10	20	30	40	50	60	70	80	90			

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iscale = adjusted															
			46.4	32	public hospital																
			31.9	22	private clinic																
			5.8	4	pharmacist																
			14.5	10	native doctor																
			1.4	1	spiritual healer																
			0.0	0	other																
v.c. = 69 ; 50.7%					m.c. = 67 ; 49.3%					10	20	30	40	50	60	70	80	90			

and thirdly, status, especially to those respondents on the Dolphin estate. The use of government medical facilities by households in Maroko, Dolphine and Isale-Eko accounted for 19.9 per cent, 47.0 per cent and 46.4 per cent of the respondents respectively. The use of the native doctor, spiritual healer and others especially by those households in Maroko and Isale-Eko accounted for 14.3 per cent and 15.9 per cent of the respondents. The respondents in the Dolphine area claimed that they did not use any of these kinds of medical facilities.

v) Dependents' Primary and Secondary Schooling

(charts 045 . and 046.)

The first schools to be established in Lagos State were founded in the latter half of the 19th century through the efforts of several mission groups. These groups in fact accounted for up to 90 per cent of all schools established prior to 1940. Even by 1972 these religious affiliated schools accounted for 61 per cent of the enrolled pupils. By 1887 the first Educational Ordinance to affect Lagos had been adopted. This was made up of a Board of Education and Inspectorate, which had by 1926 adopted regulations that established certain school standards. It also provided for the registry of teachers and for the inspection of mission schools. Nevertheless, the colonial era especially before the 1950's, left Nigeria with a very weak form of western educational structure (ILO, 1981). With the granting of autonomy to the regions, in matters relating to primary and secondary education under the Macpherson Constitution of 1954, the 1950's saw the introduction of free primary education in the Western and Eastern regions of Nigeria (1955 - 1957). In both cases the respective governments' actions were clearly motivated by political considerations (based on social demand), with little attention given to the availability or non

availability of materials and resources essential to the successful implementation of the scheme. Consequently the scheme failed in the Eastern region after one year. The educational and social infrastructure, on which this social demand approach to educational policy-making was based was just not in existence in the Nigeria of the 1950's. However, the 1960's witnessed a turning point in Nigeria's educational policy strategy. There was a shift from a socio-demand approach to a manpower-needs approach. This was in essence prompted by the desire to establish the necessary educational infrastructure capable of supporting the newly independent Federal Government's increased interest in its economic development policies. The Federal and Regional governments to revise the country's educational system and make recommendations as to improvements heralded. The most important result was the Ashby Report, which together with the Government's White Paper became the basis for educational planning and expansion from the early 1960's. In Nigeria today education is regarded as both a consumer and capital good. The consumer good concept holds that education should be provided for its own sake, as a means of enriching the individual's knowledge and for development of his or her personality. On the other hand there is the capital good concept which attaches a high premium to human skills as a factor of production in the development process. By 1966 the primary school enrolment ratio was estimated to be 30 per cent, while the secondary school ratio was only about 3 per cent (Second National Development Plan 1970-1975). By 1977 education had received a high priority rating from the Government and was absorbing well over 40 per cent of the recurrent budget of the Federal Government and over 55 per cent of the recurrent budgets of the state governments. This relatively large increase in expenditure on education is essentially reflective of the general expansion of the economy.

Universal Primary Education (UPE) was made a primary objective in 1976 giving every child the right to free primary schooling. The introduction of UPE saw a massive increase in primary enrollment - far in excess of that expected (Blueprint, 1978 at p.54). In the year 1976/7 it was estimated that about 60 per cent of the primary school age group were enrolled; it is expected that universal primary education will virtually be achieved by mid 1980's. The speed of the expansion in primary education has been associated with very severe quality problems. Primary school enrolment rose from about 3.5 million in 1970 to 9.5 million in 1977.

An estimated 170-180,000 primary school teachers are unqualified which accounts for about two thirds of the total number of teachers. Secondary school education which currently serves only a minority of the age group (about a quarter) has also expanded rapidly in recent years from 380,000 pupils in 1970 to an estimated 854,000 in 1976. A further massive expansion will be required over the next decade if the transition rate from the primary to secondary education of 40 per cent (ibid) is to be achieved.

To date it is estimated that in the Lagos metropolitan area there are a total of 4,367 classrooms or classroom equivalents in which about 9,400 streams of Grades I to VI are taught at primary school level. At secondary school level the metropolitan area supports about 1,590 classrooms in which 2,154 streams are taught. On average, therefore, each classroom must be used for two or more shifts.

The importance of education, to Nigerians in Nigeria cannot be over emphasized. As the study has already indicated, the relation between educational attainment, employment and income are strong. As such the accessibility to educational facilities especially for the children of the household must influence the overall decision in choosing a place to live. For those respondents who had children

attending primary school, the high attendance at government schools quite obviously dominates and accounts for 95.7 per cent, 82.8 per cent and 86.5 per cent of the respondents in Maroko, Dolphin and Isale-Eko respectively. The dominance of government school attendance is in essence attributed to the universal free education policy embarked upon by the previous regime as part of its drive for development. Private primary school attendance by the respondents' children accounted for 1.1 per cent, 15.2 per cent and 1 per cent of the respondents' children. The marked difference in proportion between the Dolphin area and the other two areas is probably more reflective of the relatively higher income and status associated with the respondents in the Dolphin area than any other factor. In contrast to Maroko and Dolphin (2 per cent and 3.2 per cent) Isale-Eko had a sizeable proportion 12.5 per cent of its respondents children attending traditional Koranic schools. This divergence especially between Dolphin and Isale-Eko, which both had high proportions of Moslem households, is probably attributed to the effect of location. While Koranic schools are located near the Dolphin and Isale-Eko study areas, the government schools are situated adjacent to the Dolphin area.

As for secondary education all three settlements exhibited substantial government secondary school attendance. This accounted for 87.5 per cent, 92.8 per cent and 94.3 per cent of the respondents in Maroko, Dolphin and Isale-Eko respectively. The Christian mission secondary schools account for a minor 6.9 per cent, 6.0 per cent and 6.9 per cent of the respondent households. This relatively low attendance can be attributed to a number of reasons viz of religion, income and location.

Chart 045. Respondent Dependents Primary Schooling

A					B																
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncontrolled															
v.c. = 93 ; 59.2%					m.c. = 64 ; 40.8%					10	20	30	40	50	60	70	80	90			

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	controlled															
v.c. = 99 ; 81.1%					m.c. = 23 ; 18.9%					10	20	30	40	50	60	70	80	90			

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	scale-coded															
v.c. = 104 ; 76.5%					m.c. = 32 ; 23.5%					10	20	30	40	50	60	70	80	90			

Chart 046. Respondent Dependents Secondary Schooling

A					B																
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unaccredited															
				5.6	4	trade															
				6.9	5	mission															
				87.5	63	government															
v.c. = 72 ; 45.9%					m.c. = 85 ; 54.1%					10	20	30	40	50	60	70	80	90			

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unaccredited															
				1.2	1	trade															
				6.0	5	mission															
				92.8	78	government															
v.c. = 84 ; 68.9%					m.c. = 38 ; 31.1%					10	20	30	40	50	60	70	80	90			

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unaccredited															
				0.9	1	trade															
				6.9	5	mission															
				94.3	98	government															
v.c. = 104 ; 76.5%					m.c. = 32 ; 23.5%					10	20	30	40	50	60	70	80	90			

vi) Place of Worship (chart 047..)

Although by its constitution Nigeria is and has always been a secular state, it is inhabited by people with very strong religious affiliations whether Christian, Moslim, animist or other beliefs. Attendance at a particular place of worship is therefore reflective of the particular make-up of the respondent and as such the religious make up of the respective areas can be ascertained from this. Each of the areas under study exhibit different secular distributions.

Maroko appears to be dominated by Christians who accounted for 71.1 per cent of respondents attending church; 15.7 per cent of the respondents attended the mosque and a relatively small 3.4 per cent claimed they worshiped at a local shrine within their dwelling. Isale-Eko exhibited a more complex distribution which was hidden in the simple question, "where is your place of worship". However, the findings showed that 84 per cent of the respondents in this area attended the mosque most frequently and 15.2 per cent the church most frequently. A sizeable proportion of the respondents claimed that they attended a number of different religious places of worship which included not only the mosque and church but also the local shrines and shrines of their ancestors.

This apparent confusing situation is probably best explained by the effect of the extended family. A number of the respondents had other branches of the extended family following different religions. The inter-relation of community ceremonies and religious functions is common to most religions. As a consequence, functions such as funerals and weddings which practically always involve invitations to members of the extended family on formal grounds mean that the extended family has a type of inter-religious foundation. The Dolphin area appeared to have a close balance between Moslems and Christians. Both these sects

vii) Access (charts 048. and 049.)

Access, whether by a road or footpath, forms a major element of the housing environment especially in the urban context. This investigation tries to ascertain the nature of this access, not only in terms of whether it is a road or footpath, but also in terms of the condition and quality of the access. In Maroko 40 per cent of the respondents did not have road access to their dwelling and 54.5 per cent of the respondents who did not have road access used a road that was made of compacted laterite-earth (figs 066. and 067.), which, even during the lightest shower, became almost impassable.

During the dry season the period over which the survey took place a number of the roads were flooded because of lack of adequate waste water drainage. In the rainy season the majority of respondents commented that the roads and footpaths were practically impassable, unless they were lucky enough to have the use of a high axle vehicle otherwise they had to turn up trousers or use a canoe. By contrast the Dolphin and Isale-Eko areas not only had a sizeable proportion of their dwellings with road access, (in Isale-Eko a number of these roads, although tarred were only a few metres wide) which accounted for 87.6 per cent and 64.7 per cent respectively, but also this access was tarred or gravelled and in good condition (fig 065.). The laterite or earth access roads to respondent dwellings accounted for a minor 5 per cent and 1.5 per cent of the respondents in the respective areas.

Footpath access either with or without road access had a similar distribution between the areas with 60.4 per cent of the respondents in Maroko having no footpath access to their dwelling. In the Dolphin and Isale-Eko areas the lack of adequate footpath access accounted for 10 per cent and 21.2 per cent of the respective respondents. The



Figure 065. Asphalt Road Access, Dolphin Phase 1.

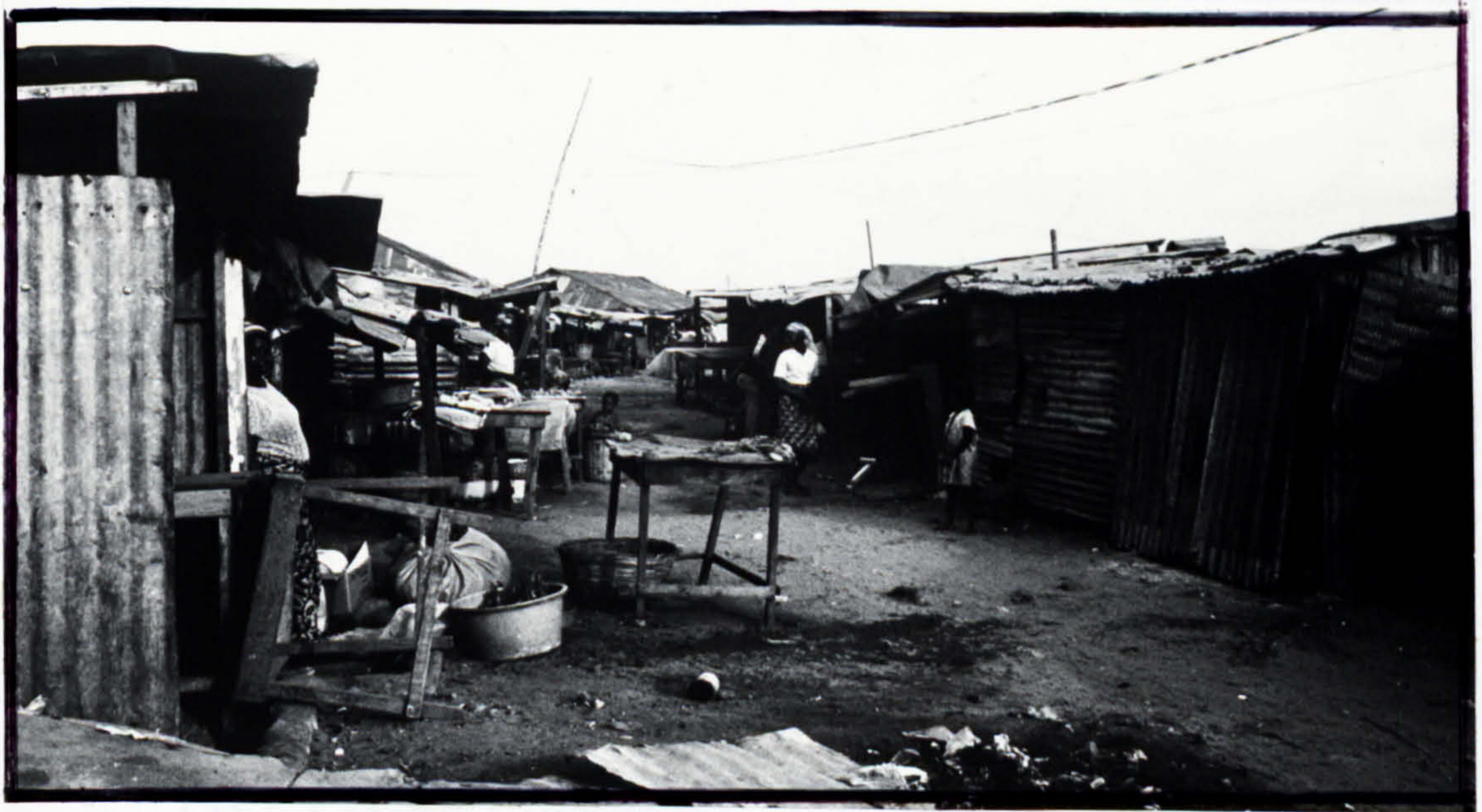


Figure 066. Laterite/Earth Pedestrian Access, Maroko.



Figure 067. Major Laterite/Earth Road Access, Maroko.

Chart 048. Condition of Roads

A					B															
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage														
v.c. = 145 ; 92.4%				m.c. = 12 ; 7.6%																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage														
v.c. = 121 ; 99.2%				m.c. = 1 ; 0.8%																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	Percentage														
v.c. = 133 ; 97.8%				m.c. = 3 ; 2.2%																

Chart 049. Condition of Footpaths

A B

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	mmarcodked															
v.c. = 149 ; 94.9% m.c. = 8 ; 5.1%																					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	elcdnpdlnna															
v.c. = 120 ; 98.4% m.c. = 2 ; 1.6%																					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iscale=edked															
v.c. = 118 ; 86.8% m.c. = 18 ; 13.2%																					

widespread existence of laterite or earth footpath access to respondent dwellings in all three areas is reflective of the low priority given to pedestrian traffic across the city. In Maroko, Dolphin and Isale-Eko, those respondents who did have footpath access, of either laterite or earth or tar or gravel accounted for 31.5 per cent, 67.5 per cent and 58.5 per cent, and 8.1 per cent, 22.5 per cent and 20.3 per cent of the respondents in the respective areas.

Further data on other aspects such as recreational, parking and postal facilities can be found in Appendix VIII.

C. Social and Community Environment

Another dimension of the housing equation which though rather less quantifiable is nonetheless as important as the building and dwelling environment, is that of the social and community environment. On the one hand the social aspect is primarily concerned with the degree of friendliness between neighbours in the various settlements under study and on the other hand the community aspect is primarily concerned with the nature of community associations and clubs within the settlements.

i) Social Characteristics

(charts 050., 051., 052., 053., 054. and 055.)

The degree of friendliness, as a measure of the social environment, is measured in terms of the percentage of the respondent households answering "yes" or "no" to such questions as:

"Are you on cordial terms with your neighbours?"

"Do you confide in your neighbours and share your problems with them?"

"Would you leave your children in your neighbour's care?"

"Do your children play with your neighbour's children?"

"Do you attend communal ceremonies of functions with your neighbours?"

In all three settlements a great majority of the respondents answered in the affirmative to the first question, this accounted for 98.1 per

cent, 97.4 per cent and 96.9 per cent of the respondents in Maroko, Dolphin and Isale-Eko respectively. This distribution was also similar for the percentage of respondents whose children played together and who attended communal ceremonies together. This accounted for 91.1 per cent, 87.9 per cent and 94.7 per cent for the former aspect and 77.4 per cent, 83.3 per cent and 93 per cent of the latter aspect for Maroko, Dolphin and Isale-Eko respectively. The differences in social aspect began to appear between the settlements in the confiding of problems between neighbours. Both Maroko and Dolphin exhibit similar trends of 52.3 per cent and 50 per cent of the respondents who confided in their neighbours with regards to their problems. In Isale-Eko the 68.5 per cent of the respondents said they confided in their neighbours. This variation could be attributed to the time factor, as a greater proportion of the respondents in Isale-Eko had lived in the neighbourhood for over ten years (some since childhood) and therefore had time to build up closer relationships. Furthermore, there is the possibility that a larger proportion of the respondents could have been related.

The question of leaving children in neighbours' care again displayed some divergent trends. In Maroko and Isale-Eko the percentage of respondents who stated that they were willing to leave their children in their neighbours' care accounted for 96 per cent and 76.2 per cent respectively. In the Dolphin study area the percentage of respondents willing to leave their children in their neighbours care accounted for 57 per cent of the respondent households.

The degree of conflict between neighbours indicated that the respondents in Maroko had a higher propensity for conflict than those in Dolphin and Isale-Eko. The exact reasons for this situation would be difficult to ascertain precisely; however, perhaps this demonstrates the co-relation between the quality of the environment

Chart 050. Respondent's Friendly Relations With Neighbours

Chart 050.		Respondent's Friendly Relations With Neighbours				Percentage									
Categ.			Adjust Freq.	Absol. No.											
yes	vc 157	mc 0	98.1	115	cordial & chatty										
no			1.3	2											
yes	vc 157	mc 0	52.2	82	confide about problems										
no			47.8	75											
yes	vc 101	mc 56	91.1	92	children play together										
no			8.9	9											
yes	vc 155	mc 2	77.4	120	attend communal										
no			22.6	35	ceremonies together										
yes	vc 101	mc 56	96.0	97	leave children with										
no			4.0	4	neighbours										
						10	20	30	40	50	60	70	80	90	

Chart 050.		Respondent's Friendly Relations With Neighbours				Percentage									
Categ.			Adjust Freq.	Absol. No.	Categories										
yes	vc 117	mc 5	97.4	114	cordial & chatty										
no			2.6	3											
yes	vc 113	mc 5	50.0	56	confide about problems										
no			50.0	56											
yes	vc 99	mc 23	87.9	87	children play together										
no			12.1	12											
yes	vc 114	mc 8	83.3	95	attend communal										
no			16.7	19	ceremonies together										
yes	vc 100	mc 22	57.0	57	leave children with										
no			43.0	43	neighbours										
						10	20	30	40	50	60	70	80	90	

Chart 050.		Respondent's Friendly Relations With Neighbours				Percentage									
Categ.			Adjust Freq.	Absol. No.	Categories										
yes	vc 130	mc 6	96.9	126	cordial & chatty										
no			3.1	4											
yes	vc 130	mc 6	68.5	89	confide about problems										
no			31.5	41											
yes	vc 113	mc 23	94.7	107	children play together										
no			5.3	6											
yes	vc 128	mc 8	93.0	119	attend communal										
no			7.0	9	ceremonies together										
yes	vc 109	mc 27	76.2	83	leave children with										
no			23.8	26	neighbours										
						10	20	30	40	50	60	70	80	90	

Chart 052. Respondent's Frequency of Arguing Leading To Avoidance of Neighbours

A		B			uncollected																
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories																
v.c.=154				m.c.=3		10 20 30 40 50 60 70 80 90															

					collected																
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories																
v.c. =119				m.c.=3		10 20 30 40 50 60 70 80 90															

					iscale = colled																
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories																
v.c. =106				m.c.=30		10 20 30 40 50 60 70 80 90															

Chart 053. Respondent's Frequency of Fighting Involving Police

A		B																			
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories																
			0.6	1	very often																
			0.0	0	regularly																
			0.6	1	occasionally																
			0.6	1	infrequently																
			98.2	151	never																
v.c. = 154				m.c. = 3																	
										10	20	30	40	50	60	70	80	90			

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories																
			0.0	0	very often																
			0.0	0	regularly																
			0.0	0	occasionally																
			0.0	0	infrequently																
			100.0	119	never																
v.c. = 119				m.c. = 3																	
										10	20	30	40	50	60	70	80	90			

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories																
			0.0	0	very often																
			0.0	0	regularly																
			0.0	0	occasionally																
			1.0	1	infrequently																
			99.0	103	never																
v.c. = 104				m.c. = 32																	
										10	20	30	40	50	60	70	80	90			

Chart 054. Respondent's Frequency of Fighting Settled By Police

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncorrelated														
v.c. = 154				m.c. = 3																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncorrelated														
v.c. = 119				m.c. = 3																

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncorrelated														
v.c. = 106				m.c. = 30																

(provision of community facilities) and degree of friendliness. This factor would apply to Maroko, in that competition for the very scarce amenities would appear to override neighbourly considerations (as was highlighted when the water tap installed in Maroko led to violent clashes between neighbours). However, this cannot be the sole reason for neighbourly friction as the the social dimensions in the case of the respondents in Isale-Eko are higher than those of the respondents in the Dolphin study area. Under these circumstances it seems possible that length of residency, tenure and location may also play an important role in influencing the relationship between neighbours.

C. Locational Circumstances

The locational dimension of housing, especially in terms of its relation to employment, relatives and friends, dependents' schooling and market facilities is of major importance, so much so that it has been known for households to forsake housing that is 'officially' considered good housing (with regards to the physical standards of the dwelling) in favour of dwellings under slum conditions owing to the improved locational dimension of the slum (Marris, 1961; Turner, 1982). The locational dimension is itself constituted of a number of hierararchical aspects in respect to places of employment, childrens' schooling, shops, worship, bus services, medical facilities, recreational areas, postal services, friends and relatives. The investigation below attempts to highlight the locational dimensions of some of these aspects in terms of the time taken by the respondents to travel to these places from their dwellings.

i) Travel Time to Place of Employment (chart 056.)

It is generally accepted that location from the place of employment (especially for low income households) constitutes a major influence in the housing equation. Although this aspect in terms of

distance from employment is distorted by transport facilities, it nonetheless highlights the nearness (in time) of the selected settlement. Of the three settlements under study Maroko, not surprisingly in contrast to the other two, exhibited the highest proportion of respondents with high travel periods. Although the comparison with the other two areas appears unfavourable it does compare quite favourably with other settlements on the mainland. Although the findings show that 30 per cent of the respondents had a travel time of over 60 minutes from their place of employment it must be emphasised that much of this time was taken up in walking to the public bus stop (discussed later). Apart from this (owing to the 'illegality' of its status) Maroko is very well located from the main centres of employment in Lagos. This is in the main probably attributable to the extensive road construction programme which has taken place over the last ten years and has consequently brought Maroko closer to the commercial centres of Lagos. Only about 20 per cent of the respondents in Maroko had a travel time of less than 20 minutes to their place of employment. This last group was most probably composed of self-employed households and those employed on nearby Victoria Island.

Dolphin and Isale-Eko are well located for the main employment centres. As such 67.7 per cent and 69.3 per cent of the respondents in the Dolphin and Isale-Eko areas had travel times to their place of employment of less than 20 minutes. Only 4.2 per cent and 9.9 per cent of the respective respondents had a travel time to their place of employment of over 60 minutes.

Chart 057. Respondent's Travel Time to Place of Employment

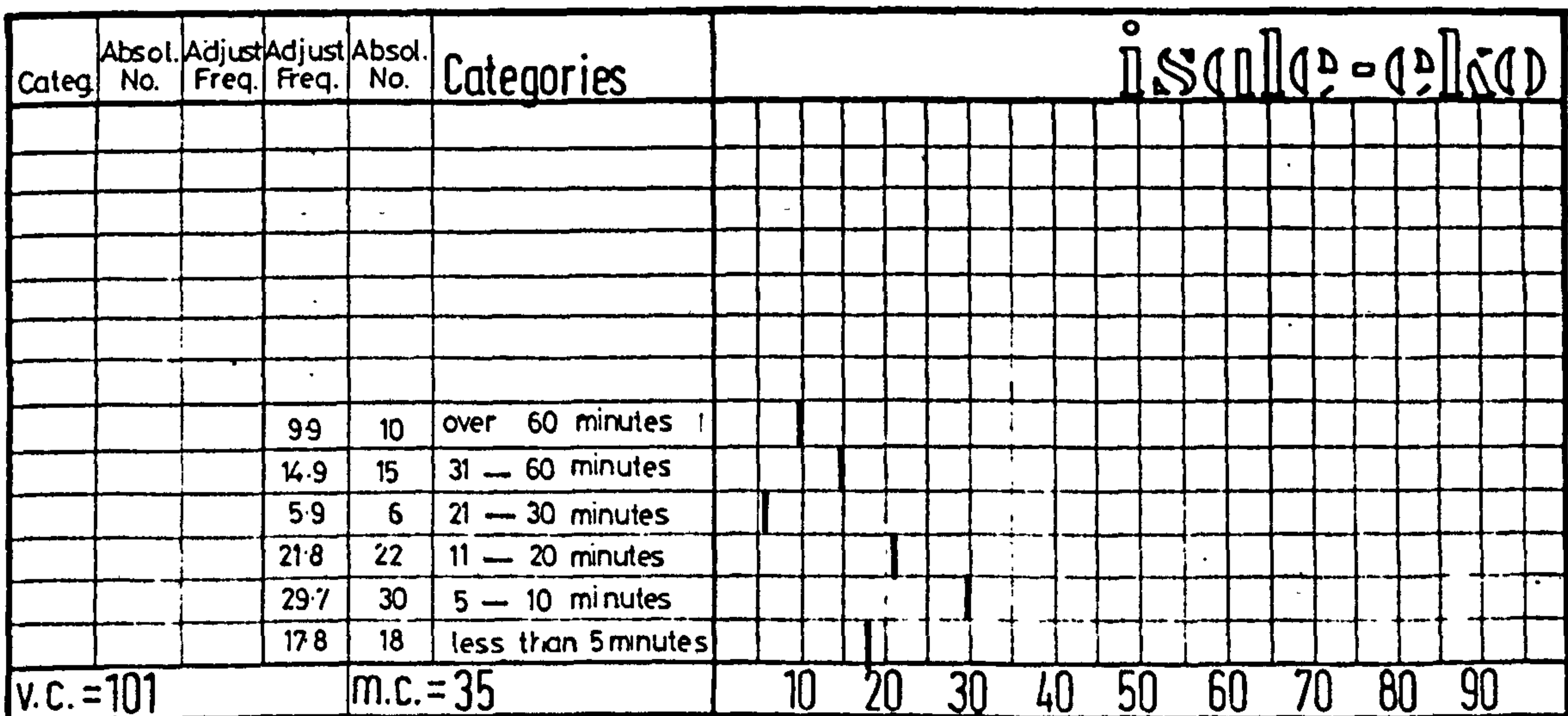
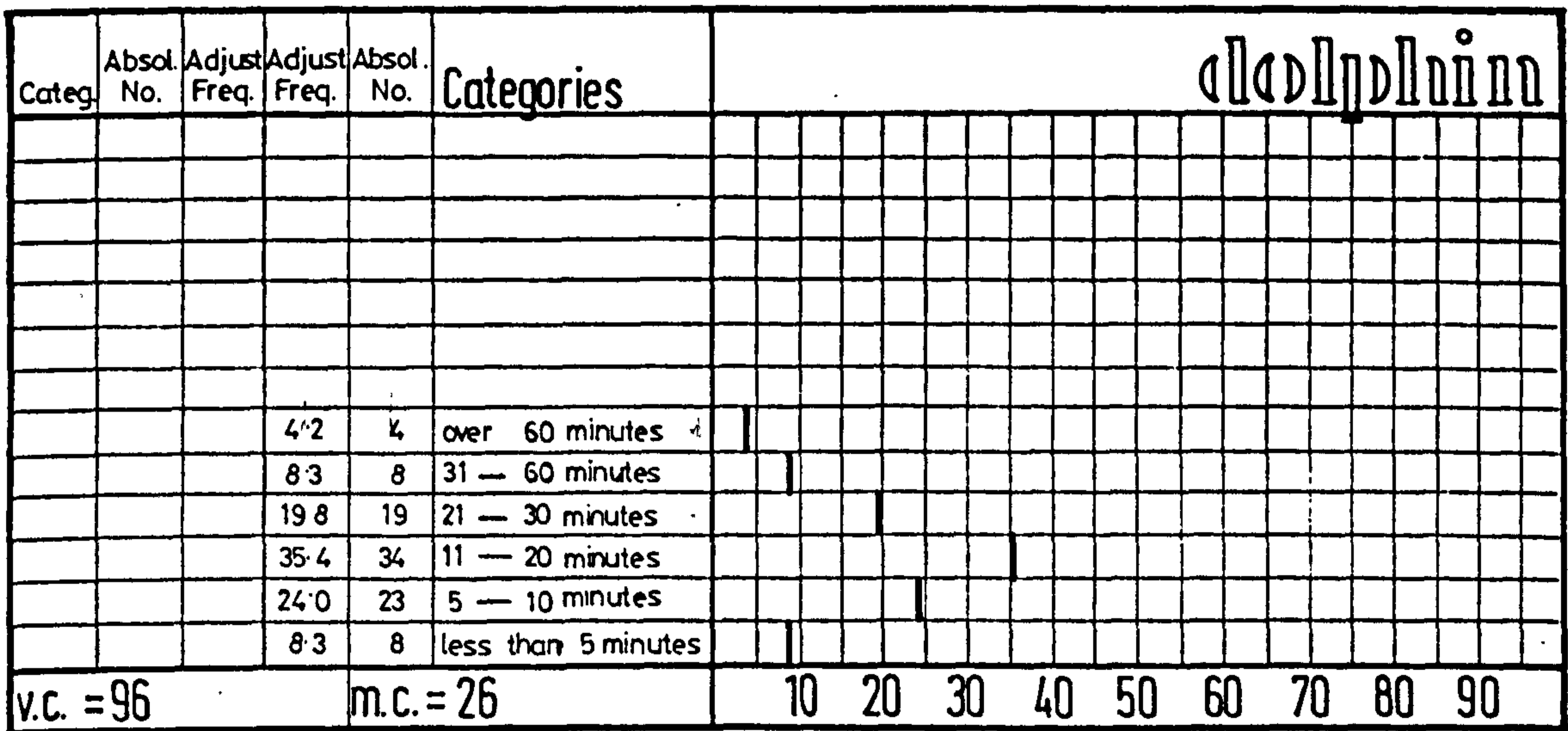
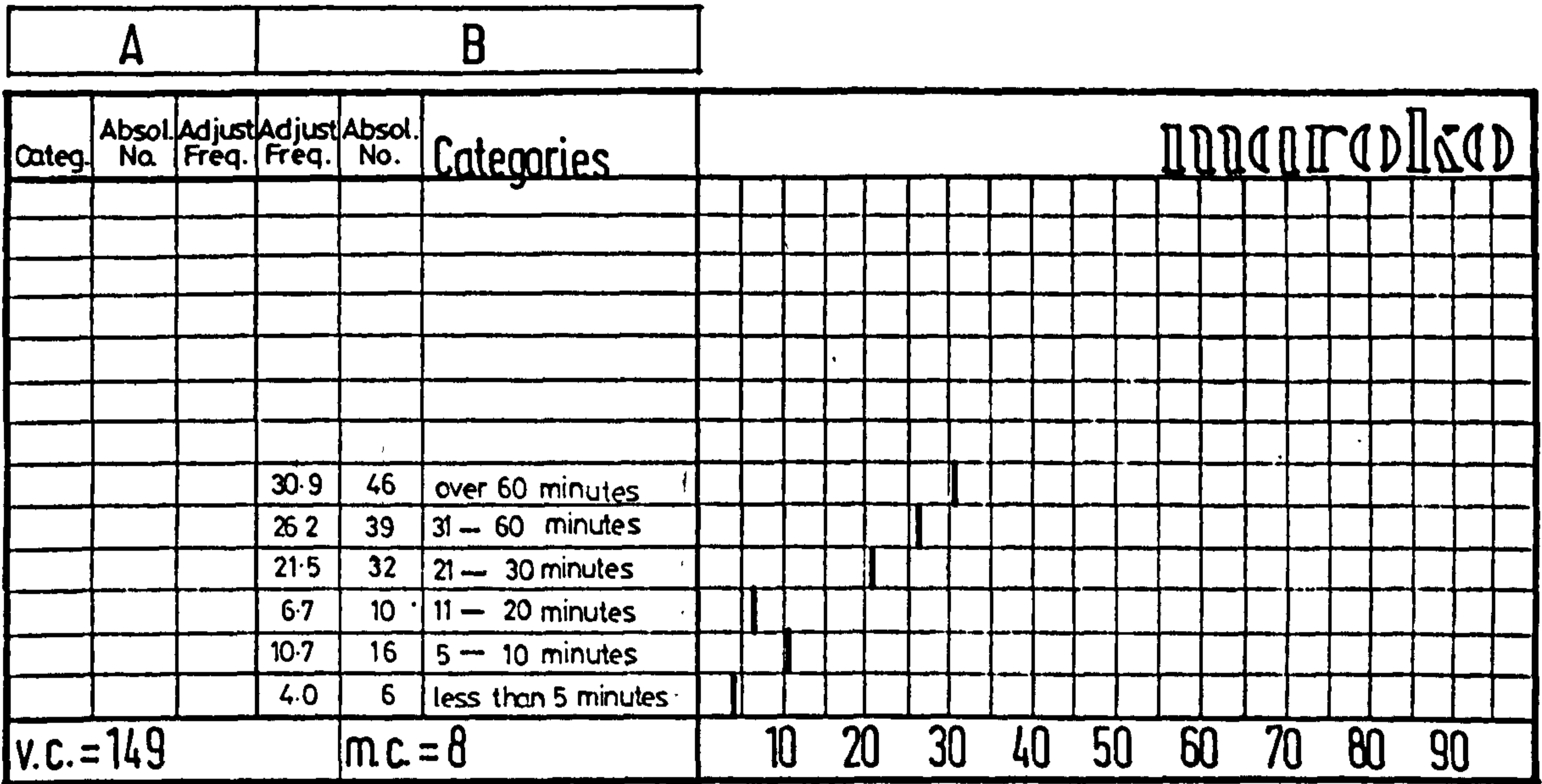


Chart 057. Locational Aspect of Respondent Household Head's Place of Employment.

A					B															
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncorrelkd														
v.c. = 124					m.c. = 33					10	20	30	40	50	60	70	80	90		

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	correlkd														
v.c. = 104					m.c. = 18					10	20	30	40	50	60	70	80	90		

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	iscale = corrd														
v.c. = 105					m.c. = 81					10	20	30	40	50	60	70	80	90		

ii) Travel Time to Public Bus Services (chart .058.)

As mentioned earlier, the main contributive aspect of the travel time to the place of employment for the Maroko respondents was that of having to walk a long distance to the bus stop located on the western periphery of the settlement. This, again as earlier indicated, is attributable to the fact that the authorities recognise that Maroko exists despite its 'illegal' status. As such 63.4 per cent of the respondents claimed that they spent in most cases over 30 minutes walking to the bus stop. 24.7 per cent of the respondents actually took over 60 minutes to get to the bus stop. If put within the context of the travel time to the place of employment from the dwelling it would appear that a sizeable proportion of those respondents who took over 60 minutes to get to work spent half of that time walking to the bus stop.

iii) Travel Time to Friends and Relatives (charts 059. and 060.)

Proximity of residence to one's friends and relatives, especially in the urban context appears to have a number of influencing factors based on kinship-tribalistic ties and length of residency. Given the rather substantial tribal homogeneity and the length of residency distribution for each area, the 45 per cent, 66.1 per cent and 92.8 per cent distribution of the respondents who lived less than ten minutes from their friends, the 39.5 per cent, 46.4 per cent and 82.3 per cent distribution of respondents who lived less than ten minutes from their closest relative in Maroko, Dolphin and Isale-Eko should not be surprising. The Maroko area, characterised by its low proportion of friends and relatives nearby, is dominated by people from the eastern region of Nigeria whose residency is relatively short. By contrast, Isale-Eko with its predominance of Yoruba inhabitants of long standing residency (as illustrated earlier), exhibited a very

Chart 058. Respondents Travel Time to Bus Services

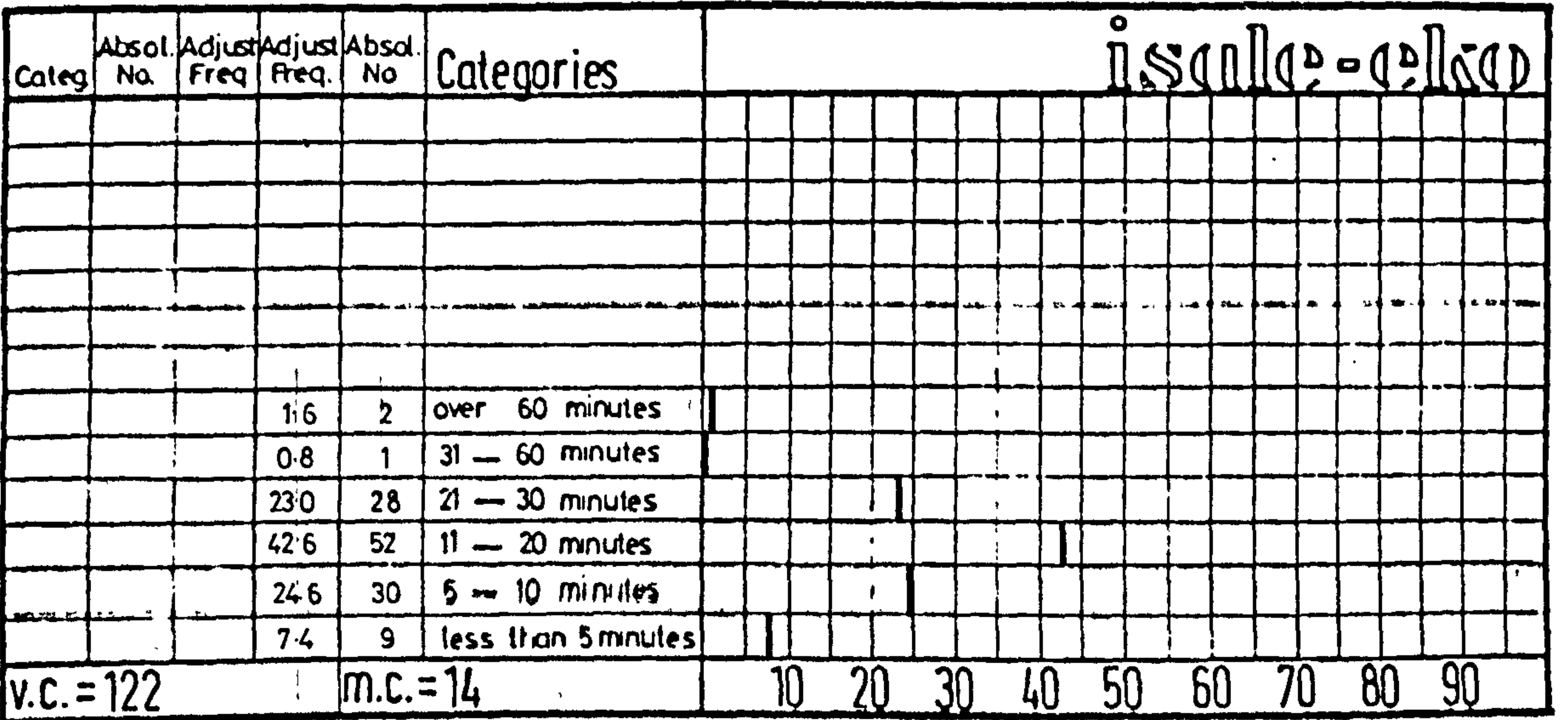
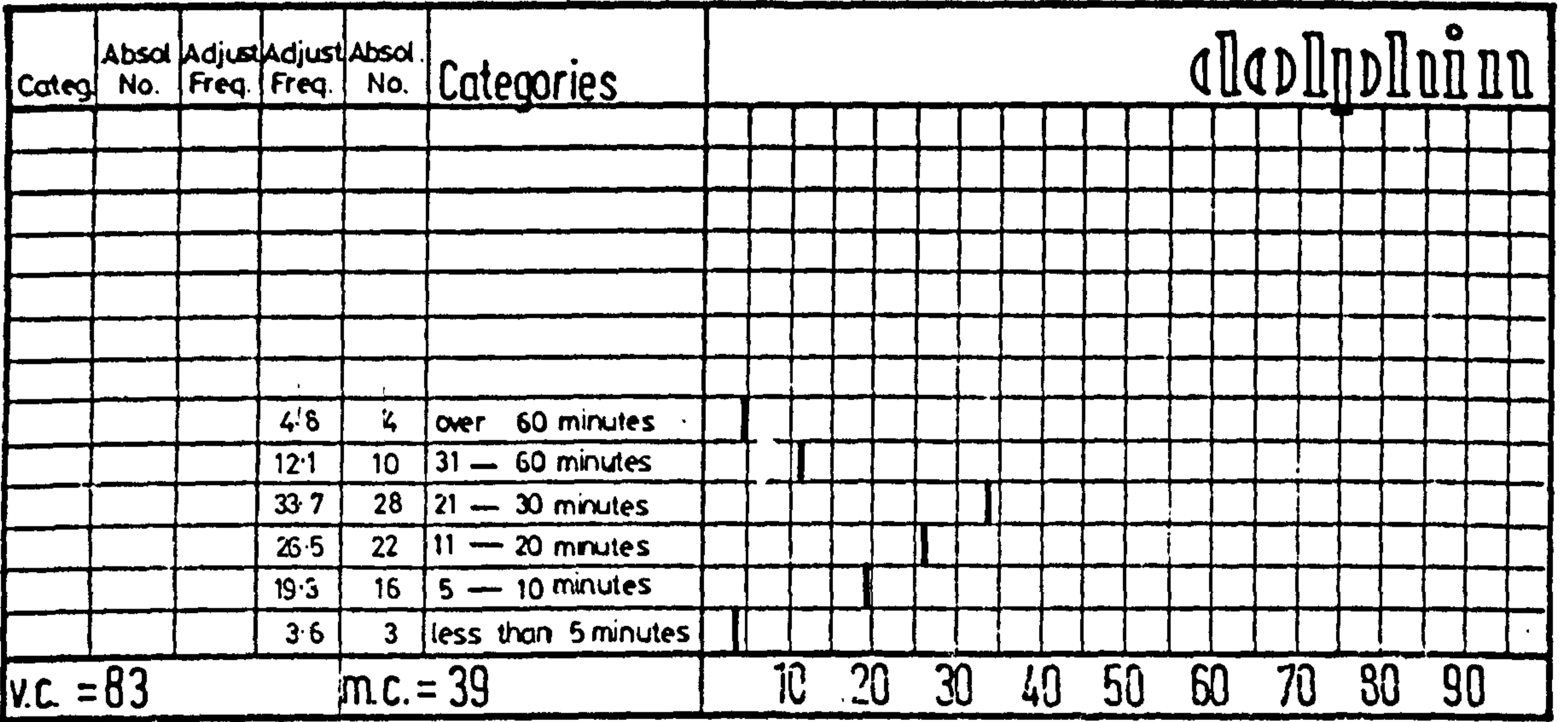
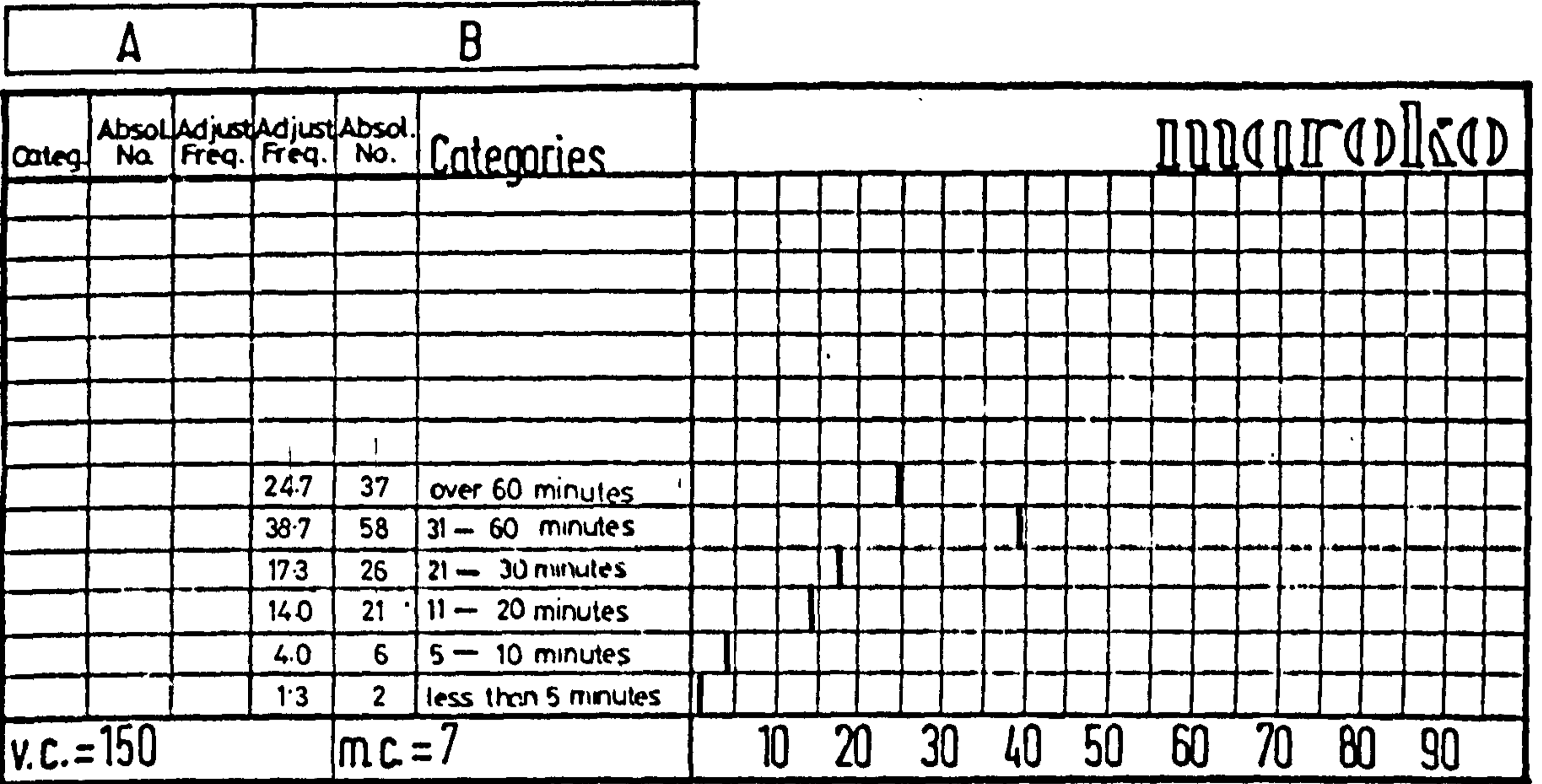


Chart 059. Respondents Travel Time to Friends

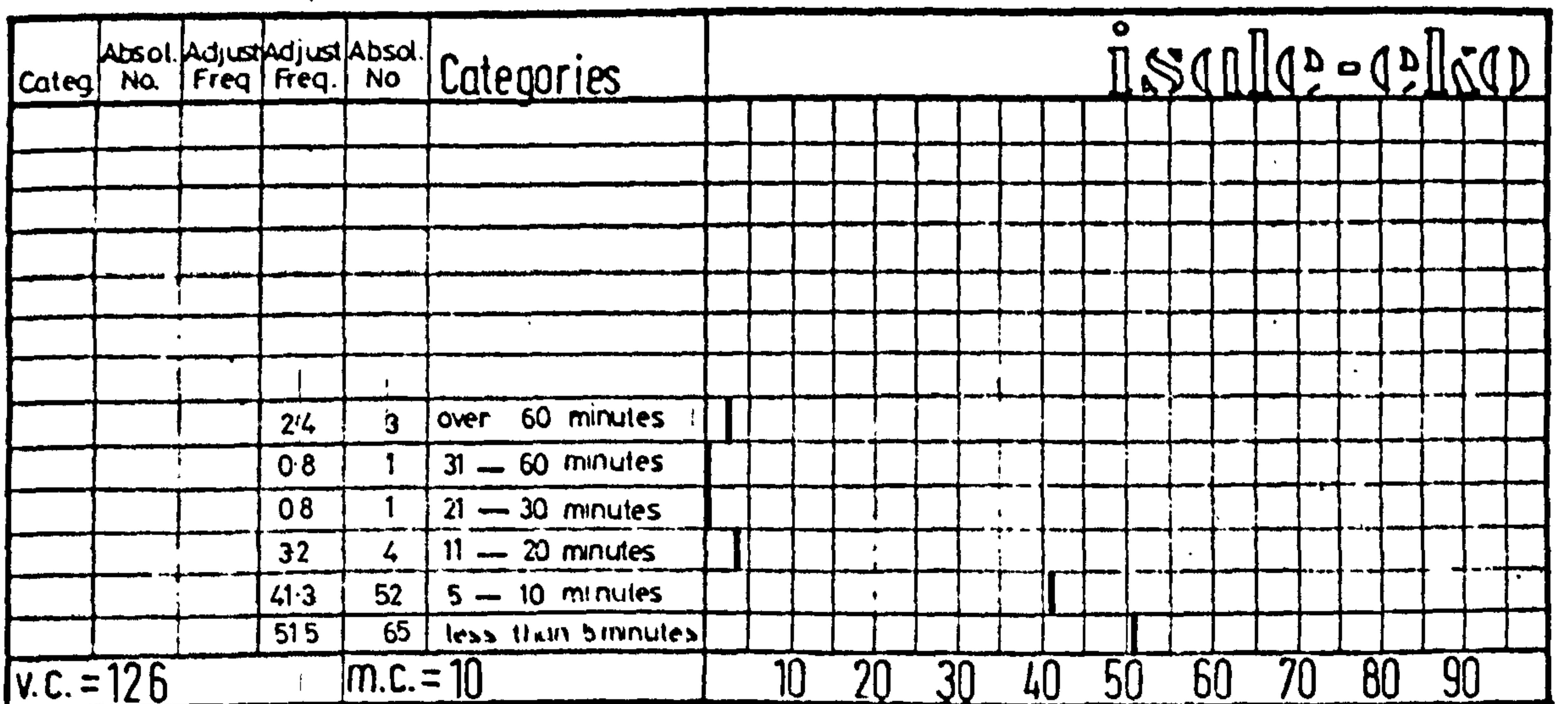
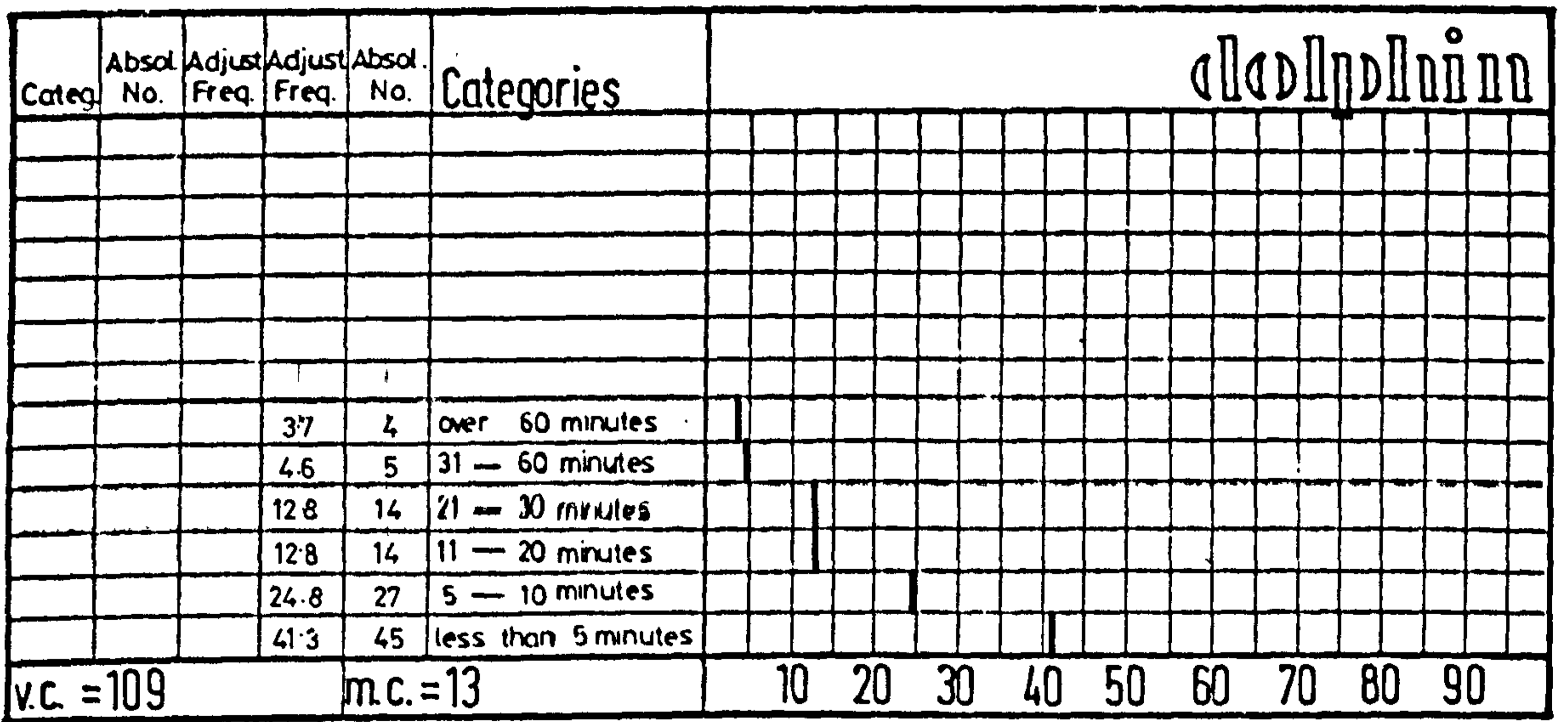
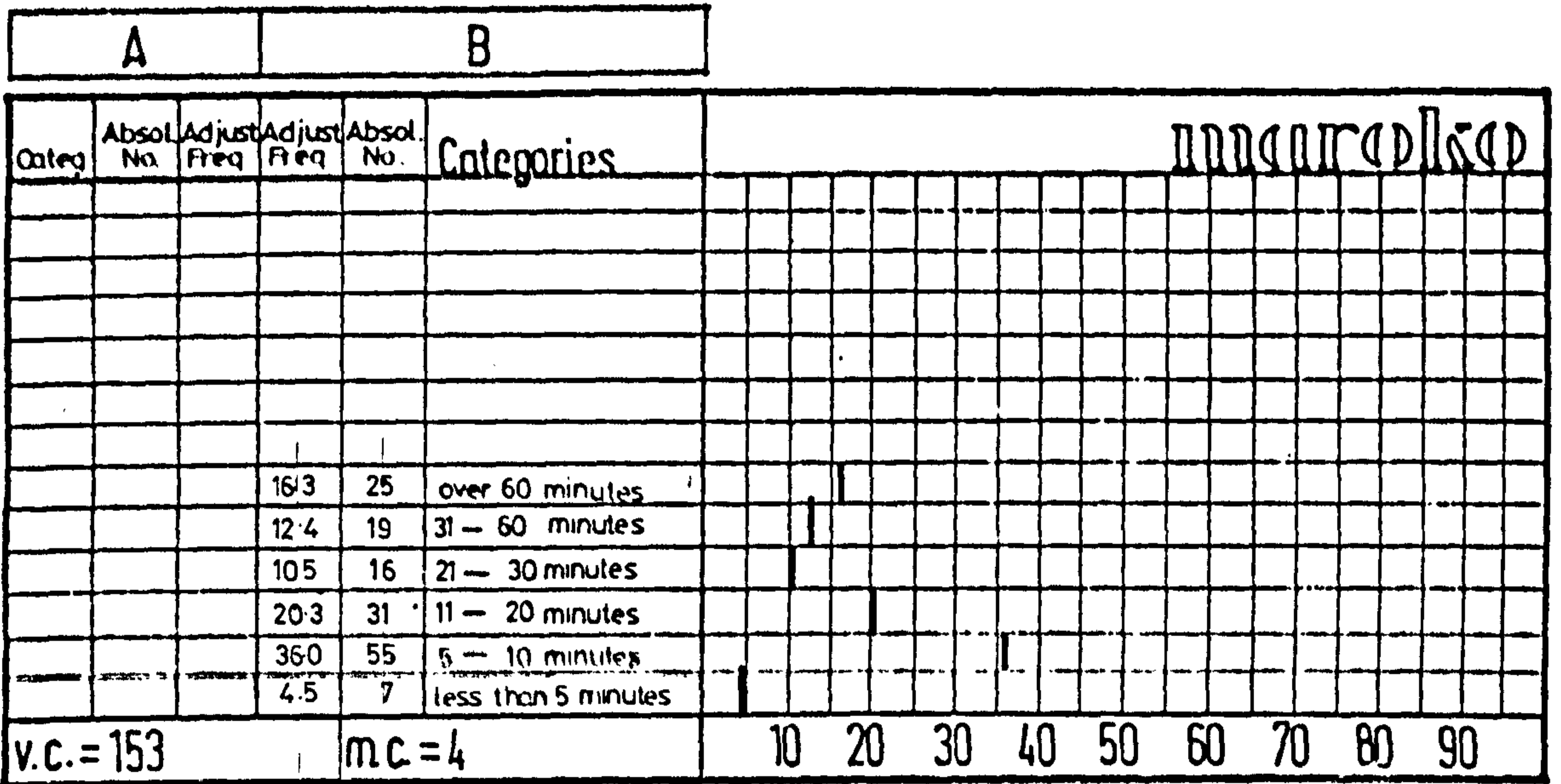
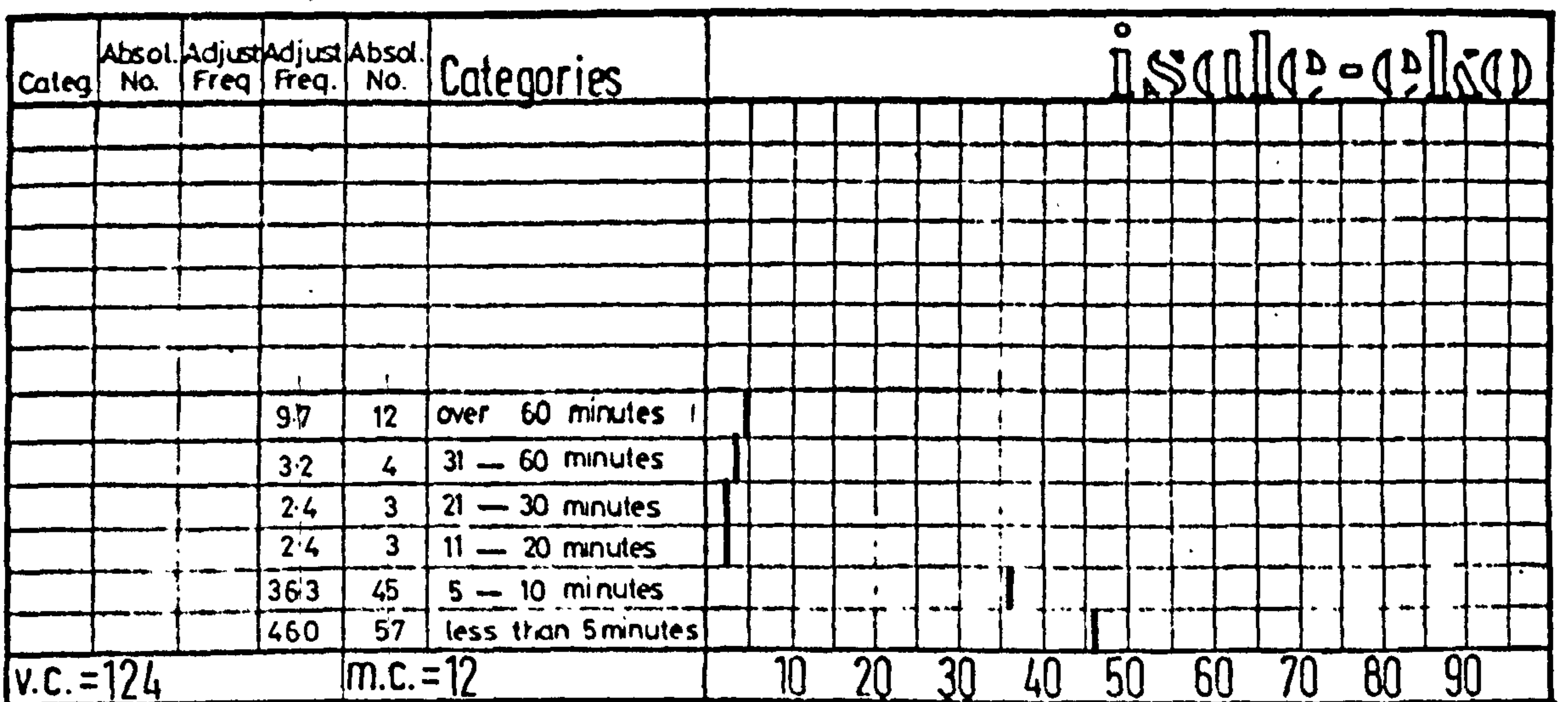
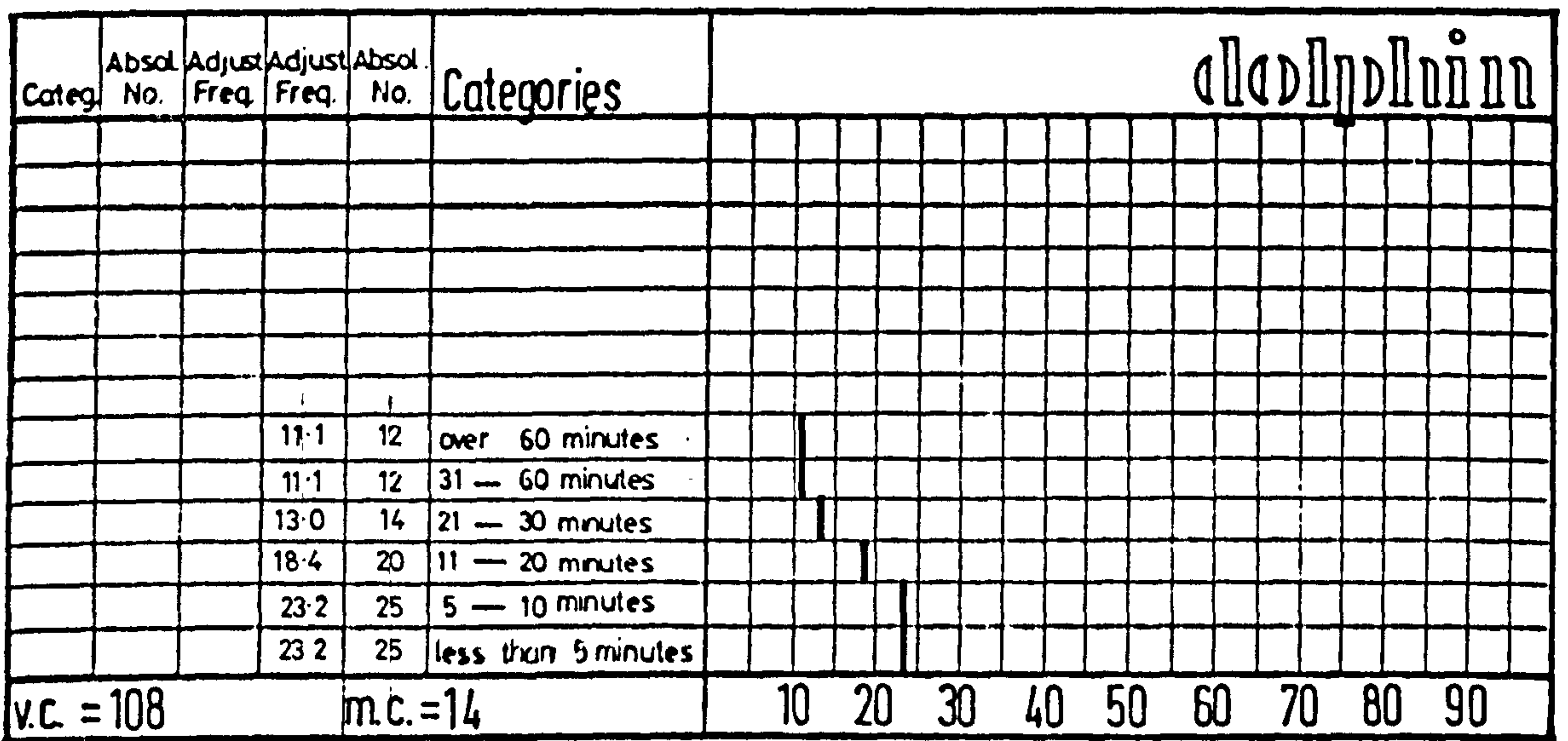
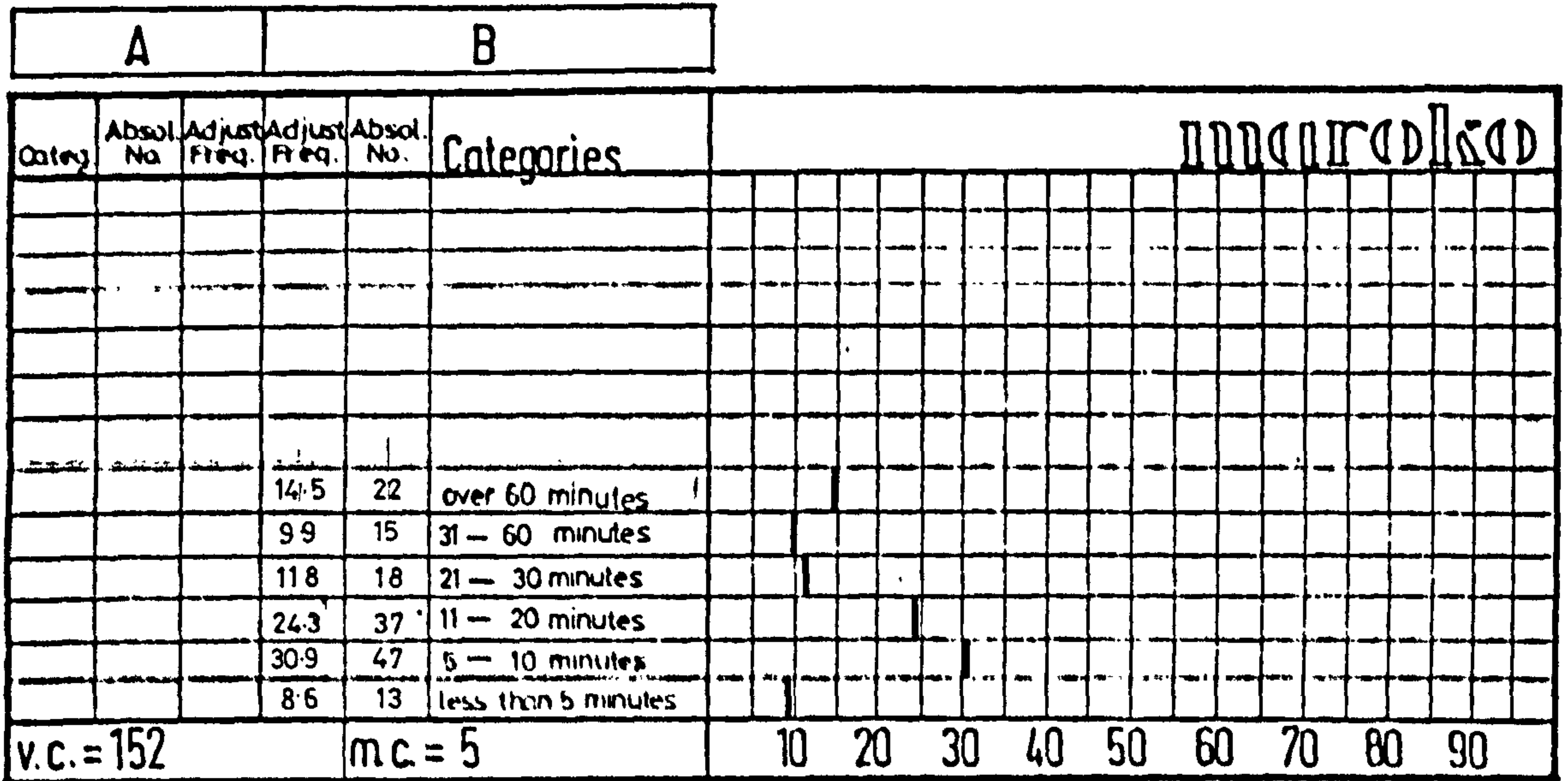


Chart 060. Respondent's Travel Time to Relatives



high proportion of friends and relatives nearby. The Dolphin area with its sizeable proportion of respondents originating from 'across the road' on Lagos Island are therefore in principal not far from their previous neighbours and relatives.

E. Concluding Remarks

As with the findings of the household characteristic survey (section I, p. 198), those of the housing environment are not only similarly diverse across the entire sample but also cohesive according to each study area, with a marked contrast in the building, dwelling and amenity standards, especially between those of the Dolphin study area and those of Maroko and Isale-Eko. Another finding associated with the housing environment is that of homogeneity of characteristics. At one end is the Dolphin estate with its almost totally uniform environmental characteristics except for the two dwelling types. At the other end is Isale-Eko with a wide spread of environmental characteristics. In the middle is Maroko which is primarily dominated by rooming houses and limited amenities.

The relevance of these aspects to an improvement programme is twofold:

(i) they have to be taken into account when considering the resources required to bridge the gulf between the actual and official standards and,

(ii) they pinpoint sharply the problems that need to be contended with when dealing with a diverse environment. With regard to the first aspect, the imposition of official standards has, in many situations worked contrary to the needs of the householders and therefore the relevance of striving for these 'official' aspirations must be reconsidered. On the diversity of the environment, although this does

present many difficulties, it nonetheless (from a positive view) provides the much needed variety missing in many of the modern housing developments.

III. Household Housing Satisfaction

Introduction

As highlighted earlier, conventional attitudes and strategies towards the problems of low income slum housing tend to view housing simply in terms of the provision of a certain number of standard dwelling units required to meet an officially prescribed housing need. The success of such strategies has now been shown to be very limited in tackling the problem. They have in fact contributed to it:

(i) By setting very high constructional standards despite the limited resources and thus only a limited number of units has been produced.

(ii) By raising the cost of housing - a consequence of the massive financial resources set aside for housing again, despite the limited building resources available to meet such a demand.

However, changing attitudes towards low income housing, have revealed that substantial contributions can be gained from householders by meeting their housing needs as they themselves see them. These attitudes are based on the view that the various 'actors' involved, the authorities, professionals, contractors and most importantly the householders themselves, are all bound up in a process of collective co-operation and participation. Assessing the needs of these householders as identified by themselves is the primary aim of this section and from this assessment the priority needs of the householders can be identified.

To this end a number of techniques were utilised to determine the attitudes the householders have towards their housing environment. The

simple attitude indexing technique used required each respondent to identify his or her degree of satisfaction or dissatisfaction with a number of housing environment variables. Each variable had a 5-point Likert scale (Likert, 1932). The five categories were then assigned simple weightings of 5, 4, 3, 2 and 1. The high score indicated a favourable attitude. In other words, 5 meant very satisfactory, 4 meant satisfactory, 3 meant acceptable, 2 unsatisfactory and 1 very unsatisfactory. In all there were fifty variables (table 029.) divided into a number of categories in accordance with the sub-sections of the household housing environment survey.

Table 029. Household Housing Environment Variable List

Variable List	Variable Number	Variable Label
(i) Building and Dwelling		
BUILD01	X1	Type of Walling Material
BUILD02	X2	Type of Roofing Material
BUILD03	X3	Type of Ceiling Material
BUILD04	X4	Type of Flooring Material
BUILD05	X5	Type of Windows
BUILD06	X6	Type of Doors
DWESAT01	X7	Number of People living in Dwelling Unit
DWESAT02	X8	Privacy within Dwelling Unit
DWEFAC01	X9	Water Supply
DWEFAC02	X10	Electical Supply
DWEFAC03	X11	Bathing Facilities
DWEFAC04	X12	Cooking Facilities
DWEFAC05	X13	Toilet Facilities
DWEFAC06	X14	Childrens' Play Space
DWEFAC07	X15	Study Space for Children
DWEFAC08	X16	Sleeping Accomodation
OWNREN01	X17	Rentage

Variable List	Variable Number	Variable Label
(ii) Neighbourhood		
COMFAC01	X18	Refuse Collection Facilities
COMFAC02	X19	Safety and Security Facilities
COMFAC03	X20	Shopping Facilities for Daily Needs
COMFAC04	X21	Medical Facilities
COMFAC05	X22	Dependents' Primary School
COMFAC06	X23	Dependents' Secondary School
COMFAC07	X24	Place of Worship
COMFAC08	X25	Postal Facilities
COMFAC09	X26	Recreational Facilities
COMFAC10	X27	Roads
COMFAC11	X28	Footpaths
COMFAC12	X29	Parking
COMFAC13	X30	Waste Water Drainage
COMFAC14	X31	Rain Water Drainage
(iii) Social and Community		
SOCENVO1	X32	Neighbourly Relations on this Floor
SOCENVO2	X33	Neighbourly Relations in this Building
SOCENVO3	X34	Neighbourly Relations in this Compound
SOCENVO4	X35	Neighbourly Relations Outside the Above Variables
COMASS01	X36	Number of Community Associations
COMASS02	X37	Goals and Objectives of Community Associations
COMASS03	X38	Achievements of Community Associations
COMASS04	X39	Leadership of Community Associations

Variable List	Variable Number	Variable Label
(iv) Locational		
LOCAT01	X40	Proximity to Place of Employment
LOCAT02	X41	Proximity to Dependents' Primary School
LOCAT03	X42	Proximity to Dependents' Secondary School
LOCAT04	X43	Proximity to Shopping Facilities for Daily Needs
LOCAT05	X44	Proximity to Place of Worship
LOCAT06	X45	Proximity to Public Bus Facilities
LOCAT07	X46	Proximity to Medical Facilities
LOCAT08	X47	Proximity to Postal Facilities
LOCAT09	X48	Proximity to Recreational Facilities
LOCAT10	X49	Proximity to Friends
LOCAT11	X50	Proximity to Relatives

A. Household Priority Needs Index (PNI)

This technique (Andrews and Phillips, 1970 at pp.211-224) which has been used to assess low income households in Lima, the capital city of Peru, involves the use of two of the 'attitude' indices. One index indicates the extent of the dissatisfaction about the variable and the other the intensity of this dissatisfaction. The 'extensivity index', based on the percentage of respondents whose attitude was less than acceptable, ie., unsatisfied or very unsatisfied towards the particular variable, indicated how widespread the problem was. The 'intensity index' indicated how important the problem was to those respondents who found it less than acceptable. This was computed by determining the percentage of dissatisfied people who were extremely dissatisfied. Once the extensivity and intensity indices had been computed, the overall ranking or priority need index (PNI) could be

computed using the formula;

$$PNI^2 = \text{extensivity index}^2 + \text{intensivity index}^2$$

Applying it to variable LOCATO1-M40, ie., proximity to place of employment for Maroko, where the extensivity index = 24.4 and the intensivity index = 6.6 we get;

$$\begin{aligned} PNI-LOCATO1-M40^2 &= 24.4^2 + 6.6^2 \\ &= \sqrt{638.9} \\ &= 25.277 \end{aligned}$$

The computed PNI values on the fifty variable for the 3 study areas are as in tables 041., 042. and 043.; and in figs 068., 069., and 070. As expected and consistent with the findings exhibited by the survey, the PNI values for each study area highlight the divergent and associated area distribution trends. Maroko stands out distinctly with an overall rating of 47.172 as against the overall ratings of Dolphin and Isale-Eko of 18.321 and 23.087 respectively. This indicates that in general terms the overall priority need (in terms of the respondent's dissatisfaction with his or her housing environment (for the given variables)) for the Maroko study area is twice that of Isale-Eko and nearly three times that of the Dolphin study area. The relatively high rating is in the main attributed to the very high rating of the neighbourhood sub-section computed at 72.397 below.

Table .030. Study Area Sub-Sectional Priority Needs Index (PNI).

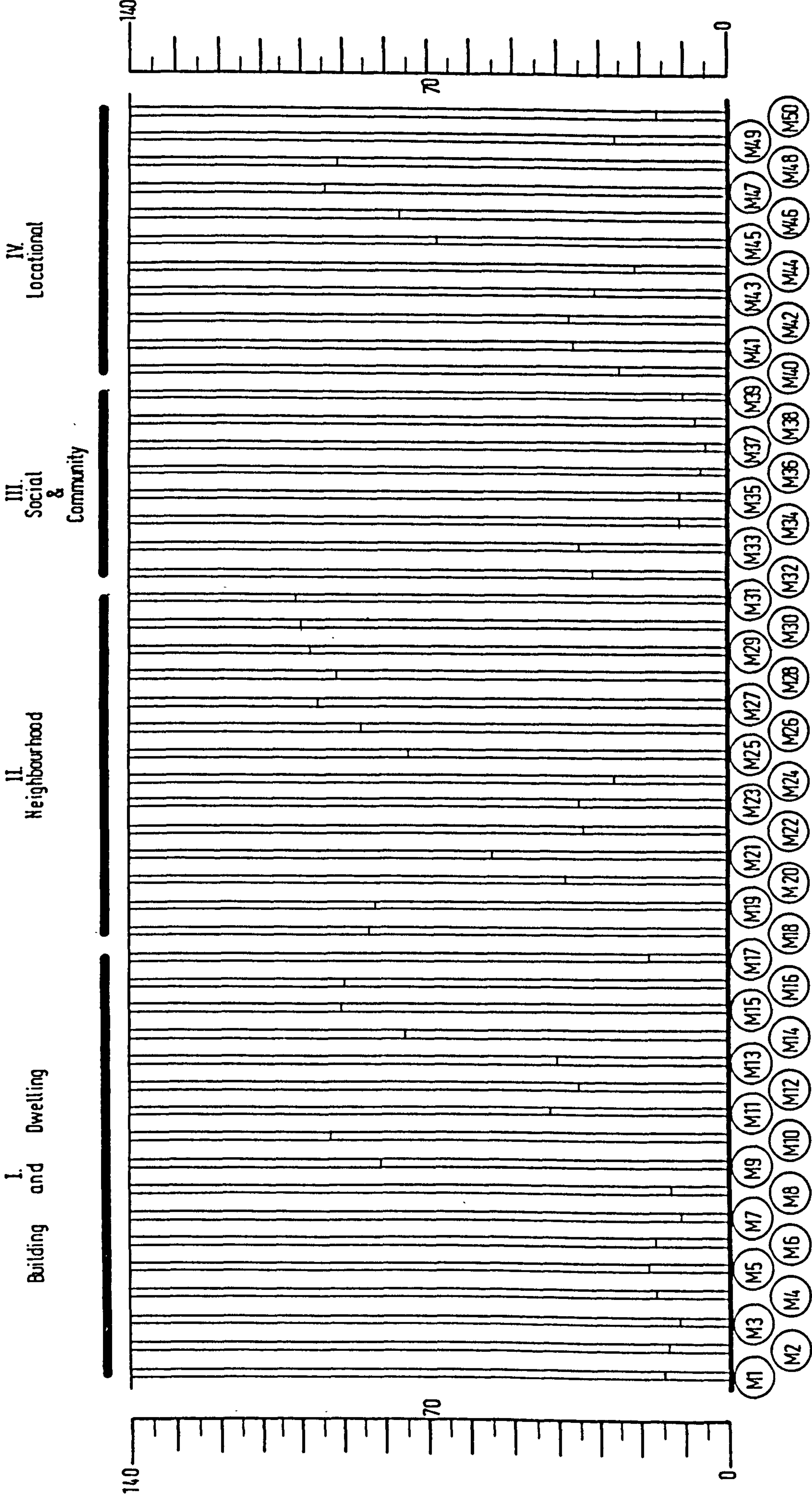
	Maroko	Dolphine	Isale-Eko
Building and Dwelling	40.826	5.133	24.847
Neighbourhood	72.397	29.769	27.496
Social and Community	15.330	5.794	5.871
Locational	48.032	33.243	27.278
Total	47.172	18.321	23.087

The influence of this factor on the other sub-sections although not immediately apparent, is particularly substantial with regard to

the building and dwelling sub-section. If for the purposes of this investigation, this sub-section is further divided into two sub-sections, a building and dwelling physical attributes sub-section and a building and a dwelling services attributes sub-section, two further sub-sectional PNI ratings can be generated. As such the building and dwelling physical attributes has a PNI rating of 15.362. This compares favourably with the equivalent sub-section for the Isale-Eko area which is rated at 23.813. On the other sub-section, the building and dwelling services attributes a PNI rating registering at a high 69.077. When compared with the equivalent sub-section in Isale-Eko with a PNI rating of 26.454, the influence of the general lack of neighbourhood facilities and its effect on the dwelling unit become apparent, especially in the areas of water and electricity.

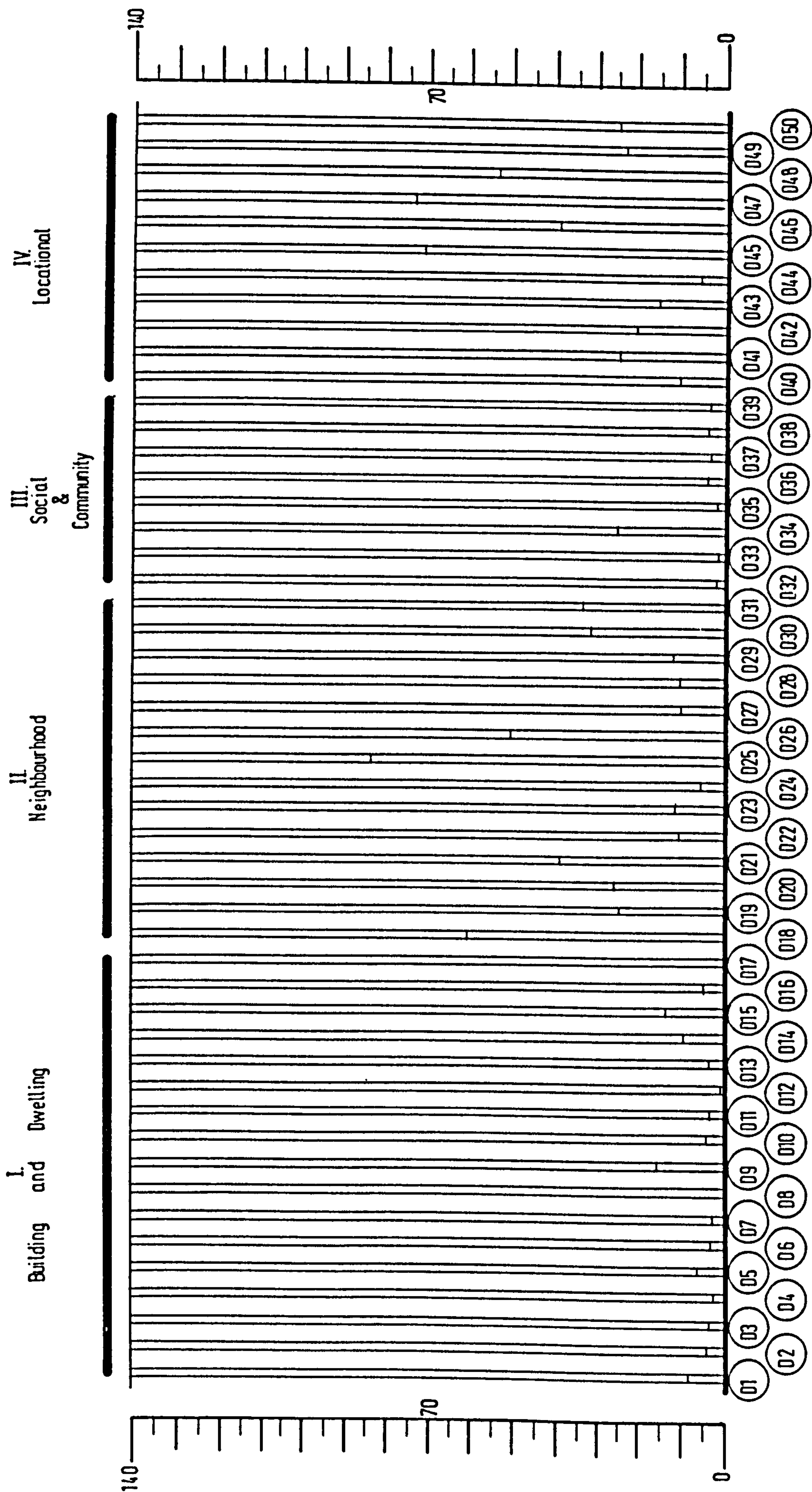
Suprisingly, the neighbourhood sub-section for the Dolphin area computed a higher PNI rating (29.769) than for the same sub-section for Isale-Eko (27.496). This somewhat contradictory finding could probably be attributed to the influence of social aspects in Isale-Eko. For example, the fact that a majority of the respondents in this area had lived there for over 10 years militates against the possibility that because they had perhaps grown up with and/or lived with these neighbourhood facilities they had, in the process got used to them and found them acceptable. Conversely those respondents in the Dolphin estate having moved to a modern housing area may have had higher expectations of this new housing.

This technique does have its limitations with regard to its application in determining the housing needs of the entire settlement as expressed by all the households. It only considers those respondents who have expressed some form of dissatisfaction with their housing environment. It has not considered or taken into account the overall attitudes of all the respondents whose attitudes if fully



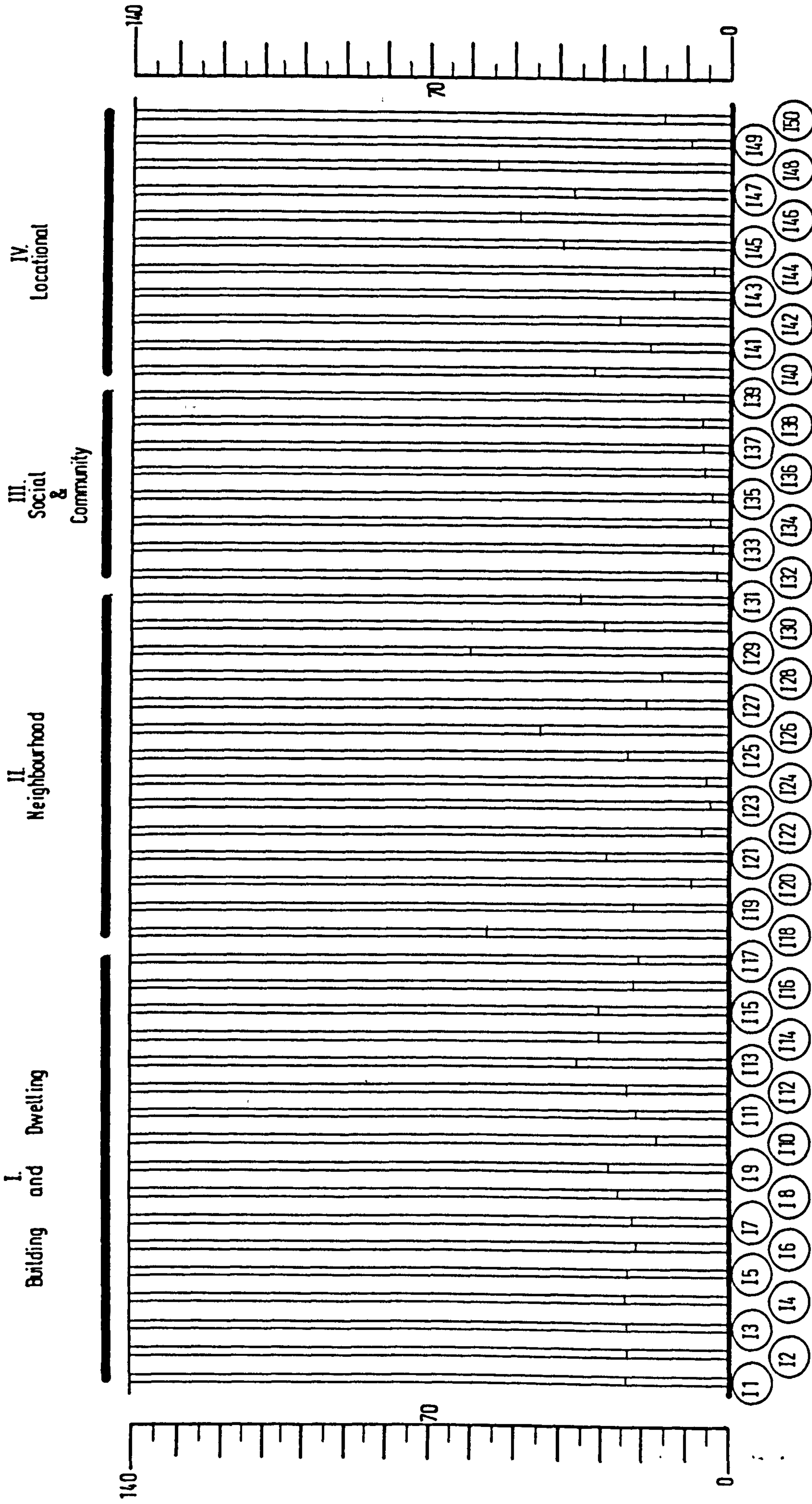
Priority indexes (PNI) = index (0-140)

fig 068.



Priority needs index (PNI) = discipline

fig 069.



Priority needs index (PNI) = index = 0-100

fig 070.

considered may change the overall ratings of the settlement, sub-sections and/or variables. The relevance of this would be crucial if a number of settlements within a similar housing sector were being investigated. The settlements in this study have been chosen to highlight the divergent characteristics between these housing sectors. The techniques used in the following sections attempt to redress this bias by computing the needs of a higher number of expressed attitudes. Despite the shortcomings mentioned above, this technique does provide a quick indicator of where the housing environmental problems lie and hence is an indicator of the possible housing needs of the households in the area under study.

B. Household Satisfaction Index Value (SIV)

When viewed against the PNI, this technique facilitates a closer examination of the relative weights which the respondents assigned to each variable. This is because this method attempts to measure the overall strength of the respondents' satisfaction above or below that of the respondents' dissatisfaction with a variable, sub-section and study area in the form of an index rating (Yen, 1975).

The first step in the computation of this satisfaction index value (SIV) is to recode the 5-point Likert scale to a 3-point scale. Thus if the respondents' responses to the question on satisfaction with location from place of employment, LOCAT01-M40 for Maroko is taken as an example.

Step 1. Recoding:

Very Satisfactory	1	} becomes	Satisfactory = 48.70%
Satisfactory	2		
Acceptable	3	— becomes	Acceptable = 27.00%
Unsatisfactory	4	} becomes	Unsatisfactory = 24.30%
Very Unsatisfactory	5		

The second step involves converting the percentage attribute of each variable in all three response categories to a decimal.

Step 2. Conversion:

Satisfactory	0.487
Acceptable	0.270
Unsatisfactory	0.243

The third step then involves assigning the response categories with either a positive weighting for the satisfactory response, a minus weighting for the unsatisfactory response and a zero rating on the acceptable response.

Step 3 Assigning:

Satisfaction	+0.487
Acceptable	0.000
Unsatisfactory	-0.243

The fourth step requires the summing-up of the categories. Thus the satisfaction index value for the variable LOCAT01-M40 is 0.244. The computed values for the remaining variable for each of the settlements are as in tables 044 ., 045. and 046. and figs 071 .., 072. and 073..

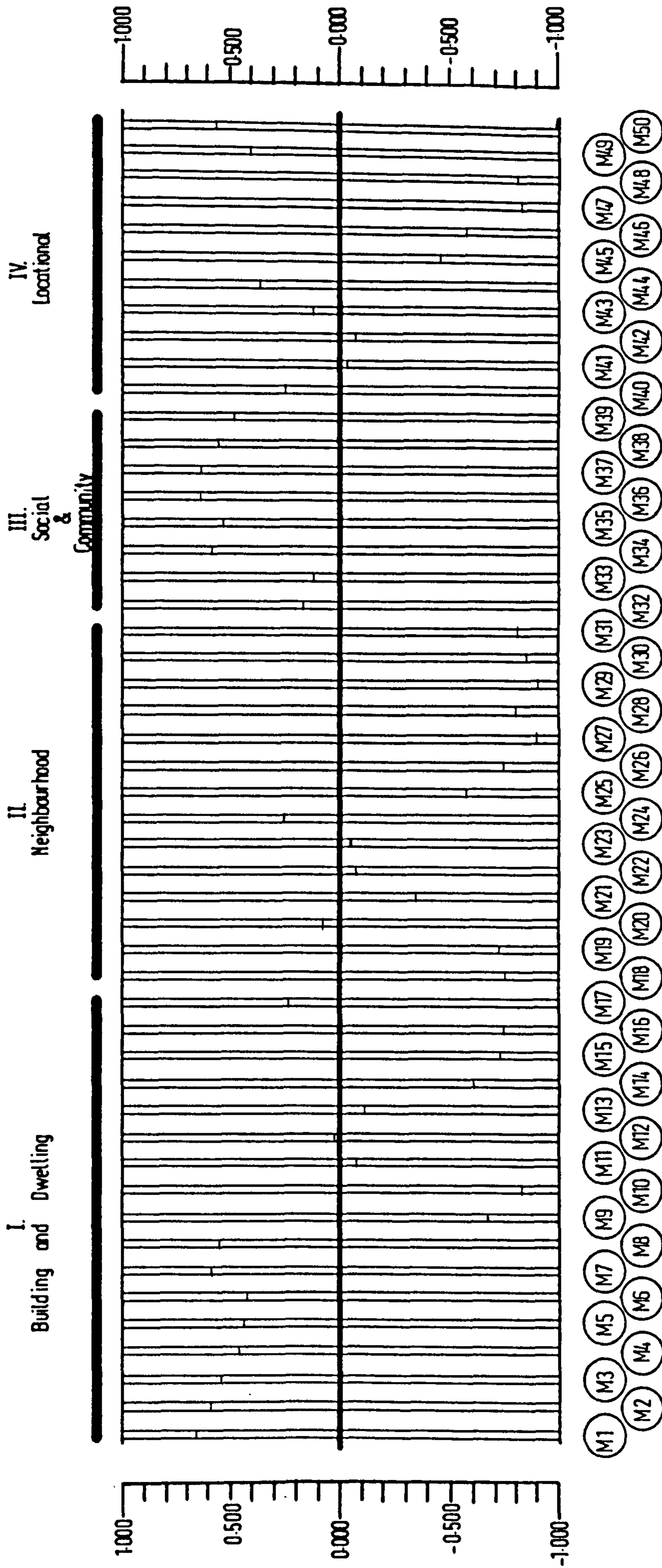
As with the findings in the previous study, Maroko exhibited a very low overall satisfaction index value of -0.032 when compared with those for Dolphin and Isale-Eko computed at 0.584 and 0.384 respectively. It must be borne in mind that the maximum and minimum values attainable under this technique are +1.000 and -1.000. The table 031 below, illustrates the SIV by sub-section.

Table 031. Study Areas Sub-Sectional Satisfaction Index Value (SIV)

	Maroko	Dolphin	Isale-Eko
Building and Dwelling	0.032	0.852	0.244
Neighbourhood	-0.520	0.373	0.362
Social and Community	0.463	0.761	0.751
Locational	-0.102	0.310	0.360
Total	-0.032	0.574	0.429

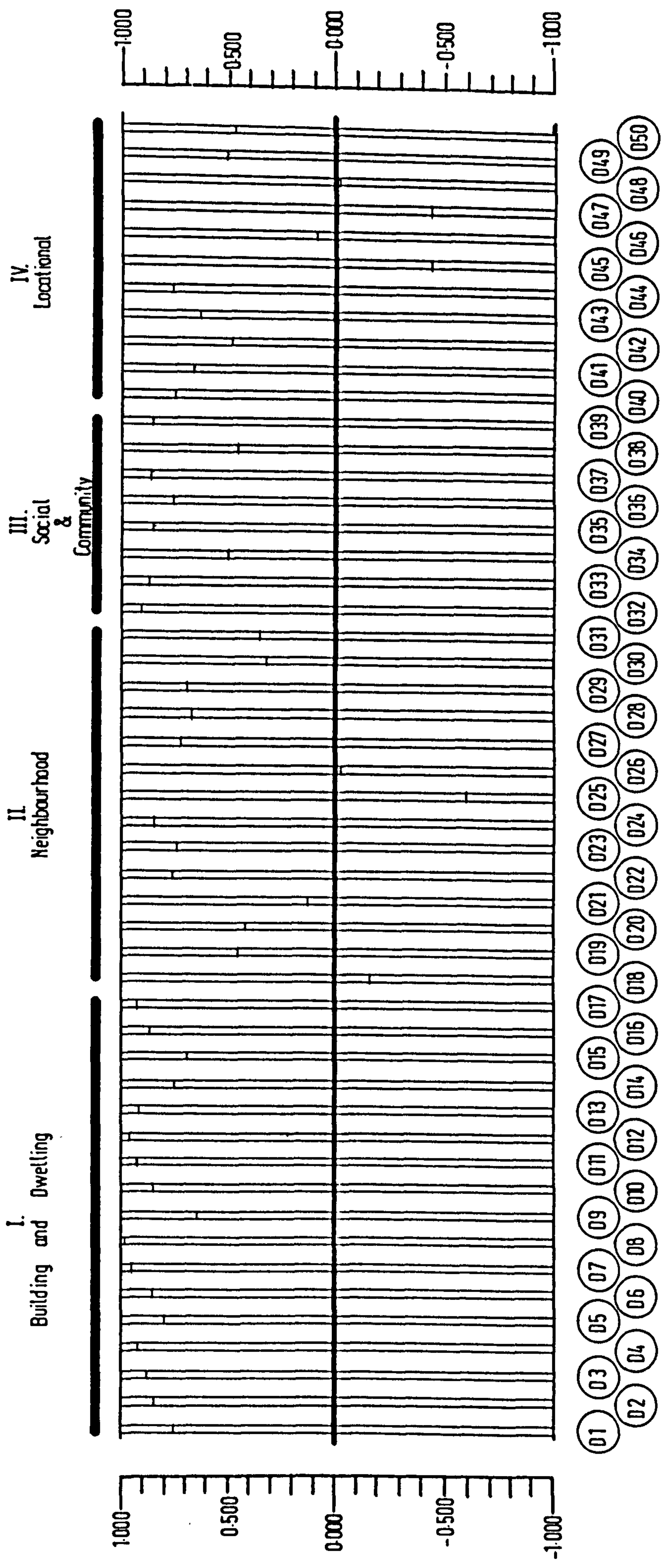
On examination, a similar trend as shown in the previous study can be deduced. All the sub-sections are consistently below those of the other study areas of Dolphin and Isale-Eko. Contributing substantially to this is the effect of the neighbourhood attributes which rated at a high negative SIV of 0.520, and like the earlier findings it also influenced the ratings (indirectly) of the other sub-sections especially that of the building and dwelling sub-section. This influence is especially noticeable when the building and dwelling attributes are separated from the building and dwelling services attributes. Examination reveals that although the former has a rating of 0.520 which is even higher than the equivalent sub-'sub-'section for Isale-Eko which has a rating of 0.229, its rating is in fact not far behind that of the equivalent sub-'sub-'section for the Dolphin area which rated at a high 0.873. On the other hand the building and dwelling attributes rated a negative SIV of 0.479. This compares poorly with the equivalent sub-'sub-'section ratings of Dolphin and Isale-Eko which were computed at 0.825 and 0.246 respectively. As with the findings in the previous technique, there appears to be a consistently high dissatisfaction with the lack of neighbourhood facilities

This technique like the previous one exhibits limitations in that it does not consider the influence of the attitudes of all the respondents in the SIV, namely, by the omission of those respondents



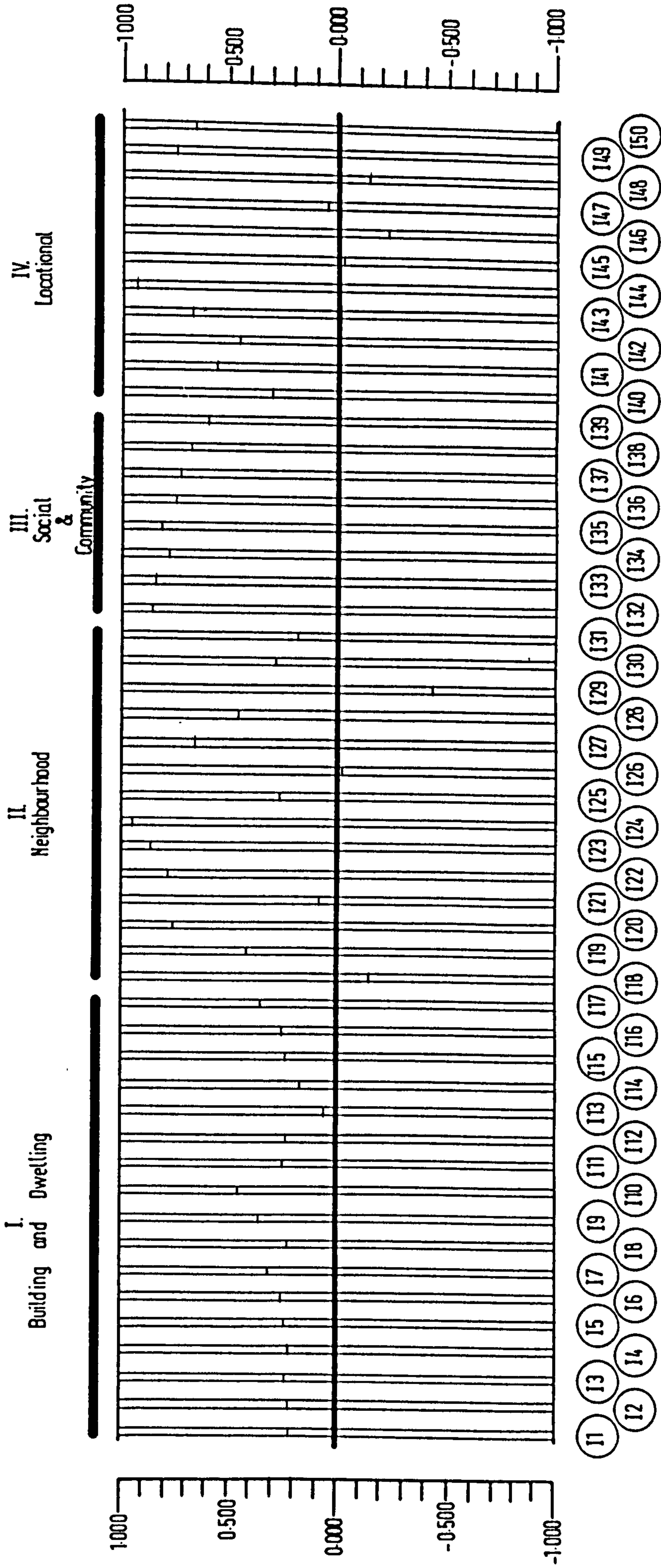
Sustenance Index values (SIV) = introduced

fig 071.



Standardisation index value (SIV) = 0.000

fig 072.



Satisfaction Index (SIV) = issodas=calsoo

fig 073.

who expressed an 'acceptable' attitude. Furthermore, the fact that the maximum index that a variable can have is +1.000 (when all respondents are satisfied and none dissatisfied) and a minimum index value a variable can have is -1.000 (when all the respondents express dissatisfaction and no dissatisfaction) creates an interpretation difficulty when the SIV rating is 0.000. A consequence of this is that this could either mean that there are an equal number of respondents expressing satisfaction and dissatisfaction for the variable with none finding it acceptable, or all respondents expressing an acceptable attitude, or that there is an equal number of respondents expressing satisfaction and dissatisfaction for a variable regardless of the number of those respondents who found it acceptable. The next technique utilised attempts to overcome this omission aspect by accounting for all the respondent attitudes in its assessment of the householders' housing environment.

C. Household Relative Habitability Index (RHI).

Unlike the previous ones, this technique takes into account in its index all the respondents' responses. It is essentially based on the evaluation of households' level of satisfaction or dissatisfaction with the housing environment.

The habitability of the householders' housing environment is not gauged merely from the point of view and influence of the engineering elements from also but the combined influence of social, behavioural, cultural and other elements in the entire socio-environmental system (Michelson, 1970; Phillips, 1967; Gans, 1962; Raven, 1967). For example, a dwelling that may be adequate from the structural or design point of view may not necessarily be adequate or satisfactory from the inhabitants' psychological, physiological or locational point of view. The dwelling unit itself is only one link in a chain of other factors

which determines the inhabitants' habitability satisfaction within their environment (Bauer, 1951). The housing system under study here has been divided into four sub-systems in keeping with the sub-sections identified in the household housing environment survey. These are the building and dwelling sub-system, the neighbourhood facilities sub-system, the social and community sub-system and the locational sub-system. Each of these sub-systems is made up of a chosen number of variables.

What constitutes habitability not only varies according to the surrounding environment but also with the characteristics of the inhabitants (Frazer, 1969). Thus the habitability of a particular housing environment at a particular point in time can be meaningfully defined not only in the relative but also in the absolute (Phillips, *ibid*). The following section sets out the procedure for determining the relative habitability index (RHI) for each variable, sub-system and the system as a whole.

Having scored each variable from 5 to 1, all the scores which each respondent has given to all the variables are added up. This gives a total score. This total score is divided by the maximum possible score for that variable. The result is then multiplied by 100 to obtain the index of habitability of that variable.

$$\text{RHI-var} = \frac{\text{Sum of the variable's actual score from respondents' responses}}{\text{Sum of the variables maximum possible score from respondents' responses}} \times 100$$

In order that the RHI may be computed for each of the four sub-systems selected from the general housing environment the following mathematical procedure must be carried out (Onibokun, 1974 at pp.189-200).

Expressed mathematically:

$$RHI_{sub} = \frac{\sum_{i=1}^{n_i} y_i}{\sum_{i=1}^{N_i} Y_i} \times 100$$

RHI-sub = Index of habitability of a selected sub-system of the general

housing environment.

sub = Any of the selected sub-systems of the general housing environment.

N = Number of variables in sub-system

y_i = sum of actual scores of variables under sub-system

Y_i = sum of maximum possible score that variables under sub-system could have on scale used.

In assessing the habitability of the general housing environment, the sum of all the actual scores of the variables is divided by the maximum possible score of all the variables under consideration multiplied by one hundred.

Expressed mathematically:

$$RHI_g = \frac{\sum_{bdi}^{N1} + \sum_{ni}^{N2} + \sum_{sci}^{N3} + \sum_{li}^{N4}}{\sum_{BDi}^{N1} + \sum_{Ni}^{N2} + \sum_{SCi}^{N3} + \sum_{Li}^{N4}} \times 100$$

RHI-g = Index of habitability of general housing environment of respondents for selected

N1, N2, N3 and N4

= Number of variables selected for sub-system

N1-17-Building and Dwelling

N2-14-Neighbourhood

N3- 8-Social and Community

N4-11-Locational

bdi, ni, sci and li

= sum of actual score of variable under sub-system

BDi, Ni, SCi and Li

= sum of maximum score of variable under sub-system

From the above relationships it can be discerned that the maximum index a variable sub-system or total system can have is 100 per cent while the minimum is 20 per cent. This is attributed to the fact that the lowest expressed value of a respondent is one. As such, if 50 respondents all scored 5 or 1 for a particular variable we would have;

$$RHI-var = \frac{50 \times 5}{50 \times 5} \times 100 = 100\%$$

$$50 \times 5$$

or

$$RHI-var = \frac{50 \times 1}{50 \times 5} \times 100 = 20\%$$

$$50 \times 5$$

The interpretation for this would then be that the nearer the index was to 100 per cent the higher the habitability and the nearer it was to 20 per cent, the lower the habitability of the variable, sub-system or total system.

The whole index may then be classified into five interval categories corresponding to the original attitude response categories. This may then be reduced to three groupings of regions of habitability. Of low, moderate and high classification.

- 20 - 59 Low Habitability
- 60 - 79 Moderate Habitability
- 80 - 100 High Habitability

This would reduce the need to identify the different value levels for each and every variable whilst also enhancing the interpretation of the distribution of the variables.

From the index values computed as in tables 047., 048. and 049. and in figs 074., 075. & 076., the trends of habitability exhibit some very close similarities to those shown earlier. Table 032. below, demonstrates the same overall ratings trends per area as before. Maroko exhibits a relatively lower habitability index than Isale-Eko, and Isale-Eko a lower habitability than Dolphin. The main difference between these figures is that the ratio between the habitability index of the areas (mathematically speaking) is much lower than that shown in the previous two techniques. As indicated earlier Maroko lags behind the other two areas in practically all respects save rentage, where its habitability rating computes at 64.2 as against that of Isale-Eko at 69.8. As with the other two techniques, the influence of the neighbourhood facilities RHI affected the other sub-system RHIs most notably that of the building and dwelling sub-systems. On examination this sub-system rated the building and dwelling physical attributes of Maroko at 68.10 above the

equivalent sub-system for Isale-Eko which was rated at 65.5.

The differences in ratings between sub-systems and between techniques highlights the shortcomings of the previous techniques. For example, the RHI rating of the Dolphin's neighbourhood sub-system put at 68.6 as compared to the RHI rating for the locational sub-system for Isale-Eko exhibits a reverse order for the SIV ratings, where the respective ratings for each area are 0.373 and 0.360. This somewhat inverse relation in terms of rating is in essence the outcome of the omission aspect as earlier mentioned.

Table 032 . Study Area Sub-System Relative Habitability Index (RHI)

	Maroko	Dolphin	Isale-Eko
Building and Dwelling	59.40	84.10	65.80
Neighbourhood	44.20	68.60	70.20
Social and Community	72.10	83.90	80.00
Locational	52.80	67.50	70.30
Total	55.40	75.90	69.70

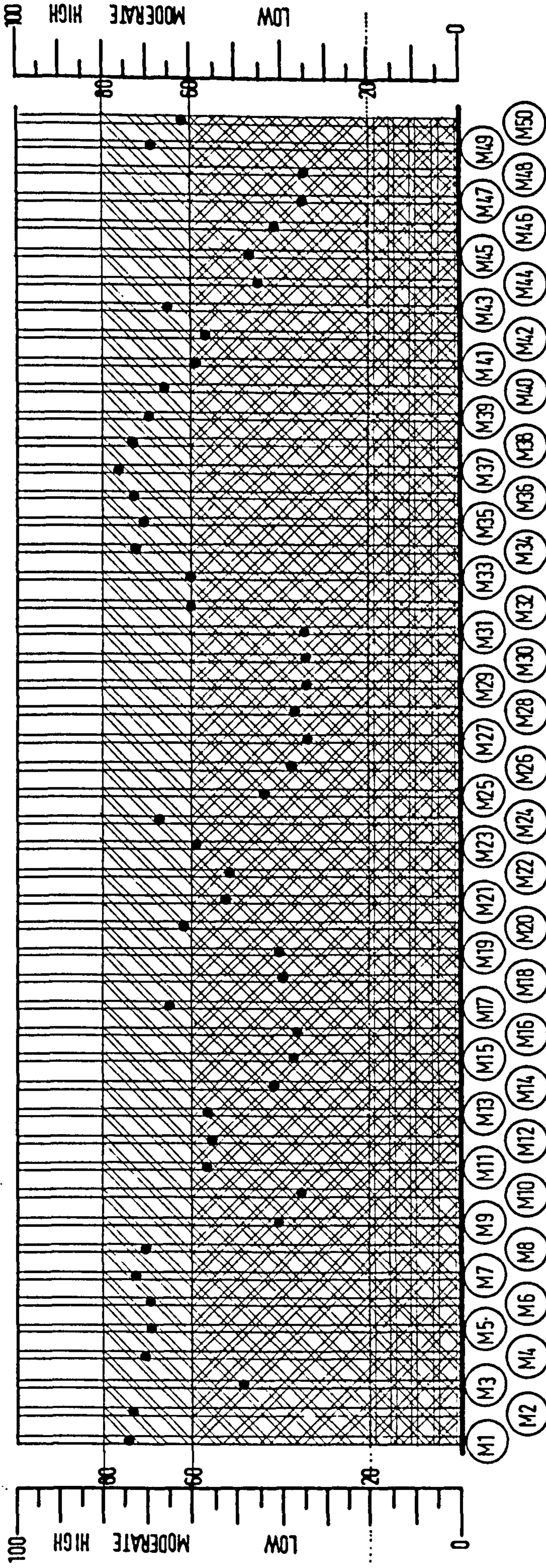
Further examination of the distribution of the variable index between the regions of habitability of the various areas (table 033.) highlights the overall low habitability of Maroko as against the other two areas. Over 56 per cent of the Maroko variables are located in the low region with Dolphin and Isale-Eko only registering 12 per cent of their variables in this region. Both Maroko and Isale-Eko have 44 per cent and 66 per cent respectively of their variables accounted for in the moderate region, with the Dolphin area having only 32 per cent of its variables here. In the high region of habitability Maroko is not represented at all. By contrast the majority of the variables (58 per cent of the Dolphin estate) are accounted for in this region.

I. Building and Dwelling

II. Neighbourhood

III. Social & Community

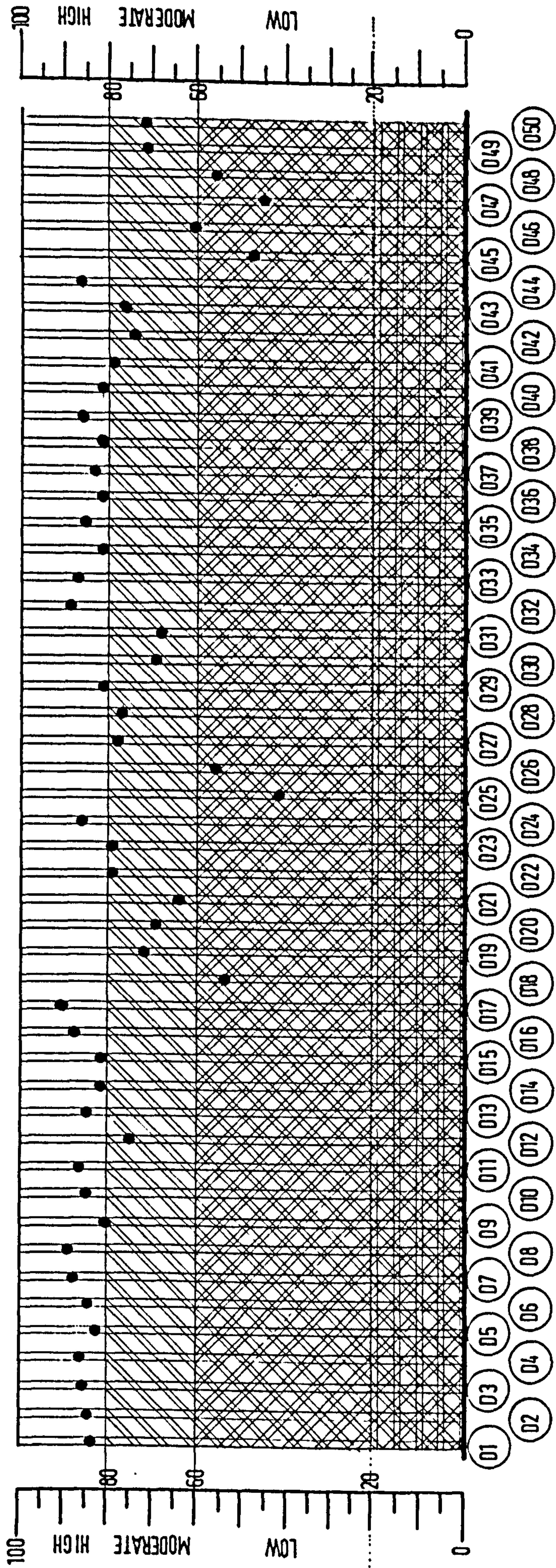
IV. Locational



Relative Incubability Index (R.I.I.) = 20

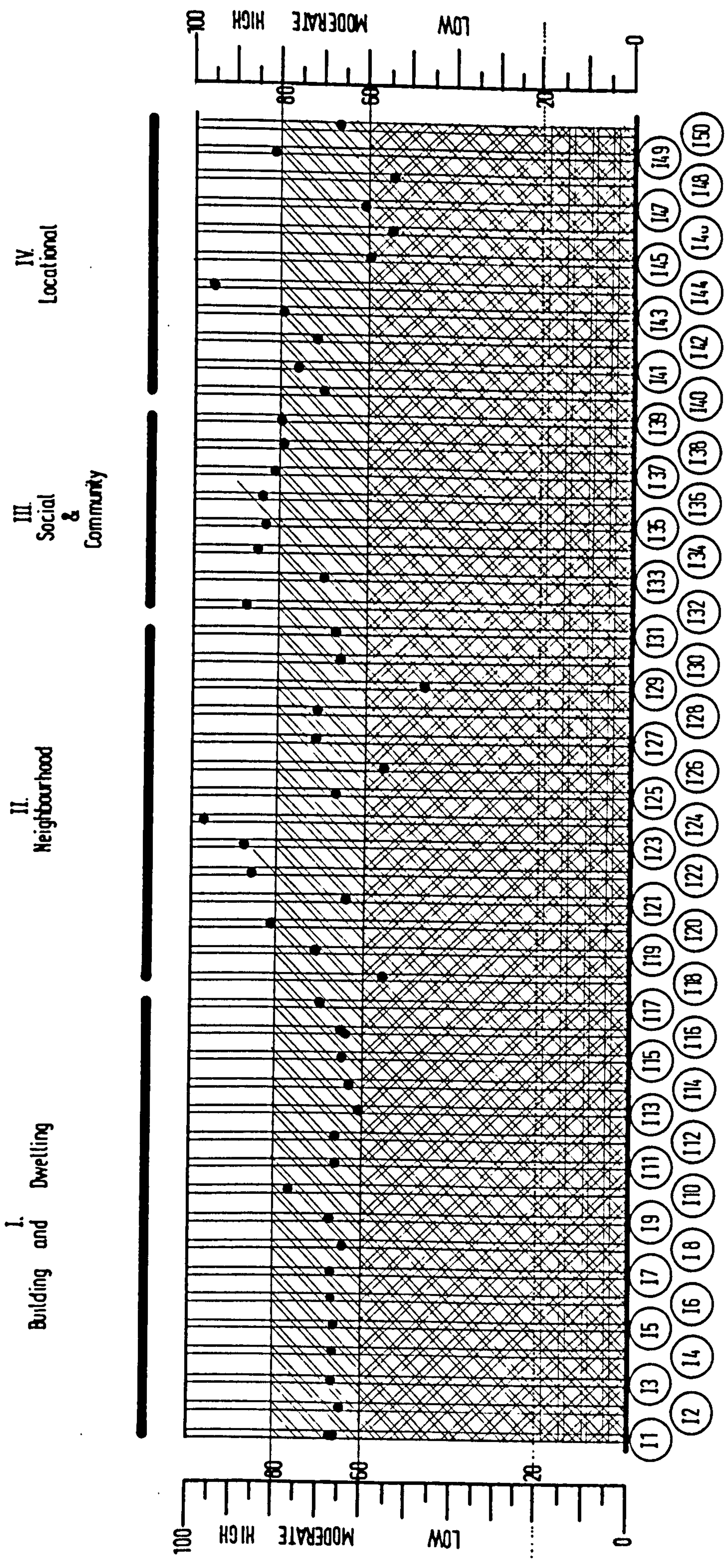
fig 074.

I. Building and Dwelling
 II. Neighbourhood
 III. Social & Community
 IV. Locational



respective Incubitability index (IAMI) = 0.000000

fig 075.



relative habitability index (RHI) = index = (1-100)

fig 076.

Table 033 . Distribution of all variables into regions of habitability for the three study areas.

	LOW			MODERATE			HIGH		
	Mar.	Dol.	Isa.	Mar.	Dol.	Isa.	Mar.	Dol.	Isa.
Building and Dwelling									
No.Var.	9	0	0	8	1	17	0	1	0
Absol.%	52.9	0.0	0.0	47.1	5.9	100	0.0	94.1	0.0
Neighbourhood Facilities									
No.Var.	12	3	3	2	9	7	0	2	4
Absol.%	85.7	21.4	21.4	14.3	64.3	50.0	0.0	14.3	28.6
Social and Community									
No.Var.	0	0	0	8	0	3	0	8	5
Absol.%	0.0	0.0	0.0	100	0.0	37.5	0.0	100	62.5
Locational									
No.Var.	7	3	3	4	6	6	0	2	2
Absol.%	63.6	27.3	27.3	36.4	54.6	54.6	0.0	18.1	18.1
Overall									
No.Var.	28	6	6	22	16	33	0	29	11
Absol.%	56.0	12.0	12.0	44.0	32.0	66.0	0.0	58.0	22.0

i) Respondents' Relative Habitability Index (RHI) Distribution

In addition to the investigations undertaken a further analysis was carried out to show the distribution of respondents' RHI between the various regions of habitability (table 034.). Not surprisingly all the respondents in Maroko recorded a low habitability rating. For the Dolphin and Isale-Eko respondents, the distribution exhibited a spread of RHI ratings between the three regions. As such the Dolphin respondents recorded a regional habitability distribution of 71.2 per cent, 28.8 per cent and zero per cent between the low, moderate and high respectively. For Isale-Eko the distribution characteristic

accounted for a spread between the regions of 83.9 per cent, 16.1 per cent and zero per cent respectively.

This apparent outright lack of and high regional habitability rating by all the respondents in the three areas and especially in the case of the Dolphine study area could in the main be attributed to the generally poor level of services which has consistently registered relatively low ratings for all the techniques.

ii) Respondents' Relative Habitability Index (RHI) by

Household Characteristics

A further study was undertaken to investigate the earlier hypothesis that the relative habitability of an area under study could exhibit different RHI values for categories of various social characteristics, eg., educational attainment.

To this end a number of social characteristics were investigated; educational attainment, income, length of residency, tenure and age. Although the results exhibited RHI rating variations between the categories of each characteristic, none of the selected characteristics indicated a correlation, such as an increase in RHI with an increase in residency or conversely a decrease in RHI with income or educational attainment.

Table 034 . Respondent RHI Distribution

Maroko.					
	LOW		MODERATE	HIGH	
	20-39	40-59	60-79	80-99	100
Absolute No.	106	51	0	0	0
Frequency	67.50	32.50	0	0	0
Overall Region	100		0	0	
Dolphin .					
	LOW		MODERATE	HIGH	
	20-39	40-59	60-79	80-99	100
Absolute No.	6	81	35	0	0
Frequency	5	66.20	28.80	0	0
Overall Region	71.20		28.80	0	
Isale-Eko.					
	LOW		MODERATE	HIGH	
	20-39	40-59	60-79	80-99	100
Absolute No.	21	94	21	0	0
Frequency	15.30	68.60	16.10	0	0
Overall Region	83.90		16.10	0	

D. Concluding Remarks

Assessing housing need from the users' priority point of view is in practice a somewhat arduous, complex and, some would say 'impossible' (Schumaccher, 1974; Turner 1981) task. The notion of quantifiable measures of human need is indeed a complex concept because aspects such as matching personal decisions with location, access to people and places, tenancies and their transferability and privacy and comfort would most probably have to be considered. Nevertheless, in order that relevant action can be taken, some

indication as to what this need is, is required. The series of techniques utilised in the satisfaction survey attempted to do this, though it must be remembered that these findings are relative, in that the needs and priorities highlighted are in a constant state of flux. Therefore, at best the findings can only provide an indicator of the needs of the particular respondents at a particular point in time in a particular housing environment.

The concept that within housing there is a dimension that considers housing more for 'what it does' (WID) than 'what it is' (WIS) highlights the issue that the RHI value, computed for a variable, is in essence an evaluation of a shortfall. As a consequence the RHI, SIV and PNI values are not necessarily reflective of the WID need, but of the deficit of the WIS. This is highlighted by the computed value rating for the postal services of Dolphin. This issue which registered a low 41.0 RHI, was not the environmental aspect which most bothered the respondents in Dolphin. In fact 42 per cent of the respondents in the area expressed a particular need to improve the safety and security aspect of the area even though the RHI rating for this aspect was computed at 71.3 and ranked 38th. In practice this was backed up by the high priority accorded this aspect by the landlords' association which was in the process of providing street lights, nightguards and constructing a high masonry wall around the estate. On the other hand this rather odd finding could be attributed to a misunderstanding of a question by the respondents who similarly expressed an RHI rating of 44.8 for the locational aspect of the Post Office or the fact that the provision of a Post Office was beyond the capability and responsibility of the community. Moreover, the possibility that this finding could have been the consequence of a misunderstanding of the question, is highlighted by the qualifying findings of the RHI and PHI ratings against the aspect of the

environment which the respondents felt needed the quickest attention.

However, the overall findings of the household satisfaction surveys, as with the previous household and housing environment studies exhibit a diversity which is in keeping with the general trend of characteristic grouping. A trend in which Maroko, relative to the other two study areas, recorded a markedly low rating; this was not suprisingly, given the relatively low environmental standards of the area. Also characteristic of this trend is the high rating that can be associated with the Dolphin estate. However, the Isale-Eko findings put this trend in question in that the registered satisfaction ratings of some of the environmental aspects were higher than those in the Dolphin study area; for example, the neighbourhood amenities which to all intents and purposes are lower in standard than the neighbourhood amenities on the Dolphin estate. It would appear from this finding that satisfaction with the environment and hence possibly 'need' may not be wholly dependent on physical criteria but maybe on non-physical criteria such as length of residence, tenure and close community spirit. However, the investigation carried out to illuminate this aspect proved inconclusive.

Thus, it is hoped that the importance of these PNI, SIV and RHI ratings will, as indicators, provide a much required guide to assessing the needs of the community. To this end the findings of this field study, especially those related to Maroko have been used in a proposal (see chapter 6).

5.01. Introduction

As a housing process self-help is not a new concept. It has in fact been the way of existence and provision of basic housing needs for the majority of the global population since time immemorial. In the light of the limited success of conventional modern housing processes in dealing with the growing housing problem, especially in developing countries, self-help appears to have experienced a growth in acceptance and is now seen as a viable adjunct to the conventional modern housing process not only in developing countries but also in some industrialised nations.

Traditionally the main motivation for self-help construction was the direct fulfillment of needs. Houses were altered as their inhabitants' needs changed and likewise repairs were done by them. There is a close relationship between the buildings and the life-styles of the people using them. In essence the buildings were produced more for their 'use-value'-'what it does', than their 'exchange-value'-'what it is', in the market. However, within the context of modernisation and the growth in influence of free market pressures, the production of housing appears to have shifted from one primarily of 'use-value' to one characterised by exchange-value. Within the context of developing countries this shift has in many ways contributed directly to the housing problem.

Although self-help housing does not necessarily improve the informal household's ability to compete in the 'market' it does somewhat change the picture in that it shifts housing from a purely commodity valued status to one of a potential commodity (Pradilla,

1976 at p.74). However, this shift is not one that has taken housing back to its traditional use value status, as its constituent elements have already been given a value or are in the process of being valorised by the self-help input. It could be said that self-help housing forms a hybrid between its 'use-value' and 'commodity-value'.

5.02. Self-Help

Self-help covers a multitude of processes which can broadly be divided into three areas (Turner & OSTI, 1969): (a) independent self-help, (b) organised self-help or mutual self-help and (c) employed self-help. Each of these areas is differentiated from the other primarily by the income level of the households and by the degree of 'aid' given or received.

Historically, the intervention of Government in the provision of housing, especially when related to workers' housing has only come about at times of crises such as epidemics, economic depression and political unrest (Donnison, 1967). This intervention, through self-help, was used as an inexpensive policy for housing provision during a crisis without the need for major changes in administrative, legislative or resource allocation. For example,

i) during the establishment of industrial capitalism in the 19th century;

ii) during the expansion of the capitalist mode of production in countries not fully incorporated into it as is the case of most third world countries;

iii) during a depression with the collapse of the markets and the consequent halting of industrial production which created mass unemployment;

iv) alongside a building industry which has a very high capacity and high sub-sectorial specialisation creating very specialised and high cost products.

Although the self-help process does greatly enhance the ability of these households to provide some form of shelter be it legal or otherwise, it is also a process that can enhance the formal sector's 'numbers game' essentially by reducing the costs per unit. Some of the areas open to cost savings include, those relating to:

i) the pre-conditions of construction (land, building materials and short term interest rates on bank loans),

ii) the actual production process (labour, production of plans, organisation of contracts, sub-contracting and transportation costs),

iii) the distribution and circulation of houses (real estate agents, building industry professionals and the costs of interest payments on finance capital),

iv) ongoing use and maintenance of the buildings (repairs, modernisation, etc.) and,

v) the release of more of the resources (income, labour etc.) which are available but have been kept at bay by circumstances outlined above for housing.

Since the early 1970's, and, as a result of ever-increasing housing problems, more countries have begun to look for new ways and means to approach the problem. Lea (1979 at p.53), has gone as far as stating that, "Few governments in the less developed countries have any real alternatives to use and promote the use of self-help strategies, if they are to really make progress in overcoming present housing deficits".

5.03. Aided Self-Help

Advocates of the aided self-help approach argue that there are numerous attributes associated with adopting it as an effective tool in tackling the housing problem in developing countries. Firstly, they maintain that there has been a realisation that public housing has not succeeded in being a major source of housing supply, and that the

limited numbers of units produced were not reaching or very rarely reached the low income households especially those of the informal sector. Secondly, they say that the housing produced by governments tended to be rather incompatible with the needs, priorities and very limited budgets of low income households. Thirdly, their view is that the macro-economic effect of various governments' housing policies, on the demand-supply aspect, of the various components of housing such as land, construction materials, manpower and finance availability for housing have in fact compounded the problem. Fourthly, they conclude that the housing in the slum and squatter areas was in fact gradually improving over time largely due to the efforts of the residents themselves who, without resorting to the use of modern housing finance or expensive modern construction models were in fact contributing to the housing stock (Martins, 1975; World Bank, 1978, Swann P., Komol P., Wegelin E., 1983; Cooke, 1981; Bamberger M., 1979). This overall trend towards establishing aided self-help as an acceptable attitude reaffirms Professor O. Koenigsberger's statement made over a decade ago that, "the government should not (necessarily) be (involved) in the business of 'building houses'" (1974).

The earlier aversion to the dirt and disorderliness of slum settlement is giving way to admiration of people who build for themselves and thereby create a variety of house forms to suit the specific needs, priorities and financial limitations of their own household. Out of necessity the relevance of modern imported technology is being questioned in relation to the advantages of improving traditional building methods and designs. There is support, in the right context for the use of more appropriate 'technology'. The fact that nobody knows how to use it is in practice due to the entrenched positions of the decision-makers. Thus, there appears to be the potential for a shift from the 'public sector will produce'

attitude to one of the 'public sector should support'.

The state is finding that if its low income housing policy is to be more effective it will have to shift from a strategy of attempting to build the housing units needed, to one of assisting and/or supporting the people in housing themselves (Turner, 1966). This approach promises a higher possibility of lower cost per household, lower defaults by the beneficiaries and an increase in the housing 'starts' on a 'larger scale' (namely, more households would be reached.)

(a) Site and Services

Although site and service projects do, at least theoretically provide an opportunity for increasing access to housing for low income households, site and services has, in practice, been achieved as a result of the requirement that only approved housing standards are to be used. This has contributed to low occupancy levels and slow (if any) plot development, as the relatively large initial payments 'soak up' the limited financial resources with consequent default on repayments by low income households. This low rate of occupancy and slow development is also influenced by the effect of market pressures on the purchase price of land.

Market pressures force housing programmes into distant locations, out of reach of much needed economic opportunities; this was the case with Tanzania, which required households to increase their transport costs by 10 per cent to 20 per cent, thereby collectively bringing the total housing cost up to 45 per cent to 50 per cent of the household income. If these low income households are to afford this housing (location as well as high standards) substantial subsidies will be necessary. These subsidies in themselves create a number of situations which eventually work to the overall disadvantage of low income households. Firstly, the subsidies have to be substantial, so that the

expensive land and high standards 'become' affordable. This in turn limits the number of households that can benefit and also means that the returns on the original investment have to be subsidised, thus further reducing the number of households that benefit. Secondly, it not only promotes competition for plots from the middle income groups but also encourages low income households with 'priority needs' other than high standard houses to sell to the bidding higher income families. This is highlighted in the subsidised Rangsit project in Thailand (Samak and Komson, 1981), where there was a reported turnover of 55 per cent of plots in under three years. This situation is in many ways reflective of John Turner's viewpoint regarding "what it does versus what it is" (1982 at pp.51-72).

In addition, the effect of low occupancy or very gradual occupancy on the overall financial performance of the project is crucial. This is because most projects are based on total occupancy on project 'initiation' and therefore overall repayments for the project could be running in arrears. This has severely limited the success of site and services, especially when low income families are involved. It is a view that is expressed in the World Bank Review (1978 at p.22) on site and services projects in seventeen countries, that in general site and services projects are too expensive for the incomes of the lowest 20 per cent of households. At the same time they increase access to housing for the upper income groups.

Although the success of the site and services process has been limited, some positive developments have been made in overcoming these limitations. These developments have in the main been along two lines. Firstly, the provision of development options in terms of size of plots and levels in the development of plots. Secondly, in terms of their relation to building regulations. These developments, combined with increased participation and self-help resulting in gradual

construction and the establishment of long and short term standards, may contribute substantially to reducing the cost per plot. Plots are thereby made available for more people with resultant lower repayments, lower default and hopefully higher low income occupancy rates. The first two options work on the initial cost and the latter on final costs. If these developments are matched with a more tightly targetted plot allocation against more specific income groups, the competition from upper income groups could also be reduced. If further developed this could, enable a cross-subsidy in terms of plot-related costs and as a consequence improve the overall cost recovery of the scheme.

(b) Upgrading

Improvement-upgrading programmes appear to be more successful in reaching a larger number of low income households (Martins, 1984 at p.33). For example, as of 1976, 495,000 families were affected by slum upgrading schemes supported by the World Bank, as against 80,000 families provided with plots in site and services projects (Moss, 1976 at p.218).

Although somewhat simplistic, viewpoint upgrading does have a number of advantages over conventional slum clearance (improvement) processes, in that it preserves the existing, essential, delicate, economic, social and locational systems of the respective low income households. It also indirectly 'transforms' illegal dwellings into legal dwellings.

Like site and services it is also similarly hindered in its success by a number of factors; most notable among which is the hesitancy of Government. Owing to the nature of this approach (in that it is seen as a corrective process), governments do not seem to find it practical or cost effective to let people take control of decisions regarding location and standards. They have come in afterwards to

provide services in what usually turns out to be very poor and difficult-to-service locations. Secondly, there is the land situation. Although in the majority of cases, the upgrading of infra-structural services was effected without any significant change in land tenure. The issue of land tenure is proving to be more complex than at first imagined (Angel et al., 1983 at p.532). This, more than anything else is likely to be the main stumbling block in the success of this new housing process.

c) Incremental Settlement Development

The more up-to date examples of this kind of housing process, can be found in other Third World countries such as Peru, Malawi and Ghana. Asiama (1984 at pp.171-183) has documented the progress of a settlement development scheme embarked upon in 1967 at Madina in Ghana. This scheme has been successful in that the inhabitants of Madina have been able to satisfy their needs within their means and with minimal government involvement in expenditure. The inhabitants of the township provide such amenities and services as exist there by self-help. In the Malawian example the State Housing Corporation laid out the plots, provided unpaved roads and built a number of communal standpipes with the notional facility of individual connection later.

The immediate advantages of this process to all 'actors' (Government, technicians, land owners and consumers) are in the lowering of initial investment costs per plot and hence of potential subsidy per plot. This lowering of plot costs can therefore promote a more effective increase in the rate of housing 'start ups' as compared to other public projects by diverting funds for further plot provision; these funds would otherwise have been used to complete infra-structure in site and service schemes or infra-structure and houses in conventional projects. Given the lower costs per plot, this process potentially raises the proportion of the total initial costs

capable of being borne by the householders.

In addition to the hesitancy towards this process already discussed above, its inherent complexity creates many potential points of conflict. One of the most important of these is the distribution of benefits and costs among the community. Owing to the tribal, religious, social or economic groupings that may exist within a settlement, competition may well develop amongst them with each grouping striving to obtain maximum benefit for its members. For example, the location of a road will have significant implications for most individuals, especially those involved in commerce and industry. The location of schools and clinics will be of great importance to all but will undoubtedly benefit some more than others. Furthermore, the undesirable social side effects of some improvements may create arenas for further conflict. These areas of conflict which in the main arise from competition, are also a consequence of the lack of or failure of the community's decision making process, in arriving at some form of consensus regarding the distribution of these amenities. The development of a residents' representative organisation (operating under this kind aided self-help scheme) to mediate between the residents, the authorities and the technicians is something that is essential.

5.0 . Inhibiting Factors

Despite the fact that most of the aided self-help housing programmes show signs of success (Keare, 1983), they are nonetheless developing and encountering some major difficulties regarding their implementation. These difficulties include the effects of the constraints of high standards resulting in high costs, lack of appropriate institutional mechanisms, lack of guarantees and securities for cost recovery, lack of maintenance, lack of qualified

staff and appropriate forms of land tenure.

(a) Personal Constraints

The constraints associated with this aspect are twofold; first those resulting from the divergent objectives and conflicting interests that may exist between the various 'actors', and secondly those due to the lack of understanding and experience of this process.

In the first instance Angel (1983), has identified 8 key groups of participants generally involved in the aided self-help process. The housers, the municipal engineers, the community builders, the land use planners, the politicians, the international funders, the slum entrepreneurs and the slum dwellers themselves, described below. The extent to which consensus can be achieved between the participants has been reflected in the progress of such programmes.

The housers are mainly interested in self-help housing improvement and see slum infra-structure as a means of increasing land tenure security, thus directing more of the people's savings towards building their own houses.

The municipal engineers are primarily interested in public health, and see such programmes as a means of removing serious health hazards through the provision of clean water, the collection of refuse and sewage and increased public safety.

The community builders are mainly concerned with community organisation and development, and see infra-structural improvements as issues of common interest around which slum dwellers can organise effectively.

The land-use planners whose primary concern is to establish legitimate land use allocations, not only find it difficult to acknowledge self-help groups in their plans, but tend at best to allocate a temporary land use title which will give way to more modern urban developments.

The politicians are mainly concerned with extending and consolidating their ability to rule and they perceive slum infra-structure programmes as an effective and highly visible means of assisting the poor without incurring vast public expenditure, and without unnecessarily alienating the support of the middle class or the land-owning groups.

The international funders whose major concern is with disbursing capital for development projects see such programmes as a means of providing a form of international assistance which can reach the poor.

The slum entrepreneurs, who are essentially interested in making profits on dealing in illegal sub-divisions of government land and lobbying the authorities for infra-structure services which will have the effect of increasing the value of the illegal subdivisions.

The slum dwellers, whose main interest is in protecting themselves from being hurt by heavy-handed government intervention and who see infra-structure programmes as an effective means of getting 'something' from the government, which is clearly better than 'nothing', but falls short of what they would like to have.

Each one of these protagonists has a valid world view that can be defended and justified on its own terms. However, to suggest that all these objectives be pursued at the same time would be over-generous and somewhat unrealistic as the serious pursuit of some will compromise others especially given the constraints of the components (to be discussed in the following sections). Nevertheless, all these actors have important and useful roles, so much so that they wield sufficient power and influence to warrant their inclusion in the decision making process and their participation in decisions is vital if there is ever to be any hope of undertaking a successful programme.

The lack of sufficient experienced personnel on the part of both

the community and the authorities acts as a major restraint on the execution of an aided self-help approach. Under conventional circumstances housing professionals are trained and become adept in the manipulation of the conventional housing processes. On the other hand aided self-help housing is essence 'new' and non-conventional. It is still evolving as a process and has yet to develop a cadre of professional aided self-help technicians. At present most of the existing aided self-help 'professionals' have developed their 'skills' either out of the growing number of sponsored Third World low income aided self-help housing projects or from the few research institutions undertaking such projects. Conventional training establishments have yet to fully take on board the principle of training the 'enabling' or 'supportive' architect, engineer, quantity surveyor, accountant etc. This alternative orientation is crucial, as studies on the 'attitude' difference between the experts (planners, architects etc.) and the targeted 'users' in present low cost housing schemes, (eg., the Iponri Scheme) have highlighted a number of contradictory beliefs in housing (Trezise, 1984).

However, training of personnel should not be limited solely to the staff of the project agency. Training and education of community association members and their representatives in the principles of organisation and methods of co-ordination as well as in association management is often neglected or remains very inadequate. If this process aims to improve the housing and living conditions of its members and promote the development of a more intergrated community, training is not merely useful but indispensable.

In the absence of an adequately trained community (particularly amongst low income households), the exercise of rights and the understanding of duties, responsibilities and obligations can lead to misinterpretation of for example, local bye-laws, this in turn often

leads to conflicts, delays and general disappointments with resultant resignations or withdrawals from schemes by community members.

As such the need for more 'appropriately' trained personnel both at agency level and with the community in order to meet the challenge of this innovative approach is growing and with it the need for educational institutions to establish appropriate courses which will be useful for the future.

(b) Institutional Constraints

At the heart of the aided self-help concept is the fact that it runs rather contrary to conventional administrative attitudes and methods with their deep rooted and entrenched traditions, prejudices, jealousies and practices which have been based on a long term involvement with conventional paternalistic modern housing programmes.

The complexities of aided self-help bring with them certain complications arising from participation such as, the issue of residents having to deal with a number of administrative departments and the probability that each of these departments is relatively ignorant of and most likely unable to inter-act with the others. This all appears somewhat ironical given that the economists, architects, physical planners etc. have now become so accustomed to the idea of being servants of the State, that they have lost touch with the concept of the State being the servant of the people. Overcoming these conventions and hardened attitudes and paving a way for alternative procedures will no doubt require considerable efforts on all fronts (Churchill et al, 1980 at p.10).

This predicament combined with the fact that international experience with the aided self-help process, such as The Kampong Improvement Programme, (KIP), in Jakarta, Indonesia and The Tamil Nadu Housing Board, (TNIB), in Madras, India, has shown that the innovative

nature of this process cannot be effectively dealt with by conventional housing institutions which are often very cumbersome in nature and slow to operate. Because of its novelty the process has given rise to a need for the creation of new administrative units with specific responsibility for such a programme.

In the KIP project for instance, the aided self-help programme had initially been administered piece-meal by various departments. However, as a result of poor inter-departmental co-ordination, contract scheduling became an area of serious conflict between the contractors and the authorities. This eventually precipitated a fundamental change in programme implementation. By 1974 it was decided that the programme should be administered by an independent technical unit of the Jakarta City Council, which was known as the Muhammad Husin Thamrin Proyek (MHT)(Aga Khan, 1983 at pp.213-221).

Simply creating a new and integrated agency will not in itself solve the problems because the existing bureaucracy simply cannot be overlooked. Whilst the formation of a new 'department' might well be desirable, that 'department' must be capable of inter-acting positively with the existing bureaucracy because the settlement under development is part of the greater urban community and as such cannot be totally divorced from it. In addition to this, the new 'department' will also be required to engage in a dialogue with the target population about the planning, organisation and implementation of the programme and this requires some form of community representational structure. The participation of a highly organised resident group should not necessarily be considered a hinderance as its involvement can have a number of beneficial spin offs:

First, it can create more integrated urban communities, -a much needed factor in this approach.

Secondly, it can assist with the prevention of speculation and illegal

transfer of land due to internal control.

Thirdly, the collective system of financing and repayment by means of mutual responsibility will be an aid in reducing the possibility of defaults.

Fourthly, the gradual assumption of responsibility in such matters as administration and management will not only reduce costs as mentioned above but will also enhance the procedural aspects of the proposals.

Lastly, it can enhance the maintenance of neighbourhoods and houses through collective effort. Furthermore, by the participation of the community in the planning of the programme, the inhabitants would learn much along the way that would usefully contribute to the further development and success of this process.

(c) Financial Constraints

The lack of an appropriate financial mechanism tailored to catering to the financial needs and abilities of low income households especially those within the informal sector, appears to overshadow all other considerations of household involvement in terms of the way they choose to participate in improving the environment.

The development of self-governing community-based organisations tailored to the needs and means of the lower income percentiles can be primarily attributed to the curtailing influence of the centrally administered and standardised system. This system not only hinders effective capitalising on the renewable resources of self-help processes such as labour, but it is also itself restricted by the procedures which depend so much on extremely scarce capital resources (Turner, 1976).

As a consequence this influence appears automatically to exclude the low income informal sector households from its sphere. This exclusion can be attributed to a number of factors:

i) The eligibility of the households; namely whether they have an 'adequate' income in order to meet the prescribed operating criteria such as regular employment so that their repayments will be met on time and whether they have provided a recognised collateral as security against the loan.

ii) The restrictive loan terms, such as specification of minimum or maximum sizes of mortgage or funds for home improvement or construction loans; the downpayment set at a particular percentage of the price of the dwelling; the maturity, or date in the future by which time the mortgage or loan is to be fully repaid; the rate of interest and the manner in which it is reckoned, i.e., either simple or compounded, and whether annual, quarterly or monthly; the size and frequency of the individual amortisation payments; the manner of collection and the penalties for arrears and default in payments.

Although some of the obstacles outlined above may contribute to the effective mis-targetting of benefits by taking them away from lower income households, the inherent nature of the low income informal sector households also restricts their capacity to exercise an effective demand. The low level of resources that are controlled by the poor curtail their ability to accumulate sufficient funds for official housing; for instance, housing loans are usually granted at a rate of two and a half times the annual income of the applicant's gross annual income. On this basis, with the market costs of a three bedroom low cost unit put at ₦20,000, the household would need an annual income in the order of ₦8,000, which, as ascertained from the survey automatically rules out over 92.8 per cent of the Maroko respondents.

In addition to this is the fact that a high proportion of low income households, probably out of necessity devote considerable proportions of their income to other basic needs. For example, studies

have shown that the purchase of food alone could take up to 80 per cent of the household income excluding other items such as transport and education. In a study (Williams & Burcroff, 1976) carried out to elicit squatters' general reaction to monetary assistance, four hypothetical loan amounts were offered (P100, P500, P1,000, and P5,000) to uncover priority needs. Food, clothing and children's education headed the list of priorities. After being allowed further consideration on the four alternative loans, each respondent indicated that they would apply the loan towards 'capital for a small business'. While this aspect highlights the importance placed on housing by these households, it must be remembered that, as tenants susceptible to eviction at any time investment in housing improvement may well have appeared as a form of giving the money to someone else.

The effect of all the foregoing undermines the conventionally held view that housing loans should at least be based on amortisation payments including interest, of between 20 to 25 per cent of household income. This situation therefore reinforces the probability that any loan scheme (as above) aimed at providing loans for housing will probably find these housing loans being used for purpose other than housing. In a study undertaken by Brossard (1975) (table 035.), a revised estimate of monthly repayment capability was developed. This table illustrates the considerable differences between the ability of the poor to pay for housing as conventionally measured - a view held by a number of other authors (Mayo S.K., 1981 at pp.95-116; Fallain J., Renaud B., and Lim G.C., 1980 at pp.313-336.)

Table 035. Revised Estimates of Low Income Groups' Capacity to Make Monthly Housing Repayments.

Annual Gross Income ₦	Monthly Gross Income ₦	Monthly proportion of family income possibly available for housing			
		5%	8%	10%	15%
83	6.90	0.42			
166	13.80	0.84			
249	20.70	1.25			
332	27.60		2.66		
415	34.50		3.34		
498	41.40		4.00		
581	48.30			5.93	
664	55.20			6.66	
747	62.10			7.50	
830	69.00				12.50
913	75.90				13.70
996	82.80				15.00

Source: United Nations Centre for Housing, Building and Planning
Estimates and Case Studies Findings.

The other side of the coin to the borrowing aspect is the 'saving for housing' aspect. For whilst it may be possible for prospective informal sector householders to save money in a conventional institution, restrictions (as shown above) would then come into play. Furthermore, under the conditions where a certain deposit has to be made in order for a loan to be granted, the situation may arise where, with high inflation and over a period of time the value of the savings may no longer be sufficient to cover the initial costs of the housing.

This possibly excludes a sizeable amount of much need capital from the informal sector itself.

However, these financial limitations are not solely relegated to the modern sector and its mechanisms. For while independence and self reliance are fostered by present methods of financing popular construction, and the individualism permitted by popular construction respects diverse preferences for different designs and construction procedures, it is evident that the indigenous operations are not sufficiently equipped with capital and machinery to solve the housing problem (otherwise they would surely have done so by now).

The alternative and preferred approach would be to assume initially that the target population cannot expect any subsidies and that what is to be provided will have to be financed entirely from the collective resources of that community however meagre. This it seems, is a more intellectually honest attitude to the problem, with the starting point being ascertained from what the people themselves can afford. This of course would be disadvantageous to the poorest of the poor in society as the costs of setting up an organisation to administer such assistance for these 'ultra-poor' people would vastly outweigh the value of the material goods and services that could be provided from their own resources.

It would appear therefore, that there is a need for modifications in the present financial mechanisms of both sectors. These modifications would in essence involve the creation of new and the further development and refinement of the various existing sources of housing credit. This could be achieved in four ways:

(a) By encouraging increased investment through promoting incentives to encourage savings. This could be done by providing deposit insurance and indexation schemes, preferential interest rates and preferential tax treatment of savings.

(b) By establishing compulsory housing finance schemes, eg., by requiring certain percentages of wages and/or company profits to be allocated to house savings schemes. However, the feasibility of this approach may well be very much dependent on political interests.

(c) By establishing contractual savings schemes. Essentially this would mean establishing a number of schemes such as saving for housing schemes, co-operative house savings schemes, home credit unions and the development of the traditional savings arrangements on a more formal footing.

(d) By the establishment at local as well as national levels of housing banks, whose main aim would be to channel funds from various sources into housing.

Having set up these new means of providing funds, the following steps would have to be taken to ensure that those funds reach and cater effectively for the low income groups by means such as:

- (1) The redefinition of acceptable forms of collateral and guarantees.
- (2) The institution of small short-term, repetitive loan programmes with flexible repayment schedules.
- (3) The facilitation of access to banks by locating them in low income areas and maintaining flexible opening hours.
- (4) The extension of loans in kind in the form of building materials and technical assistance.

It must be emphasised that if these modifications are to be effective they must, in be applied together. Simply implementing one or two of the proposed modifications can lead to the situation where low income households would still be excluded from access to funds. A case in point is that of the Federal Mortgage Bank (FMB) and the Lagos State Development and Property Corporation (LSDPC), which both having implemented modifications in steps (2) and (3) above, were found that the majority of low income households were still excluded from

obtaining a loan whilst the higher income groups found the measures turned out to be very lucrative for them.

Although substantial developments have been made in the provision of housing finance in Nigeria, it has yet to be developed sufficiently to cater for the needs and abilities of the informal sector low income households, especially under the conditions of an aided self help programme. Allied to the foregoing is the all important but often omitted aspect of education not only of the staff but also of the householders and their representatives. It is to be hoped that the greatest significance of developing these financial mechanisms to cater for the poor, lies in the potential multiplier effect that a small amount of financing can have in enabling more of the poor to build more efficiently. In the following chapter a financial proposal is suggested which takes into consideration a number of the constraints highlighted above.

(d) Tenure Constraints

Whilst finance, labour, materials and building standards are all important components of housing, land is the sine qua non of any housing programme. It is not simply a commodity, but property over which people, different people can exercise a number of rights. Its availability, depends on the ease with which the land owners whether government, private or communal, release it for development. In 1978, the Federal Government in an attempt to overcome the escalating prices and ever increasing difficulties associated with purchasing land, especially for low income households, promulgated the Land Use Decree.

As highlighted earlier this intervention has been of limited effect in combatting the problems it was designed to tackle.

The issue of land appears to be one that revolves around tenure -

primarily security of tenure - without which it is doubtful whether any aided self-help orientated programme would succeed.

In other countries many aided self-help projects have run into innumerable problems regarding the securing of land and the establishment of some form of security of tenure along conventional lines. The case of the slum up-grading programme in Bangkok is well documented and provides a good example. In Bangkok the National Housing Authority (NHA), pressed by its own production targets, was forced to negotiate with each landowner to obtain permission to enter property to undertake physical improvements. This then forced the NHA to adopt a modus operandi which omitted the tenure condition from the slum improvement policy and merely demanded a non-binding agreement from the landlords not to evict the residents within the next five years. The effect of this on the project was that less than 50 per cent of the proposed areas received public participatory improvements.

The lesson from this experience and from that of Lagos appears to be that there is a need to evolve and develop a number of alternative forms of tenure that can deal with the various relationships between the actors and the land, whether they be traditional landowners, freeholders or leasehold owners, private, public or communal tenants or landlords. However, conferring security of tenure as illustrated above cannot simply be done at the stroke of a pen. It is, in most cases a lengthy and complex administrative procedure, involving considerable political commitment. Given this, a tenure proposal is suggested in chapter 6. that attempts to resolve the dilemma posed by these constraints.

(e) Regulatory Constraints

The issue of regulatory requirements is a thorny and vicious one, for reasons of entrenched dogma, unrealistic idealism and

misunderstanding as highlighted earlier (see chapter 2). The rigid zoning requirements which are, unrealistic in that they take no account of the living conditions of the informal sector all serve to hamper the potential of an aided self-help programme for low income households. There is a need not merely to reduce the present standards but to 'appropriate' them and make them flexible so that they will relate to their locale, as well as being able to change if necessary, when circumstances in that locale demand it.

However, abandonment of all controls can and will lead to chaos. There is a need to protect the public, by for example, not siting a workshop or factory producing noxious life-endangering fumes in or near the abodes of a community. Therefore, what is required is a system which allows for a high degree of differentiation by creating greater flexibility than there is at present whilst allowing for some form of legal sanction to be evoked where necessary. For example, under a properly administered land use control, licences and permits can be issued and each use would be considered on its merits through agreement (if any) between the individual who wishes to conduct the particular activity (e.g., a potential factory builder) in a particular area and the local participants (locally elected representatives, technical experts etc.). If the use were to change then the licence or permit would become invalid as specified, and a re-application would become mandatory. Although controls are in fact a negative way of achieving the goals for improving the environment for they do not encourage activities anywhere but merely discourage them from being located in other places, this system could at least introduce a greater degree of opportunity with control, for income generation within the particular area.

Similarly, the aim of the proposed standards would be designed to allow for flexibility and change. Growth and improvement of the houses

or plots of the inhabitants within the resources available to them would be the norm, whilst a degree of health and the rights of neighbours would be maintained. Each community would, in consultation establish the principles and standards which it feels are most appropriate to its particular priorities and needs.

Thus the rigid building standards which operate in Lagos at present and serve only to ossify and retard the development of informal sector building (see chapter 2.) when viewed in terms of performance specification can conversely be seen as allowing for that very flexibility. For example, by allowing the use of local constructional materials such as mud instead of concrete provided that the structural requirements can be satisfied. However, viewing these alternative building standards in terms of 'performance standards' has limited application in countries (such as Nigeria) where the guidance and technical testing facilities are limited and the dissemination of the necessary information even more limited.

What is proposed in the next chapter is a form of tierred building standards, which in time will improve as the expectations and quality of life of the low income dwellers improves. It is envisaged that this improvement will develop under the management of the communities' representative organisations who will be 'assisted' by the programme's project agency.

5.05. Concluding Remarks.

The poortrack record of the conventional housing process in meeting the ever-growing housing needs of low income households combined with the growing awareness of the substantial contribution the informal self-help housing process has made in adding to the housing stock, have borne in their wake a 'hybrid' concept of aided self-help or housing by participation.

Although still in the throes of its evolution this hybrid is nonetheless gaining momentum as a possible alternative official housing process, especially for low income household in developing countries.

Over the past couple of decades this process has propagated a number of variations. Most notable among these are site and service, upgrading and planned incremental settlement development. Of the three, the first process although of longer standing, appears to have had limited success in improving the housing environment of low income households. The other two though limited in number, when implemented seem to be gaining a better track record.

In a sense, the divide between these processes appears to have developed because of the difference in degree of influence and participation of the 'actors'. The site and service process with its associated official guidelines demands relatively less if any co-ordinated and co-operative participation by all the actors. On the other hand upgrading and phased incremental settlement development processes appear, out of necessity to demand higher levels of co-ordination and co-operative participation between the actors and an acceptance of the characteristics of the low income percentiles. Table 036. below highlights this point. The upgrading programmes consistently registered substantial penetration of the low income percentiles.

When compared to other processes as table 037. below shows, the effectiveness of aided self-help in providing relatively good housing is marked. The example below has been drawn from an El Salvadorian (FSDVM) experience.

Table 036. Urban Settlement Programme in Percentages

National Urban Income Percentile	Site and Services		Upgrading	
	El Salvador(77)	Zambia(78)	Phillipines(79)	Zambia(76)
00 - 20	6.0	18.0	27.0	38.0
21 - 40	38.0	38.0	24.0	22.0
Upper 60	56.0	44.0	49.0	40.0
41 - 60	37.0	14.0	23.0	17.0
60 and over	19.0	30.0	26.0	23.0

Source: Keare D.H. & Parris (1982)

Evaluation of Shelter Programs for Urban Poor (Principal Findings) World Bank Working Papers. Number 547. Table 4. Washington D.C.

Aside from the difficulties and inhibiting aspects highlighted above, aided self-help is nevertheless plagued by others, the most notable and probably the most important being the political aspect. The inhibiting dimension of this aspect probably stems mainly from the belief by the dominant groups that an aided self-help or housing by participation policy may encourage even more people to come to the already over-stressed cities and towns. In addition to this is the effect of the collective and solidarity forming attitudes acquainted with these processes which unless addressed accordingly may become a political threat to those factions that dominate.

However, international experience is beginning to illuminate the fact that this threat is not as potent as at first believed. Most low income householders are quite conservative and any radical upheaval may result in the loss of their jobs and hard won niches in the urban environment. Moreover, the effect of indigenous historically conditioned land markets, political institutions, the contemporary political climate and a number of other factors have a considerable

influence in shaping and directing settlement improvement programmes (Baross, 1983 at p.170.)

Table 037. Accessibility of Formal and Informal Housing Programms to the Urban Poor in San Salvador (1977)

Institution	Type of Building	Lowest Percentile who can afford this option
Tenament Housing	Poorest Quality	6
Extra-legal sub-divisions	Poorest Quality	10
FSDVM	Basic Core Unit	24
Tenament Housing	Adequate Quality	24
IVU	Marginal	27
Extra-legal sub-divisions	Adequate Quality	42
Salvadorean Housing Fund	Normal Programme (1975-78)	48
IVU	2 Bedroom Houses	Beyond the 68th
IVU	4 Bedroom Houses	Beyond the 68th
IVU	Apartments	Beyond the 68th
Salvadorian Housing Fund	Normal Program	Beyond the 68th

Source: Richard J. & Bamber (1977)

Economic Evaluation of Site and Services and their
Accessibility to Low Income Groups in El Salvador

Table 2.15. FSDVM Report Services on the Evaluation Programm.
No. 16.

In conclusion, it would appear, that aided self-help or housing by participation has an inbuilt set of values that rationalise and realise the specific politico-economic interests of both sectors. As such, given the context of Lagos-Nigeria and the performance of existing policies and strategies in dealing with the housing issue, housing by participation seems to offer a ray of hope in the otherwise seemingly darkening sphere of improved housing especially for low

income households.

6.01. Introduction

Since the 1976 Vancouver Habitat Conference, it has become increasingly apparent that community participation in housing can play an effective part in improving the appalling living conditions of the ever-increasing numbers of poor urban populations. However, fundamental to the successful execution of such an approach is the recognition that its initiation must originate from the authorities or at least from an external organisation publicly carrying an endorsement from the Government. Numerous studies have uncovered examples of the efforts made by residents of low income urban settlements to improve their own communities, but owing to lack of official support these efforts were frustrated by conventional attitudes and became relatively ineffective (UN, 1975). In other words, if the participation and contributions of these low income percentiles are to be effectively realised, especially in the long term execution of these improvement programmes, assurances of official concern and support will be needed.

Therefore, the central axiom of (my) proposal is that there should be constant inter-action and involvement - a partnership between the various 'actors' in the housing process (the Government, the 'experts' and the residents) on policies and programme formulation not only at the planning stage but also at later stages of implementation and maintenance. If the establishment of relevant housing is to be realised, direct contact with the grass-roots of human need is needed. It goes beyond pre-conceived conventional notions which were largely acquired from received ideas of what is 'normal', which are for the

main part, almost all copied from foreign cultures and reflect foreign values. So, rather than just allowing the 'experts', professionals and technicians exclusively to set housing standards, types, etc., the residents should be consulted and involved in establishing their priorities and values. The constructive involvement of the residents at all stages is probably the best way of promoting and ensuring a higher degree of support and participation for the programmes, projects and schemes. Each of these factors could, in their own way, either be a source of conflict (and thus undermine the spirit of the participatory process) or could form the basis for grass-roots' organisation through which the participatory process can be implemented.

The nature of the resulting approach will spring from those who live in slum settlements and their attitude will shape it. It has the potential to release individual, family and community responsibility and initiative. The programme of action would take as its reference the needs and resources of the residents as the basic criteria against which options are measured.

This approach has the further potential of not only satisfying the needs within the potential resources but also of improving the quality of slum-settlement-living through economic, health and educational linkages. The formulation of aided self-help strategies, policies and programmes can be couched within a variety of other developmental objectives each of which has its own rationale. By providing an improved infra-structure together with loans and sites for small industries and vocational training for youth, those who are unemployed or under-employed can be given opportunities to work. The health objectives of the programmes also bring with them a reduction in the risk of epidemics such as cholera and by increasing the level of public health, the residents can be made stronger, happier and more

productive and their contribution to the economic objectives would be doubled because of improved health. By drawing the residents together in the provision of schools, clinics, community centres, play grounds, day care centres and the like under a community development programme the social objectives can be achieved. The improvement of the environment combined with the progressive application of building controls, extension of city-wide services and the establishment of secure tenure will in the process contribute to achieving the legal objectives. These objectives are not mutually exclusive - in most cases they are closely linked. Most strategies and programmes include one if not all of the social objectives as well as the housing objectives.

With the necessary and appropriate pre-conditions to support and encourage this process, a greater diversification in the use of plots could take place, ranging from renting accommodation, shop stalls, work-shops and even some crop growing which would provide the much needed extra income denied to inhabitants of public housing estates, and is so vital in the development of housing plots.

The model proposed, can also be seen as a structure which can interface between the various participants and which will be harnessed by the consumers (residents) as a housing generating guide which the authorities can use as a guide when allocating the resources available to them. The final shape of this model, would be one in which the professionals, experts and technicians are participants of local community housing action, and in which the consumers (residents) are the dominant actors. This is not meant to imply absolute freedom of action even though it is certain that some minimum controls will need to be established in order to guide the residents but with this model decisions will be reached multi-laterally between the residents and technicians or 'experts' within an overall flexible master plan. The

outcome of these deliberations will represent a collective expression of residents' preferences and a symbol of co-operation between design and use.

In order to foster its acceptance and encourage participation and commitment by the community over a long period, it is imperative that the improvements programme envisaged be reflective of the needs and means of the community at which it is targeted. The assessment of these needs and priorities is thus an important element for the successful establishment and implementation of a programme. As mentioned in the field study (chapter 4.) several methods can be utilised to establish these needs, the purpose underlying the use of the various methods may vary depending on the data required and the phase of the programme at which the research is being conducted.

The study undertaken has endeavoured to meet these principles of unified development analysis and planning, which emphasise the importance of diagnosis of particular situations in order that the most appropriate plans can be made. This approach is not new and has long been advocated by pioneering urban planners such as Geddes in the nineteenth century, and has now been revived by scholars such as John F.C. Turner, who urge that a "satisfaction index" of needs and priorities be incorporated into urban planning schemes. This approach has been used here and applied to the model proposed.

While recognising the dangers of concentrating on community surveys rather than on-site action, it is envisaged that where resources are scarce surveys can provide the important and resource saving data required in the implementation of community improvement programmes. This method of working with the aim of satisfying basic and priority infra-structure and social needs, as determined by the community in which the improvement programme is being implemented, is registering higher success, impact and penetration than the

conventional housing processes. For example, during the early 1970's in Jakarta, Indonesia, the improvement programme began with road and footpath projects. The Government demonstrated to the community its interest and concern in working with the community by improving the local environment according to community stated priorities and by paving roads and footpaths and providing drainage. From this relatively small, flexible and simple project objective requiring very little input from Government, the 'kampong' (slum) dwellers were encouraged to begin making some of their own improvements, and project objectives gradually moved up the priority needs ladder. In the Salvadorian example, the improvement programme investment of \$15.5 million generated an additional \$30 million to the value of the national housing stock.

In the light of these and the Nigerian-Lagos housing experiences, a number of measures would have to be taken if this alternative housing approach is to be realised. To this end, the recommendations outlined below are considered fundamental and would broadly entail:

1. Making a shift in housing policy, from one of 'production and provision' to one of 'support and participation'.
2. Establishing designated improvement areas on a project basis, towards which the housing programme can be focused.
3. Creating institutional organisations capable of managing such programmes.
4. Establishing registered residential community organisations.
5. Providing legislation that determines the degree of security of tenure.
6. Establishing financial services tailored to the particular needs and means of residents in the improvement areas.
7. Establishing training programmes for the participants regarding their tasks, responsibilities and duties.

However, these recommendations however form the outline of objectives of this strategy (related specifically to housing), which are in themselves made up of a composite of objective components. The model proposed below defines these components and attempts to apply them to a nominated residential improvement project.

6.02. A model

Although not exactly true to the spirit of the proposed housing process, the development of 'prototype' models can not only contribute to reducing the costs, but can also be used to pre-evaluate the experience gained for application to future projects. Moreover, it also provides a 'fixture' on which the 'clients' can ponder in the process of translating their needs on to paper. Therefore the proposal below puts forward notional 'first stage' settlement improvement designs based on a number of aspects which have been generated from the relative habitability index which in turn is based on the satisfaction study.

The model proposed in this study is primarily applicable to low income housing improvement schemes. However, it is envisaged that it could be applicable to other housing situations. Owing to the wide array of variables (requiring in-depth research and survey) which would arise and have to be resolved, for the effective application and implementation of this model on a conventional housing project, a site and services or 'green field' site, the proposal has been curtailed to an improvement settlement development design for Maroko. The choice of The Maroko settlement was made because of the settlement improvement selection scoring chart proposed later. On both its relative habitability index (RHI) ratings and improvement selection score Maroko rated highest followed by Isale-Eko and Dolphin. However, it must not be forgotten that in most cases the political factor may also greatly influence the choice of settlement.

It is not possible here, within the limited time and resources available to demonstrate adequately the application and implementation of RHI ratings for the other study areas, Dolphin and Isale-Eko; however, it can be acknowledged that each settlement would have a modified version of the model proposed. Each model would be tailored to suit the particularities of the settlement in accordance with the determining criteria of householders needs and means. Both these elements can to some degree be established from the household satisfaction study and the household characteristic study.

The following study attempts to design (at least in part) an aided self-help process. To this end the proposal is made up of an aided self-help organisational framework capable of inter-facing amongst the various actors, such as the state, sponsoring agencies (if any) and the residents and their representatives. In addition to this the aspects of finance, regulatory controls, security of tenure, economic development, training of personnel and the manner in which these issues integrate within a semi-institutional aided self-help organisation will be examined.

6.03. Aided Self-Help Organisational Framework

The proposed aided self-help organisation structure is here seen as a framework bridging the gulf (see chapter 2.) between the sectors, on one side there is the informal sector community in the form of a representational organisation, and on the other side the authorities in the form of a project agency. This hybrid organisation has two main requirements in order for its structure to be operative. First it must inter-face with the existing authorities so as to secure the delivery of the various administrative, financial and physical elements of the development in an integrated and co-ordinated manner. Secondly, it must be sensitive to the social situation and capable of integrating

social factors arising from the project into administrative, financial and physical action. To these ends the following sections are made up of two main parts; the project agency organisation and the community organisation.

(a) Project Agency

Present housing agencies in Lagos, notably the FHA and the LSDPC are organised primarily to function on conventional bureaucratic lines (see Appendix XII.) The control and delivery of housing by such agencies has tended to be a single, fixed and finite package in accordance with government policy. These agencies decide the form and cost of the dwelling unit, the time and place at which they are to be located and the quantity and persons to whom they are to be supplied.

Although one of the primary aims of the agencies was to enhance the co-ordination of the delivery process between the various components which had previously been the responsibility of a number of ministerial departments, namely, they were to act as a lead agency, they have in effect been very limited in their co-ordinative capability and have proved to be socially insensitive, (much needed ingredients in a participation programme). At present the contact between the residents and the agencies is at post construction stage, and in the case of the FHA is relegated to the sanitation and welfare division of the real estate department.

International experience with regards to aided self-help programme organisation (Addis Ababa, Ethiopia; Manila, Phillipines; Madras, India; Lusaka, Zambia and Jakarta, Indonesia) indicate that if the two requirements mentioned above are to be realised, such programmes are best undertaken initially on a pilot project basis and secondly require the establishment of a new administrative and organisational arrangement. This arrangement gives the proposed project agency a relatively self-contained independence from the other departments of

the Government with a 'special' status label, and does have a number of advantages. First the complex and slow procedural processes normally associated with governmental agencies can be overcome. Secondly, the participation of the community representatives may well be through councillors of the local government. Thirdly, it makes it easier to create cadres of staff with a 'different outlook'. Fourthly, it makes it easier to recruit individuals possessing the right qualities required by the new organisation.

Unlike the other housing agencies and departments, the proposed project agency would be directed by a steering committee made up not only of department heads but also of local councillors, community representatives and community development committees. In an attempt to overcome some of the existing prejudices that may exist within the present housing departments and agencies it is envisaged that the unit could well be affiliated with the Ministry of Local Government and Community Facilities (Appendix XIII.), with final approval for major decisions resting with the governor. Given the proposed technical capability of the organisation, this 'location' appears to facilitate its much needed physical and social orientations.

However, this new organisational arrangement also has a number of disadvantages. The disadvantages are essentially two-fold. First, a 'them and us' relationship could build up between the unit with its 'special' nature and the existing administration which might hamper some inter-departmental activities to the detriment of the project. Secondly the transition from the project phase to the maintenance phase could pose problems which may not have occurred if the unit was originally part of the local government, LSDPC or FHA. In addition to this the establishment of a new organisation creates a first opportunity to improve the management performance of the existing agencies. Nevertheless the trend for success appears to be the

establishment of a relatively independent unit, which on attainment of the initial goals could be dissolved or transferred lock, stock and barrel (with necessary minor modifications) into the main city governmental structure.

(i) Project Agency Structure

It is envisaged that the agency will have two levels of operation. At the first level there are five sub-agency units essentially characterised and corresponding to the areas of activity of the project, fig 077..

At the head of the proposed agency is the Project Director (PD), who provides the overall initiation, direction and control within the guidelines as set by the steering committee and to whom the five sub-agency unit heads report (as well as reporting to their respective departmental heads who, in turn report to the steering committee). It is also envisaged that the post will be occupied by a full time head team leader of the agency. Experience from other aided self-help programmes has shown that this post should be on a contract basis with a higher salary than that paid to a civil servant at a comparable departmental level. The aim is to attract a suitable individual from the very few with this type of experience. It is essential that the individual be dynamic, as should be the pace for the whole project. It is also envisaged that the PD will have a deputy (DPD) who, if possible, should have a complementary professional qualification. For instance, if the PD has a legal or financial background, the DPD could have a constructional or sociological background with his/her's responsibilities stretching to the control of the administrative sub-agency unit. This provides the possibility for better control and co-ordination of the various disciplines involved.

The administrative sub-agency unit itself would be made up of a number of offices. Apart from the general administrative office, the

unit would also consist of a registry and legal offices. It is envisaged that the main function of the registry office would be that of registering both old and new plot and association members. It would maintain files on all members and their plots to enable full information to be obtained on the current position of any plot or household under the improvement programme. The legal office would be primarily concerned with any legal technicalities the agency might be involved in.

The construction sub-agency unit's responsibility will essentially cover the physical implementation of the project as well as providing construction advice and supervision. To this end, the constructional sub-agency unit will be made up of three offices, viz., a survey office, a civil engineering office and a planning and building office. The primary function of the survey office will be the preparation of survey plans and plot boundaries of the project areas. It would also be charged with responsibility for preparing plans for over-spill areas, as well as with preparation of the information required for plot registration. The civil engineers' office will primarily be concerned with the engineering aspects of detailed design work, costing and supervision of facilities such as roads, drains, water, etc. The planning and building office's function will essentially be twofold; first, it would be responsible for preparing detailed area use plans of settlement that would fit in with the overall planning framework and secondly, it will also be responsible for the provision of technical assistance to the various levels, mainly in terms of advice for improvements and designs for plots.

The community development sub-agency unit is regarded here as the 'front' of the project agency. It will primarily be responsible for promoting and understanding the aims and objectives of the project and the services provided by the agency. It would liaise closely with the

local community leaders and representatives on issues concerning the project. It would also be responsible for preparing publicity material and circulars to be distributed to the residents' association members, as well as being involved in the preparation of displays and signs identifying land use areas etc. Enquiries from members and prospective members would also go through this office and be directed to the appropriate (field) sub-agency unit.

The finance sub-agency unit's role will, in the main, involve the preparation of financial plans and negotiation of loans for the agency and project. As well as this it will have a day-to-day responsibility for handling project finances including the receipt of repayments for loans; its responsibility could also stretch to materials' stores management.

The economic development sub-agency unit, will essentially be responsible for developing a range of training, productive, business advisory, co-operative and employment generating activities. The staffing at this level will in essence be determined by the needs of the project and the resources available.

(ii) Steering Committee

In order that co-ordination and decisions can be carried out effectively with regard to policy making, control and operational execution there is need for a high level local steering committee - hence the the dual link to the field teams from the steering committee and PD. This committee is essentially a body composed of representatives of all the actors involved (the community representatives and committees, departments, field team leaders (sub-agency unit heads) and perhaps any other non-governmental (aid) organisation that happens to be involved.)

It is hoped the committee will have the power to take all decisions relating to the project without reference to other sections

of government for example, the Governor. Such decisions will stem from issues covering matters such as policy, staffing and finance, the main aim of this being to provide a rapid procedural capability as well as securing co-ordination and momentum of the project. In addition to this it is proposed that there should be regular steering committee meetings - possibly once a month. By monitoring reports from the various sub-agency units progress reviews could be carried out and an evaluation committee within the steering committee could evaluate the more long term effects of the programme and its implications on future housing and urban policy.

(iii) Field Teams

At the second, or operational co-ordination level of the project agency are the field teams. These groups could be described as the 'coal face workers' of the agency. The teams are essentially corporate inter-divisional groups specifically aimed at promoting performance in the field. Within the strategic framework determined by units and dictated largely by the programme of the various activities, they would have a large measure of delegated responsibility for making and implementing short-term tactical decisions on the programme. The units would be regarded as a supporting structure to be called on as and when needed and would formulate their own requests for assistance. If however, technical as opposed to operational questions arise, the individual members of the field teams would still look to, and be controlled by, their sub-agency unit head. From the departmental view-point the field team is in fact a secondary informal or semi-formal structure.

The agency's organisational component could be summarised as consisting of five inter-disciplinary field units inter-acting with an equal number (five) of management sub-agency units, rather than as an organisation with five professional divisions whose field staff are

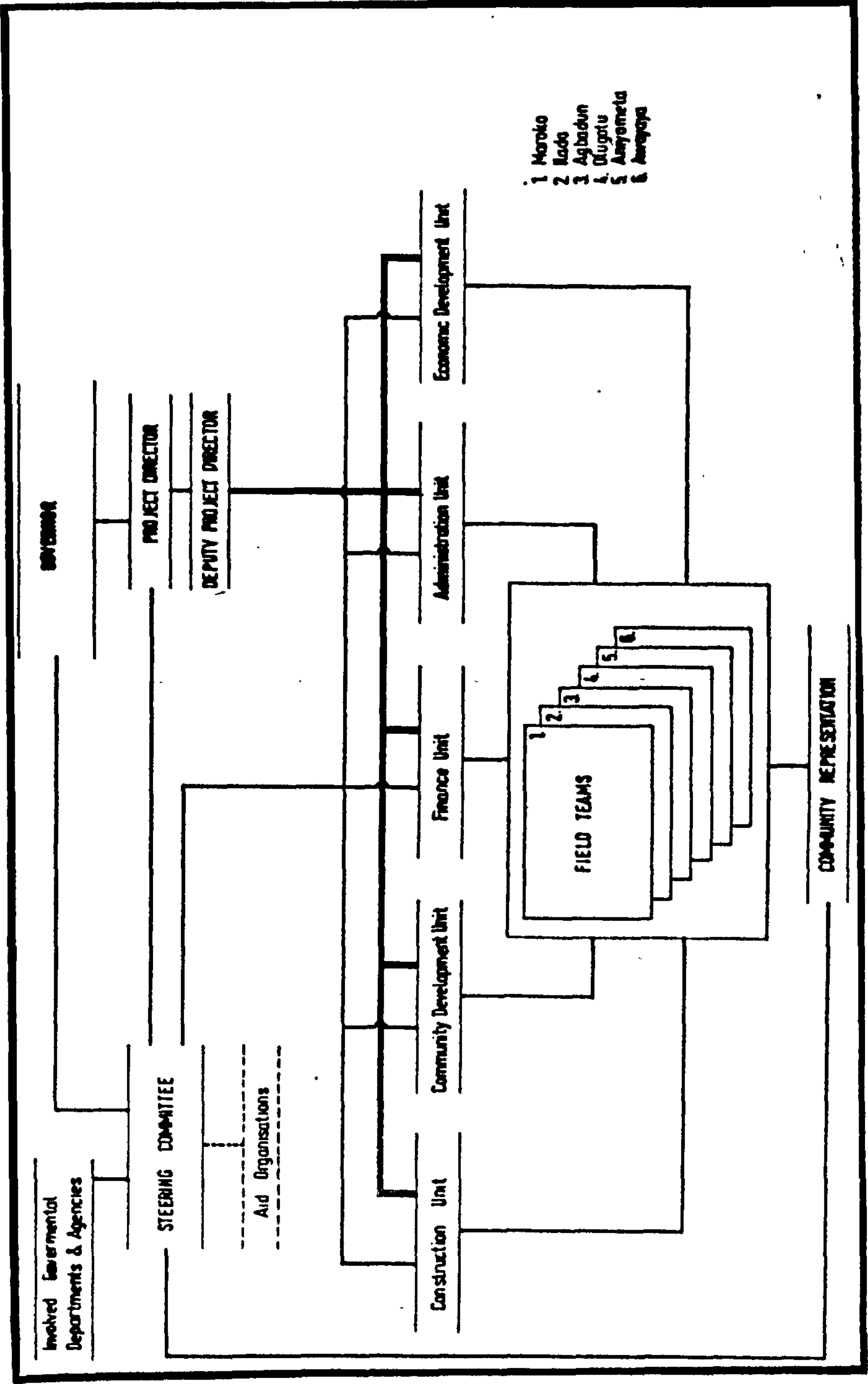


Figure 077. Project Agency's Organisational Structure

co-ordinated through leadership in the field.

(b) Community Participation

The first question that comes to mind in considering this community participatory approach is whether actual communities exist. Using the general definition of 'community' as a social system involving social inter-action and some common tie or ties within a particular geographical location (Hillery, 1968), it can be claimed that slum areas in many of the rapidly expanding cities of developing countries are indeed composed of communities, an observation highlighted by Andrew, Paul, Christie and Martin (1974), with regard to Lusaka in Zambia. This is a characteristic also common to Lagos as preliminary investigations of the field study (see chapter 4.) indicate - many of the communities being made up of local organisations or voluntary associations, established without purposeful external government stimuli.

In order that a degree of meaningful participation and control over the immediate environments be realised on a residential basis and communicated to 'higher' levels by the inhabitants, an effective and integrated residential community organisation and residential community representation is needed. Given the existence of such organisations and the sense of 'community' that they convey, it is envisaged that the proposed residential participation project be arranged along a number of lines.

First, there is a need for a residential hierarchical structure (as an adaptation from the traditional and existing informal residential organisations) ranging from the household level of 'omo-iya' (see chapter 3.) to the district or settlement level (described below). Secondly there is the associated series of representative bodies whose function is to communicate 'across' the

needs and priorities of the various levels of the residential hierarchy. Ideally these bodies would form a continuous link through the system of delegation from one level to the next. Thirdly, there are the community development committees.

(i) Residential and Representational Hierarchical Structures

The precise form of a residentially based hierarchical structure will almost certainly depend on the particular characteristics of the settlement. The important factor is that the chosen structure will operate in conjunction with a framework reflecting the community's representative structure, thus allowing for appropriate representation of the needs and priorities of that particular level. Before the 1983/84 coup, elective representation operated at local government level and associated housing agencies at state level. Both operated separately and therefore housing needs etc. were at best concerned with numbers and not with specific needs and priorities.

It is envisaged that the proposed residential structure (fig 078.) would operate at five levels starting at the 'omo-iya' level. These levels are;

- a) Individual households
- b) Plotholds
- c) Super-block communities
- d) Segment communities
- e) District or settlement.

The associated population counts will vary according to density and area of allocation. The figures below are 'average' and have been set at 5, 50, 5,000, 20,000 and 100,000 respectively. In terms of households this may be approximated to 1, 10, 100, 4,000 and 20,000 households.

The envisaged representative structure (as illustrated in fig 079.) and organisation will, like the residential structure, vary

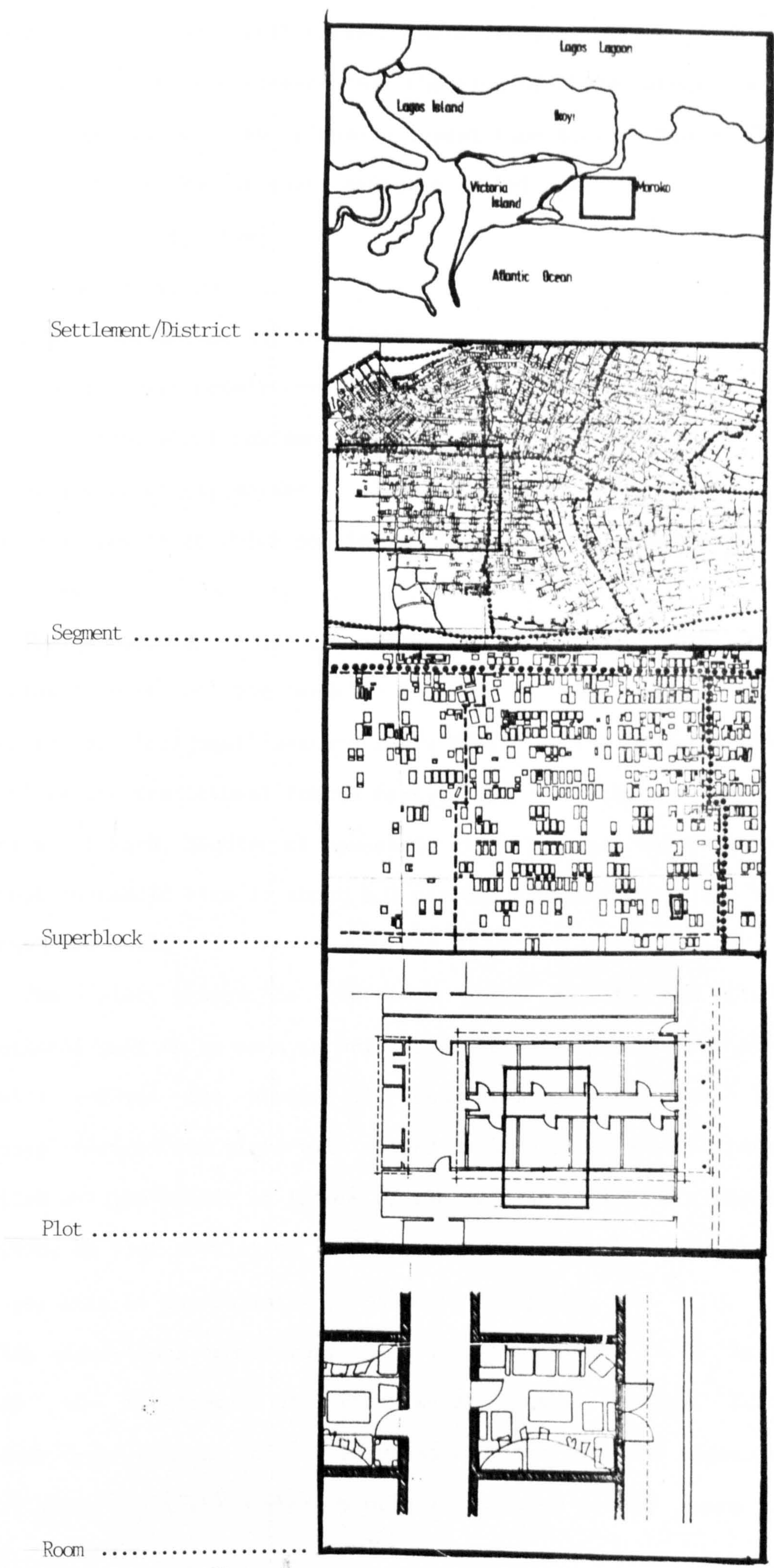


Figure 078. Residential Hierarchy

from area to area but will reflect the structural nature of these residential areas. It is envisaged that the size of these areas will also be influenced by the planning layout (see section 6.07). The representation hierarchy for these areas is as follows;

- a) household heads (oba akan)
- b) plot or compound group
- c) super-block residential sub-committees
- d) segment residential committees
- e) district or settlement residential councils.

This breakdown simply serves to illustrate the basic concept of organisational levels at which particular issues will be considered or decisions taken.

a) The household: this is the basic 'building block' and organisational unit of the model. It can be made up of the 'elementary' or 'conjugal' western style family or the 'omo-iya' and 'oba-akan' of the traditional Yoruba family or, for that matter a combination of both. Studies of household sizes in Lagos suggest that the average household size is about 5.2 persons and that they in the main occupy one room.

b) The plot group: is the next level and is the first organisational unit to be seen as being semi-private. The size of this group will reflect the number of households on the plot. The differences between the plots will depend on such factors as the size of the plot and the number of floors of the building. Studies (Master Plan, 1978) on plot population in Lagos at large put the number at 52 persons per site or approximately 9 household per plot.

c) The super-block committees: these will correspond to a large unit of the settlement of approximately 5,000 persons. These super-block organisations will be involved with the everyday issues of community life, a situation where people are to some extent aware of

each other. It is at this level that the proposed 'bare foot' architect (see 6.06.) would operate and the lowest level at which there can be any positive engagement with the existing formal sector representative organisation (under a democratically elected administration.)

d) The segment unit will be made up of four or more super-blocks or sub-ward areas, accounting for a population of approximately 20,000. Each ward will have sets of elected representatives from the super-block committees. This level probably represents the upper limit of the area covered by a field team.

e) The district or settlement council: (which in the case of Maroko would have come under the jurisdiction of the Eti-Osa local government - now come under the jurisdiction of the Lagos Island local government). This council is to be made up of locally elected representatives from the various segments who will be responsible for articulating the needs, priorities and decisions taken on behalf of their areas. As demonstrated in earlier sections (see chapter 3.) this concept representation of responsibility is not new to the settlements of south-west Nigeria. It is an attempt to adopt a more indigenous system of representation which will range from the household or lineage heads through the precinct councils and precinct chiefs, to the ward councils and ward chiefs. It is envisaged that it would be these representatives who would sit in consultation on the steering committee.

(ii) Community Development Committees

Operating in conjunction with the representational organisations but at the segment or ward level will be a number of elected community development committees. In essence these will engage in dialogue with three of the five sub-units and will be charged with the responsibility of enhancing the co-ordination of agency and community

activities in the pursuit of the priority needs of that particular segment community (fig 079 .)

First, there would be a self-help committee responsible for organising training in mutual self-help work such as trench digging, building of community amenities such as schools, post-offices or clinics. Secondly, there would be an economic promotion committee, responsible for organising groups of residents (residents' association members) into business co-operatives and establishing businesses with the help of equipment, materials, credit etc. from a local community bank, although the stimulation of employment and income generation is often cited as an ancillary justification for intervention in such projects.

Such projects in themselves promote this objective; first, through the use of hired labour during construction; secondly, through the induced effects of such programmes (the hypothesis being that by encouraging people to embark on the process of improving their homes, labour and employment demands will be stimulated). An example can be quoted from El Salvador, where evaluation results indicate that a typical World Bank Project of 7,000 units will produce about 3,700 person/years of employment and US \$4.2 million (1978/1979) income wages. More difficult to estimate but just as influential is the effect of infra-structural investment as a stimulus to small commercial and manufacturing enterprises. In addition, increases in rental income will in themselves increase incomes and consequentially the ability to access a wider and improved range of housing services resulting in a greater demand for labour.

Thirly, there would also be a general planning committee which would deal with the physical aspects of planning matters such as roads and other infra-structural services and both sides would report to the appropriate higher levels of the organisation on ascertained needs,

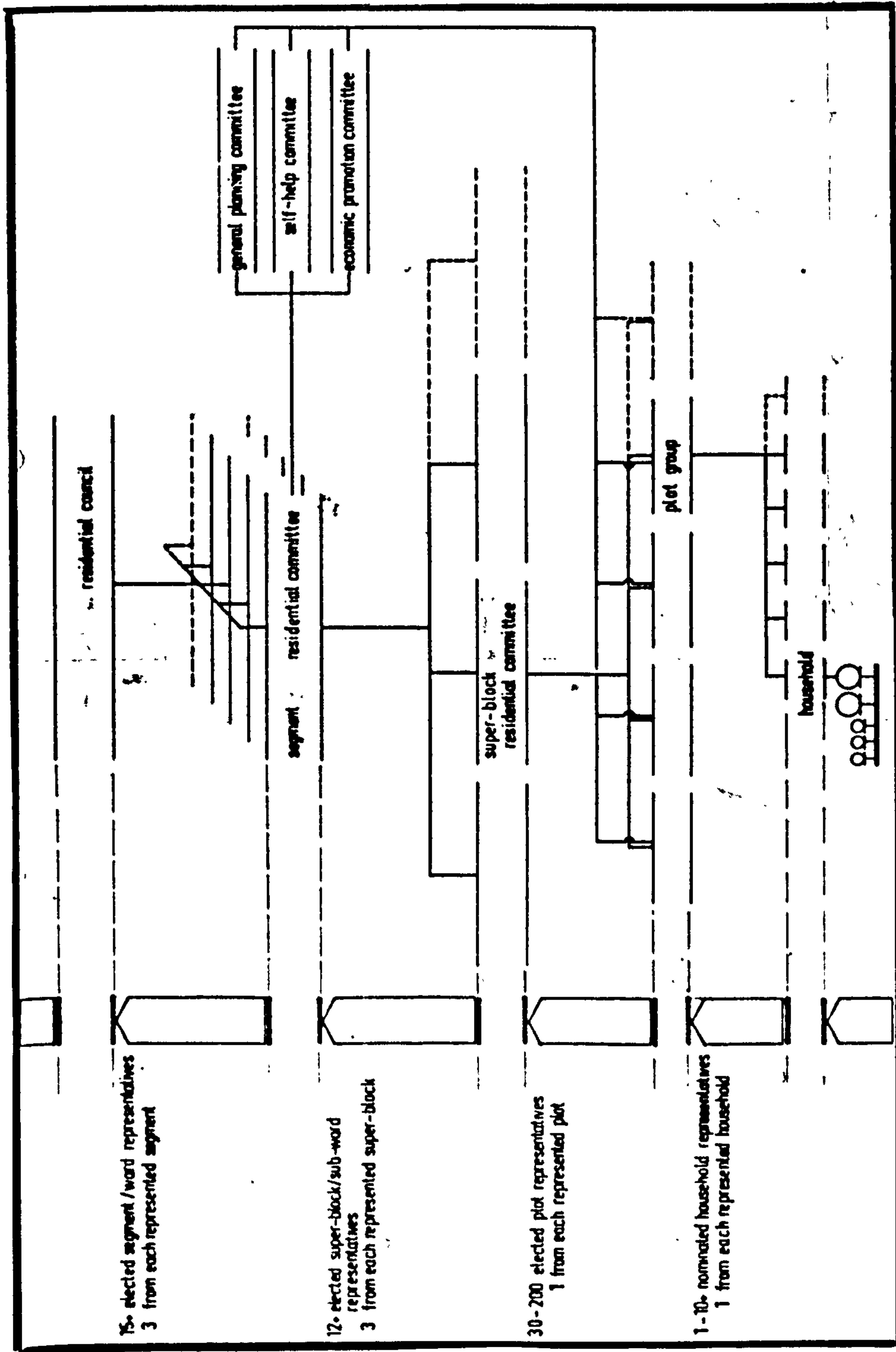


Figure 079. Resident's Organisational Structure and Hierarchy

priorities and procedures, from which the final decisions would be taken.

It is envisaged that the model described above which has been primarily tailored to the Maroko settlement area can be easily adapted for other settlement areas - with regard to the other settlements studied a similar organisational structure could be envisaged, eg., Dolphin could follow the lines of the flats and flat representatives, block and block representatives, phase and phase representatives and the Dolphin residential council. Likewise Isale-Eko could have a residential organisational arrangement reflecting the compound/court-yard and lineage characteristics of the settlement.

In conclusion, it cannot be over-emphasised that a community's involvement in a scheme will simply be a passive or neutral variable in the project implementation, it is and can act as a substantial influencing stimulus or conversely a substantial drawback in the realisation of the goals and objectives, which are in turn dependent on the concordance between the community and the programme's policy and objectives.

What this project does have to offer over the conventional process is some degree of local containment by community control. This is not an idealisation of the notion that community control of resources is necessarily wiser or freer of partisan interests than that of the paternalistic policy makers, but as the scale of the organisation is so much smaller, the mistakes, conflicts and range of relevant relationships can be grasped by the community itself and as such it will be able to learn how to harness available resources for its own needs (Marris, 1981).

(c) Post Project Stage Modifications

If an aided self-help programme of this nature is to be embarked

upon, contingency plans must be made along with the initial plans as to what happens once the original goals have been achieved: ie., how will this new improved settlement and its process be consolidated and 'absorbed' into the existing system.

These modifications have here been considered in two stages. First, a transitional stage, where the programme changes from a short term project to a long term maintenance and semi self-sustaining programme. Secondly an increase in scale stage, where the programme proliferates from a local government housing improvement programme to a city or nationwide housing improvement programme.

International experience (Pasteur, 1982) indicates that a 'new style' agency should be established within the existing governmental structure. It is envisaged that its structure, organisation and functions should be similar to those of the project unit's structure, organisation and functions, thus maintaining the 'idea' and momentum of this alternative approach. However, its relationships with the other departments will no doubt have to be modified so that it will be able to integrate with the existing governmental structure.

The need for the integration of such an agency within the existing government structure arises from the fact that a number of its functions will invariably overlap with different departments. The nature of this integration for the agency proposed is known as the matrix approach. Celand and King (1968 at p.172), have described this matrix organisation concept as a mixing of project structure and functional structure, the desired mixture lying somewhere between the two extremes of purely functional and pure project organisation. This matrix organisational approach has in essence evolved in response to the needs of the particular task requirements, and the need for it is greatest where there is a call for close co-ordination. It is characterised by the change in authority, control and communication

and by which degree intra-departmental, vertical authority control and vertical communication have shifted to the inter-departmental, horizontal axis.

The range of alternatives are, in the main dependent on the government's (national, state and local) effectiveness on both political and administrative grounds. The horizontal axis distinguishes new and existing agencies, and the vertical axis the preponderance of governmental involvement and power. The characteristic features of the intermediate alternatives is that they are modifications of existing organisations which have been adapted to meet special needs which nevertheless stop short of entirely new arrangements. It is not intended in this study to analyse in detail the particular mixture and patterns of vertical and horizontal authority, control, communication and relationships that would have to be made for this model, but merely to draw attention to the overall structure of the proposed organisation. At this stage it must be emphasised that the location of this unit would be influenced greatly by political interests; what those interests would be is not known to the writer.

(i) Maintenance and Further Development

In consideration of the continuation of the maintenance and further development stage, it is envisaged that the location of the new agency be the Ministry of Local Government and Community Development. This ministry has been chosen instead of say, the Ministry of the Environment or agencies such as the FHA or LSDPC, because it is felt that by its very nature it can adapt more efficiently to the dual characteristic (i.e., the ability and power to take decisions on road building, power supplies etc., in tandem not only with researching the need for improvements but also with explaining their beneficial effects to the community). However, final

approval for major decisions would still rest with the State Governor.

In Lusaka, Zambia arrangements were made during the initial stages of the Squatter Upgrading and Site and Services Project (1977), for a gradual transition from a short term special status project to a long term continuous programme in 1980 (Pasteur, 1982). Experience gleaned from this project has illuminated a number of difficulties associated with this transition, they were tackled by a series of regular meetings between staff of the various departments and the agency. The idea was "to increase mutual understanding and awareness of the process and the problems of handover among the councillors and staff from the heads of departments downwards."

(ii) Proliferation

In consideration of the proliferation of the process to a wider arena say for the city or the country at large, further modifications to the organisational structure would be needed.

The community organisation would essentially remain the same except that there could well be community representation for the residents' associations at state and federal levels. This representation at higher levels could provide extra influence with regard to funding of such projects. The relationship between the local, state and national governments would be crucial in that with the execution of the urban programmes they could take on complementary roles where the highest levels of government are seen as actively supporting such programmes, while the local government is charged with the responsibility of co-ordinating the day-to-day operations of the programme.

Regarding the implementing organisation structure, this, whilst also having a 'higher' structure, would out of necessity have a somewhat modified community-agency relationship.

If the proliferation of this process throughout the city or nation

is to be achieved, it is envisaged that each area should initially embark on an experimental one-off project basis. This would provide the opportunity-time for improvement programmes to develop in keeping with local conditions whether they be political, administrative, financial, cultural, and/or on tenure.

If these aspects are contended with then the main determining factor of the modification of the agency will be that of the availability of sufficient numbers of trained technical personnel, although, the initial project approach stage would help provide much of the necessary training ground for the essential personnel. It would nonetheless be incapable of generating sufficient numbers of staff to cope with a programme of this type on a nationwide scale.

Earlier discussions on this issue have already highlighted the inbuilt shortages and maldistributions that exist in the construction industry. Given a shortage of staff especially at the field team level it is envisaged that the sub-agency units could take on a 'touring' characteristic in those areas where the manpower shortage is most acute. In conjunction with this touring field team, the introduction of another tier of operation may prove necessary.

To this end, the envisaged lower tier's scale of operation would exist at the super-block community level. In essence it would be a one man operation (with periodic help from students on National Youth Service Corp assignments etc.). Ideally this individual would be selected from the immediate community (so as to encourage confidence and inter-action) and would be sent on a short course on running the 'office'. Sani (Ekistics, 1984 at pp.34-36) describes a similar type of individual, referred to as a 'barefoot' architect, who acts as a type of 'go-between' for the authorities' sub-agency units on tour and the people at super-block level. His/her duties would involve the resolution of everyday problems of the super block community,

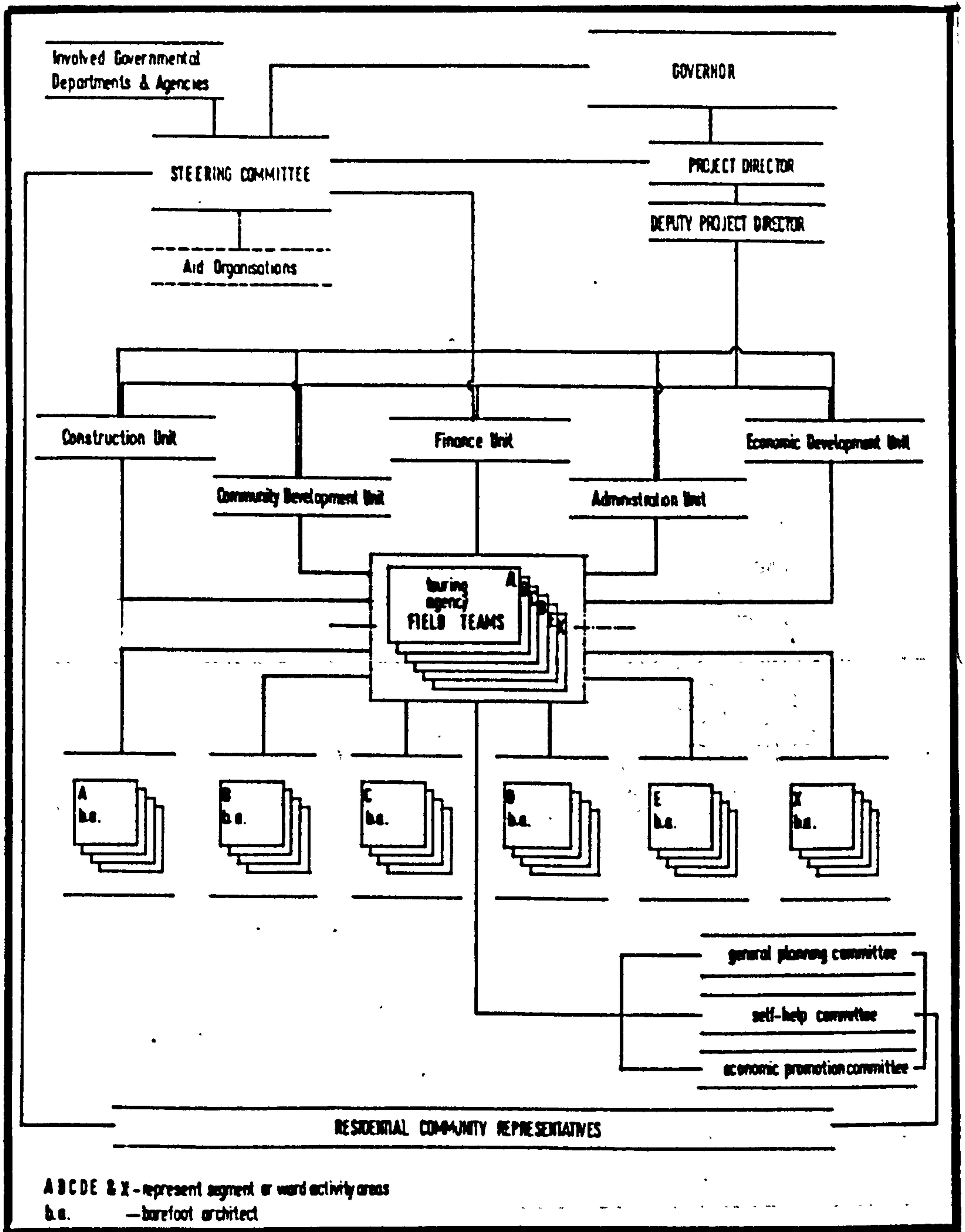


Figure 080. Project Agency's Proliferated Organisational Structure

administering plot developments, passing on more complex issues to the particular super block field team, collecting rates, checking the validity of permits and licences and monitoring the growth and development of the super block.

This data could possibly be on 'confidential' permanent display in the super block/sub-ward office with updates being made as soon as the changes occurred, these could then be sent up the line on a quarterly, half yearly or yearly basis to a permanently located agency head office. This essential data could then be monitored by the sub-agency units as well as being evaluated by academics in the higher institutions of learning and by government policy makers.

The main function of the field teams at their 'clinics' would be to help resolve the complex problems passed on to them by the 'barefoot' architects. Their functions would also include detailed planning (based on data received from super block communities) in conjunction with the local representatives, local government and state government departments. Further, they could undertake survey work such as a satisfaction survey of a selected sample of the population to ascertain its needs. All this data could then be compared and acted upon in collaboration with the wishes and aims of the community representative committees.

It is at this level that standards, regulations and the establishment of rate levels will be decided, as well as the issuing and enforcement of permits and licences and the collection of repayment charges and loans in conjunction with community committees and community representatives.

(d) Slum Improvement Selection

There is little doubt that the availability of funds and resources in general will be very limited, thus restricting the number of slum areas that can be tackled at any one time. This said there is a need

Three points are scored for conditions most favorable or most requiring improvement. One point for conditions least favorable or least requiring improvement. Two points for an intermediate situation.

Tests	Criterion	3	2	1	Weighting Factor
Visual intrusion	Visual intrusion	400 metres off main highway and visible from highway	400-800 metres from highway and visible from highway	More than 800 metres from highway and not visible	3
Gross residential density	Area divided by population	More than 600 persons per hectare	300-599 persons per hectare	Under 300 persons per hectare	3
Income group	Average income in all settlement areas	More than 2/3 of families have less than average income	Between 1/2 and 2/3 of families have less than average income	Less than 1/3 of families have less than average income	1
Age of area	Oldest (=worst) areas improved first	2/3 of houses more than 15 years old	2/3 of houses 7-15 years old	2/3 of houses existing less than 7 years	1
Road access	For firefighting and garbage collections	2/3 or more of area more than 50m from road	Between 1/3 and 2/3 of area more than 50m from road	less than 1/3 of area more than 50m from road	3
Water supply	Number of individual connections to city mains	Less than 1/3 with connections	Between 1/3 and 2/3 with connections	More than 2/3 with connections	2
Sanitation	Type of WC in exclusive use by family	No exclusive use	Night soil tank or other	Connections to city sewers	2
Electricity	Number of connections to city supply	Less than 1/3 with connections	Between 1/3 and 2/3 with connections	More than 2/3 with connections	1
Flooding	Not included as all sites subject to flooding are to be redeveloped				0
Primary Schools	Walking distance without crossing mainroad	2/3 of area not within 800m of school	2/3 of area within 400-800m of school	2/3 of area within 400m of school	2
Primary Schools	Operations	Double session	--	Single session	2
Health	Dispensary or doctor available	Not within 1 km	Within 800m-1 km	Within 800m	2
Location	Distance from CBD	Within 5 km of CBD	5-10km of CBD	More than 10km from CBD	4
Land ownership	Public ownership	More than 2/3 in public ownership	Between 1/3 and 2/3 in public ownership	Less than 1/3 in public ownership	1
zoning for residential use	Changes required	No change	Changes on up to 20% of area	Changes on 20% of area or more	2
Attitude of resident to improvement	Positive attitude	2/3 of people want improvement	Few people want improvement	People resisting improvement	3
Impact on city	Visual improvement	Major contribution	Modest contribution	Minor contribution	1
Community	Church, meeting room associations, playground, open space	None within 100m	One within area or 2 within 100m of area	2 or more within area	1
Building condition	Permanent materials in walls, roofs, floors, doors or windows	2/3 of homes have 1/3 of permanent materials	2/3 of buildings have between 1/3 and 2/3 of permanent materials	2/3 of buildings have more than 2/3 of permanent materials	3
Demolitions	Number of existing houses to be cleared	Less than 10% demolished	10-20% demolished	More than 20% demolished	4

Table 038. Suggested Scoring and Weighting Factors for Choosing Priority Upgrading Projects.

Source: Shankland Cox Partnership (1977)

for some form of unbiased slum selection procedure. The approach suggested here is based on a procedure developed and used in Seoul, South Korea and Jakarta, Indonesia. It essentially involves a number of general criteria selection guide-lines as follows;

1. Physical conditions (those areas with the worst conditions would be given priority for improvement).
2. Population density (high density should be given priority).
3. Strategic location of slums with respect to development trends in Lagos.
4. Age of slum (older, well established slums being given priority).
5. Programme should also confirm the general land use patterns envisaged in the master plan.

These criteria can then be converted into a weighted scoring system, which involves putting certain emphasis on specific items and certain scores to varied conditions of an item (table 038 .). It must be remembered that this approach is not bias proof, as interpretation by the surveyors will come into play. It is also not finite in its selection of the slums to be improved, as political and other judgemental factors may and probably will influence those deciding which areas are to be improved. It does however, operate as a primary screening process as well as providing much needed data for future actions.

6.04. Personnel Training

The innovative and evolutionary nature of the aided self-help process combined with the limited awareness, understanding and experience of the process by most if not all of the actors, (as well as the experience acquired from several existing projects) highlight the need for an intergral training programme. The programme would not only equip the actors with the skills necessary to undertake the tasks

involved in such a project, but would also play a crucial part in the formation, promotion and dissemination processes of the project.

However, establishing a training process for an aided self-help project is more complex than a conventional developmental project. Cockburn (1985) has highlighted this issue; unlike conventional methods of assessing training requirements, the nature of aided self-help generates a situation where not only are the tasks required by the programme variable, interminable and fully comprehensible, but also the capabilities of the individuals involved relative to the tasks are similarly untested and unknown.

As far as training programmes in participation are concerned, it appears that the trainers and trainees should collaborate with each other in devising such programmes and in taking decisions acceptable to both sides. There cannot, and should not be strongly fixed blueprints for training people and promoting community participation. To set rigid guidelines on the subject would appear to encourage the very undemocratic and non-participatory practices which frustrate the approach. Training should be conducted through carefully planned activities involving the professionals who have a full-time responsibility for the project as well as those who have other duties to perform but are capable of helping the project if they are acquainted with its aims and objectives. To this end it is envisaged that the community development sub-agency unit will be primarily responsible for such programmes.

I. The Actors

In broad terms, the tasks to be undertaken can be divided into two main camps. Essentially these camps reflect the relative position of the particular actor. On one hand there are the 'enablers' ie., the technicians and policy makers and on the other hand there are the 'enabled' ie., the community and its representatives.

(i) The Enablers

In this camp the training and education would relate to those either within the agency or to the policy makers and those within the existing governmental structure involved with the project. The agency personnel can be categorised into three target groups reflecting the hierarchy of senior, middle and junior staff.

The senior staff will comprise essentially the field project director and the various sub-unit heads. Ideally these people should already have some form of aided self-help experience and may in fact form part of the pre-programme training staff.

The middle staff, can be categorised as either, from base, on site or community staff. The first group who are essentially the 'paper pushers' will consist of accountants, loan officers, engineers and social workers. Their duties will be primarily to maintain the books, process loans etc. and check the acceptability of standards on which loans are made. The second group, the on-site workers comprise of engineers, surveyors, site inspectors and building foremen, their main duties being to supervise and check on-site activities. The third group, the community workers, will essentially be social workers, bridging the gap between the enablers and the enabled. The junior staff are essentially secretaries, clerks, drivers etc., whose activities are not necessarily specific to the needs of the programme.

(ii) The Enabled

It is anticipated that the educational level amongst this section will generally be low (as illustrated by the survey of Maroko). As such the importance and spin-offs of such an integrated training programme cannot be over-emphasised. With regard to the phasing of the training programmes it is envisaged that this will be made up of three stages (Lewin, 1981). First, the pre-membership training stage, which

involves the introduction of the basic principles, organisation and functions of the aided self-help process through the analysis of other aspects such as planning, finance, construction and management, leading to the establishment of the programme members and community representative committees. In addition the prospective members would also be made well aware of the responsibilities, liabilities and duties associated with such an improvement programme, while the training of the development committees would involve familiarising these individuals with the technical points, with regard to the planning, business and constructional aspects of the programme. Thirdly, the post programme training stage applicable to all actors which is primarily concerned with maintaining and sustaining the momentum of the activities of the programme (see section 6.03.)

II. Training Courses

The actual make-up of these training programmes will consist of a number of different educative components to meet the particular requirements and capabilities of the various actors. These courses will be short ones covering a range of management skill workshops, community workshops and study tours.

(i) Short Courses

In such instances where 'academic' course training programmes are needed, it is envisaged that these will be primarily targeted to the enablers' training schedule. The courses, applicable to all the sub-units' activities will be aimed at 're-training' these individuals on aspects of aided self-help related to their area of operation. These courses could be set up with the help of personnel seconded from one of the city's higher education establishments such as the Yaba College of Technology or the University of Lagos, both institutions being experienced in aided self-help. The same teaching staff could then be utilised during the early stages of the project on

site before handing over to trained personnel. They could then either leave or return to their colleges to continue and develop the short course curriculum needed for further personnel training ie,. current and post project courses.

Ideally these training programmes will be short course based. This has the advantage of not only helping to save the limited funds available but also in reducing the effect of having depleted the project of its staff and community members, especially for the concomitant project courses.

(ii) Study Tours

Good practical examples of community participation are not easily available. Since skills in community participation can only come through application, it would be invaluable for national, state or city government to invest money not only in initiating such programmes as suggested here but also in sending prospective trainees on study tours of some existing programmes. The idea of a study tour is to exchange experience and review different techniques for dealing with the implementation of similar urban development and housing projects on an international basis. The experience gained from such programmes would be documented and used for training.

(iii) Workshops-Seminars

In keeping with the somewhat modified matrix organisation structure the workshop appears eminently suitable, at both community and agency levels. The conference format of community meetings is likely to evoke a better response from community leaders than a formal meeting. A workshop format can break down the relationships within the bureaucratic hierarchy which tend to inhibit an office staff meeting - it is also more conducive to participation by those attending than is classroom training.

However, some would argue that carrying out training in community

participation is not only unnecessary but actually harmful, in the sense that it kills initiative, and furthermore that the trainers are bound to offer a pre-determined academic perception of reality which will eventually result in trained 'incapacity'. It is hoped though that the training approach proposed above will overcome these fears, in that it will attempt to produce a cadre of aided self-help personnel both enabler and enabled who will exhibit a style and outlook distinct from the normal bureaucratic, elitist and traditional situation. It call for flexibility in meeting very difficult conditions and a more democratic way of working them out. Its orientation is one that concerns itself with what can be achieved within the constraints both of finance and the socio-economic and environmental conditions of slum settlements. The aim is to develop a product quickly and visibly while ensuring that that product has immediate impact in the city.

6.05. Financial Access and Cost Recovery.

Although substantial strides have been made in the development of housing finance in Nigeria (see chapter 2.), it is doubtful, given the economic and political climate and the demand for funds, whether the modern sector finance mechanisms could be sufficiently modified to cater for the housing needs and abilities of low income households. Therefore, the proposal put forward in this study does not attempt to recommend any substantial modifications to the existing modern sector housing finance system. To this end the sections below are primarily concerned with the access to and recovery of finance on an aided self-help basis.

In keeping with the spirit of aided self-help, the financial approach proposed will attempt to foster financial mechanisms based on community participation and the development of loan arrangements for

housing which will be in keeping with local and community needs and abilities. If this is to be achieved (given the constraints mentioned earlier), it will be necessary to expand the source of credit for housing on a more LOCAL and COMMUNITY basis.

Encouraging low income households to save for housing is not as easy as it sounds. The incentives to save could however, be achieved by providing deposit guarantees and indexation, preferential interest rates and preferential tax treatment on deposits made to the local-community 'bank'. It is envisaged that this bank would in essence be independent of government with all its usual constraints.

With the establishment of a community orientated and controlled credit source, the proposal then attempts to organise and relate the various existing sources of finance available for housing (discussed below) with comparable residential and representational structures. For instance, owing to the nature of employment and hence to the income of the informal sector low income households, the inter-action between a household and a building society is not viable because these households do not have the sizeable and regular income required by the societies. However, at the plot, street or block level, the hypothetical collective income makes interaction through a representative more feasible in terms of financial affordability. Furthermore, the presentation of the 'right of occupancy' certificate (discussed later) as collateral for the loan of these households could come into operation, the potential relinquishment of which acting as a deterrent against default.

(a) Financial Access

Some of the financial schemes presently in existence (Awotona, 1977 at pp.100-105) which could be fitted into the proposed community representative structure (see section 6.03.b.ii.) are listed below:

- (i) Esusu (credit unions)
- (ii) Co-operatives and non-profit associations
- (iii) Non-profit organisations (employers, charities, church, local aid agencies etc.)
- (iv) Institutional organisations (commercial and merchant banks, fiduciaries, estate developers, building societies, international aid agencies)
- (v) Federal and state government institutions.

(i) Esusu (credit union)

This is a very ancient credit institution which the Yorubas operated in Ile-Ife using cowries, long before the introduction of the British currency system in Nigeria. Although having elements similar to a credit union, insurance scheme or savings club, it is distinct from these in that for example, unlike other savings clubs many esusu groups hold no meetings as the members are frequently not known to each other. It is very widespread and very well established (Appendix V.)

There are broadly two types of esusu groups:

1) Restricted, where the membership is restricted primarily to the inhabitants of a social group i.e., those people working for the same firm, members of the same church or mosque, labour union or a closely knit community such as members of the same compound, consisting exclusively of members of an extended family group.

2) Unrestricted, where the membership is open to anyone.

It is hoped that these 'esusu housing groups' will then consult with their field team or local barefoot architect on how best to use these funds. The scheme could be developed into a formal local system having the capacity to draw deposits from numerous small investors of the low income category and operating at such a level that feasibility of such small proposals (relative to larger institutions) in

consultation with the field team barefoot architect would be attractive. It is envisaged that government intervention at this level would be minimal as its attention will in no uncertain terms be required at other levels with regard to financing of certain community facilities, e.g., roads.

(ii) Co-operatives and non-profit organisations.

Liblit (1964 at p.71) has defined co-operative housing as "a form of home ownership in which the resident and his neighbours own their own property jointly, it differs from conventional public housing in that overall policies of the project are determined by the members." It is this aspect of community ownership (when applied to the provision of infra-structural services in the proposal) that could read, "...as a form of infra-structural services ownership which the residents and their neighbours own jointly". It is at this level that the field team with its 'experts' would be best able to consult with the super-block committees as to how best to use such funds for infra-structural provision in relation to other areas of urban settlement.

(iii) Non-profit organisations

It is envisaged that the operational level of these organisations such as churches, charities and aid agencies would be between super-block and segment committees in association with the field teams. The benefit to be gained by this is that the financial requirements and size of funds needed for community facilities at these levels would be commensurate with the collective affordability, guarantees, charges and publicity derived from such sponsorship. The activities of such organisations will essentially be limited to short-term local projects such as the construction of community facilities like post offices.

(iv) Institutional organisations

The supply of funds from sources such as commercial and merchant banks, fiduciaries, estate developers, building societies and international aid agencies for low income housing (see chapter. 2.) is very limited. The involvement of such institutions would only be at district or local government level where capital and interest repayments, unaffordable by the majority of households, would be the responsibility of the district and local government treasuries whose funds are inevitably derived from taxes and rates received from the residents and businesses in the areas of action.

(v) Federal and state government institutions

The intervention of federal and state government housing agencies would be best and most effectively utilised (with regard to the financing of low income housing programmes) in the areas of infra-structure and services provision, indigenous building materials' production and training schemes that would support and encourage the success of the proposal outlined here. Further support for low income community housing could be achieved by the provision of middle and high income housing on a commercial basis. The beneficial effects of all this could help first to reduce 'down-raiding' for housing by the middle and high income groups and secondly by providing additional funds by means of a cross-subsidization programme for low income community use - a system which has been operating in Lagos.

Although in slight contradiction to the present financing of direct construction programmes and the provision of credit for house building for low income groups numerous studies have demonstrated that these things do not benefit such groups. Thus if housing investment for the informal sector is to be efficient and effective it must adopt a different character, one commensurate with the informal housing provision process, viz. gradual and incremental investment in the

home. The participation of the formal sector institutions in this process would be limited, owing to the cost of administering the loans which would be considerably smaller than loans being presently given. A community-based finance institution along the lines of a community esusu institution could and possibly would be more appropriate for individual housing finance with the larger institutions being involved with the financing of infra-structure provision for the community as a whole. Loans would be made to the community representative institutions and repayment through payment of rates, taxes and licences.

(b) Cost Recovery

On the other side of the financial coin is the cost recovery aspect. The failure of a repayment scheme will, like the lack of access to funds (see chapter 2.) also contribute to the stifling of the project. At the heart of this is the ability and willingness of the target population to pay for the project. As such, it cannot be over-emphasised that improvement proposals must be related not only to the needs of the community involved but also to the income structure of the target population.

If loans are kept small, short term and frequent, the question of security for them becomes less important as there is an inbuilt incentive to repay. Furthermore, it enhances the flow of money, in that once one small loan is cleared, another one may be taken out. The drawback of this is that it will contribute to the administration costs and hence to the repayment costs.

Collection of the loan repayments and service charges poses another problem. The intrinsic nature of the modern sector system, especially regarding collection of repayments is such that the cost of collecting these repayments is in many instances more than the repayments themselves.

Successful collection systems, developed in relation to aided self-help programmes have, in the main been based on a 'carrot and stick' approach. On the carrot-incentive side, rebates can be offered on condition of prompt payment of charges due. This can be achieved either on a fixed or sliding scale, for example, the rebate could rise from 2 per cent of receipts at the level of 31 to 35 per cent of monthly charges, to 5 per cent at the level of 90 per cent to 100 per cent and 6 per cent for over 100 per cent.

On the stick-sanction side, a number of methods can be implemented. The social pressures that can be implemented within a co-operative arrangement are probably best in that coercive sanctions from within the group are made possible through the group representative while the scheme maintains the repayment charges. This may be taken a stage further where services such as water may be cut off. Although unfair on those who have paid, it nonetheless increases quite substantially the social pressures on the individual or individuals who are defaulting. The alternative to this would be a legal sanction (eviction) against the defaulter. This has its difficulties in that unless the particular household involved owns the dwelling, legal sanctions may be impossible. Nevertheless, the threat of legal sanction on the household does tend to have the effect of 'encouraging' repayment by both the defaulters and any others under similar circumstances. A case in point can be seen in the squatter upgrading project in Lusaka, where once title to the land had been established, legal sanctions were taken. This resulted in those who were concerned smartly paying up their arrears (Pasteur, 1982 at p.41). However, it must be emphasised that default is not necessarily correlated to affordability or income. In the same scheme in Lusaka, a 50 per cent default situation arose which on investigation showed that the default was due to the lack of knowledge of responsibilities and

duties, and the fact that the local politicians' interests were not being served by coercing participants to make repayments.

In Maroko, with its preponderance of tenants, it is proposed that participating households - registered as members of a residents' association could be threatened with the loss of their association membership unless arrears are paid. It is hoped that this may prove to be sufficiently coercive in promoting prompt payment of loans and arrears. The sanction would be that protection against rent increases or eviction by landlords will be forfeited as would membership of the association.

It is hoped that this relatively less-subsidised housing process, geared to the needs, culture and financial capabilities of the urban poor within the framework of the MIP project may initiate the development of still more independent and community orientated finance mechanisms. Although still in its infancy, this approach has, where adopted, produced good repayment and maintenance records (Federal Task Force (Ottawa), 1969 at p.24). Thus if the appropriate conditions and administrative arrangements could be established, it should be possible to effectively tap the initiatives and savings of low income households, so that they can at least improve their living conditions within their means on a collective basis as against what they could not do on an individual basis.

6.06. Tenure

The influence of the tenure factor on the aided self-help process is primarily that of security of tenure. Advocates of the self-help housing process argue that unless a reasonably secure tenure is available to the participatory householders, little if any self-help orientated housing improvements can be expected in the slum areas. However, exactly what a reasonably secure tenure is, appears to depend on exactly where the slum settlement is as empirical assessment of

some international experience has demonstrated (Angel, 1980). In essence this is reflective of the political and administrative environment for the conferment of security of tenure involves not only administrative costs but also processes much more complex than the mere stroke of a pen in offering compensation.

However, the issue is clouded by the dilemma in which the householders, plotheolders and the local community find themselves in that having invested money, labour and energy in improvements whilst not having security of tenure, the benefits of their efforts will accrue to the landlord. Conversely though, if the landlord who potentially can play a major role in this approach is to invest time, money and effort and the benefits accrue to the tenant (through loss of rents etc.) it is doubtful whether the landlord will wish to participate in the improvements. This dilemma appears to be at the heart of the tenure issue.

Simply handing over plots to householders will not necessarily resolve the predicament either, especially under the rooming conditions of Maroko. Apart from the above-mentioned factor, the nature of the market is such that these householders would most probably sell the plot (At between ₦60,000 to ₦100,000 per plot (Aradeon, 1983), this roughly works out at a shared capital income of over ₦10,000 for each household. Which is equivalent to three to four times the annual income of those below the 60th percentile of respondent households) or rent out the rooms to generate income or move to cheaper accommodation in order to make the best of the situation in meeting their own perceived priority needs. If controls were then established to monitor these activities, a further compounding of the issue could develop where the majority of the 'new owners' may find it impossible to pay the tenement rates etc. on the plot. This in turn would, one way or the other, not only hamper

investment in housing improvement by householders but also reduce the revenue or potential revenues received by the authorities from the present situation, thereby curtailing a possible source of loans and credits for an improvements programme. Furthermore, it must be borne in mind that it is the landlords' income derived from rents, which has financed the construction of existing accommodation (it being doubtful whether present low income households could finance the construction of such accommodation), according to the RHI ratings registered higher than construction in Isale-Eko.

Critical to the issue of tenure is the fact that ownership in itself does not matter. Therefore, if people are to invest their own resources they must at least have an inalienable legal right both to the occupation and the realisation of the added value of their housing improvements. The adoption of a de-facto as opposed to a 'de-jure' security may be one means of overcoming this dilemma. As such there appears to be a need to evolve and develop alternative forms of tenure which could not only help solve this predicament but also encourage participation by all parties.

This proposal could take the form of a title or right of occupancy conditional on membership of a registered residents' association. Furthermore, this could establish a basis not only for holding rents in particular areas at a fixed level over a specified time (given that there will be added value and provided rent defaults have not been incurred by the tenant) but also for providing a basis for loans and credit to members as well as regular compensational grants to landlords.

In conjunction with these acquired rights, the 'roomholders' would have to acknowledge a number of responsibilities that could be built into the proposal. These responsibilities would be aimed primarily at promoting the participatory dimension of the proposal, i.e.,

residents' association membership and active participation in the activities of the association in order to achieve the aims and goals of the Maroko Improvement Programme (MIP). This approach bears some resemblance to traditional forms of land tenure and activity, in that once a family or individual was using a plot and paying a regular tribute, the owner could neither evict the occupants nor reclaim the plot for personal use unless it had been abandoned and unoccupied for a stipulated period of time or change of use.

In a comparative study of various types of land tenure systems and their responsiveness to urban conditions, Doebele (1978), had the impression that while tribal ownership may not be as responsive to conventional urban changes as other types of tenure, it ranked highly on equity and continuity with existing conditions in the fringes of urban areas. He draws on Okpala's study (1977) to show that, while problems occur on transfer and quality of urban development, in general traditional systems scored well on performance variables (table 039.) Okpala notes that despite the years of predictions of its impending demise - especially in the land law courts, traditional ownership of land is very much alive. When the Lagos Executive Development Board needed land it found compulsory acquisition so cumbersome and socially disruptive that it often preferred to reclaim land from the sea instead.

On the other hand, the use of traditional allocation procedures of urban land offers a number of advantages:

i) The social and emotional ties with the traditional institutions are usually very strong and any break is likely to cause problems.

ii) It is useful for later maintenance and reallocation if the original allocations meet with local approval and if vacant plots and common user land remains in traditional ownership.

iii) The size and complexity of land acquisition and allocation for

rapid increase in housing are too great to be effectively handled centrally or by an outside agency (Doebele, 1978.)

However, the involvement of traditional land owners in development is bound to lead to disquiet and allegations of malpractice and corruption, traditional chiefs are checked in their actions by their responsibilities to the land owners (community). This is potentially a very useful control mechanism, as is the local nature of a chief's duties and privileges. So, whilst it may be difficult to curb the corrupt practices of bureaucrats in distant offices, a chief is highly visible and accountable to his community and any sanctions for his misconduct will be administered by that community and are likely to be severe. Furthermore the bureaucrat may have national, or at least regional, scope for corruption while an individual chief's potential for corruption would be on a smaller scale. Okpala (1977 at p.89) tells of an instance in Lagos, where government staff made up to 19,900 per cent personal profit on sales of land originally allocated to them at subsidised rates.

There is in fact a growing feeling in international agencies that traditional authorities are valid and useful agents in the planning process. This feeling has sprung from the partial realisation that, a strong traditional structure exists, "...government policies which attempt to impose European concepts abruptly may encounter serious political and administrative problems" (Okpala, 1977 quoted in Doebele 1978 at p.145).

As developments in housing (aided self-help) tend to be of such scale and complexity, the use of existing traditional tenure processes at every possible stage in planning and implementation may in fact prove to be a positive factor. The proposed community representation which requires the involvement of community leaders such as chiefs enhances the existing strong social and emotional ties, so working

through them may prove to be a lot less disruptive than trying to work against them.

This approach to land involving the traditional land owners on a semi-formal basis has been successfully operated to a degree in Madina, Ghana (Asiama, 84). In that case, a Town Development Committee, comprised of traditional land owners and chaired by a government representative allocated plots through this representative to prospective tenants. Given this experience and the realisation that present government legislation may be inappropriate, in that many land dealings still take place outside the Land Use Decree, a more practical and enforceable process that involves the traditional process within the context of an aided self-help programme may be appropriate in overcoming the frustrating aspects that presently operate.

Table 039. Performance Evaluation of Three Systems of Urban Land Management and Control.

Performance Variable	Systems and Ranks		
	PM	T	M
1. Degree of urban land supplies	2	3	1
2. Housing unit production	2	3	1
3. Price of raw urban land	2	3	1
4. Distribution across income groups (per cent of low income housing)	2	3	1
5. Potential for credit or institutional financing	3	2	1
6. Security of tenure	3	2	2
7. Ease of transfer	2	1	3
8. Control of urban land values/prices	2	3	1
9. Quality of urban land development and environment	3	1	2
10. More likely to reduce proportion of income spent on housing	2	3	1
Mean Ranking	2.3	2.4	1.4
PM = Public Management	Rank 1 = Least Effective		
T = Traditional	3 = Most Effective		
M = Real Estate Market			

Source: Okpala D.C.I., 1977

6.07. Regulatory Standards

Although land, finance, management and training all play fundamental roles in the design, planning and implementation of aided self-help housing, the issue of standards constitutes an indispensable element of an aided self-help strategy. Experience of conventional standards (see chapter 2,) in controlling and enhancing the quality of housing even in aided self-help projects has shown these to be somewhat ineffective and negative (see chapter 5.). The need to develop a more appropriate approach regarding the question of standards is urgent and long overdue.

The standards approach proposed below is put forward within the context of 'architectural designs', which attempt to reflect the needs and means of the slum inhabitants (Maroko respondents) whilst providing a basis for incremental provision and improvement in the long term. The proposals are considered in terms of planning and technical aspects. In addition, an incremental aspect is also considered because of its influence on both the planning and technical aspects viz - in determining the particular kind of improvements to be provided (priority needs ladder) as well as the extent (planning) and level (technical) of the improvement. All three of these aspects are in fact very closely inter-related but, for the purposes of this study, they have been dealt with separately with regard to neighbourhood (community) and plot (household) levels.

Conventionally, this incremental aspect relates to the improvement or upgrading of the planning and technical aspects as prescribed and pre-determined by the authorities. However, the approach put forward below considers it in terms of a 'Ladder' of Priority Needs (PNL) determined by the slum inhabitants within a series of graded areas determined by the authorities. The planning aspects suggested below

relate primarily to land utilisation and facilities' allocation, i.e., public and private land distribution, roads, schools, clinics and a plethora of other utilities. The technical aspect is here concerned with the constructional or technological make-up of the improvements.

Due to the lack of adequate data regarding the cost of building materials, labour and finance as well as field survey data, it is felt that the 'rigorousness' of the proposals suggested below has been severely curtailed. Nevertheless, given these circumstances, the Relative Habitability Index (RHI) derived from the study provides a foundation of sorts on which the suggested proposals can be based. It is hoped that this application of the RHI findings within the context of the three aspects identified above is tenable from:

- i) the incremental point of view, through the establishment of a ladder of priority needs and hence priority proposals,
- ii) this 'ladder' the planning proposals can be determined and
- iii) similarly, technological or constructional proposals can also be established.

A. Incremental Aspect

Theoretically, the conventional view on the incremental aspect is one primarily represented by prescribed minimum or base standards which are deemed acceptable to the authorities. However, as the study thus far has repeatedly indicated, these official standards are not only beyond the means of the population at large (and for that matter those of the Government) but are irrelevant as a greater part of the city environs; namely, 80 per cent (Awotona, 1981) do not meet these standards and as such are classified as slums.

The approach considered here attempts to resolve this predicament by relating the standards issue to a particular locale (see chapter 6 at p.402), the needs of the households inhabiting it and their means. To this end the incremental aspect is discussed on two levels:

- (i) Graded Areas and the
- (ii) Priority Needs Ladder.

(i) Graded Areas

The Graded Areas approach is the outcome of a compromise between the twin requirements of relating the standard 'deemed to satisfy' the authorities and the needs and means of the community and households within the prescribed area. It thus means that these communities and/or households are living within the law as prescribed by the authorities and, that the authorities will have an increased degree of effective control over the built environment through community groups.

However, this approach is not entirely new and has been instituted in Khartoum in the Sudan. In this instance urban land has been classified for the purposes of a graded building standards system into four levels. Class four areas require no regulatory standards, class three require only minimal standards, class two slightly higher standards and class one areas are subject to the full regulatory standards. Improved standards mean that improved public services are provided. Residents on class four land can only ask to be upgraded on meeting the required standards. They then move into the grade three category and if they improve their standards further are eligible for better services. So in theory the concept of a slum settlement being officially illegal does not exist. The class four areas therefore allow even the poorest urban dwellers to have 'legal' housing. The difference between slum housing and what is conventionally regarded as official legal housing is one of standards and not one of legality.

The institutionalisation of a graded step-by-step improvement in the quality of the housing environment and hence the life of the households, in accordance with affordability must be one of the major realisations of this approach. It attempts at least to ensure that the most disadvantaged have a chance of achieving improved living

standards gradually through their own efforts. It is envisaged that the grading will initially be based on existing conditions in the neighbourhood, for example, roads, water supply, electricity supply, etc., and will be assessed in relation to the score ratings generated on the slum selection procedure chart suggested earlier (see p.415). Under such a procedure Maroko is ranked as a grade 4 area, Dolphin as a grade 1 area and Isale-Eko as a grade 3 area.

(ii) Priority Needs Ladder (PNL)

Within the 'frame' of the graded areas, the limited resources and the fact that slum areas do develop and improve incrementally over a period of time, the PNL offers a more detailed structure around which these aspects and the participation of the inhabitants can be realised. This can be achieved by utilising the RHI findings of the field survey for Maroko (table 040.), as it provides a basis on which the very limited government resources can be targeted relatively accurately in line with the inhabitants' needs whilst maximizing their enthusiasm to contribute further financial and other resources as well as their desire to see the successful implementation of the improvement.

With regard to the planning aspects at the neighbourhood level, the location of recreational facilities and the post office are ranked at 3 and 7. At plot level, aspects such as sleeping accommodation and children's study space ranked eighth and ninth. However, this finding is somewhat contradictory to the fact that the people per dwelling unit and privacy in the dwelling unit are ranked fortyfourth and fortysecond. Given this finding it would seem that bunk beds could well be an appropriate solution.

Regarding the technical aspect at the neighbourhood level, drainage, access and other closely related aspects dominate the upper regions of the ladder, i.e., the first four 'rungs'.

Table 040 . Priority Needs Ladder For Maroko

Ranking	Score	Variable Number	Ranking	Score	Variable Number
1st	34.00	M29	26th	58.10	M23
2nd	34.10	M31	27th	58.70	M42
3rd	34.30	M30	28th	59.10	M12
4th	34.90	M27	29th	60.00	M32
5th	35.20	M48	29th	60.00	M33
6th	35.70	M10	31th	62.00	M20
7th	35.90	M47	32th	62.80	M50
8th	36.70	M16	33th	64.20	M17
9th	36.80	M28	34th	65.10	M43
10th	37.70	M15	35th	65.40	M40
11th	37.90	M26	36th	67.70	M24
12th	39.30	M18	37th	68.30	M49
13th	40.40	M09	38th	68.60	M06
14th	40.60	M19	39th	68.90	M05
15th	41.50	M14	40th	69.90	M39
16th	42.70	M46	41th	70.20	M04
17th	43.40	M25	42th	70.50	M08
18th	45.00	M44	42th	70.50	M35
19th	45.70	M45	44th	72.00	M07
20th	47.90	M03	45th	72.60	M34
21th	51.10	M22	46th	72.70	M38
22th	52.00	M21	47th	73.07	M02
23th	56.40	M11	48th	73.60	M36
24th	56.90	M13	49th	74.11	M01
25th	57.30	M42	50th	76.00	M37

At the plot level, the highest ranked items on the PNL are associated with the water supply, although it must be stressed that this finding is also strongly influenced by the relatively poor water supply at the neighbourhood level. Given this situation, it does not necessarily mean that a mains water supply direct to the plot is essential in order to improve the neighbourhood's position on the ladder. In other words, at the neighbourhood level either 'float tanks' or communal taps could be provided, while at the plot level provision could be made for sufficient storage capacity of potable water. The next highest ranked item that could be wholly associated at the plot level is the ceiling material in the dwelling which is on the twentieth rung. In general the technical plot items are grouped around the lower parts of the ladder.

Thus, although limited by the data available, the user determined standards approach suggested above, in addition to resolving some of the problems associated with conventional methods does also help to bind the low income community and households to the improvement programme (which present site and services projects appear not to encourage (Burns and Grebler, 1977 at pp.220-224)).

B. Planning Aspect

I. Neighbourhood (Community) Level

(i) Land Utilisation

Above the plot scale, land utilisation can be classified broadly into public, semi-public, semi-private and private users:

a) The public areas are primarily allotted to circulation for pedestrians and vehicles. They include streets, pavements and open spaces whose upkeep is essentially the responsibility of the local authority, with control being established by the actual or potential

presence of pedestrians.

b) The semi-public areas are usually allotted to public facilities such as post offices, hospitals, schools, churches etc. The percentage of land allocated to these areas is generally influenced by the size of the population being served as well as the incremental proportional ratio of the population.

c) The semi-private areas are often areas of shared use among a particular group of neighbours. In the conventional situation this concept usually applies to shared facilities on that land, facilities such as car parks, swimming pools, etc. In the case of low income households such as those in Maroko this would, in the main, be the area of the compound (external and internal) shared by the inhabitants of the rooming house.

d) The private areas are essentially regarded as a dwelling unit, in this case (Lagos) this would be the 'room'.

The distribution and allocation of these area types, especially where low income households are concerned will, in the event determine the costs that have to be borne by the households and/or the authorities. Given this relationship and the balance between the capital (constructional) costs and the recurrent (maintenance and administrative) costs to be borne, the land use allocation within the categories given above can be considered in terms of whether they are efficient or inefficient. This relationship of household/private, authorities/public is such that at the end of the day, the cost must be borne by private land through levies and taxes. As such and in theory, the larger the proportion of public areas to private areas the higher the financial burden to be borne by the private areas. This balance is critical in the case of the low income households. So, although the ideal balance between these two aspects would be one of maximum private allocation, the needs of the community must also be

considered in order that a balance between them can be established. This balance or optimum ratio between public and private has according to Caminos and Goethert (1980), been approximated at about 1:3.

(ii) Layout

Under these circumstances and for the purposes of this proposed model, these spatial dimensions are considered as falling within the jurisdiction of the community and community representative dimensions (see section 6.03.). The urban 'super-block' and 'blocks' are taken as the characteristic elements of the urban layout. The super-block contains one or more blocks, with each block in turn containing one or more plots bounded and served by several lines of circulation. From this, a number of types of urban layouts can be realised, the gridiron, the gridiron-grid, the grid and the grid-gridiron layout.

1) The gridiron layout is an arrangement whereby the distances or intervals between the lines of circulation and boundaries are determined by the dimensions of the blocks or super-blocks. The most typical cases of gridirons consist of rectangular super-blocks or blocks, or curvilinear super-blocks or blocks.

2) The grid super-block or blocks layout is an arrangement whereby the distances or intervals between lines of circulation and boundaries are independent of dimensions of the super-blocks or blocks.

As a consequence of the simple conditions of elementary geometry described above, a number of limitations are imposed upon the urban layout:

1) In order to minimize the lines of public circulation when the urban layout has been determined by the dimensions of the plot the resultant layout will in essence be a gridiron layout.

2) The only way to minimize lines of public circulation so that the urban layout is determined by circulation requirements and not by dimensions of the plot is by use of a grid layout.

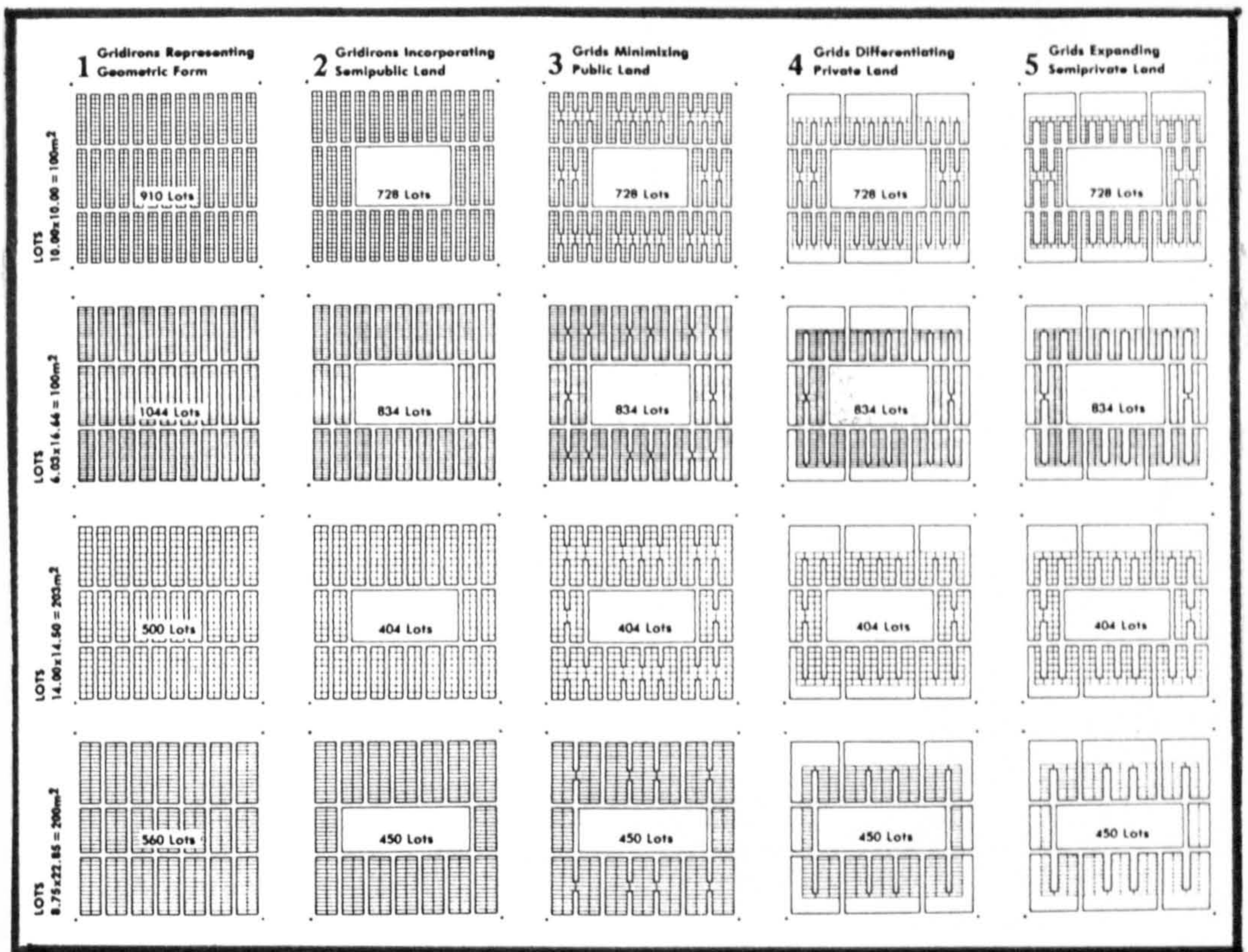


Figure 081. Matrix of 20 Basic Reference Layout Models

LOT TYPES Area (m ²) Dimensions (m x m)	LAND UTILIZATION RATINGS LAYOUT TYPES	GRIDIRON BLOCKS				
		GRIDIRON BLOCKS		GRID BLOCKS		
		1	2	3	4	5
Land Utilization	Represents Geometric Form	Incorporates Semipublic Land	Minimizes Public Land	Differentiates Private Land	Expands Semiprivate Land	
100 10.00x10.00	Semipublic	Unprovided	OK	OK	OK	OK
	Public	Wasteful	Wasteful	OK	OK	OK
	Private	Inflexible	Inflexible	Inflexible	OK	OK
	Semiprivate	Inadequate	Inadequate	Inadequate	Inadequate	OK
100 6.03x16.66	Semipublic	Unprovided	OK	OK	OK	OK
	Public	Wasteful	Wasteful	OK	OK	OK
	Private	Inflexible	Inflexible	Inflexible	OK	OK
	Semiprivate	Inadequate	Inadequate	Inadequate	Inadequate	OK
203 14.00x14.50	Semipublic	Unprovided	OK	OK	OK	OK
	Public	Wasteful	Wasteful	OK	OK	OK
	Private	Inflexible	Inflexible	Inflexible	OK	OK
	Semiprivate	Inadequate	Inadequate	Inadequate	Inadequate	OK
200 8.75x22.85	Semipublic	Unprovided	OK	OK	OK	OK
	Public	Wasteful	Wasteful	OK	OK	OK
	Private	Inflexible	Inflexible	Inflexible	OK	OK
	Semiprivate	Inadequate	Inadequate	Inadequate	Inadequate	OK

Table 041. Land Utilisation Ratings

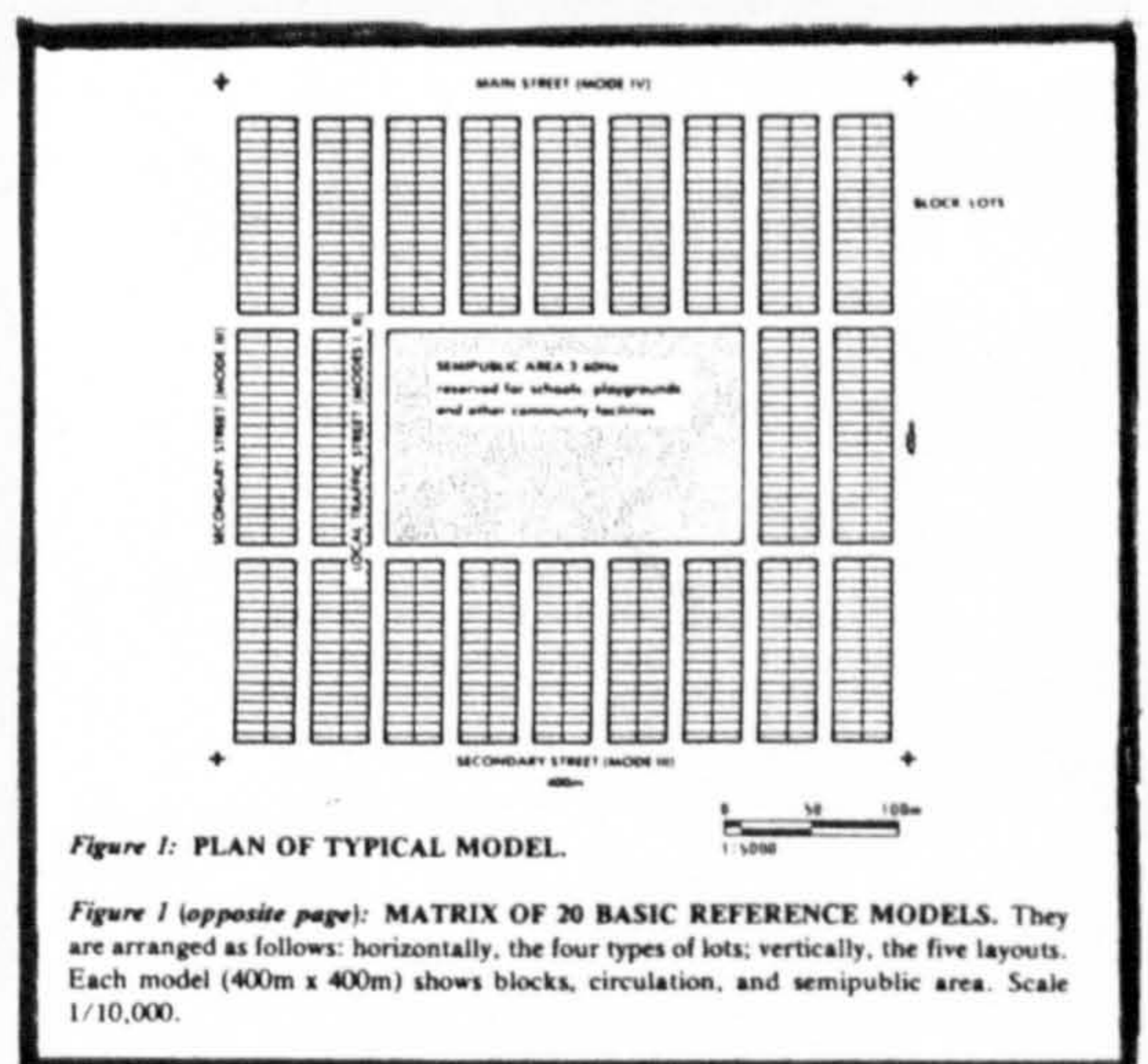


Figure 1: PLAN OF TYPICAL MODEL.

Figure 1 (opposite page): MATRIX OF 20 BASIC REFERENCE MODELS. They are arranged as follows: horizontally, the four types of lots; vertically, the five layouts. Each model (400m x 400m) shows blocks, circulation, and semipublic area. Scale 1/10,000.

Figure 082 Caminos & Goethert (1980). Optimum Layout Model.

Due to the nature of the grid layout as defined above, the street lengths for the various options will be constant because they are in fact independent of the plot dimensions and therefore the ratio between public and private is constant. The outcome of all this is that the optimum layout achievable and land utilization ratings (Caminos and Goethert, *ibid*)(fig 081 ., fig 082 . and table 041.) is where the ratio between the two principle land uses (public and

private) can be put at 63 per cent and 21.25 per cent respectively, with 15.69 per cent of area allocated to semi-public use, for a land area of 13.49Ha. For this layout the street length amounted to 2400 metres with a unit circulation put at 150m/Ha.

(iii) Circulation

In addition to the public-private factor, there is the circulation aspect, which not only channels the movement of pedestrians and vehicles but since it is public land, also determines the patterns of land utilisation, land sub-division and the layout of utilities such as water, electricity, etc. Within this purview, the classification can be further composed of lines of circulation and lines of access. This distinction is very important in that it determines the utilization of the street in the domain of the general public circulating through urban areas (circulation) and the time(s) at which the utilisation of the streets is within the domain of a limited group of neighbours who use the street access, i.e., street or sub-ward community.

The above approach is of crucial importance, for while it must not be too detailed, demanding or inflexible it must still preserve the capability for future incremental constructional and services development. The proposed plan is in essence, more of a strategy than a finished product.

(iv) Access

In human settlements, access to premises is probably the most crucial infra-structural element, only outranked in importance by houses. The planning of the road networks is based on a road hierarchy, eg., collector streets, service streets and paths for pedestrians and/or bicycles, carts, etc., which are in turn related to the municipal strategic road system. The design of the roads and paths, ie., its layout and road width, maximum slopes and pavement

structure are usually determined by the following factors:

Composition and volume of traffic.

Design speed.

Axle load and dimensions of the largest circulating vehicles (trucks and buses).

Terrain, soil conditions and climate.

Availability of low cost construction materials.

The capacity of the construction sector to build and maintain roads.

General acceptance of the roads by the low income target group and probably most important of all, the financial resources and investment risks.

(1) Roads

a) Interior Street: This usually has a width of between zero and 5 metres and is mainly utilised for pedestrian circulation. The street will, for practical and economic reasons have a continuous surface with shallow depressions or ditches which have the function not only of channelling rain but also of serving a few motor vehicles.

b) Access Street: This street will have a width of between 5 and 10 metres with maybe one or two lanes. It could have a utility function of circulation and other community facilities. It will not only provide direct access to plots and blocks or super-blocks in which the pedestrians dominate, but will also serve a small number of motor vehicles.

c) Local Distributor Street: With a width of between fifteen and twenty metres this street may be made up of 2 to 4 lanes and have a spacing of between eighty to two hundred metres. It could probably provide circulation between the neighbourhoods with the potential for supporting a private bus route (commonly known in Lagos as damfo or molue). As with a) and b) above, practical and economic reasons will probably determine its profile.

d) District Distributor Street: With a width of between twenty and thirty metres and carrying up to 4 lanes with a spacing of approximately four hundred to one thousand metres, this street will probably provide access and circulation for the plots, blocks and neighbourhoods. It could also act as an alternative general urban circulatory route with a number of public bus routes. As with a), b) and c) above, its profile will, in practice be mainly determined by financial considerations.

e) Arterial Street: This street or expressway may have a width of between twenty and forty metres and carry between 4 and 6 lanes with a spacing of between one thousand to five thousand metres. It will most probably have a minimum frontage access (safety from high speed vehicles) while serving as the main regional or inter-city connection.

In applying the layout and circulation model suggested above to Maroko's case, a number of modifications have to be made to the ideal grid. This is in the main due to the fact that Maroko already has a circulation and access layout, albeit on a semi-informal basis.

The issues of circulation, access and layout design are very broad and the descriptions given above simply provide a generalised highlight. Nevertheless more rational standards and design principles are of paramount importance because roads may account for up to 30 to 40 per cent of the total investment costs of infra-structure in low income communities. Furthermore, the probability that other infra-structural facilities may depend on the road system for access to plots, eg., water carts, night soil carts, refuse disposal carts, etc. underlines the great importance of how an 'effective' yet appropriate road system can contribute to enhancing and reducing the costs of other infra-structural facilities, given the limited resources available.

(v) Utilities

The provision of utilities at this level, such as water and electricity supply, storm drainage, sanitation and sewage and refuse disposal tends to follow the established urban segment, super-block and block layout (see Appendix XIV.). However, given the limited resources available and the legal status of Maroko it is doubtful whether the provision of these utilities would be on a conventional basis. The alternative approach envisaged is one orientated on an area by area basis, i.e., in accordance with the segment, super-block, block or even plot level needs. As a result of this, the proposals envisaged are discussed later under the technical aspect.

II. Plot (Household) Level

With regard to the plot level the issue of planning standards can be similarly considered. As defined by Caminos and Goethert (1980) the plot is measured as a parcel of land having fixed boundaries and with

access to public lines of circulation. Although plot layout may play a secondary part in the determination of land planning and sub-division, nonetheless it plays an important role with regard to meeting the needs and requirements of the households occupying the plot. This role is, in essence influenced by the size, shape and area and space utilisation of the plot. These aspects are all closely inter-related and all have a bearing on the determining 'efficiency' of plot layout. As such each of them will be discussed under separate headings and the links between them will be mentioned as and when they arise.

(i) Size

Given that the aim of low income housing would be to provide an adequate plot area to meet its inhabitants' needs, the size of the smallest plot capable of supporting the needs of the average low income household must be ascertained. Aside from the basic cost of the land (which increases with area), the cost of the infra-structures required to serve the plot also increases, i.e., as the plot size increases the cost per unit circulation of length increases.

Reducing the plot size will enable more households to be provided with a plot at a cheaper price whilst at the same time emphasising its unattractiveness to the higher income groups. The cost per unit length of circulation per square metre of plot also increases, i.e., increasing the ratio of public to private area. However, reducing the absolute size of the plot not only restricts the ability to expand the dwelling to meet the growing accommodation needs of the households (children, etc.), but also creates restrictions with regard to the on-site disposal of sewage (a necessity for low income housing.)

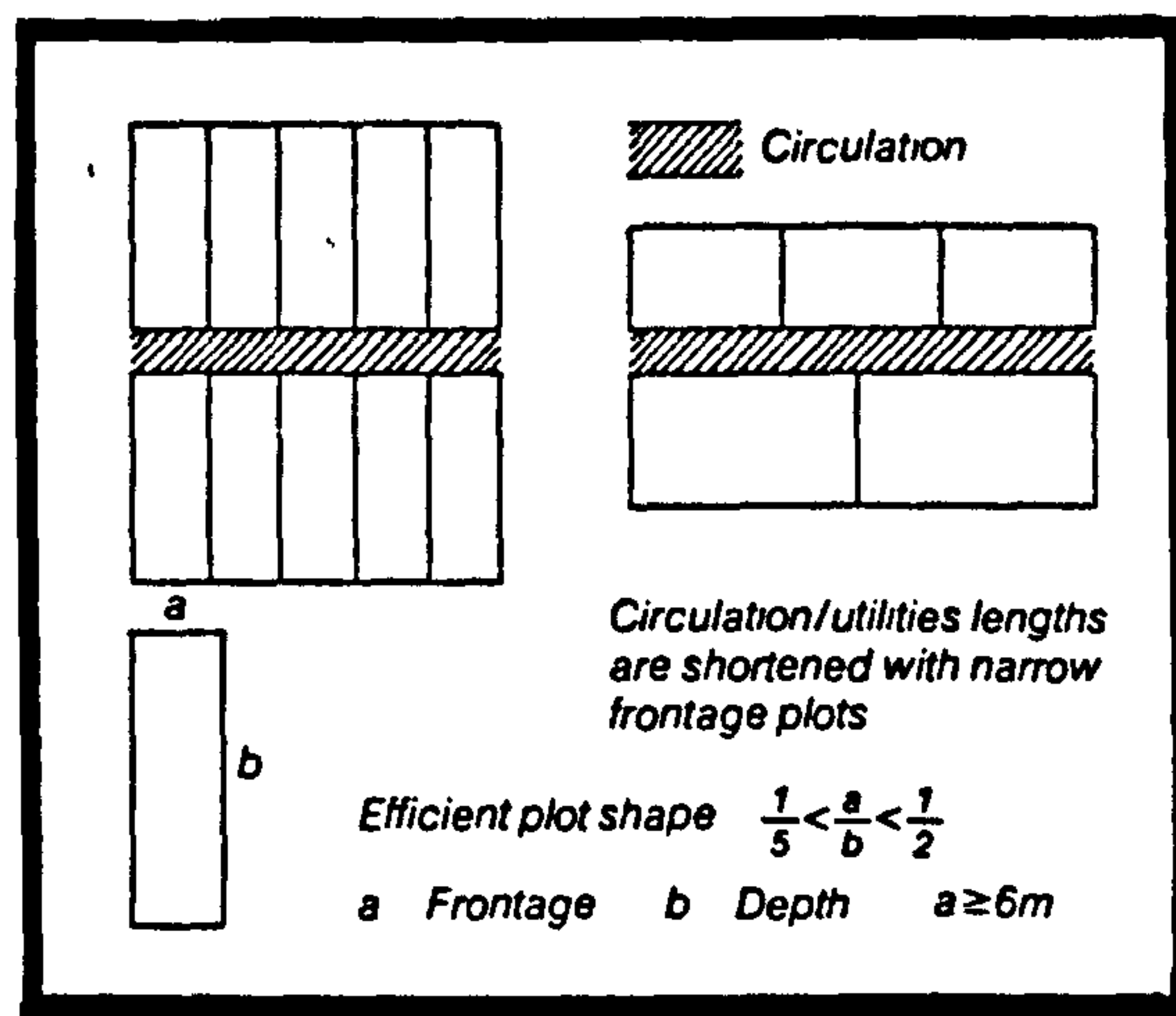
Furthermore, the idea of providing a standard plot size, for a community which, as highlighted in the survey, exhibits a wide range of household sizes, appears counter to any relationship between

household size and plot size.

By adopting an approach which provides a range of plots and sizes a number of benefits can be realised. First, it enables the households to select according to their needs and means. Secondly, it enables the imbalances in demand and supply to be corrected during the various phases of the programme. Thirdly, it also provides ~~the opportunity for~~ a varying plot rate to be operated and thus enhances the possibility of cross-subsidy. Finally, by virtue of involving the households in some selection process it contributes to the idea of participation.

(ii) Shape

Another aspect of plot determination is that of plot shape. In considering this, the discussion below is primarily concerned with square and rectangular plots. The influence of the plot shape on costs per unit length per plot strongly suggests that where the frontage is on the longest side it contributes substantially to the cost per unit circulatory length. The most economical unit are plots where the frontage is on the shorter side.



-Figure- 083. Narrow Frontage Plots

In the example above, plots of equal size and within the ratio of 2:1 in the length of sides to frontage produces a substantial reduction in total area per circulation length. The layout on the right not only results in a 20 per cent increase in the total land

area but also a 100 per cent increase in circulation. This aspect of plot layout for a range of plot sizes and shapes range from 100m² to 200m² with ratios from 1:1 to 1:2. In the case of Maroko the plots are already accounted for so they provide a range of plot sizes and shapes which will only really be applicable in case of an 'overflow' requirement on a green field site.

(iii) Area and space utilisation

Another element which plays an important role at the plot level is that of the area and space utilisation on the plot. To this end the discussion below is primarily concerned with the utilisation of the dwelling or inside (covered) areas and outside (open) areas by people in pursuit of their domestic activities within the plot.

Broadly speaking, the building regulations as they presently stand (see chapter 2.), appear to support a European type relationship between the aspects mentioned above i.e., the inside areas, the outside areas, the people and their domestic activities such as sleeping, cooking, socialising, studying and washing etc. This adopted European relationship draws a rather pronounced 'boundary', between these aspects, i.e., in terms of the utilisation of the area and space within the plot. The end product is an outward looking house, where the use of area and space on the ground can be divided into three distinct zones. A rear private outside area, a front semi-public outside area and an in between area - the dwelling itself where a sizeable proportion of domestic activities are carried out.

These outward looking arrangements derive their make-up from a number of factors. The most notable being the climactic, cultural, technical and socio-economic factors. Given this and the regulations which operate in Lagos, it would be understandable to believe from this point of view that Lagos has a temperate climate, a relatively high average socio-economic standing and is technically developed. As

described later it (Appendix I.) has a warm humid climate, a relatively low average socio-economic standing and is fairly technically poorly developed.

In fact these regulations (as ascertained earlier in chapter 2.) owe their existence to the colonial legacy. They are based on imported British building regulations introduced to meet the housing requirements of British administrative staff. Therefore, if the influence of the prevailing local factors is to be considered in determining the relationship between these aspects, a somewhat different relationship must follow. A more appropriate relationship based on local factors would in fact draw a much less pronounced 'boundary' between the aspects in terms of the utilisation of areas and spaces within the plot. The climate permits practically all domestic activities to be carried on outdoors for most of the year. The socio-economic standing (an average of 5.2 persons per room, which is a dwelling unit) mitigates that if conflict created by the necessary multi-use of the room (if all domestic activities had to be carried inside) is to be reduced, outside areas and spaces will have to be used for domestic activities. The technical level, with regard to domestic conveniences (such as cookers for example), given the level of utilities, mitigates that outdoor areas, or at least semi-covered areas be used when firewood is utilised for this purpose.

The use of the outside areas and spaces or compound-courtyard, in the pursuit of domestic activities is not new to southwest Nigeria. As highlighted earlier (see chapter 3.) it is a traditional Yoruba house form, with numerous advantages especially under the limiting conditions of low income households. Yet the planning standards do not appear to take cognisance of the socio-economic, cultural, technical and climatic conditions, or of the widespread use of the room as the dwelling. They appear equally unaware of the opportunity that the use

of outside space provides. In such climates, with up to 75 per cent of domestic activities such as cooking, sleeping, eating, entertaining etc., taking place in a private courtyard for at least 70 per cent of the year, the compound-courtyard can assume a utility coefficient index of $0.75 \times 0.70 = 0.525$, which is about half that of a built up room (Cantacuzino, 1983)(Bombay).

Furthermore, the compound-courtyard form of plot dwelling has several advantages over the rooming house. It provides added safeguards against the endemic security problem which is part and parcel of life in Lagos. With its one entrance and semi-private courtyard it provides a relatively easy area to defend against intruders and a safe place for children to play, especially if they are being minded by other inhabitants of the compound while their mother is at work. Although there is relatively little privacy, (except in the rooms themselves) this layout does allow the rooms to be kept relatively free of non-household members intruding as they pass by.

The inclusion of an intermediary area, i.e., the verandah, is a further attribute of the use of the courtyard house as an alternative to the conventional outward looking house. Owing to the bi-seasonal climate of Lagos, i.e., wet season and dry season, the verandah or patio more so than the inside area of the room and the outside area of the courtyard tends to be used most for carrying out domestic activities (Awotona, 1978). Given environmental conditions the use of this area and its cost of construction possibly provides a higher if not similar utility coefficient throughout the year.

The use of the compound-courtyard dwelling within the context of the Maroko scheme is limited in that most of the existing plots are occupied by the rooming house, and to the yard at the rear, by the inhabitants of the building in the pursuit of their domestic

activities. This type of dwelling will now be considered.

To take a typical example, the area of the yard is approximately 7.5m x 3.0m. It is utilised by approximately 8 households, ie., forty persons, for washing, cooking, bathing, socialising, etc., in other words its utility factor is relatively high. This element is important, and when considered in conjunction with the low habitability ratings associated with the 'domestics', some design proposals can be suggested. Aspects dealing with utility improvements eg. toilets, are considered in the next section. What is considered here is the improvement of the utility coefficient (in the absence) of the domestic activity area, ie., the yard.

If loans schemes were established with regard to an on-plot utilities' improvement basis, they could take the form of a 'verandah loan' (semi-open space), designed to provide either a partial or totally covered area in the yard. Thus, by increasing the utilisation of this area for most if not all domestic activities, some provision for an all weather environment for domestic activities will be made.

If modification to standards could be introduced with regard to the utilisation of the compound-courtyard area, promotion of the construction of courtyard houses on presently vacant plots should be encouraged. This would involve the boundary walls serving a dual function, that of boundary and dwelling wall. The area in the centre, the courtyard, would provide additional space for domestic activities whilst creating more area for the construction of rooms for rent. The illumination and ventilation requirements could easily be provided by stepping the roof (single storey buildings).

Apart from increasing the capacity for more rooms per site as well as the possible consequence of the density per plot, the beneficial effects will be that the cost per household (one household per room) per unit length of circulation and network facilities will decrease

(Kaln, Wheaton and Schussteim, 1955; Uli, 1958; Katz, 1964) while liberating more useable visible space within the plot and stemming the practice of boundary developments.

C. Technical Aspects

I. Neighbourhood (Community) Level

In conjunction with the planning criteria laid out above, a set of technical standards would be required for basic construction and services. It is envisaged that this would be a combination of performance expectations and a number of specific requirements, i.e., households may be expected to ensure that drains in front of their compounds are cleared on a weekly basis by any means they choose so long as it does not inconvenience others within the settlement (performance expectations) and be required to ensure that their boundary wall does not encroach on to public areas (specific requirements).

(i) Access (Roads and Footpaths)

Under ideal circumstances of limitless resources, road construction standards would invariably be based on a compromise between local construction techniques, site soil conditions and climate. The list below illustrates a number of road surface standard options available. Under low income settlement circumstances these would be selected primarily on cost and financial capability of the locale involved.

a) No Provision: minimal grading of in situ soil to provide demarcation of access way.

b) Sub-Base Only: grading and compaction of sub-grade with gravel surface.

c) Stabilised Soil: in situ soil stabilised with bitumen or cement.

d) Sub-Base and Road Base: gravel based materials or stabilised soil

as in (c) above.

e) Basecourse: asphalt-concrete additional structural layer on sub soil road base.

f) Wearing course: asphalt concrete.

(ii) Utilities

(a) Surface Water Drainage

In essence surface water drainage collects the run-off from relatively small catchments. It should protect sites against water-logging and/or water-ponding on the surface. In areas of heavy rainfall such as Lagos, storm water drainage should not be separated from the roads and paths if the latter's structural construction, strength and durability are to be enhanced and preserved. In addition, given the fact that there is no sewage system in Lagos, it is doubtful whether these drains if provided, would not also be used for waste water drainage from the plots. As well as this, the provision of storm drains creates a distinct boundary between the public and the private land use and as such may contribute to prohibiting encroachment on to the public thoroughfare. In designing a surface water drainage system a number aspects such as hydrology, engineering and socio-economic criteria must be considered. The importance of a low cost, low maintenance yet integrated 'road and drain' design is fundamental. For ease of maintenance open channels should be used to transport the surface water run off. The number of options available range from compound drainage channels, access drainage channels and district drainage channels to main collector channels.

The provision of storm water drainage for Maroko (as indicated on the habitability index and main problem question) highlights the regular flooding of the settlement. Even during the dry season (during which the survey was carried out) a number of streets were impassable

(fig 101.). Therefore, it is proposed that drainage should follow the road and footpath routes suggested above.

It is also suggested that, owing to the relatively flat topographical nature of the settlement, a storm drainage pumping station of sorts be provided to the east of the settlement. This could be powered by one large or several smaller wind generators taking advantage of the strong and regular winds coming off the Atlantic Ocean only hundreds of metres to the south.

(b) Water Supply

The overall objective in urban water supply planning is the improvement of the health and socio-economic conditions of the community at an affordable cost. Therefore, the immediate objective is to provide the consumer with the best possible service, which is determined in terms of availability, quality and quantity of water.

The need for, and application of, standards depends, to some extent, on where urban water supplies are built and operated by the authorities or the community. If it is assumed that supplies to low income urban areas are extensions of the municipal water supply, the authorities will be involved to a greater extent and then the question of appropriate standards and institutional mechanisms becomes particularly relevant. If however, the supply of water is based on a 50:50 basis between the authorities and the community (where water is supplied to particular points at specified standards by the authorities) from where it can then be distributed by the community to the designated households, a compromise on the question of standards may be achieved.

Water supply in Lagos is frequently sporadic (with water for domestic purposes sometimes coming on only during the very early hours of the morning.) In providing an improved water supply for Maroko, and in order to minimise the disruptive effect of such a new system, it is

proposed that water sellers who are presently in existence in Maroko be included in the scheme. Water, either piped or delivered regularly should be made available to them and they would then become a recognised legal part of the water board. So, as 'officials' within the context of a community organisation, they would allocate stipulated quantities of water at a subsidised price to local residents' association members within their (the water sellers') catchment areas. The water sellers on meeting this responsibility would then be free to sell the remaining water at market price.

(c) Sanitation and Sewage Disposal

In addition to clean water supplies, sanitation and proper disposal of human waste and household water is essential to the wellbeing of the population and the maintenance of a good physical environment. As indicated in the survey (see chapter 4.) the low income households would be particularly prone to sanitation-related diseases such as cholera, typhoid and gastro-enteritis. The main cause of this is the combined effect of continued use of traditional rural practices in sanitation which are often inappropriate in densely populated urban areas and the lack of any available sanitation system in the city tailored to the requirements of an urban environment. The basic objective in providing proper sanitation facilities either on a new or upgrading basis for low income settlements is to ensure that human waste is rendered harmless and thus safeguard the health of the community. To this end treatment of waste may be done either on an on-plot basis or an off-plot basis.

The major constraints of the successful provision of sanitation facilities in developing countries are the lack of funds, trained personnel and knowledge of acceptable alternative technologies (Ahmed, 1981 at p.34). Technology which has to rely completely on skills and actions which have come from outside the community concerned cannot be

successful. Only those technologies which are simple to implement, are independent of long term national action and are affordable by the target population have a chance of success (Kruijff, 1981 at p.30).

In considering Maroko and its inhabitants it must be emphasised that the use of water borne systems, given the general lack of water supply is very unlikely. Problems encountered as a result of insufficient water are blocked pans, pipes and aqua-privies. However, it must be noted that Lagos and its environs are well served by water channels whether they are fresh or sea water in origin. Thus there is scope for the development of a 'dual' water system, where untreated water could be supplied for sanitation purposes and treated water for drinking, cooking and washing.

The off-site treatment, if not provided by water borne system requires the use of a tanker or cart. Given the prevalence of the 'night soil' or 'bucket and pail' system in Maroko (as highlighted in the survey) such a system would probably benefit from improved access, timetabling and transfer of soil from bucket to tanker. In addition it would also require the use of a locally produced disinfectant 'powder' to reduce the effects of odour and insects. Nonetheless, if access is easily facilitated its operation would improve dramatically and the cost would be very low. Communal latrines have rarely been found to be successful sanitary devices for operational, maintenance and social reasons.

Aside from all this is the need for more attention to be paid to the development of educational support programmes in order to explain the technologies and why they are necessary. The idea behind this is to convince the community members that improved sanitation is not only essential for good health but also, and probably a more attractive argument, that good sanitation health can indirectly improve the wealth of the community by saving on hospital bills, chemists' costs

and work days lost. In any slum latrine programme the human factors are the most important ones, people must accept, pay, build and maintain their own latrines.

In conclusion it must be said that, given the conditions of the Maroko environment, waterless sanitation and hence on-site treatment is probably the most viable alternative to the conventional water borne systems. However, it would appear that the successful use of the composite latrine depends greatly on user education.

(d) Refuse Collection

The factors that affect solid waste management (refuse collection) are such that it is doubtful whether there is a truly universal process applicable to all environments. Waste management is influenced by factors such as, the composition of waste, quantities, climactic conditions, provision of other services, property infra-structure, indigenous resources of the area, environmental standards, legislation, work practices, population lifestyles existing community practices, technical and manual skills and geology and economics (Skitt, 1981 at p.42).

If some form of waste disposal which is not simply wholly the responsibility of the household is to take place and is not on a plot to plot basis, a communal system would probably operate.

At the present time no centralised system of waste disposal exists in Maroko. This means that the households either throw their refuse on to vacant sites or on to the informal refuse point that has grown to the east of the settlement, adjacent to the proposed roundabout. In essence this involves a 50:50 relationship between the community and the authorities. Certain disposal points would be allocated by the authorities who, with their limited mechanical resources (imported) can handle the waste deposited by households in a particular super-block or segment. Like the water system proposed refuse

collection would be linked with the residents' association on a monthly payment basis or on a private basis. The proposed improved road and path infra-structure would make transportation of refuse on locally made carts more feasible.

(e) Street Lighting and Electricity

The provision of street lighting and electricity, although inter-related creates a conflicting situation. On the one hand where street lighting is supplied and no house-to-house electrical connections made, there is ample opportunity provided for illegal tapping of power.

The provision of street lighting and electricity to Maroko is a major infra-structural commitment. Given the prevalence of power 'cuts' it must be questionable whether the provision of such an expensive component is functional. However, with the existence of present lines (fig 055.) maybe a more locally generated system of electricity could be developed, with generator owners being paid for the amount of electricity they sell to the local grid system.

II. Plot (Household) Level

In conjunction with the planning aspects set out above, a set of technical aspect proposals are also suggested. It is envisaged that these could well be a combination of performance expectations and/or a number of specific requirements, ie., households may be expected to keep a bucket of sand or water by the front door in the event of fire (performance expectations) and be required to have fire resistant roof finish or front door access with minimum width access (specific requirements).

(i) Construction

The constructional needs do require either the use of specific and particular materials, or that parts of the building must be of a

certain defined size or thickness. The concept of adopting performance standards appears to be one method of resolving this issue. In Kenya building standards are on the one hand, affordable by low income residents, and on the other are safe and healthy to live in. In other words, the building regulations, whilst defining a basic requirement, enable a number of alternatives to be used.

In principle, although specifying performance requirements rather than particular materials and techniques, building codes and regulations, may encourage a fuller range of options and are not negative per se; in practice they do necessitate a technical process that is beyond the capacity of the existing establishment. Furthermore, the dissemination of the relevant information is another hinderance to this approach. Moreover, changing the building regulations as in the Zambian example (Martins, 1984 at pp.31-50) in order to permit the use of local materials - 'soil cement blocks and mud bricks' did not appear to discourage the use of concrete etc. as the residents preferred concrete blocks because they represented 'the first rung of the "proper house" (ibid) ladder'.

The case of Maroko is such that competition between landlords coupled with present building practices has necessitated that practically all the rooming houses are constructed in concrete. The issue of construction standards with regard to this element within this settlement and as indicated by the habitability index is minimal. The issue of incremental or graded standards is discussed in the next section.

(ii) Utilities

The provision of minimum standards of utilities at plot level is in essence a plot responsibility.

(a) Water Supply

The lack of a piped water supply at this level necessitates that

potable must be stored in large vessels and utilised when the circumstances necessitate. To this end it appears that proposals would be geared to providing each household per plot with a vessels large enough to meet the allocation of the proposed water process.

(b) Sanitation and Sewage Disposal

The provision of an appropriate sanitation system would in the main, be best tackled by first establishing the ways people solve their sanitation problems themselves and improving on it, i.e., on-plot treatment. The option available is the use of waterless sanitation systems. Compost latrines and pit latrines would appear to have a higher degree of suitability to the often flat and water starved slum environments. They are usually entirely owner-built mostly from local materials. Minimum standards in this area would appear meaningless as residents have to relieve themselves regardless of the availability and standard of the sanitary facilities. Of the waterless systems, the composite and pit latrine are the most commonly used. In the composite latrines a controlled aerobic biological process is involved, one in which various types of organisms break down organic substances into a humus endproduct.

Within the Maroko context the most suitable type of composite latrine is the double vault composite laterine. This is because it can be used regardless of topography, sub-soil and ground water conditions, and in all tropical and temperate climates. However, the successful outcome of the process depends on the controlled addition of dry organic material and the exclusion of most water. The other option based on the waterless sytem is the pit latrine, its main advantage being that of its simplicity and low cost. On the other hand, it tends to be malodourous, act as an incubator for insects, a pollutor of ground water and, under some circumstances is very difficult to dig. These disadvantages can be tackled by providing a

ventilating pipe, lining the top part of the pit and providing an impervious squatting slab. So, while composite latrines are more expensive and do require training in their use and construction the pit latrine is limited by population density. The composite latrine is capable of tackling up to 1,000 persons per hectare.

However, the prevalence of the 'bucket and pail' method coupled with its relatively low cost would tend to indicate that improvement of this system might prove more viable. This would therefore necessitate improvements along the lines mentioned earlier in terms of access by night soil carriers between the rooming house and the boundary wall. It must be mentioned briefly that this could also be the access for a tanker pipe to empty out the pit or septic tank. In addition, improvements could be made to the design of the bucket itself to reduce the proliferation of insects, odours and leakage.

(c) Surface Water Drainage

It is envisaged that the compound drainage channels will be the responsibility of the individual plot occupant(s) and/or owner(s). In preliminary observations it was noted that rudimentary shallow concrete channels and ditches ran along the boundary wall into the street. In most cases access drainage channels will need to be provided on both sides of the road and be located at the verge as a segregatory boundary between vehicular and pedestrian traffic. The actual section of the channel will however, be dependent on the the run-off area being served. The district channel will in essence be similar to the access channels except possibly in size of the section. The main collector channel will primarily collect surface water from the access and district channels.

(d) Refuse Disposal

On-site, the storage of refuse before disposal to designated community disposal points could be facilitated by the provision of

modified oil drums which allow for ease of handling while keeping manufacturing cost down.

(e) Electrical Supply

As indicated by the survey the supply of electricity to households in Maroko was by private generator. Given the restraints highlighted earlier with regard to electricity and street lighting, it is envisaged that the supply and development of a local settlement grid is a possibility that must be considered.

6.08 A User Orientated Housing Development Methodology

Conventionally, the provision of community facilities tends to be on a top-down predetermined basis. However, this approach has a number of drawbacks in dealing with the informal sector housing environment in that it rarely if ever takes adequate cognisance of existing community behaviour patterns and existing community facilities. The consequences of this are that the provision and/or improvement of the facilities in relation to the geo-residential needs may give rise not only to the duplication of these facilities but also to the fact that they may well go beyond the means of the community. In attempting to resolve this predicament and as a development of the study thus far, a user-determined housing development methodology has been devised. In principle it considers the provision and improvement of community facilities and the housing environment as a bottom-up resident orientated process which is in essence functional for the resident(s):

- (i) Relative Habitability Index (RHI) ratings,
- (ii) locational RHI ratings and,
- (iii) distance from a facility.
- (iv) The costs of such facilities.
- (v) The affordability factor for all these improvements.

To demonstrate the principles of the methodology, a chart has been constructed and is described below. In principle this chart provides the possibility not only of resolving the drawbacks mentioned above but also of assessing the percentile affordability within the community of such improvements. However, owing to the fact that this concept has grown and developed out of the findings and analysis of the study thus far there is a lack of specific data tailored to the requirements of this 'test' and the demonstration below is confined to the general fundamentals of the methodology. Essentially the chart (fig 086.), is essentially made up of four graphs.

GRAPH 1. Distance By Percentile Satisfaction Ratings.

This graph is primarily a product of a cross tabulation between the satisfaction group ratings and the distance travelled by the respondents in each satisfaction grouping. This distance aspect originally recorded in terms of time as perceived by the respondents has been converted to distance on the assumption that the average walking speed is 4km/hr. From this a series of percentile satisfaction curves for particular facilities can be drawn up (fig 084.).

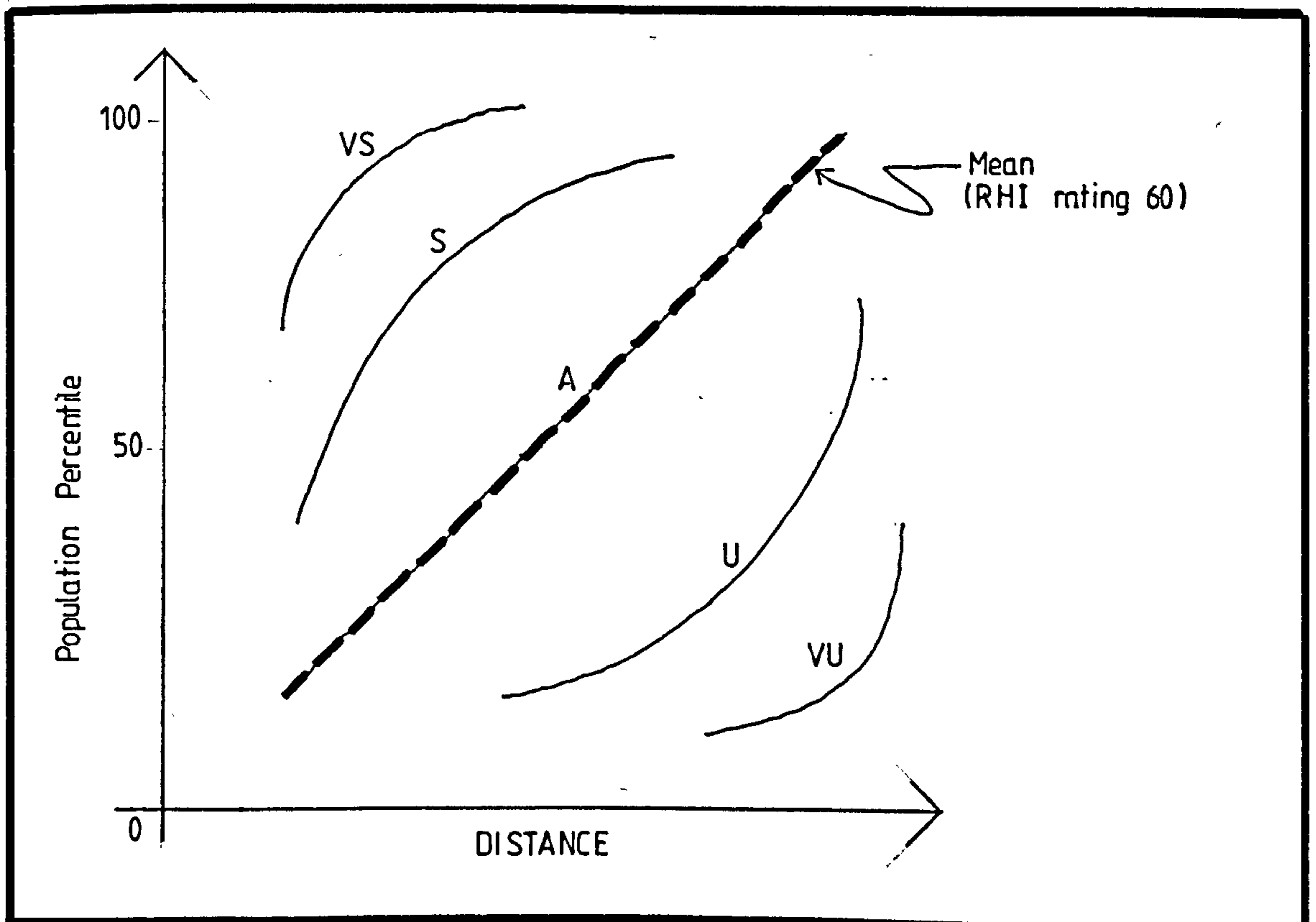


Figure-084. Percentile Satisfaction Curves.

In the case as illustrated by graph 1a above, an overall RHI rating of 60 is utilised. Although it is doubtful whether a facility with a rating as high as this would be considered under a slum improvement programme, it has been used here to help explain the concept. In addition, another assumption made here which would, under 'ideal' conditions be a distribution of respondents' satisfaction findings (for each satisfaction grouping) would tend to show a relatively higher degree of satisfaction the closer the respondents are to the facility. The groupings as depicted by the five curves as on graph a, fig 085, and are represented as:

VS - Very Satisfied

S - Satisfied

A - Acceptable

U - Unsatisfied

VU - Very Unsatisfied

It is also envisaged that the mean percentile satisfaction of the five groups by distance would overlap with curve A.

However, if the RHI rating was above 60 the mean percentile satisfaction line of the sample would move upwards. In other words the higher the rating the more the tendency to overlap and take on the curve pattern of the S and VS curves or the closer the facility the higher the satisfaction as illustrated in graph a, fig 085. On the other hand, where the RHI rating is below 60 the mean percentile satisfaction line of the sample would move downwards. The lower the rating the greater the tendency of the mean line to take on the curve pattern of the U and VU curves, i.e., the further away the facility the lower the satisfaction graph b, fig 085.

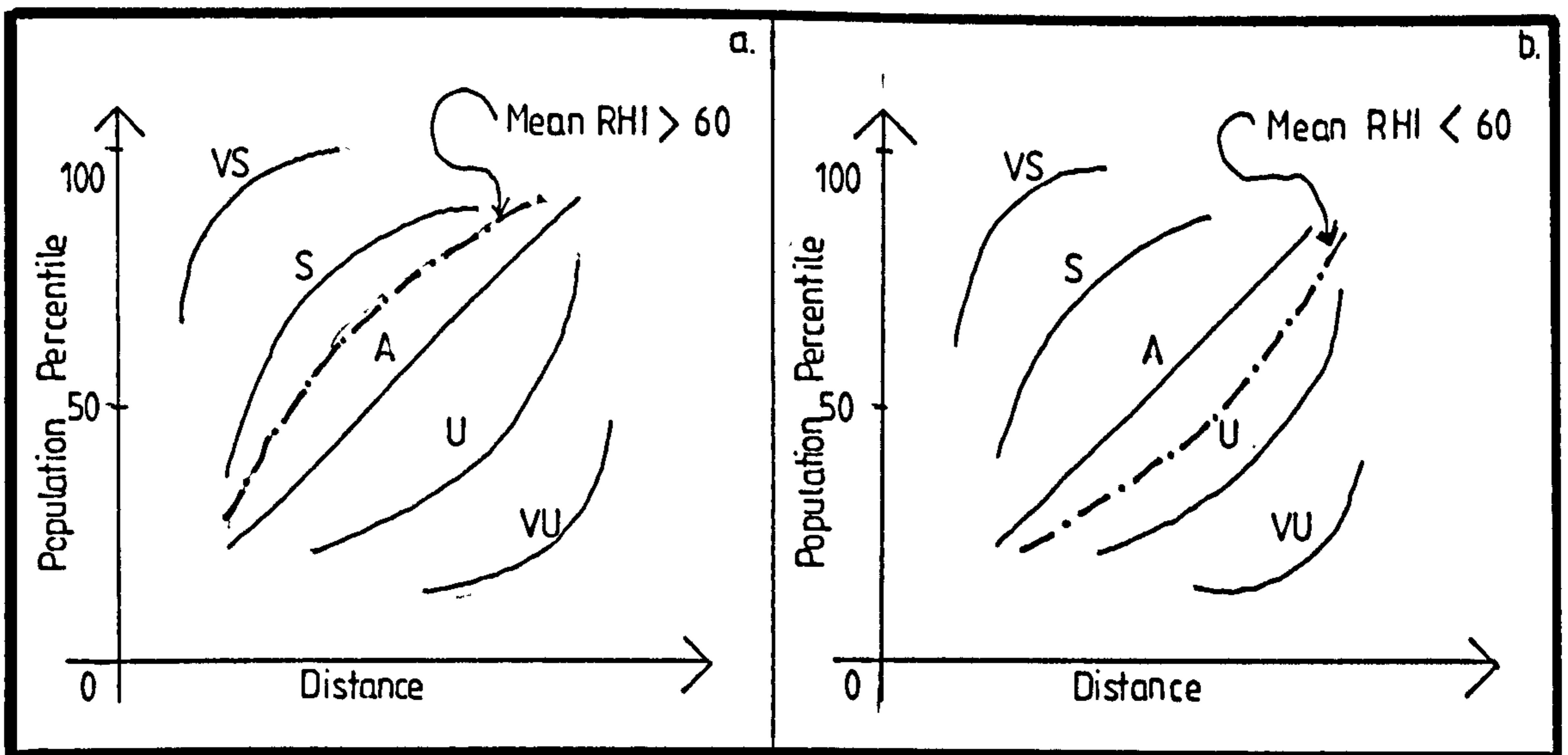


Figure 085. Percentile Satisfaction BY Distance a) RHI > 60
b) RHI < 60

GRAPH 2. Technical/Quality Costs

Put simply this graph represents the relation of cost and the 'amount' (volume, length, width or number) of a particular facility technological and/or quality level. The 'amount' in terms of volume could pertain to such facilities as water storage tanks or refuse tips; in terms of length this could pertain to such facilities as roads, footpaths, storm and waste drains, water supply pipes or electrical cables; in terms of width this as does length could apply to any of those same facilities and, in terms of numbers this could pertain to such aspects as for example, numbers of pupils in a school.

The lines LQL/LTL, MQL/MTL and HQL/HTL represent the cost by amount relationship in terms of the low, medium and high quality or technical levels of a notional facility.

GRAPH 3. Affordability

This graph is characterised by several lines which essentially represent the affordability of capital and its costs, as a function of the total plot (dwelling unit, super-block or segment) annual income, duration of the loan, interest rate and the percentage of the plot (dwelling unit, super-block or segment) income devoted to meet a particular improvement (see chapt. 4.).

GRAPH 4. Income Distribution

As the title suggests this is an income distribution curve of the respondents whether individually at the dwelling unit level or collectively at the plot, super-block or segment level.

Utilisation of the chart to demonstrate the principles of the proposed methodology, a further assumption has been made. This essentially involves assuming that the fifty percentile on graph 1, represents the point at which the habitability rating of the improved facility will no longer count as a priority. The required improvement can then be computed by noting the difference between the distance of the fifty percentile of the mean line and the acceptable line (A). This figure represents a mean improvement need which is explained in terms of distance per 'unit' (room, plot, superblock or segment) of the respondent units across the settlement surveyed.

The cost per unit distance for a particular facility's quality level can then be computed by simply projecting the lines on to graph 2. This involves drawing a set of parallel lines, dictated by the line drawn from the lower distance value on graph 1 to zero on the distance axis on graph 2 and the second one parallel to the first from the upper distance value to the distance axis on graph 2. From this the improvement need (distance) of the particular facility can be estimated and the cost of a number of options can be computed (these are depicted in graph 2).

With the improvement cost per respondent unit of the particular facilities, the affordability can be computed. As with the previous computation, this can be achieved by projecting the line from the points at which the line cuts the capital cost per distance axis of graph 2 to graph 3 to the points of intersection with the affordability lines on graph 3.

The point at which the projected line from graph 2 intersects with the affordability line(s), reflects the loan arrangements that can be

negotiated upon.

If another line is projected to graph 4, which is essentially a unit income distribution, (from the point of intersection on graph 3) the affordability percentile penetration of the improvement can be indicated, and from this on a 'rough' basis, the population percentile impact can be estimated. If the line does not intersect the income distribution curve at the 50th percentile, it either means that the improvements are within the affordability of the 50th percentile or they unaffordable by those at or below the 60th percentile.

Owing to the probability that the inhabitants would most likely be unable to afford such improvements on 'ideal' financial terms, coupled with the political desirability for maximum population impact and penetration, (for instance down to the 30th income percentile) the shortfall between what can be afforded and costs of such a decision could be roughly estimated. This would involve a line projection from the 30th percentile value on graph 4 round to graph 3 and then to graph 2, once financial terms have been established. Then, if the quality level of the particular facility has been established, the procedure described could be followed in the other direction, the outcome being two projection lines crossing the capital cost axis at different points. The difference between these points represents the capital cost per unit subsidy. Ideally it is hoped that subsidies would be kept to a minimum and a compromise between population impact and penetration and the quality level of facility and financial terms would see the two projected lines intersect on the capital cost axis at the same point.

In conclusion, it is hoped that this methodology in conjunction with the relevant database and computer power, will generate an instrument which could provide the capability for more subtle and complex investigations and analysis of existing settlements whether

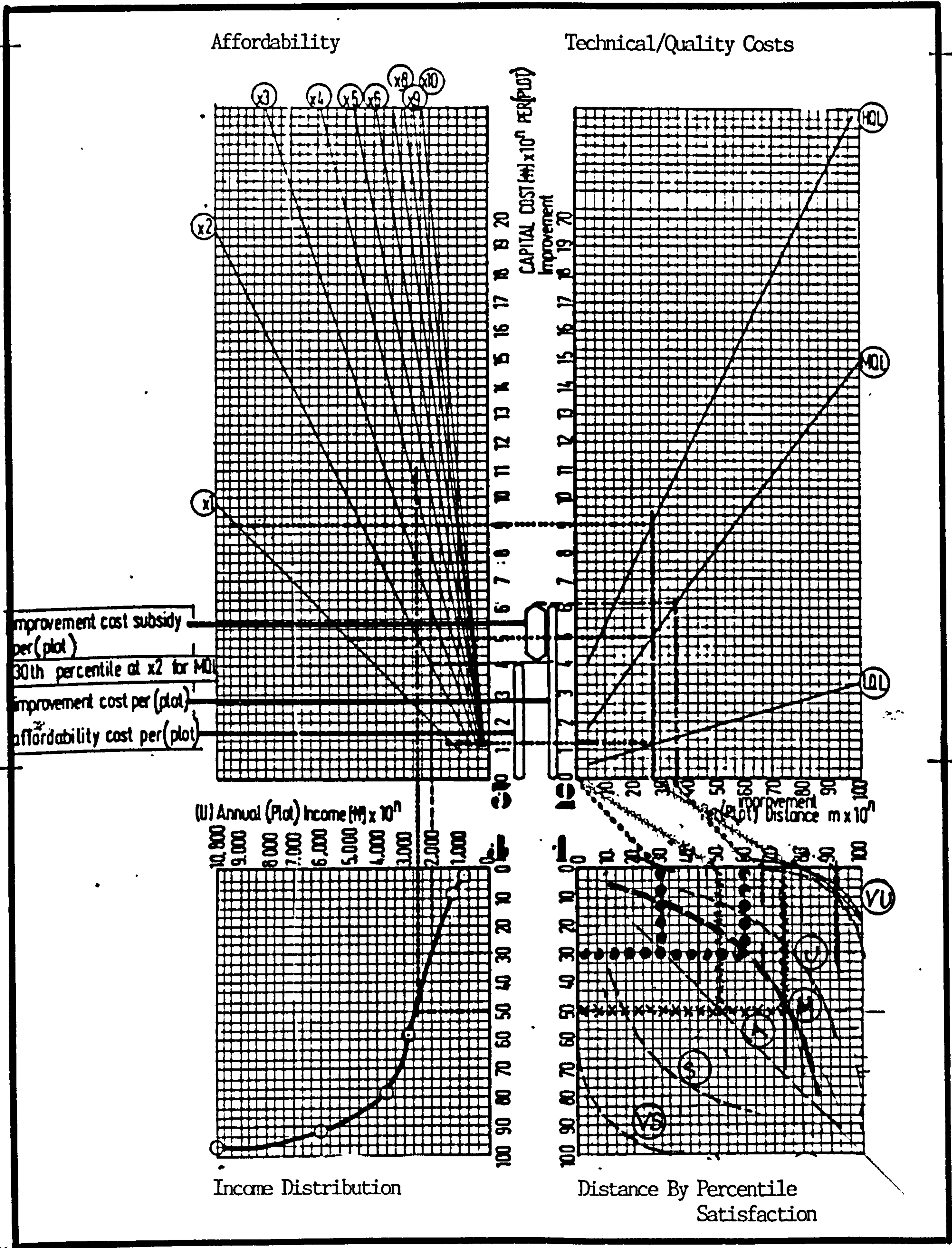


Figure 086. User Orientated Housing Development Chart

modern, informal-popular or informal-traditional.

6.09. Monitoring and Evaluation

Monitoring and evaluation of the project are essential steps in the execution as well as in the design and implementation of future programmes, whether the project under evaluation be a one-off project or not. Every programme, because of the strengths or weaknesses in its structure and the success or failure of its operation, can stand as a model to be followed, limited or avoided by future programmes.

It must be remembered that monitoring and evaluation are not simply the final act in the execution of a programme. These should be regarded as part of an ongoing process alongside the various stages and activities of the programme. The main purpose is to provide information concerning the impact on the intended beneficiaries of the programme and to assess the output of the programme. The elements of monitoring and evaluation are here viewed as separate issues.

Monitoring refers primarily to the measuring of the physical progress of the project without specific reference to the impact of the project on its objectives. It looks to the generation of conclusions that will help maintain the project on course up to its completion. On the other hand, evaluation refers to an assessment of the impact of the effectiveness of the project in relation to its objectives and other unintended consequences. It looks to the generation of conclusions resulting from the completion of the project or a major part of it which will have lessons for future projects, urban housing policy and the development process as a whole.

The main distinction between the two appears to be one of time. Monitoring is short term and is aimed at providing feedback for the management of the project itself. On the other hand, evaluation is more long term in that it considers the impact of the project and its

activities, this takes time to filter through to the population, the economy and society at large.

It is envisaged that execution of these elements will be separate. Monitoring will be undertaken on an internal basis by the field teams and steering committee, and the evaluation process on an external basis, notably involving agencies such as the FHA and LSDPC.

As with all other aspects of the improvement programme, the particular form of the evaluation will reflect the particularities of the programme. However, a number of questions do remain which are common to these two factors. Where do the goals meet? What were the actual accomplishments in terms of the services that were introduced into the community? Did the programme meet the needs of the people and, accordingly, the priorities designated by them? The answers to these questions will form the basis of the main criteria for assessing the results of the programme.

Therefore, it is envisaged that both monitoring and evaluation mechanisms be built into programmes. This could be achieved through the regular submission of reports as an outcome of the proposed regular weekly field team meeting and the quarterly or half yearly meetings of the steering committee. The reports would contain a combination of descriptive accounts, suggested modifications and new directions that could be incorporated immediately into the programme. The submission of these reports is built into the programme as part of the work plan. If achieved these reports could well provide the necessary feedback and whichever corrective measures are required could be injected directly into the project.

Monitoring and evaluation are very important especially where new processes and approaches are concerned and to omit them would indeed be a built in weakness of any such programme.

6.10. Implementation

The implementation phase brings with it a number of problems which are conflicting in nature. First, there is the aim of the implementing agency which should be on the one hand to provide a singularly uniform proposal whilst attempting on the other hand to secure the backing and meet the diverse needs of the various participants at plot, super-block and/or segment level. Secondly, there is the need to provide affordable improvements. However, this creates a conflict between the need for highly visible, substantive and comprehensive improvements and disruptive effects of such highly complex improvements.

In attempting to resolve this conflict it is suggested that the choice of improvement proposals be as flexible and low key as possible. This would provide the opportunity first, of keeping the cost down and thereby making the improvements affordable to those receiving them; secondly, it makes it easier for both agency and users to implement such a process and thirdly, it reduces the possibility of the sorts of delays which tend to accompany complex projects and have cumulative effects. Time costs the participating households money and as such, can substantially threaten the objective of affordability. It also costs loss of morale on both sides. Fourthly, the disruptive impact of the improvement provides a point over which conflicts could arise.

The overall benefit of a small and simple project approach is that it can be replicated not simply in terms of improvements in another designated area but also in transferring recouped resources to the next priority of the priority needs ladder of the community.

It is hoped that the procedure proposed could be taken a step further, i.e., in the development of a suite of computer programs which would collate, analyse and produce a number of alternative

layouts, with considered costs and standards of various options in accordance with residents' needs and affordability.

This approach is not new and has been advanced and developed to a degree by Antonio Zuniga of the World Bank's Latin American Urban Projects Division (1982), but it is limited to a programmable HP41C calculator, which can only determine land use distribution and costs of site infra-structures for designs that follow the urban primer approach. However, this has been developed further by Alain Bertaud and his colleagues at PADCO, who produced a model for analysis of alternatives for low income shelter (ibid.).

It is envisaged that if this procedure could be combined with the grid orientated SPSS programme, a model could be realised which assesses the needs and characteristics of the community and environment under survey and then computer-generate a format expressing these characteristics. Given this, it is envisaged that the model could generate layouts, costs and standards in accordance with the affordability of the respondents' locations. This 'tool' could provide the field teams and steering committees with a much reduced 'turn around' time, whilst facilitating the propositioning of an increased number of options. As such it could contribute substantially to the reduction of planning and design time and hence reduce costs (excluding computer capital and running costs.) This would in turn enhance the affordability of the project and hence its success.

To conclude, it must be remembered that this approach to housing is a strategy and will not in itself provide the panacea to the wider economic, political and sociological problems which influence housing. However, it is believed that if the 'spirit' of the concept is genuinely followed it will have a substantial impact for the better on present housing condition.

Chapter 7.

SUMMARY, CONCLUDING REMARKS AND CLOSING NOTE

Over the last few centuries Lagos and its environs have experienced some marked changes. They have seen their socio-structural and demographic characteristics, economy and environment change from those of a trading town of some 25,000 inhabitants covering an area of about 1.5 sq miles in the latter part of the nineteenthth century to the national administrative and commercial centre of about 230,000 inhabitants covering an area of 27.2 sq miles in 1950. Today, it is a major sub-continental centre of politics and commerce with an estimated population of 6,048,000 covering over 300,000 sq kilometres.

The most dramatic of the changes took place in the nineteenth century when Lagos was ceded to the British. An outcome of this cession was the establishment and development of a dualism which still persists today and which characterises practically every aspect of the urban system including housing. It is a characterisation which originates from theoretical economic analysis and which views the economy in terms of sectors, i.e., modern and traditional (hence dualism). Over time this concept has gradually been used to analyse other aspects of the urban system including housing. However, it must be emphasised that these sectors are not seperate and distinct but are inter-related and inter-dependent sub-systems. This dissertation regards these characteristics as fundamental elements in achieving the goals, policies and programmes outlined in various development plans in Nigeria; it is submitted that the overlooking of these characteristics only served to extend and reinforce the dualistic system.

In tackling this deteriorating environmental and housing

situation, successive governments (colonial and post-colonial) adopted numerous measures ranging from rent control and land reform to increased public financial investment and direct construction; during the Third Development Plan Period (1975-1980) these measures were reinforced by the promulgation of the Land Use Decree (1978), a National Housing Policy (1982), the allocation of some #1.5 billion to housing and the construction of 202,000 dwelling units. However, experience is beginning to show that these measures, policies and programmes are proving ineffective in tackling the housing problem in general and in particular those of the lower income percentiles.

From all the research undertaken for this dissertation, it is submitted is that these measures have not been accompanied by effective and appropriate arrangements for their execution. A consequence of this is that most had little impact beyond the paper they were written on and those measures that were put into effect have been slow and expensive to execute. They appear tailored more to the convenience of the bureaucrats and developers than to the requirements of the consumer. So, although the policy and objective decisions may not be specifically modern sector oriented, they are nonetheless based on well entrenched concepts which serve the particular outlook (social, political and economic) of the modern sector, which are, as this dissertation has attempted to illustrate, often in conflict with the low income households.

A brief examination of traditional Yoruba settlements was made (see chapt. 3.) in order to see if they held any characteristics that still underlie contemporary settlements. The Yorubas have a tradition of urbanisation; in 1931 this registered a degree of urbanisation comparable if not greater than that in a number of industrialised countries such as Sweden and France. The existence of these urban environments unlike those found in the developed nations at that time

(1931) was not a product of industrialisation but of the the social structure of the society required to support the administrative needs of the Ifa dynasty. At the centre was the Oba or Alafin, his palace and the main area of commerce and trading. Radiating spatially and socially from this centre was the Oyo Mesi (Council of State). Each of the counsellors of State represented the interests of a particular district of the town and the commerce and other activities associated with that district.

In support of the review thus far the field study undertaken attempted to investigate more precisely the nature and attitudes of a selected number of housing environments within the city. The results of the research established that the differing characteristics, needs and means were reflective not simply of the dualism described in the earlier chapters of this dissertation but of a further divide of the non modern sector.

The survey essentially involved research in three areas of the city. These reflected the sectorial divide thus:

- a) The Dolphin Estate - representing the formal modern sector,
- b) Maroko - representing the informal-popular sector and
- c) Isale-Eko representing the informal-traditional sector.

The survey was primarily a stratified random sample survey. The stratification derived from the pre-selection of the three settlements. Owing to a lack of existing frames and resources, a number of intuitive decisions had to be taken - these were utilised instead of the long and time-consuming computer-aided analysis employed at the sampling stage.

With regards to the household's nature the study areas exhibited a number of differing but related characteristics, for example, the household heads in Maroko tended to be young, of low educational achievement and income, with a residency of short duration and

relatively smaller families. The Dolphin and Isale-Eko study areas, exhibit similar household characteristics except in the related areas of education and income even though the Dolphin estate is only a few years old. Isale-Eko exhibited similar characteristics to Maroko viz., low income and educational achievement, otherwise in both these areas older individuals predominated as household heads with relatively larger households.

Regarding the respondents' household building and dwelling environment, the Dolphin study area was distinctly characterised by the high planning and material standards usually associated with modern housing developments. In contrast Isale-Eko exhibited a diversity of building and dwelling environments. Maroko, however was dominated by the rooming houses that characterise and account for somewhere in the region of 85 per cent of the residential accommodation in Lagos. Similarly, the Dolphin study area respondent dwellings were characterised by a relatively high standard of dwelling facilities as well as exclusive use of bathrooms, toilets and kitchens. Respondent residents of Maroko and Isale-Eko had in the main, poor facilities which they had to share with other households within the same building.

The range and standard of the neighbourhood amenities like those of the building and dwelling environment exhibited marked differences between the study areas. Characteristically the Dolphin study area, when looked at in relation to Maroko and Isale-Eko was well served for refuse, security, educational, religious and recreational facilities. In addition there were electrical, access and drainage facilities. However, relative to Maroko, Isale-Eko was better served. For a number of reasons the Maroko study area lacked practically any form of those public facilities mentioned above. Those facilities that do exist such as water, electricity and security are all supplied on a private

entrepreneurial basis.

Similarly the household satisfaction survey that was undertaken showed differing characteristics. The respondents in the Dolphin study area when compared to those in the Maroko and Isale-Eko study areas, expressed distinctively higher satisfaction or habitability rating with the housing environment. When 'boiled down' to a single value rating Dolphin, Isale-Eko and Maroko registered RHI values of 75.9, 69.70 and 55.40 respectively, the low rating of Maroko being primarily the outcome of very poor neighbourhood amenities and the locational aspect. In all the study highlighted the marked differences that exist between the settlements and characterised the dualistic situation which does not appear to have been reflected in Government housing policy.

The aided self-help proposal perceives housing - especially in the context of Lagos-Nigeria and its informal sector - as a developmental instrument or vehicle rather than a developmental objective involving:

(i) re-orientating the imposition/paternalism relationship between the authorities and the residents by establishing one of co-operation and partnership, which is not limited to consultation on the physical aspects of the programme but which includes other aspects of planning, decision making, administrative, managerial, financial and maintenance, and

(ii) replacing current dogmatic attitudes of meeting housing needs by producing grandiose housing estates and initiating slum clearance schemes by an open-mindedness and flexibility which can accept the existence and permanence of slum settlements and promote the concept of their gradual improvement over time. Improved housing along with education, health, employment and community development would be the beneficial spin-offs of this participation strategy.

Aided self-help sees community participation as a basic resource

that has not yet been fully realised or harnessed and which must be if the present situation is to be effectively tackled. The approach concerns itself not necessarily with the best design as conventionally viewed, but with one which will have the greatest likelihood of success, which can be afforded not simply within the confines of a particular settlement location but also when applied on a metropolitan or even national scale.

The proposal attempts to blend a number of the housing components on a non-conventional basis within the context of registered and organised user participation strategy. This involves:

a) The development of a project agency specifically tailored to 'go between' the existing authorities and a structured community organisation.

b) The provision of an inalienable security of tenure whether of a plot or a room was based on the residents' membership of a registered housing improvement association. However, these rights are subject to withdrawal if any of the rules and responsibilities are not adhered to. From this secure position can be created a situation which gives an opportunity for the application of rent control which simultaneously awards rental compensation to landlords. This compensation could be structured in such a way as to promote the reinvestment of such grants in areas in need of improvement. For instance, rents could be set at a market value for rooming houses without services being provided. However, for those dwellings with services (which under market conditions should command higher rents) the compensation can be scaled in such a manner that it either promotes or deters the construction of low or higher standard dwellings.

c) The establishment of local financial services which are primarily tailored to meet the needs and means of the association members while encouraging these residents to save.

d) The development of an incremental approach to standards that reflect the needs and means of the residents and their locale. It is hoped that this would enable quicker, more efficient and more sensitive development to occur while providing the conditions for the 'developers' at large to partake.

e) Adopting a training component that serves a number of roles, in that it not only attempts to educate and explain the approach and its mechanisms from the policy makers through to the ordinary association members, but will, it is hoped develop a cadre of agency personnel dedicated to a philosophy of achievement rather than to one simply and primarily concerned with protecting a post.

The implementation of each of these components is crucial, the failure of one can substantially undermine the success of such a programme. In an environment of such impoverishment the effects of failure are acute, especially for those living there.

For the very poor, housing is something that is provided and improved gradually; for example, a door is acquired today and stored for future use when funds will be available for its installation. Whilst being very aware of their own skills, resources and limitations these groups are most probably unable to perceive building in the same way as architects. If architects are to acquire a role amongst the low income groups of the informal sector, they should be capable of adapting their modus-operandi and using their skills to enable and help the user (consumer or real clients) in these groups to design their homes and surrounding environment. In doing so they have to confront two groups, the sponsors (government or developers) and the users. Architects would then be in a position - uncomfortable though it may be initially - to transform the political and social plans and theories into viable practical realities.

However, from a conventional architect's point of view, the

problem starts, as Jon Rowland (in Martin, 1984 at pp.31-50) says, when the architect has in mind from the outset, only the image of the end product of his brief instead of taking into account the processes involved in the generation of housing, the result of this 'blinkered' view is that architects seldom design so called low income housing for low income groups.

It is envisaged that the architect's role within the informal sector housing context would not simply be one of a participating building technician in local action (in which the users are the dominant actors or at least constitute a significant participant), but as 'conductors' in the design of alternative processes, means and ways of utilising land, shelter, infrastructure within a framework that allows for the user's personal choices and preferences. The design options then shift from predetermined product options to evolutionary options offering a plethora of possibilities. The consequences of this are that the architects field of operation will stretch into areas of management of various aspects of the built environment, technical assistance, monitoring and evaluation as well as institution building and training, areas previously regarded with trepidation and as being 'no-go'. This role is at its heart driven and guided by the goals of improving the quality of life of the inhabitants, increasing their involvement in the improvement of the urban environment and realising their eventual legitimacy and integration with the city at large. Housing is the conduit through which these goals can be achieved.

Internationally the validity of this approach is now quite secure, it has been shown to be relatively efficient in terms of the impact of the projects on housing stocks. The projects have proved that they are affordable and generally accessible to the target populations whilst not necessarily having a negative impact on the expenditure of food and other basic needs. Studies have shown that both in theory and

practice aided self-help projects are reaching substantially below the 20th percentile by income, especially in upgrading projects. By comparison the conventional heavily subsidised housing process rarely if ever reach below the 60th percentile.

By realising the particular needs of the households, the plots, the super-blocks, the segments and the settlement within a participatory framework, aided self-help promises a 'unity in diversity' and a symbiotic relationship of 'community building', on the long march to progress and development

Closing Note

In view of the realization that the Nigerian Government is falling behind in its attempts to satisfy the quantitative and qualitative housing needs of the majority of urban households and especially those of the lower income groups, it would appear imperative that additional alternative approaches be embarked upon if this 'endemic problem' is to be resolved.

The present public sector oriented and operated low income housing policies and programmes as highlighted by the study have turned out to benefit mainly those of the upper income households, whilst at the same time alienating the low income households who constitute the majority of the urban population. So while it may appear that the lower income households neither have the ability nor the resources to partake in the modern urban development process that the Government has embarked upon the reverse is what is more likely to be the case in that it is the Government which is unable to partake in the housing and development processes of the low income households, especially those of the informal sector.

Overcoming this gulf, will however, entail adopted approaches, policies and programmes that would require substantial political and economic will and justification on the part of the Government. Such a

move would be beset by innumerable difficulties primarily involving a political shift in which the authorities would have to forego their present paternalistic attitude and adopt one of partnership. The Government may not be able or willing to make such a shift as it could well undermine its present position. However, the changeable political situation and the darkening economic climate could prove to be the economic and political opportunity for adopting a more co-operative and partnership based approach in line with the political aims and objectives of the present regime.

On New Year's Day 1984, Nigeria witnessed some dramatic changes. The democratic government of President Shehu Shagari was replaced by a new Federal Military Government. However, this administration was replaced twenty months later on August 27th 1985 by another military one led by President Babangida.

However, behind these changes there appears to lie an ever-darkening economic climate. Oil production which provides over 90 per cent of Nigeria's foreign exchange has dropped to under one million barrels a day from an average of 1.5 million earlier this year (1986), a very important factor since Nigeria imports a sizeable part of its(modern sector) construction materials. In addition, an urgent need has developed for Nigeria to reschedule its estimated 12 billion dollars of medium and long term debt. With inflation put at about 30 per cent, tens of thousands of government personnel being retrenched, salary cuts of up to 15 per cent for civil servants, a foreign debt service ratio of 44 per cent which is projected to rise and a projected capital project investment cut of 40 per cent, (power, agriculture and irrigation and petrochemicals constituting the top priority developments), it can be tentatively concluded that housing investment will all but be stopped (1).

This darkening economic climate coupled with the projected fall in

the price of oil, has precipitated the necessity for the Government to shift its revenue base away from oil (Financial Times, September 1985). This shift, which was probably initiated by a closer examination of Nigeria's domestic policies was taken by President Babangida in his first broadcast on August 27th 1985; he said, "It is the view of this Government that austerity without structural adjustment is not the solution to our economic predicament". He identified four fundamental issues which appear to reflect this situation:

1. A decrease in domestic production while the population increases.
2. A dependence on imports for both consumer goods and industry's raw materials.
3. A grossly unequal gap between the rich and poor.
4. The large role played by the public sector without any concrete results.

Housing could in its way prove to be one of the vehicles through which to organise and integrate the present relatively disparate sectors. It could also provide a framework on which the Government could widen its tax base whilst at the same time tackling the housing issue where it is most serious.

It would entail the Government moving on from its present side-line attitude of simply stating that it will provide legal, administrative and technical assistance (NHP, 1982 at p.26) if and when voluntary agencies decide to sponsor a project of this nature in Nigeria, to adopting a support policy, which could be initiated either by wholly or partially sponsoring a pilot (aided self-help) programme. This hesitant attitude, although somewhat understandable, given the Government's limited experience in this field, should nevertheless be overcome. The acuteness of the housing situation in the urban areas is endemic and reaching a critical stage. This is a stage which

Towry-Coker at the Nigerian Institute of Architects, Bi-annual Conference in 1979 described as being "at the crossroads, where we either solve once and for all the tremendous problems of shelter for our urban masses or forever be faced with deteriorating social conditions". Embarking on an aided self-help programme (as suggested) offers the chance to make a positive turn, in that it not only lays the foundation stone for a more meaningful development process that involves the population at large but also provides the opportunity to redress the present deteriorating situation and creates the possibility of a better environment for future citizens of Nigeria.

Appendix I. Geographical Aspects South Western Nigeria

Physiographical Aspects

The coastland of south west Nigeria is low lying and swampy and it runs parallel to the mainland in a series of long, flat islands that have become linked together by great accumulations of sand and mud swept into position by the strong Guinea current. The consequences of this has been the creation of a series of shallow inter-connected lagoons separating the mud flats of the mainland from the open ocean. The modern port of Lagos is situated at the only gap in this coastal barrier which eventually merges into the Niger Delta to the east. The low lying coastland varies in width from twenty to sixty miles inland, after which the land rises fairly steeply to a plateau of twelve to fifteen hundred feet. This upland of hard igneous rock is separated from the coastal plain by the Niger Valley and a series of low range of hills and isolated eminences (fig 087). Many small rivers flow southwards in the direction of the general tilt and fall in rapids to the coastal plain and lagoons (fig 088.).

Dense tropical forest is confined to the more humid areas of the coastal plains and the southern plateau. The brackish tidal waters of the lagoons are fringed by mangrove swamps and behind them lies the tall rain forest in which lofty smooth-backed evergreen trees and palms of many varieties rise through the dense undergrowth to height of over two hundred feet (fig 089.).

Climatological Aspects (fig 090.)

Throughout the year the temperature rarely falls below 18 C and averages about 27°C. The average daily maximum temperature is about 30°C and the average minimum of about 24°C. There is a seasonal variation of about 6°C between the hottest month (March) and the coolest month (August). The relative humidity at dawn is usually between 80 per cent

and 100 per cent with the air often being saturated with water vapour resulting in precipitation in the morning during the rainy season. The vapour pressure present in the air averages 29 millibars. Two types of storms prevail - isolated storms which occur more often during the dry season and continuous rainfall up to several days covering large areas during the wet season. The average annual rainfall in Lagos is about 1,895 mm/annum with some variations within the Metropolitan Area: Apapa has an average of 1,895 mm/annum, Ebute-Metta has 1,702 mm/annum and Ikeja with only 1,466 mm/annum. On the average 85 per cent of the total annual rain water falls over a period of seven months and these months have heavier rainfall than others, i.e., June has an average rainfall of 430 mm as against December with an average of 50 mm. Individual storms' intensities are very high reaching as much as 250 mm/hr for a major rain storm lasting fifteen minutes once in thirty years. An intensity of 100 mm/hour can be expected for a rain storm lasting one hour in thirty years with an intensity of 89 mm/hr once in ten years.



Figure 087. Major Physical Reliefs Across West Africa.

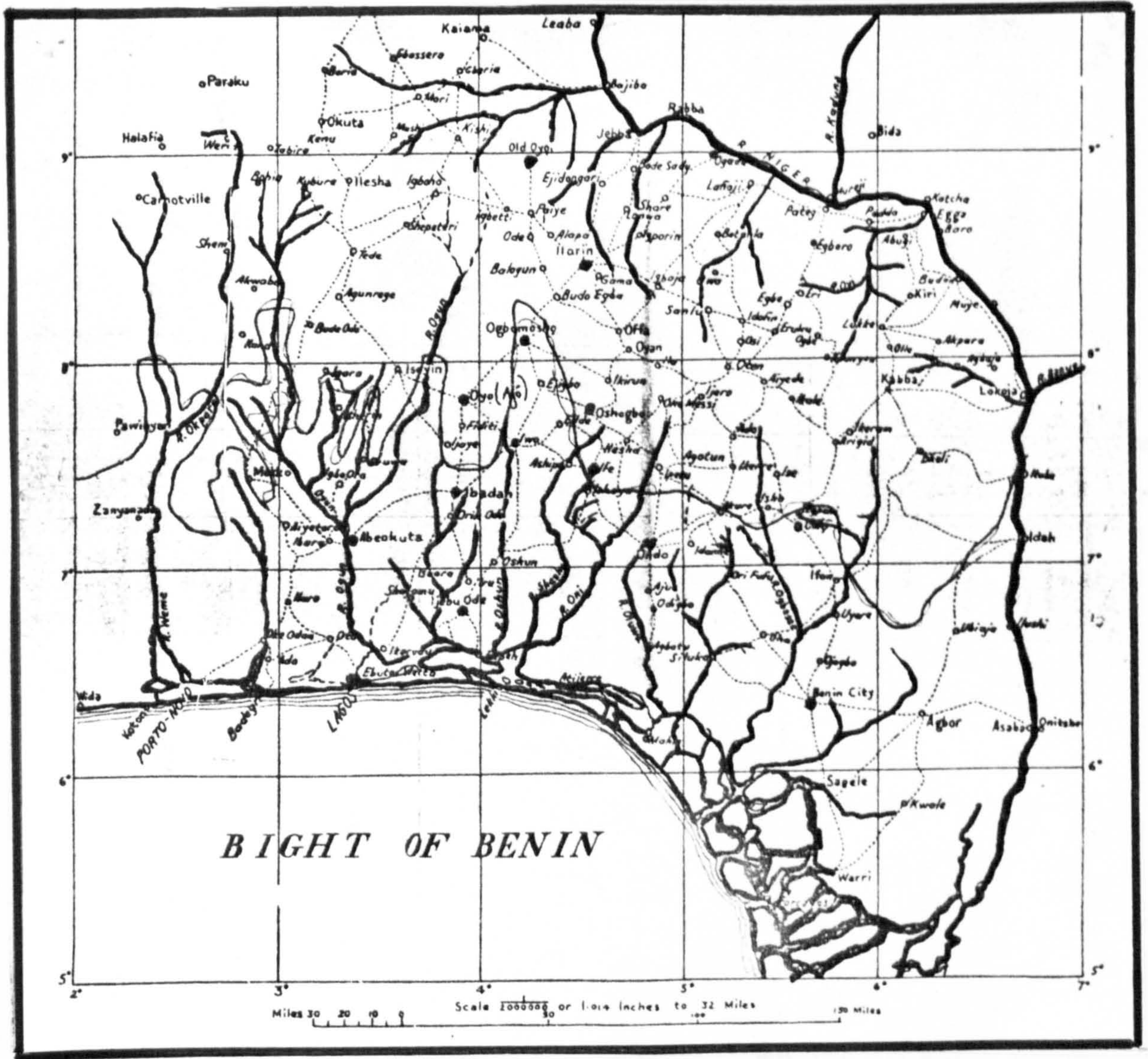


Figure 088. Drainage Across South Western Nigeria.

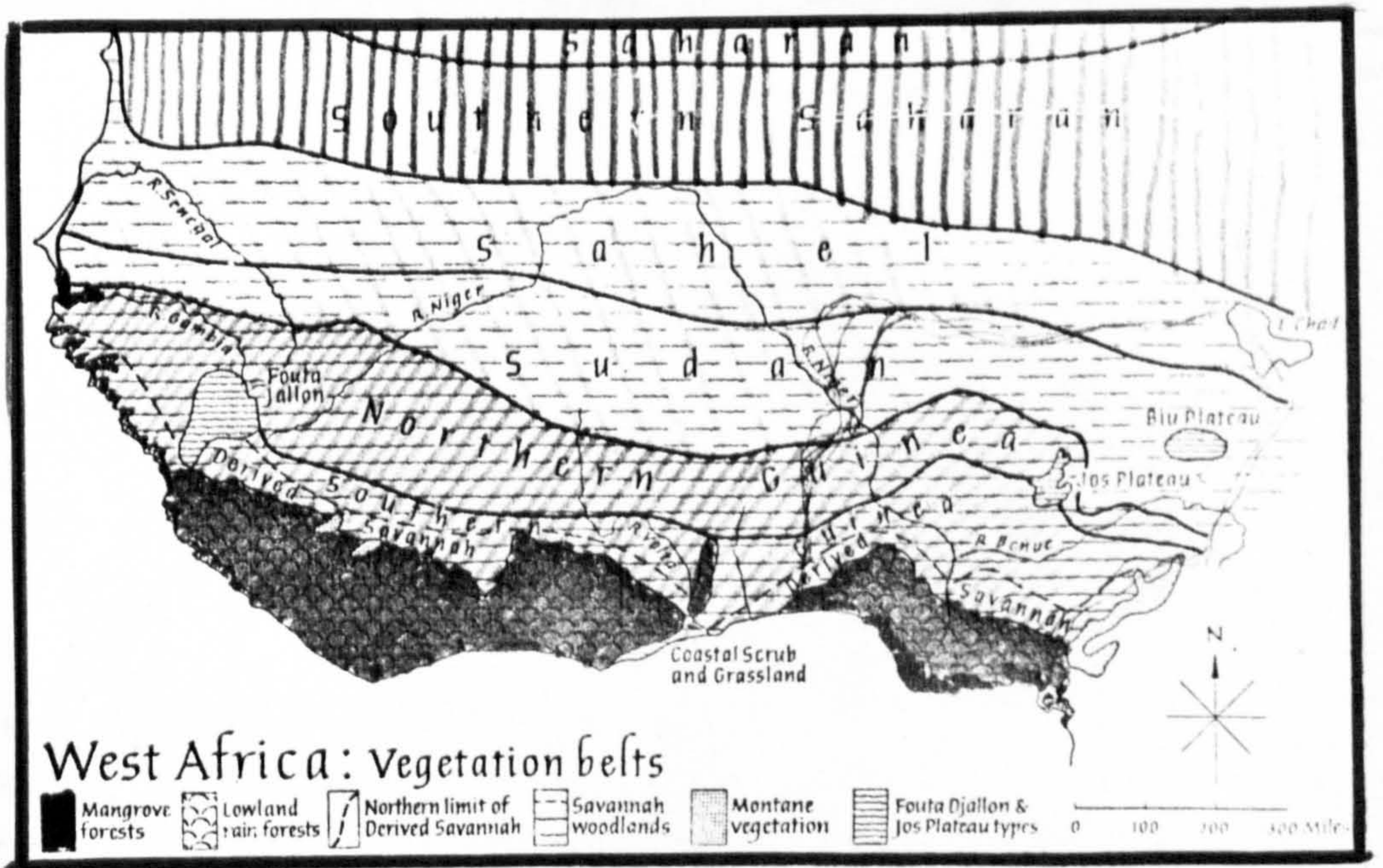
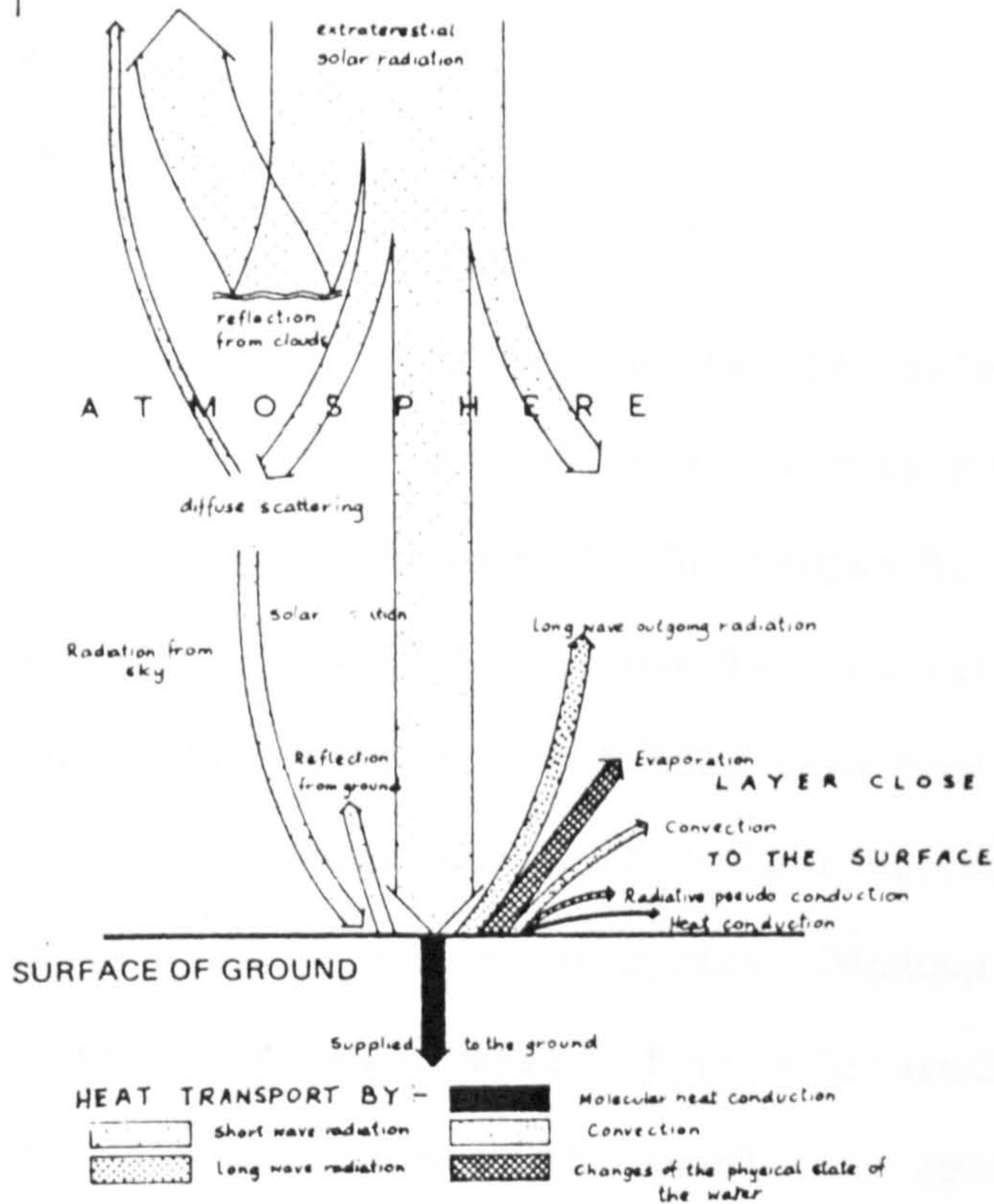
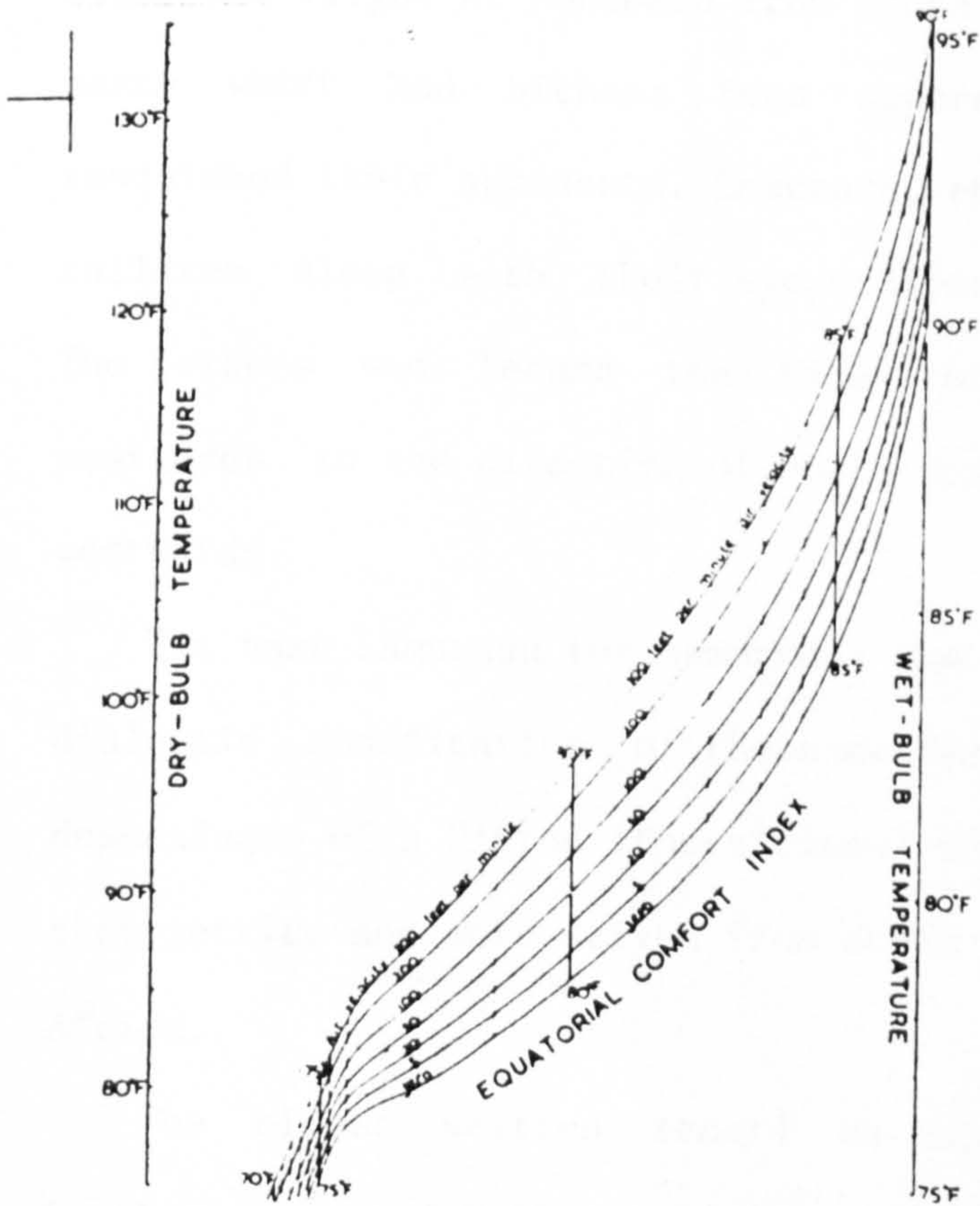


Figure 089. Vegetation Belts Across West Africa.

UNIVERSAL SPACE

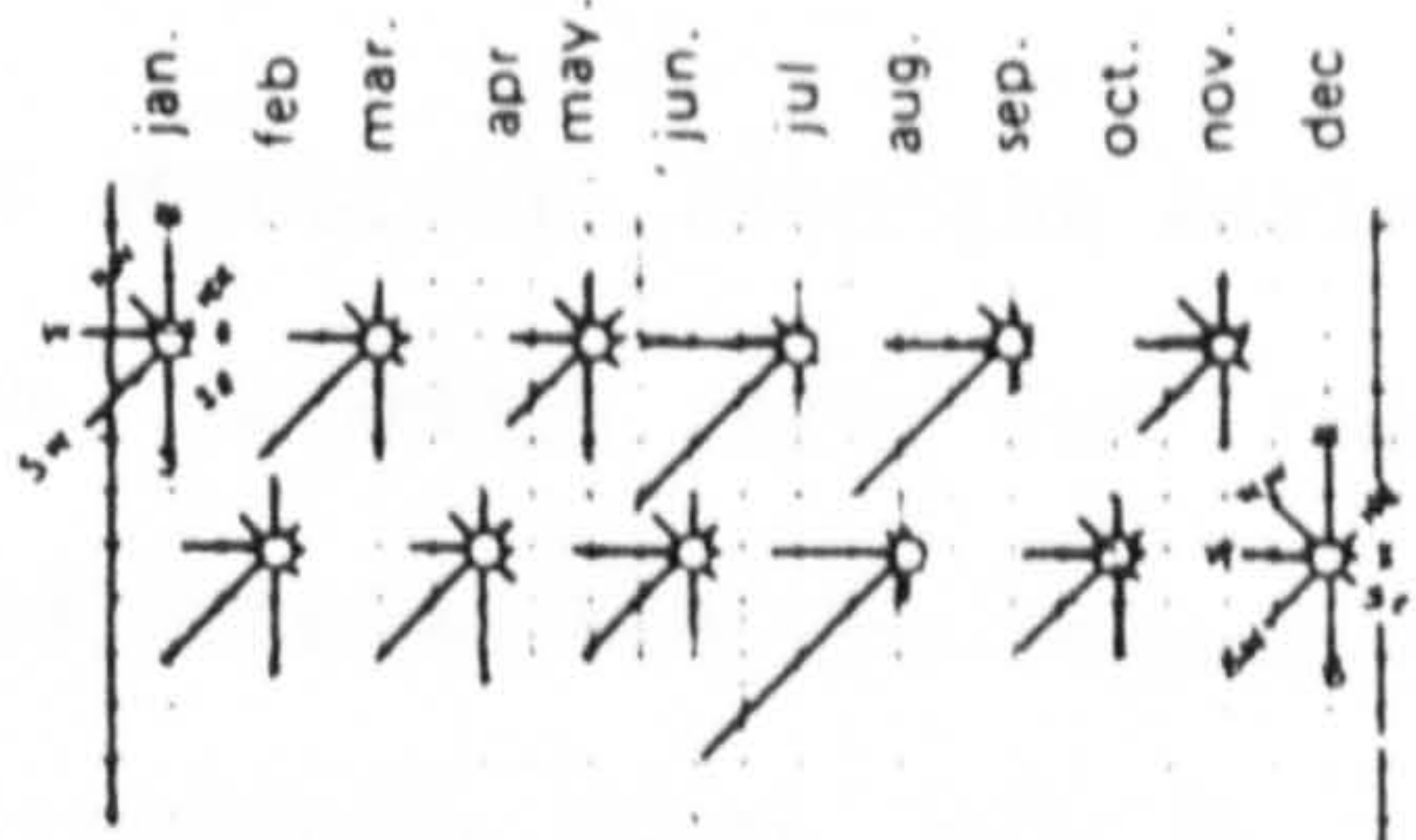


SOLAR HEATING OF THE EARTH

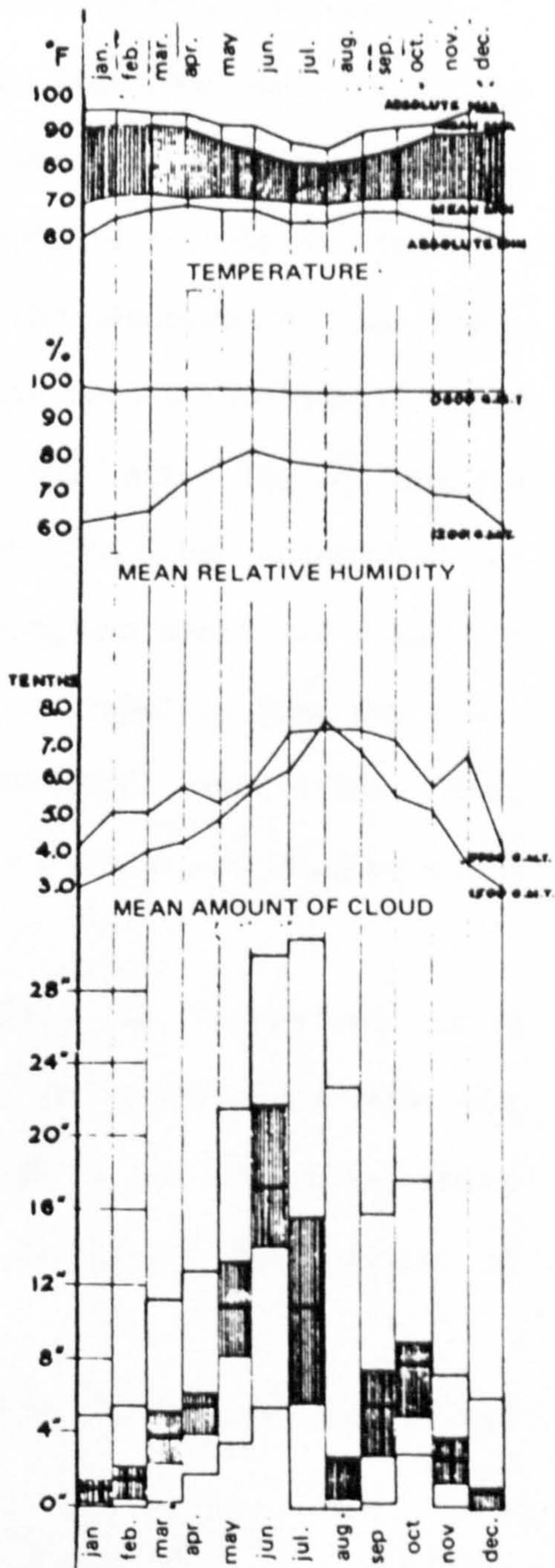


NOMOGRAM FOR COMFORT INDEX

Mark the dry-bulb temperature on the left-hand vertical scale, and the wet-bulb temperature on the right-hand one. Join the two marks, and then mark the point of intersection of the line with the curve which corresponds to the air velocity. Estimate the value of the Equatorial Comfort Index by interpolation between the adjacent vertical lines. The value is the temperature of still air saturated with water vapour which is equivalent physiologically to the climate under consideration.



PERCENTAGE FREQUENCIES OF SURFACE WIND DIRECTION



VARIATION OF RAINFALL

fig 090.

Appendix II.

The Yorubas

Origin of The Yorubas

The origins of the Yorubas is veiled in obscurity. Like the early history of most nations, the commonly received accounts are for the most part purely legend. The people being unlettered and the language unwritten, all that is known is from verbal tradition which has been carefully preserved and handed down from generation to generation.

The Yorubas are said to have descended from Lamurudu, one of the Kings of Mecca whose offspring Oduduwa, was the ancestor of the Yorubas. At what period of time Lamurudu reigned is unknown, but from the accounts given of the revolution among the descendants and their subsequent dispersion, it appears to have been a considerable time after the flight of Mohammed from Mecca in 622 A.D. The Mohammedan party which had hitherto been suppressed had the upper hand and vanquished their opponents. Lamurudu, the king was slain and all his children along with their sympathisers were expelled from the town. The princes who became the kings of Gobobirri and Kukawa went westwards in the direction of north western Nigeria and Oduduwa south westwards.

The name Lamurudu (or Namurudu) can easily be recognised as a dialectic modification of the name Nimrod. It is also known that the descendants of a Nimrod (Phoenicians) were led in war to Arabia, where they settled and were driven from there by religious persecution to Africa.

The oldest written record on the subject of the origins of the Yoruba is that of Bello the Sultan of Sokoto.

" The inhabitants of Yorubaland (Yarba) originated from the remnants of the children of Canaan, who where the tribe of Nimrod. The cause of

their establishment in West Africa, was as it is stated, in consequence of being driven by Yar-rooba, son of Katitan, out of Arabia to the West coast between Eygpt and Abyssina." The only question arising from this account is that the Yorubas as there are today are certainly not of the Arabian family.

That the Yorubas culture came originally from the Arabian region there can only be the slightest doubt, as their habits, manners, customs and certain architectural styles etc. all strongly indicate an eastern flavour. The fact that they migrated from Upper Egypt to Ile-Ife is also reinforced by the famous sculpture known as the 'Ife Marbles', several of which can be seen at Ile-Ife today. They are altogether Egyptian in form, and the most notable of them an obelisk standing on the site of Oranyan's supposed grave is marked with characters that suggest a Phoenician origin as illustrated in figure

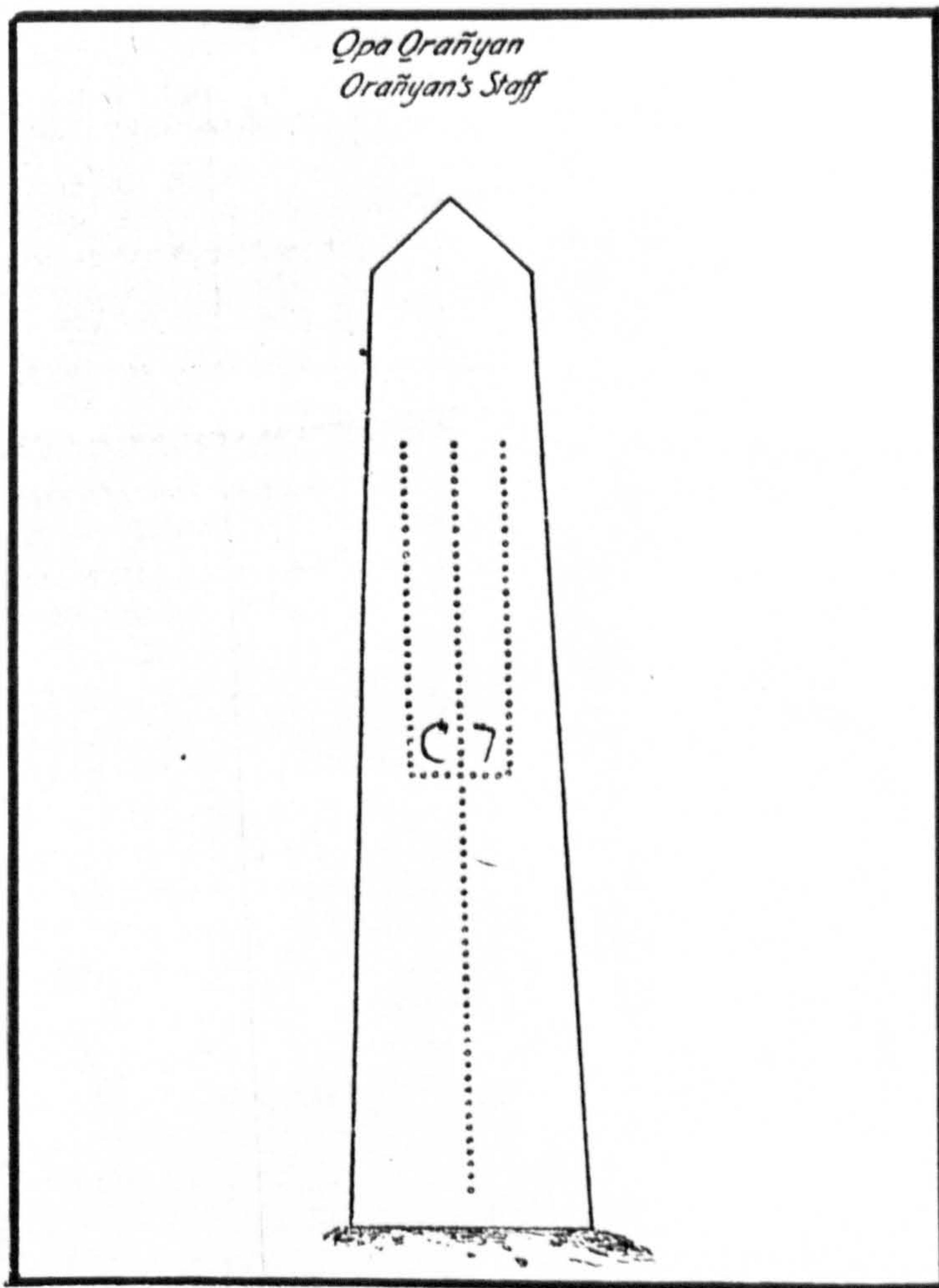


Figure 091. Obilisk at Oranyan's supposed grave.

In addition, the symbol of the snake which represents the power of the Oba also provides another tentative link between the Niger and the Nile areas. Other aspects of Yoruba and Egyptian material culture, religion and language link the two cultures. Yoruba make-up pallets for instance. Such observations are creating considerable interest and have given rise to a good deal of speculation. Furthermore, fragments of potshed pavement dated about the 12th century and very similar to those of the Yoruba have been found at Diama (South of Lake Chad). Diama lies on the migratory approach to Lake Chad - the Mandara Mountain corridor through which contacts between West Africa and the Nile Valley would surely have passed.

Another postulation on the settlement of southwest Nigeria is that of an early colonial phase where a group of technological and stylish innovators migrated across the eastern Sudan. Settling down in the Benue valley to become the overlords of some pre-existing culture, and being very small in number they were rapidly assimilated with the local inhabitants. They established a monarchical tradition based on the concept of divine kingship co-existing with the legends of the origins of the northeast (fig 092.).

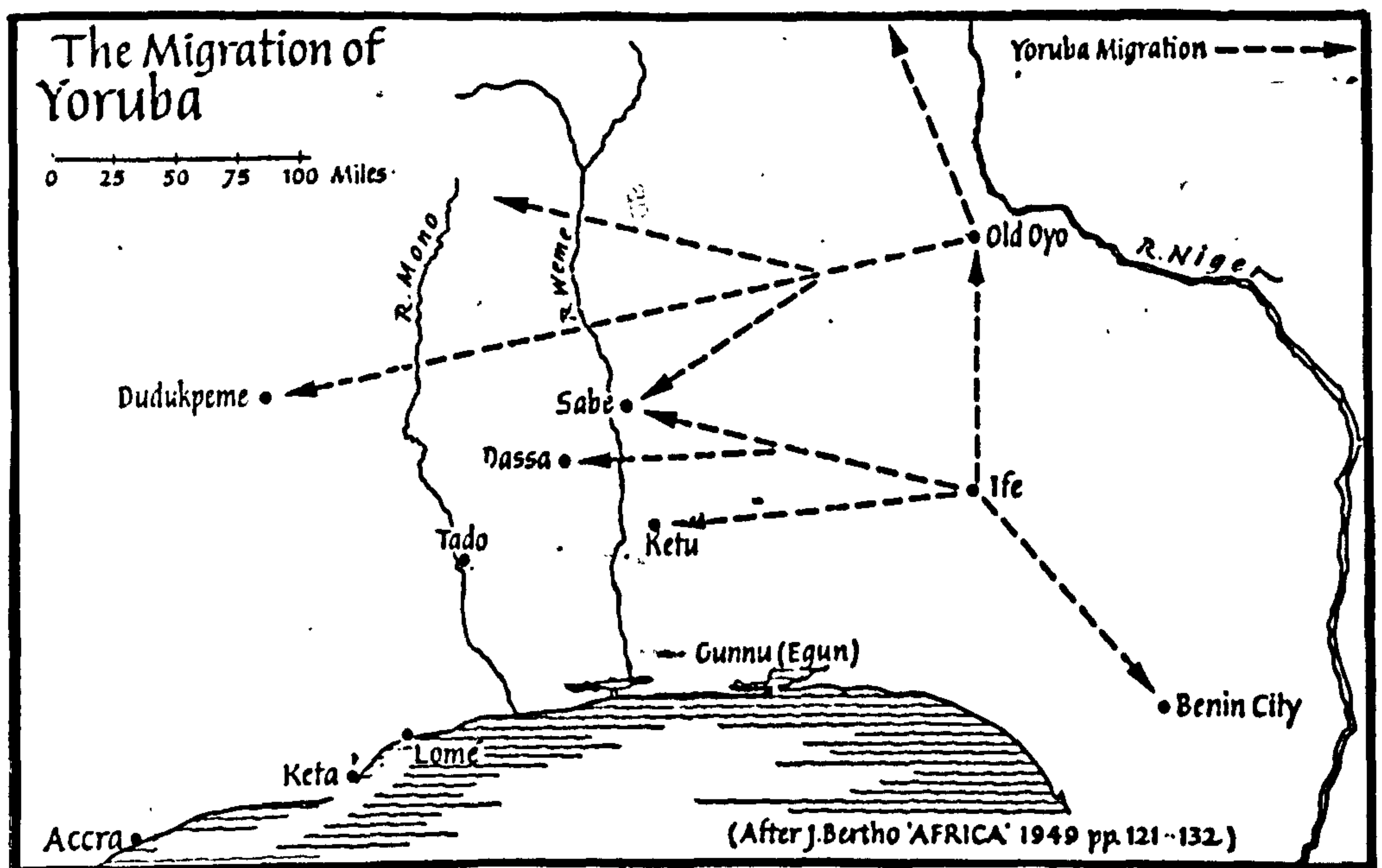


Figure 092. Migration of the Yoruba

The Yoruba Peoples

All the various peoples who constitute the Yoruba nation trace their origins from Oduduwa and the city of Ile-Ife. Ile-Ife is the fabled spot where God created man (both black and white) and from whence they dispersed to all parts of the earth (Yoruba Country). It must be born in mind that the country was not altogether uninhabited when Oduduwa and his party entered from the east. Oranyan and his army, as well as his brothers pushed on their conquests in every direction. The princes and war lords were stationed in various parts of the country and from among their number were descended many of the provincial kings of various ranks and whose descendants are still around today.

This accounts for the tradition that the Yoruba once held sway as far as Ashanti and that their purview or domain included the Gas of Accra, for the Gas say that their ancestors came from Ile-Ife and the constitution of the Gas language is said to be more akin to Yoruba than Fanti, one of the languages of Ghana; furthermore, the area in which that language is spoken is strictly limited. Even until relatively recent times, the Popos and Beninois (formerly Datiomians) to the west paid tribute regularly to Oyo as their feudal head. The generals and the warlords of Oranyan had pushed far beyond the limits of the Youba nation we know today. Although far from the centre of the Yoruba country the ruling chiefs and priest castes of Benin the Sekiris to the east and the Popos, Beninois and Gas to the west still maintain their connection with Ile-Ife, the place of common origin (fig 093.).

This view goes some way to explaining the mutual understanding and bond of sympathy existing between the Ifes, Ekitis and allied families - and the remnants of the largely diluted aboriginal elements still having many things in common including their natural antipathy to the

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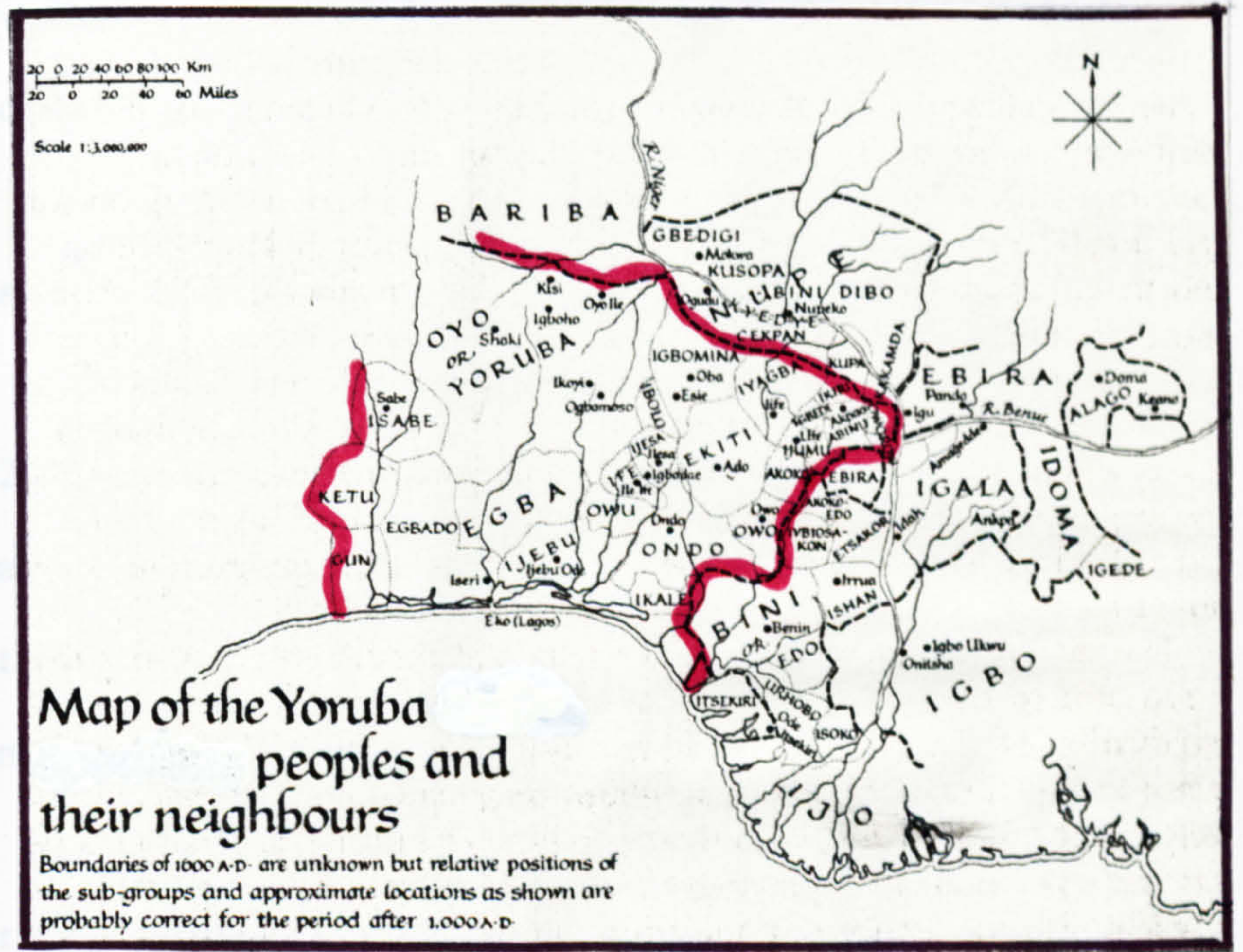


Figure 093. Yoruba Speaking People's and their Neighbours

head's full brother in 1975, a new house with four rooms was added

The enlarged compound then contained a kinship group consisting of two

full brothers and their families, as illustrated in Stage 2, Plan 2.

The next two additions to the compound were made between 1942

and 1954 as illustrated in Stage 3, Plan 3. The compound was at

the compound head carried his first wife's house and the

co-residential kinship group into Stage 4, Plan 4. The compound

of the compound head's younger brother to the west of Stage 3,

Plan 4. With the death of the compound head, the compound

eldest son assumed responsibility for the compound and the brother's

wives and unmarried children. As a result the compound kinship

grouping as illustrated in Stage 5, Plan 5 was established. The

Appendix III.

The Growth and Development of a Compound and its Co-residential Kinship Group (fig 094, and fig 095).

The following two typical examples (Schwerdtfeger, 1982 at pp.142-147), demonstrate the operation of the co-residential kinship organisation at various stages of growth and development of surveyed compounds in Ibadan.

(i) In the first example, the land on which the house stands was given to the present compound head's late father by his mother's family shortly after the first world war. The core of the house was built between 1920 and 1922. In 1923 or '24 the then compound head's first child was born. The family then occupied the house as illustrated in Stage 1 of Plan A. In 1930 the present compound head's mother and younger full brother came to live in the house and anticipating his marriage to a second wife, the compound head built two additional rooms plus a small shop to accommodate the newcomers as illustrated in Stage 1, Plan B. Following the marriage of the compound head's full brother in 1935, a new house with four rooms was added. The enlarged compound then contained a kinship group consisting of two full brothers and their families, as illustrated in Stage 3, Plan C. The next two additions to the compound were constructed between 1947 and 1954 as illustrated in Stage 3, Plan D. In 1949 the eldest son of the compound head married his first wife, thus moving the co-residential kinship group into Stage 4, Plan E. The premature death of the compound head's younger brother in 1964 gave rise to Stage 5, Plan F. With the death of the compound head two years later, his eldest son assumed responsibility for the late father's and brother's wives and unmarried children. As a result the consequential kinship grouping as illustrated in Stage 6, Plan F was generated. It was made

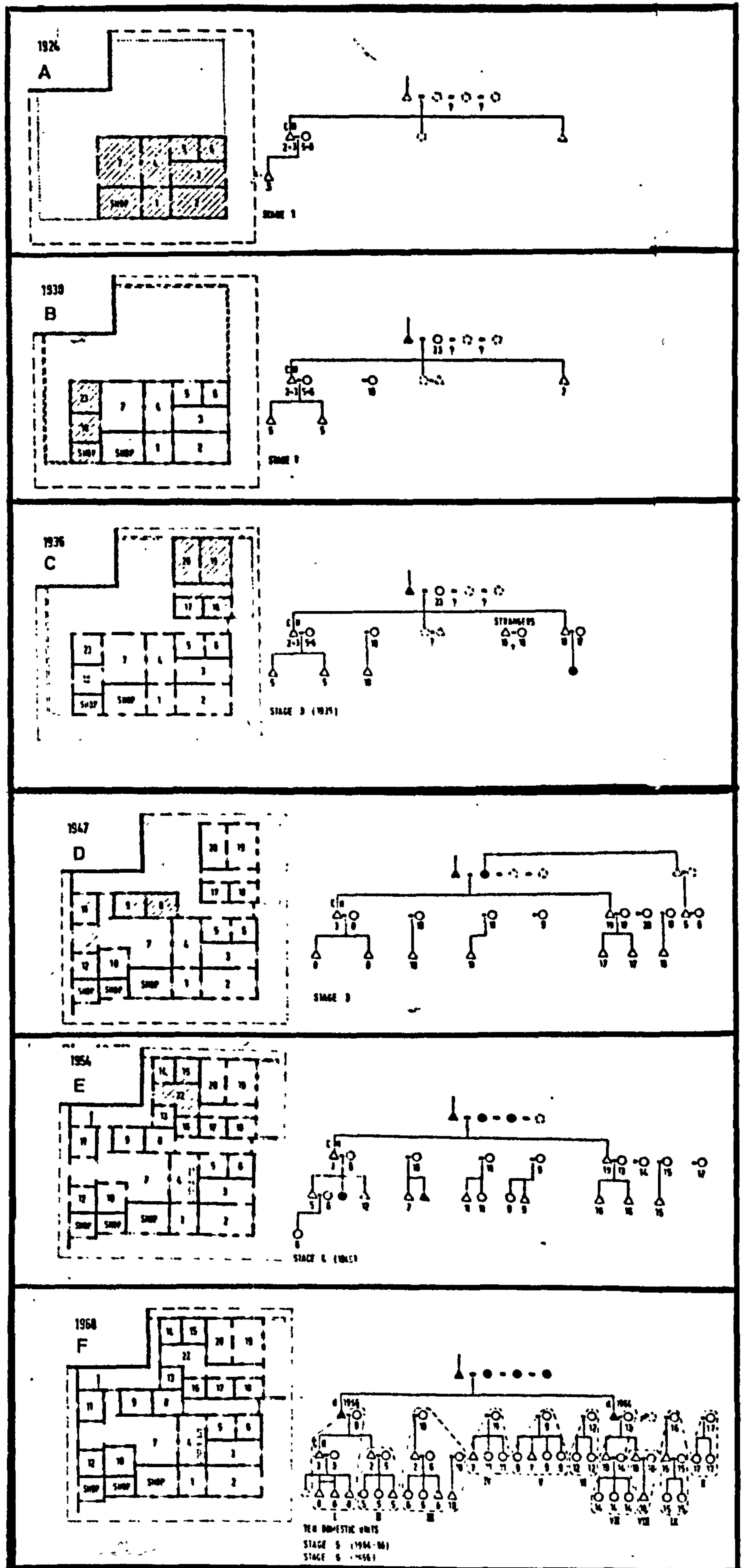


Figure 094. The Growth and Development of a Compound and its Co-residential Kinship Group, 1924 - 1968.

up of several paternal parallel cousins and their unmarried children. By 1968 the inhabitants of the compound dicussed amongst themselves (as they were all co-owners of the property under Yoruba native law and custom) the possibility of constructing an upper floor otherwise some of the family would be forced to find alternative accomodation - a step of which the compound head disapproved.

(ii) The second example demonstrates the rapid change that took place over a 10 year period between 1958 and 1968. This example start with the co-residential kinship group having reached Stage 3 as illustrated in Plan A. At this stage it contained full and half-brother families with their unmarried children and descendants. As a result of the death of the then compound head in 1961, several of the rooms changed hands, following certain principles generally observed by the Yoruba. According to the present compound head, the house was originally built during the first decade of the century. Owing to a family dispute in the late 1940s the compound was divided into two seperate units, marked by the closing of the internal passage as illustrated in Plan F. In 1958 the rooms were distributed among the half-brothers and their families who lived in the house. The compound head and his family occupied the front rooms numbered 1-4 while each of his half-brothers and their families occupied the rooms to the left and right of the courtyard respectively as illustrated in Plan G. In the late 1950s, two marriages occured, the youngest brother's third and the compound head's eldest son's first. This gave rise to the construction of two new rooms which were completed in 1960 as illustrated in Plan H. Following the death of the compound head in 1961 and the succession of the senior surviving half-brother to the leadership, several rooms changed hands. The new compound head moved into rooms 1 and 2, while the late compound head's eldest son occupied room 3. This move was made in recognition of the young man's

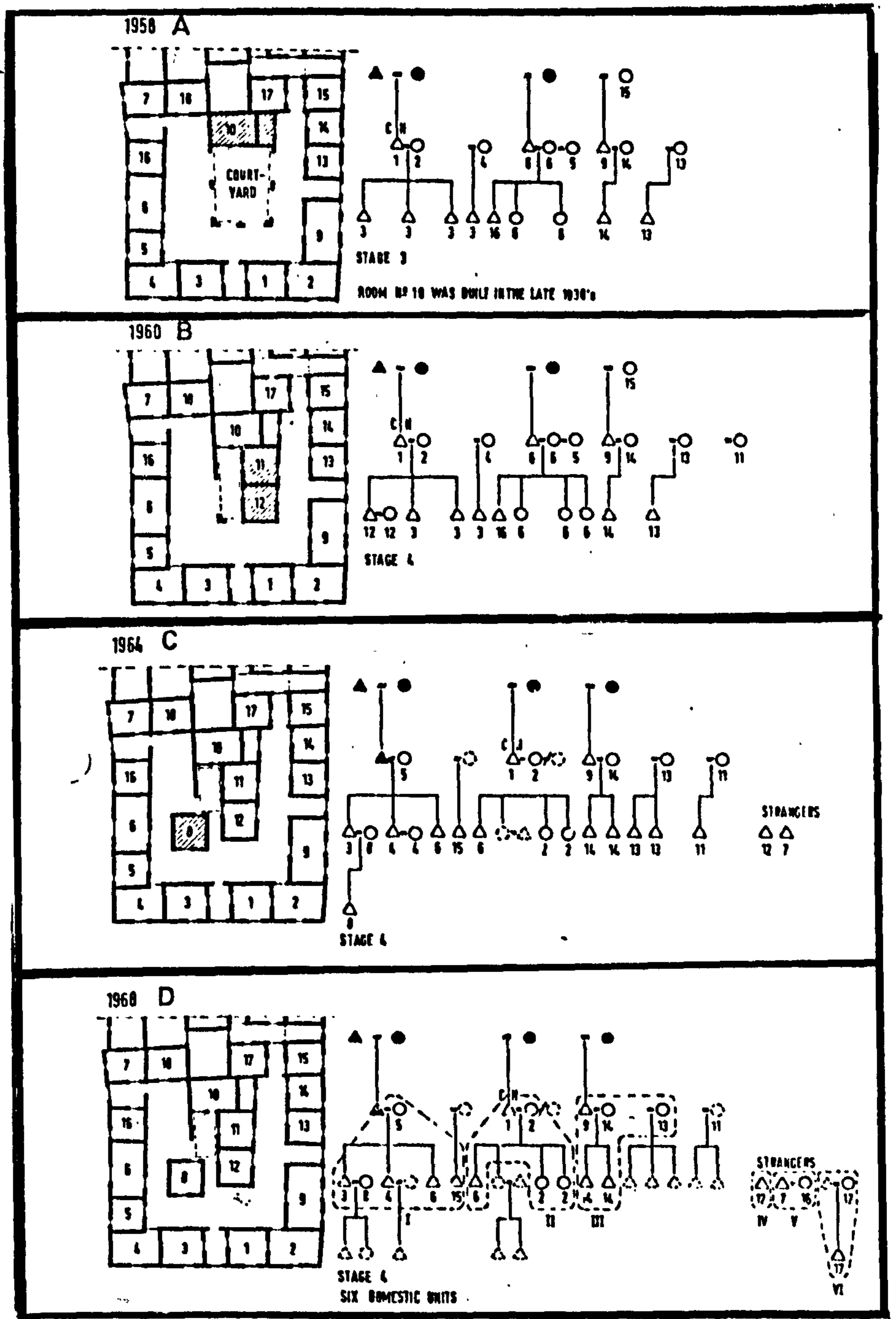


Figure 095. The Growth and Development of a Compound and its Co-residential Kinship Group, 1958 - 1968
 increasing wealth as a successful craftsman and a future contender for the leadership. In 1964 he built a room for his wife. The distribution of the rooms in 1968 still reflected the pattern of occupancy laid down in 1960, with the eldest son of the new compound head remained in the room formerly occupied by his father.

Appendix IV.

Afin at Akure

The residence of the Alafin is located at the centre of the town on one side of the principal market square. Most if not all afins (palaces) are basically a collection of courtyards. In some cases the number of courtyards exceeds a hundred, and some are so small that they simply act as light wells or rain-water impluvia while others (as is the case in Oyo) were reputed to have had a courtyard twice the size of a football pitch.

The description below of the Afin at Akure illustrates the variety of sizes and functions of these courtyards (fig 096.).

(A) Uwa Nla: This is the biggest courtyard used as a public assembly ground, especially during festivals and municipal meetings. On such occasions, the Oba sits on his elevated throne known as the ojopo which is reached by a flight of steps.

(B) Uwa Ogoga: This is one of the three covered apartments in the palace which in spite of their being covered, are referred to as courtyards (uwa). This particular courtyard contains the shrines of Olokun, Ogunjesha, Ogun Akure and Ogoga each of whom is worshipped yearly. The courtyard is named after Ogoga which is the official title of the Oba of Ikerre Ekiti.

(C) Uwa Elese: Criminals and other offenders are subjected to punishment within this courtyard. Some palace servants also reside in the rooms overlooking it in order to make themselves readily available to keep an eye on the offenders and punish them when necessary.

(D) Uwa Odo Owa: This courtyard with rooms bordering it is one of the meeting places for the Oba and his wives, hence it is out of bounds to others.

(E) Uwa Ibura: A newly installed Deji (paramount chief) and also

other lesser chiefs, on their installation, take their oaths of office in this courtyard, just as the name itself suggests (oath-taking-courtyard). The door on the southern side of this courtyard linking it directly with the Uwa Ojukoto is opened only when the Deji is being installed. Then the Deji passes through it once and only once during his life time. It is later kept permanently under lock and key. It is believed even today that by the mere act of passing through this door any new Deji who, not being of royal blood, is installed in error will die within 7 days of his installation. On the death of the Oba a temporary door is made along the western door of this courtyard through which the corpse is carried out of the main building.

(F) Uwa Ikomo: This is another covered courtyard where every year the Deji is entertained by his warriors known as Ikomo, and whose head was Chief Saro. Not many of these warriors are still alive and as such the grandeur of this particular entertainment is quickly diminishing.

(G) Uwa Agbitto: The primary purpose of this courtyard is to serve as a urinal, especially during meetings that are taking place in the Ojukoto courtyard.

(H) Uwa Odo Aya: In this courtyard the Oba meets plaintiffs and defendants involved in serious cases of settlement. Palace servants take their recreation here during the day when it is not otherwise engaged. They also store their personal belongings here - belongings such as palace drums and the engungun (masquerade) attire.

(I) Uwa Odo Ule: This is one of the retiring apartments of the Oba. Only special palace servants and virgins are allowed to enter this courtyard so as to keep company with the Oba and attend to his needs.

(J) Uwa Oriole: This courtyard contains the shrine known as Oriole.

(K) Uwa Ojukoto: Within this courtyard important state matters of utmost secrecy are discussed by the Oba and his chiefs, hence the name

Ojukoto (literally, the place where eyes cannot reach). A few Obas are worshipped here along the sections of the verandah allotted them. People accused of witchcraft or of being in possession of dangerous 'medicine' (juju) take an oath before the Oba in this courtyard. During important festivals the Oba also entertains selected youths here.

(L) Uwa Ogoro: Gifts from hunters of rare animals and birds or their skins, tusks or feathers are presented to the Oba here. It is also the place where chiefs and other well-to-do citizens make presentations to the Oba. This area also serves as a meeting place for the Oba with the Ogbonis (state councillors/chiefs).

(M) Uwa Imorun: This area was formerly used as the residential area for the wives but has recently been converted for the use of the Oba's (natural) mother and is the first time the natural mother has been awarded an apartment in the area.

(O) Uwa Ojuto:

(P) Uwa Layo:

(Q) Uwa Lake:

These courtyards are used exclusively for the wives of the Oba.

(R) Uwa Ile Idana: This is known as the kitchen courtyard, and it is here that the Oba's food is prepared.

Besides playing a multifunctional role (such as being a town hall, court of justice, theatre and sports ground etc.) the palace was for all practical purposes the embodiment of the arts and crafts of the community.

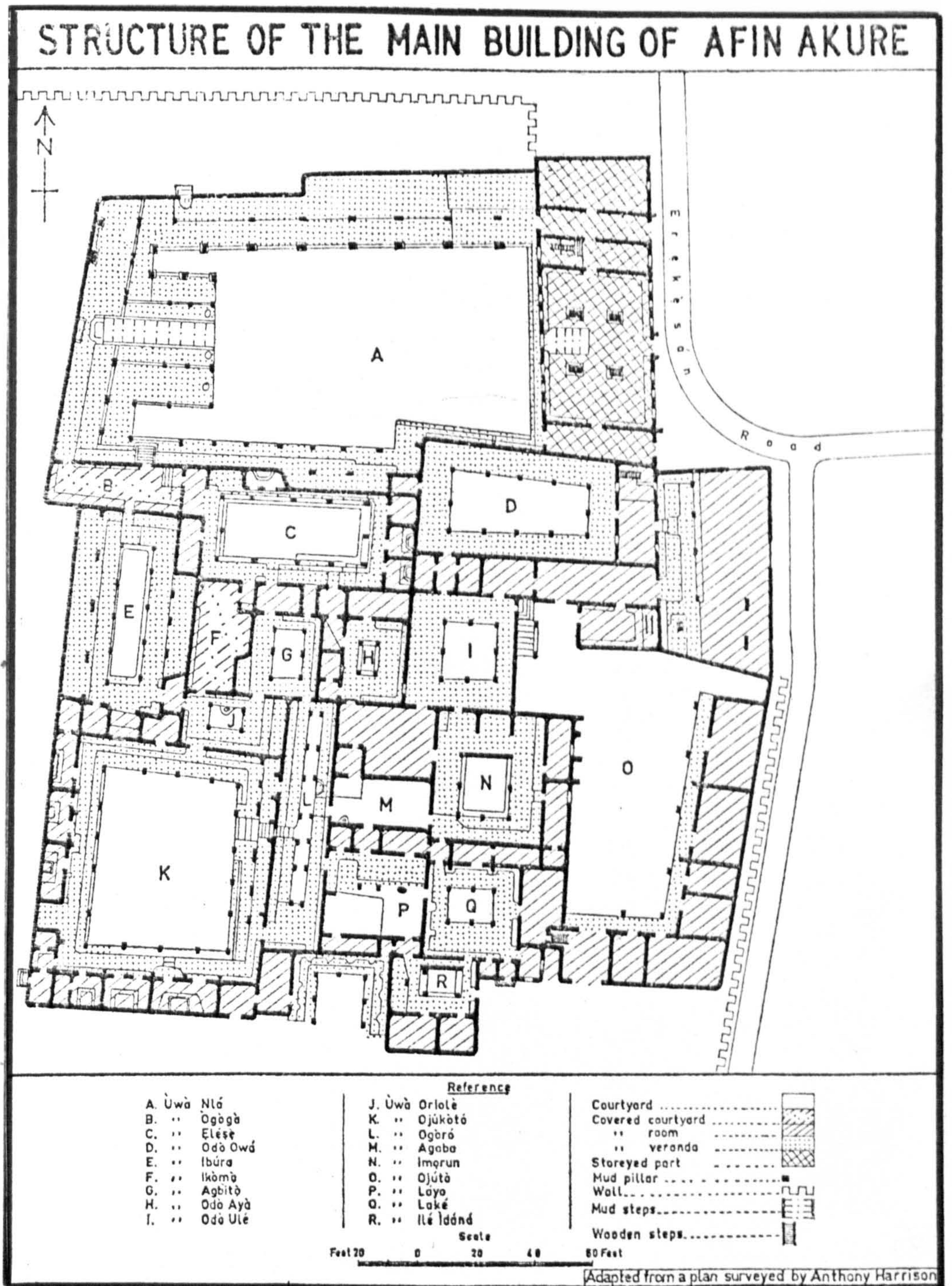


Figure 096. Layout Plan of the Main Building of Afin Akure

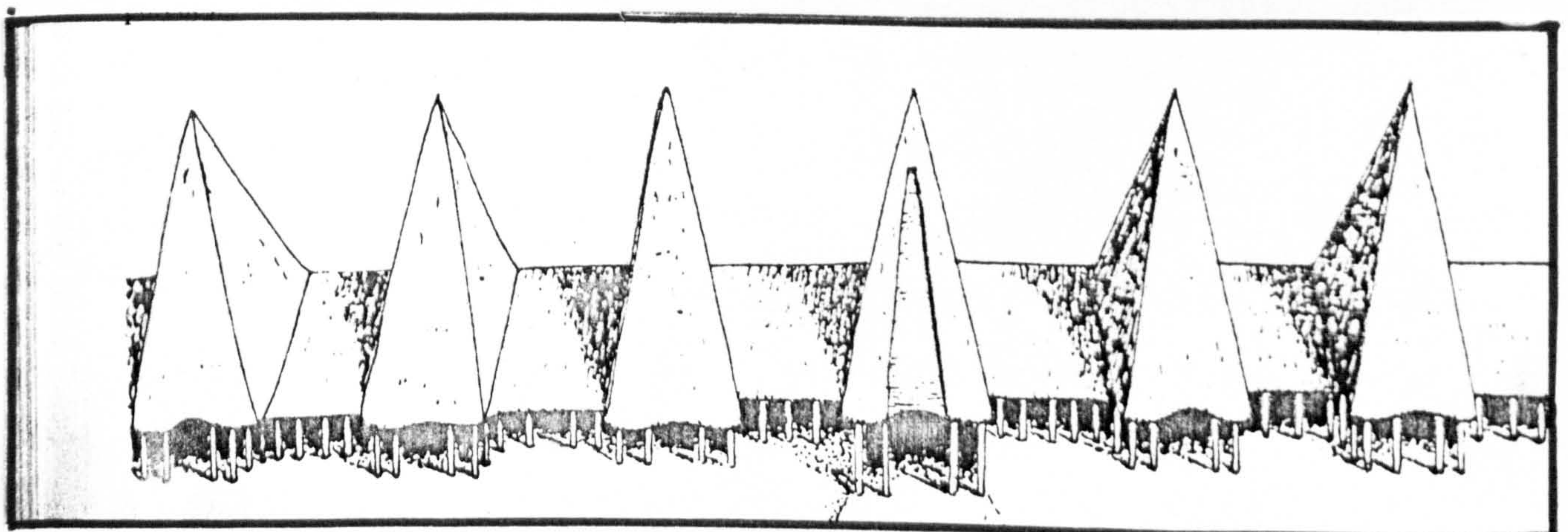


Figure 097. Elevation of the Main Building of Afin Akure

Appendix V.

Esusu

This is a very ancient credit institution which is believed to have been operated by the Yorubas in Ile-Ife using coweries long before the arrival of British currencies into Nigeria. A.K. Ajisafe (1924 at pp.48-49) wrote "there is a certain society called esusu. This society deals with monetary matters only, and it helps its members to save and raise money thus;

i) Every member shall pay a certain fixed sum of money regularly at a fixed time (say every 5th or 9th day), and one of the subscribing members shall take the total amount thus subscribed for his or her own personal use. The next subscription shall be taken by another member; this shall continue rotationally until every member has taken.

ii) Should one of the members who has taken the esusu fail to continue to pay the regular subscription, such a member must be held responsible for his or her subscription to the remaining members who have not taken their own esusu. Payments shall be enforced as in the case of a debt.

iii) But if a member who has taken fails to continue, another person may take up his place, and when that one takes the esusu, he shall refund to the first man (his predecessor) the amount subscribed by him (the first man).

iv) A man may pay twice the fixed sum regularly. In that case he will be considered as paying to two men and he shall be entitled to two men's portions. It matters not what time he takes the first portion, or what time he takes the second. Should a man pay for the amount equivalent to three times the fixed amount or more, he shall be entitled to take esusu three or more times as the case may be.

v) Sometimes, esusu is not taken rotationally. The regular

subscriptions are taken and kept by the president. At the end of three months or any time decided by the members, the total amount is brought forth and every member receives his total subscription. The president, who is also the treasurer, is entitled to the amount equivalent to 2.5 per cent from the amount subscribed by every member.

vi) Should a member of the esusu society die while the esusu is not closed, his children or nearest of kin receive the amount subscribed by him or pay the amount standing against him."

A. Household Characteristic Survey

Personal Data

1. Sex

Male	01
Female	02
No Response	03

2. Age

15-20 years	01
21-25 years	02
26-30 years	03
31-35 years	04
36-40 years	05
41-45 years	06
46-50 years	07
51-55 years	08
Over 55 years	09
No Response	10

3. Marital Status

Married-Native Law and Custom	01
Married-Under the Act Church/Court	02
Married-Plural (more than one wife)	03
Single	04
Divorced (single)	05
Co-Habiting	06
Separated (single)	07
Widow	08
Widower	09
No Response	10

4. Religion

Moslem	01
Christian-Roman Catholic	02
Christian-Protestant (Native)	03
Christian-Protestant (Foreign)	04
Traditional	05
Other (specify)	06

5. State of Origin

Specify	01
Non Nigerian	02
No Response	03

6. Ethnic Grouping

Not Applicable	01
Specify	02
No Response	03

7. Educational Attainment of Respondent ?

Not Educated At All	01
Koranic School Only	02
Uncompleted Elementary School/Koran School	03
Completed Elementary School	04
Uncompleted Secondary Modern School/Trade	05
Completed Secondary Modern School/Trade School	06
Uncompleted Post Secondary School	07
Completed Post Secondary School	08
No Response	09

8. Educational Attainment of Household Head ?

Ditto	00
-------------	----

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Household Data

1. Household Size ?

None	01
One	02
Two	03
Three	04
Four	05
Five	06
Six	07
Seven	08
Eight	09
Nine	10
Ten and Over	11
No Response	12

2. Who is Head of This Household ?

Respondent (Male)	01
Respondent (Female)	02
Respondent's Father	03
Respondent's Mother	04
Respondent's Relation (Male)	05
Respondent's Relation (Female)	06
Others (Specify)	07
No Response	08

3. With Whom Are You Living With In Household or Family ?

Alone	01
With Relatives	02
With Friends	03
Others (Specify)	04
No Response	05

4. Length of Residency ?

Under 1yr	01
1-3 yrs	02
3-5 yrs	03
5-10 yrs	04
Over 10 yrs	05
No Response	06

5. With Whom Were You Residing Before Present Situation ?

Not Applicable	01
Respondent's Household Unit	02
Respondent's Parents	03
Respondent's Relatives	04
Respondent's Friends	05
No Response	06

6. Location of Respondent's Residence Before the Present Abode ?

Not Applicable	00
Lagos Island	01
Agegunle	02
Surulere	03
Kirikiri	04
Mushin	05
Yaba	06
Palmgrove	07
Other (Specify)	08
No Responce	09

Occupation and Employment

1. Type of Employment ?

Not Applicable	00
Civil Service	01
Parastatals	02
Private Sector	03
Self-Employed	04
Unemployed	05
No Response	06

2. Number of Respondent Household Members in Employment ?	
Not Applicable	00
None	01
One	02
Two	03
Three	04
Four	05
Five	06
Six	07
Seven and Over	08
No Response	09
3. Locational Aspects of Household Head's Place of Employment ?	
Not Applicable	00
Within Neighbourhood	01
Outside Neighbourhood but Near	02
Outside Neighbourhood and Far	03
Outside Neighbourhood and Very Far	04
No Specific Place	05
No Response	06
4. Respondent Household Head's Transportation To Place of Employment ?	
Not Applicable	00
Walking	01
Bicycle	02
Motorcycle	03
Car-Driver	04
Car-Taxi	05
Public Bus	06
Private Bus	07
No Response	08
5. In What Category Does the Income From Your Main Occupation Fall ?	
Not Applicable	00
Under ₦720	02
₦720 - ₦1,200	03
₦1,200 - ₦2,800	04
₦2,800 - ₦3,600	05
₦3,600 - ₦6,000	06
₦6,000 - ₦10,800	07
Over ₦10,800	08
No Response	09

B. Household Housing Environment Survey

Building and Dwelling Environment

Building

1. Type of Building

Single Detached House	01
Single Attached House	02
Semi-Detached House	03
Blocks of Flats	04
Rooming House	05
Traditional Compound-Yard House	06
Others (Specify)	07

2. How Many Floors in Building

Single Floor (Ground)	01
Two Floors	02
Three Floors	03
Four Floors and Over	04

3. Walling Material of Building

Mud	01
Stabalised Mud	02
Sandcrete	03
Cement Blocks	04
Clay Blocks	05
Zinc	06
Wood Planks	07
Other (Specify)	08

4. Roofing Material Of Building

Thatched	01
Treated Thatch	02
Asbestos Sheets	03
Zinc	04
Aluminium	05
Concrete	06
Other (Specify)	07

5. Age of Building

Less than 1 yr	01
1 - 2 yrs	02
2 - 5 yrs	03
5 - 10 yrs	04
10 - 15 yrs	05
15 - 20 yrs	06
20 - 25 yrs	07
Over 25 yrs	08
No Response	09

6. Number of Rooms in Building

1 - 3	01
4 - 6	02
7 - 9	03
10 - 12	04
13 - 15	05
16 - 20	06
Over 20	07
No Response	08

7. Use of Building Other Than Residential

None	01
Warehouse-Storage	02
Beer Parlour	03
Work Shop	04
Shop Stalls	05
Other (Specify)	06
No Response	07

Dwelling

1. Floor Level of Dwelling Unit

Ground	01
First	02
Second	03
Third	04
Above the Third	05

2. Number of Rooms in Dwelling Unit

One	01
Two	02
Three	03
Four	04
Five	05
Six	06
Seven	07
Over Seven	08
No Response	09

3. Number of Rooms in Dwelling Used for Sleeping

One	01
Two	02
Three	03
Four	04
Five	05
Six	06
Seven	07
Over Seven	08
No Response	09

4. Flooring Material in Dwelling Unit

Mud	01
Cement	02
Stone	03
Wood	04
Terrazzo	05
Marble	06
Other (Specify)	07

5. Type of Door To Dwelling

Wood (Flush)	01
Zinc	02
Plank-Boards	03
Metal	04
Glazed Door	05
Other (Specify)	06

6. Type of Windows in Dwelling

None	01
Glass Louvers	02
Wooden Louvers	03
Plank Boards	04
Glass	05
Zinc	06
Mat	07
Other (Specify)	08

Dwelling Facilities

1. Source of Water Supply for Household

Pipe Borne Water	01
River or Spring	02
Well or Bore Hole	03
Purchased From Private Seller	04
Public Company Tanker Supply	05
Other (Specify)	06
No Response	07

2. Use Of Water From This Source	
For All Purposes	01
All Purposes Except Drinking and Cooking	02
Other (Specify)	03
No Response	04
3. Location of Household's Pipe Borne Water Outlet In Dwelling	
Not Applicable	00
Inside Dwelling Unit	01
Outside Dwelling Unit But On Floor	02
Outside Dwelling Unit and Floor But Inside Building	03
Outside Dwelling Unit, Floor and Building But Inside Compound	04
Outside Dwelling Unit, Floor, Building, Compound But Within 100m	05
Beyond 100m of Dwelling Unit	06
Other (Specify)	07
No Response	08
4. Location of Household's Bathing Facilities	
Not Applicable	00
Inside Dwelling Unit	01
Outside Dwelling Unit But On Floor	02
Outside Dwelling Unit and Floor But Inside Building	03
Outside Dwelling Unit, Floor and Building But Inside Compound	04
Other (Specify)	05
No Response	06
5. Use of Bathing Facilities	
Not Applicable	00
Exclusive To Household	01
Shared With Others On Floor	02
Shared With Other In Building	03
Shared With Others In Compound	04
Shared With Others Beyond Compound	05
Other (Specify)	06
No Response	07
6. Location of Household's Cooking Facilities	
Not Applicable	00
Inside Dwelling Unit	01
Outside Dwelling Unit But in Corridor	02
Outside Dwelling Unit But In Kitchen On Floor	03
Outside Dwelling Unit and Floor But In Kitchen In Building .	04
Outside Dwelling Unit, Floor and Building But In Kitchen In Compound At The Back of Building	05
Outside Dwelling Unit, Floor and Building But In Kitchen In Compound At Front Of Building	06
Other (Specify)	07
No Response	08
7. Use Of Kitchen Facilities	
Not Applicable	00
Exclusive To Household	01
Shared With Others On Floor	02
Shared With Other In Building	03
Shared With Others In Compound	04
Other (Specify)	05
No Response	06
8. Household's Cooking Equipment	
Firewood	01
Kerosene Stove	02
Gas and Electric Cooker	03
Other (Specify)	04
No Response	05

9. Location of Household's Toilet Facilities	
Not Applicable	00
Inside Dwelling Unit	01
Outside Dwelling Unit But On Floor	02
Outside Dwelling Unit and Floor But Inside Building	03
Outside Dwelling Unit, Floor and Building But Inside Compound	04
Other (Specify)	05
No Response	06
10. Use Of Toilet Facilities	
Not Applicable	00
Exclusive To Household	01
Shared With Others On Floor	02
Shared With Other In Building	03
Shared With Others In Compound	04
Shared With Others Beyond Compound	05
Other (Specify)	05
No Response	06
11. Household's Toilet Facilities	
Not Applicable	00
Flush	01
Pit Latrine	02
Bucket and Pail	03
Other (Specify)	04
No Response	05
12. Lighting In Household's Dwelling Unit	
None	01
Candle	02
Paraffin	03
Electrical -Legally Supplied	04
Electrical -Illegally Supplied	05
Electrical -Privately Supplied	06
Other (Specify)	07
No Response	08
13. How Does This Dwelling Unit Compare to Previous Abode	
Not Applicable	00
Better	01
Same	02
Worse	03
No Response	04
Ownership and Rental	
1. Tenure Status	
Landlord/Owner	01
Member Of Community Ownership	02
Tenant	03
Squatter	04
No Response	05
2. Rent-age (Monthly)	
Not Applicable	00
Under ₦25	01
₦26 - ₦50	02
₦51 - ₦75	03
₦76 - ₦100	04
₦101 - ₦150	05
₦151 - ₦200	06
₦201 - ₦250	07
₦251 - ₦300	08
Over ₦300	09
No Response	10

Neighbourhood

1. Refuse Collection-Disposal	
None	01
Official Communal Disposal Point	02
On Plot Collection	03
On To Unofficial Tip	04
No Response	05
2. Safety and Security	
(a) Street Lighting	
None	01
Irregular	02
Regular	03
No Response	04
(b) Police Patrols	
None	01
Irregular	02
Regular	03
No Response	04
(c) Security Fencing	
None	01
Adequate	02
Inadequate	03
No Response	04
(d) Nightguards	
None	01
Volunteer	02
Hired	03
No Response	04
3. Shopping Facilities Used For Daily Needs	
Street Hawkers	01
Fixed Kiosks and Stalls	02
Traditional Market	03
Modern Shopping Centre	04
No Response	04
4. Medical Facilities Used By Household	
None	01
Public Hospital	02
Private Clinic	03
Pharmacist	04
Native Doctor	05
Spiritual Healer	06
Other (Specify)	07
No Response	08
5. Dependent's Primary Schooling	
Not Applicable	00
None	01
Traditional/Koranic	02
Government	03
Private	04
No Response	05
6. Dependent's Secondary Schooling	
Not Applicable	00
None	01
Trade	02
Government	03
Secondary Mission	04
No Response	05

7. Place of Worship	
Not Applicable	00
Within Dwelling	01
Local Shrine	02
Mosque	03
Church	04
No Response	05
8. Postal Services	
None	01
Letter Box	02
Post Office	03
No Response	04
9. Recreational Facilities	
None	01
On Road Side	02
On Vacant Site	03
Government Allocated Area	04
No Response	05
10. Access	
(a) Roads	
None	01
Tarred/Gravelled and In Good Condition	02
Tarred/Gravelled and In Poor Condition	03
Laterite/Earth	04
No Response	05
(b) Footpaths	
None	01
Tarred/Gravelled	02
Laterite/Earth	03
No Response	04
11. Parking Facilities	
Not Applicable	00
In Garage	01
In Compound	02
On Road Side	03
On Vacant Site	04
No Response	05

Social

1. Friendly Relations With Neighbours	
(a) Chatty and Cordial	
Yes	01
No	02
No Response	03
(b) Confide In Them About Problems	
Yes	01
No	02
No Response	03
(c) Children Play Together	
Yes	01
No	02
No Response	03
(d) Attend Communal and Other Ceremonies Together	
Yes	01
No	02
No Response	03
(e) Leave Children In Their Care	
Yes	01
No	02
No Response	03

2. Frequency Of Slight Disagreement With Neighbours
 Very Often 01
 Regularly 02
 Occasionally 03
 Infrequently 04
 Never 05
 No Response 06
3. Frequency Of Arguments With Neighbours
 Very Often 01
 Regularly 02
 Occasionally 03
 Infrequently 04
 Never 05
 No Response 06
4. Frequency Of Fighting Involving Police
 Very Often 01
 Regularly 02
 Occasionally 03
 Infrequently 04
 Never 05
 No Response 06
5. Frequency Of Fighting Settled By Police
 Very Often 01
 Regularly 02
 Occasionally 03
 Infrequently 04
 Never 05
 No Response 06
6. Frequency Of Fights Resolved In Courts
 Very Often 01
 Regularly 02
 Occasionally 03
 Infrequently 04
 Never 05
 No Response 06

Location

	Not Applicable	Less Than 5 mins	5 to 10 mins	11 to 20 mins	21 to 30 mins	31 to 60 mins	Over 60 mins	No Response
	00	01	02	03	04	05	06	07
Nearness To								
1. Place Of Work								
2. Dependent's Primary Schooling								
3. Dependent's Secondary Schooling								
4. Shops For Daily Needs								
5. Place of Worship								
6. Public Bus Services								
7. Post Office								
8. Recreational Areas								
9. Friends								
10. Relatives								

C. Household Satisfaction Survey

	Not Acceptable	Very Satisfied	Satisfied	Acceptable	Unsatisfied	Very Unsatisfied	No Response
	00	01	02	03	04	05	06
Building and Dwelling Environment							
Building							
1. Type of Building							
2. Walling Material of Building							
3. Roofing Material of Building							
Dwelling							
1. Flooring Material in Dwelling							
2. Ceiling Material in Dwelling							
3. Type of Doors to Dwelling							
4. Type of Windows in Dwelling							
5. Number of People Sleeping Per Room							
6. Privacy Within Dwelling							
Dwelling Facilities							
1. Water Supply							
2. Electrical-Lighting							
3. Bathing							
4. Cooking							
5. Toilet							
6. Play Space For Children							
7. Study Space For Children							
8. Sleeping Space							
Ownership/Rental							
1. Rent							
Neighbourhood Amenities							
1. Refuse Collection-Disposal							
2. Safety and Security							
3. Shops for Daily Needs							
4. Medical Facilities							
5. Dependent's Primary Schooling							
6. Dependent's Secondary Schooling							
7. Place of Worship							
8. Postal Facilities							
9. Recreational Facilities							
10. Access - Roads							
- Footpaths							
11. Parking							
12. Drainage - Waste Water							
- Rain Water							

	Not Acceptable	Very Satisfied	Satisfied	Acceptable	Unsatisfied	Very Unsatisfied	No Response
	00	01	02	03	04	05	06
Social							
1. Neighbourly Relations On This Floor							
2. Neighbourly Relations In This Building							
3. Neighbourly Relations In This Compound							
4. Neighbourly Relations Outside The Above							
Location							
Proximity To							
1. Place Of Work							
2. Dependent's Primary Schooling							
3. Dependent's Secondary Schooling							
4. Shops For Daily Needs							
5. Place of Worship							
6. Public Bus Services							
7. Medical Facilities							
8. Post Office							
9. Recreational Areas							
10. Friends							
11. Relatives							

Appendix VII. Storm Water Drainage

Owing to its topography, much of metropolitan Lagos is subject to flooding after the rain storms. So much so that during the rainy season some areas, such as Maroko are perpetually under water. In total it is estimated that 8,534 hectares of the metropolitan area is flooded by both natural and manmade causes.

The drainage system primarily consists of street drains (both covered and uncovered), underground pipes and paved and unpaved channels (fig 098.) which, by 1974 covered only about 40-50 per cent of the built-up areas of the city. The street drains which were originally constructed with covers and which were periodically cleaned by flushing with city water from fire hoses have now ceased to perform adequately, an outcome of the water system's inability to keep pace with the dramatic growth of the population.

Street flooding in fact has become a common feature in Lagos, even during the dry season. Although due in part to the inadequate capacity of the drains, the poor refuse collection system has also contributed to this as many of the drains have become receptacles for solid wastes and sand, thus resulting in their blockage. However, this situation has been further compounded by the lack of an effective sewage system. The result is that domestic waste water and in some cases sewage is discharged into the street drains which, due to blockage overflow shed their fluid contents into the public arena, with obvious health hazards (fig 099.).



Figure 098. Drainage Channel Between Dolphin Phase 1, Stages A and B.



Figure 099. Unpaved Drainage Channel

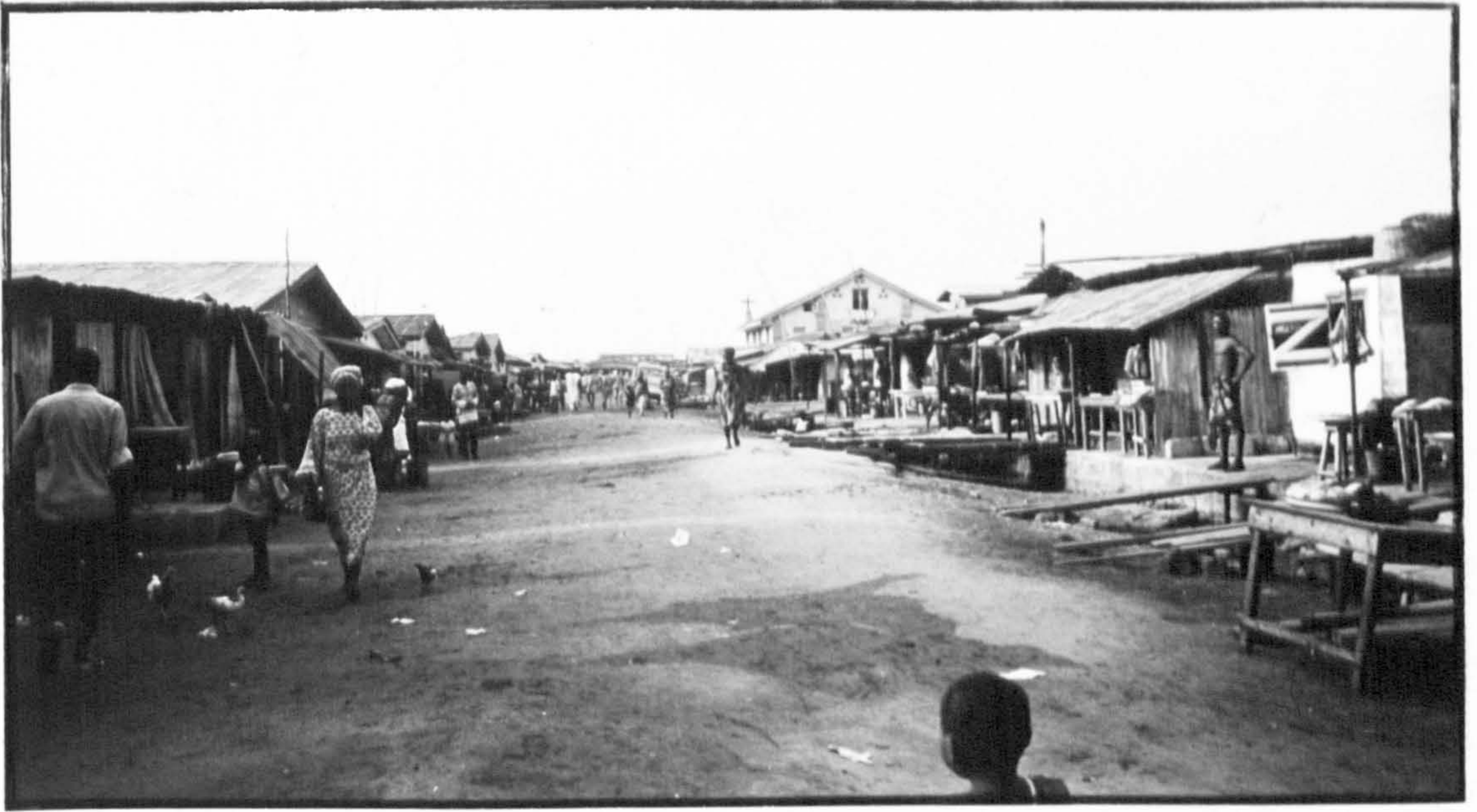


Figure 100. Drainage Channels Along Roadsides

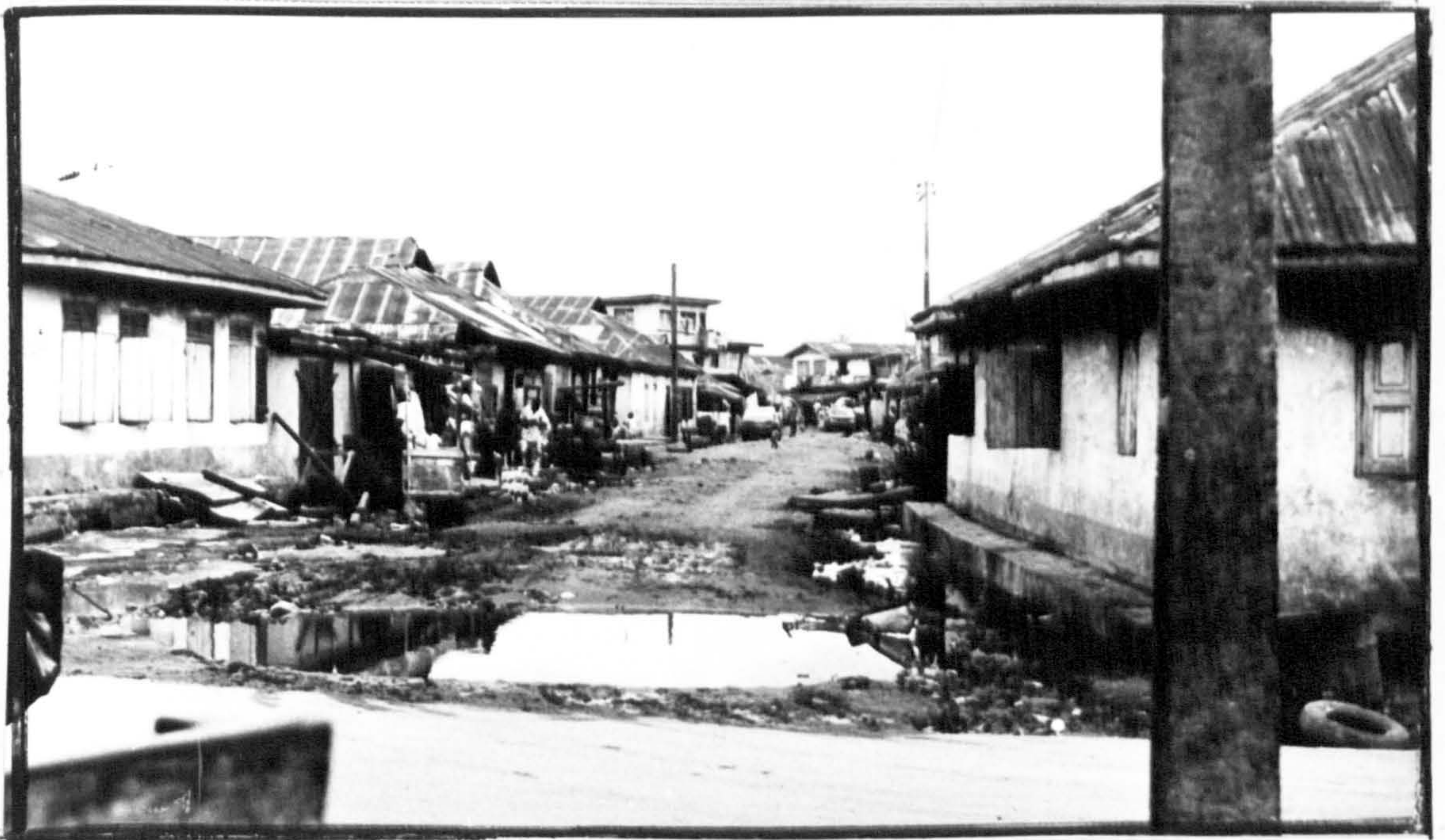


Figure 101. Flooding Caused By Blockages And Poor Drainage

Chart 063. Parking Facilities

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncollected														
v.c. = 55			m.c. = 102		10 20 30 40 50 60 70 80 90															

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
v.c. = 103			m.c. = 19		10 20 30 40 50 60 70 80 90															

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
v.c. = 109			m.c. = 27		10 20 30 40 50 60 70 80 90															

Chart 064. Travel Time To Respondent's Dependents Primary School

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	minutes														
v.c. = 94		m.c. = 63			10 20 30 40 50 60 70 80 90															

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	minutes														
v.c. = 87		m.c. = 35			10 20 30 40 50 60 70 80 90															

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	minutes														
v.c. = 89		m.c. = 47			10 20 30 40 50 60 70 80 90															

Chart 065. Travel Time to Respondent's Dependents Secondary School

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
				30.9	25	over 60 minutes														
				19.8	16	31 - 60 minutes														
				16.0	13	21 - 30 minutes														
				18.5	15	11 - 20 minutes														
				9.9	8	5 - 10 minutes														
				4.9	4	less than 5 minutes														
v.c. = 81				m.c. = 76			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
				4.2	3	over 60 minutes														
				17.1	8	31 - 60 minutes														
				23.6	17	21 - 30 minutes														
				27.8	20	11 - 20 minutes														
				20.8	15	5 - 10 minutes														
				12.5	9	less than 5 minutes														
v.c. = 72				m.c. = 50			10	20	30	40	50	60	70	80	90					

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories															
				3.8	3	over 60 minutes														
				13.0	10	31 - 60 minutes														
				14.3	11	21 - 30 minutes														
				22.1	17	11 - 20 minutes														
				28.6	22	5 - 10 minutes														
				18.2	14	less than 5 minutes														
v.c. = 77				m.c. = 59			10	20	30	40	50	60	70	80	90					

Chart 066. Travel Time to Market/Shops for Respondents Daily Needs.

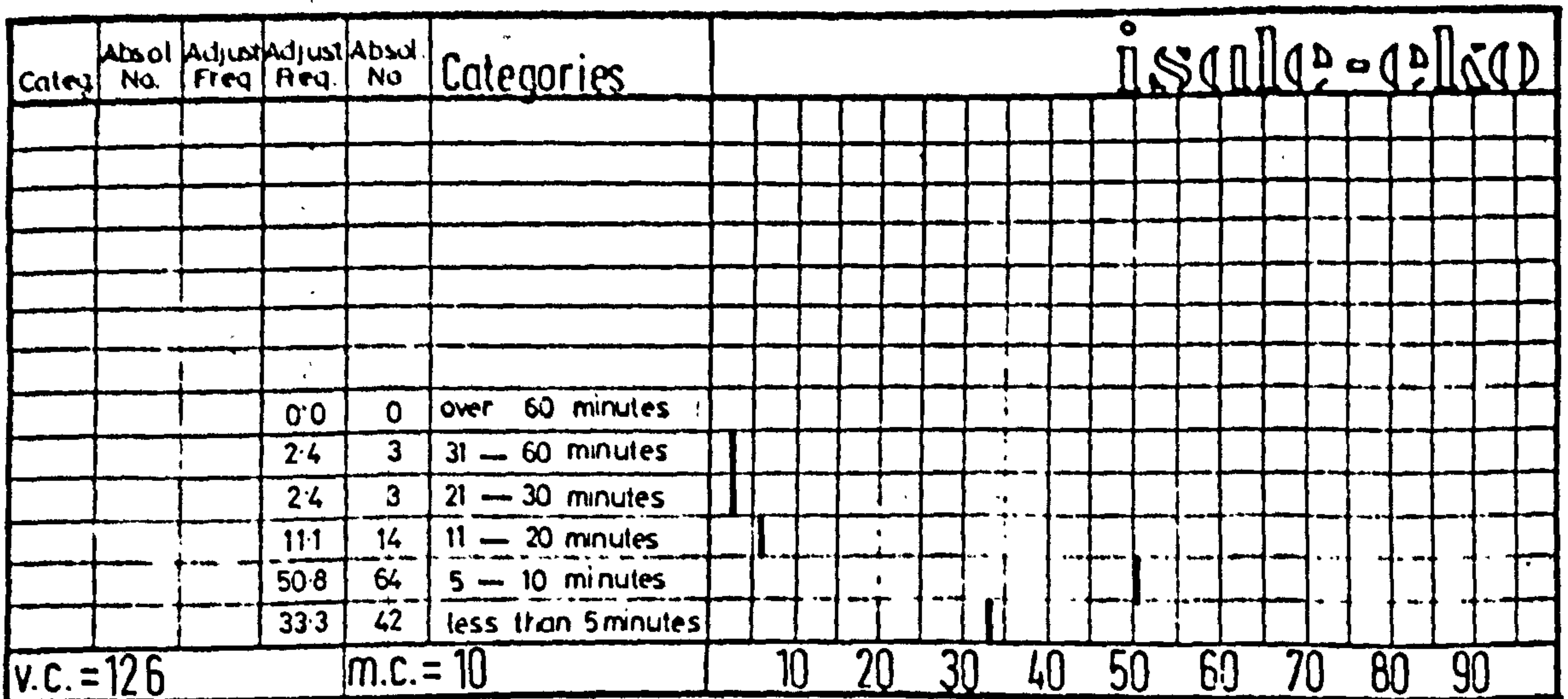
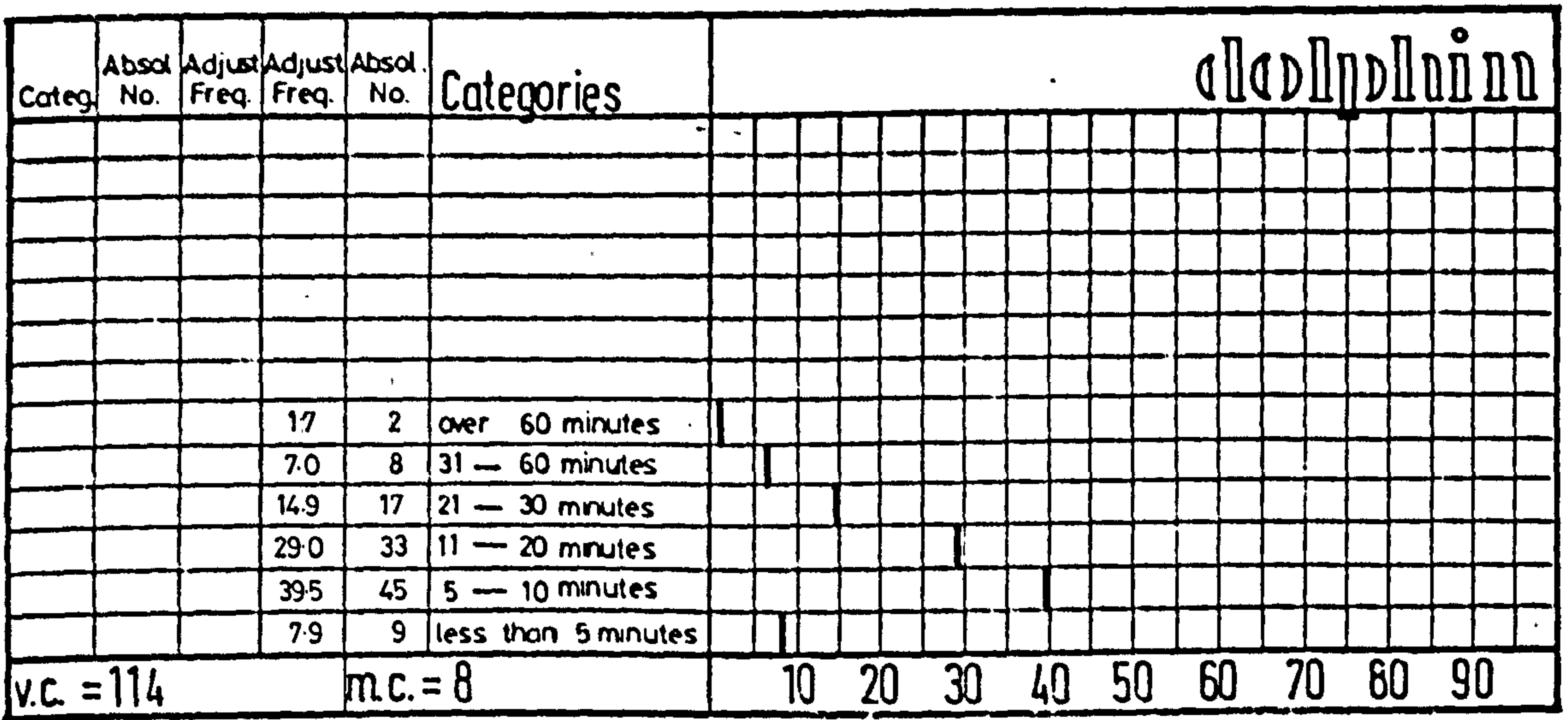
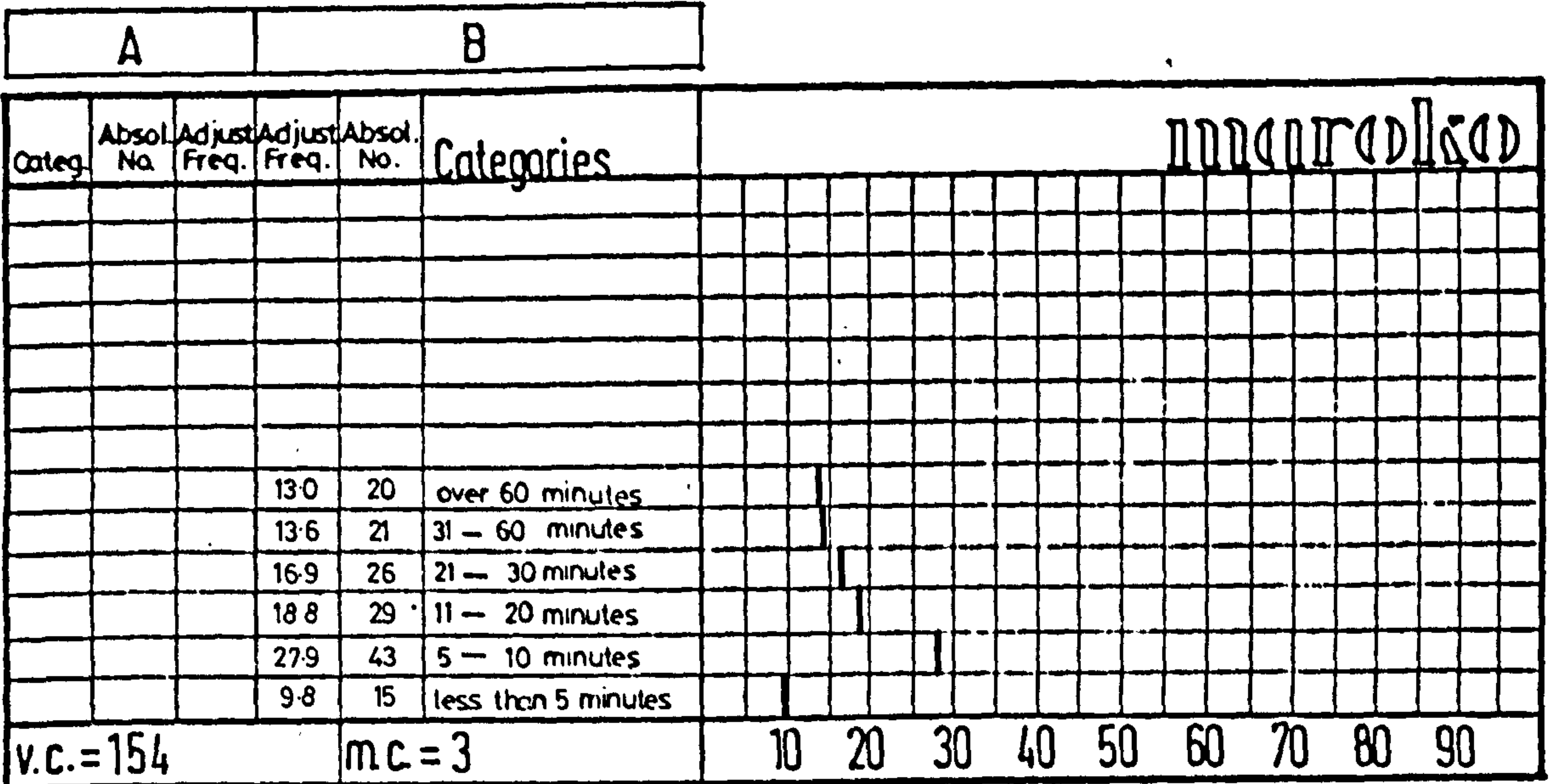


Chart 067. Travel Time to Respondent's Place of Worship

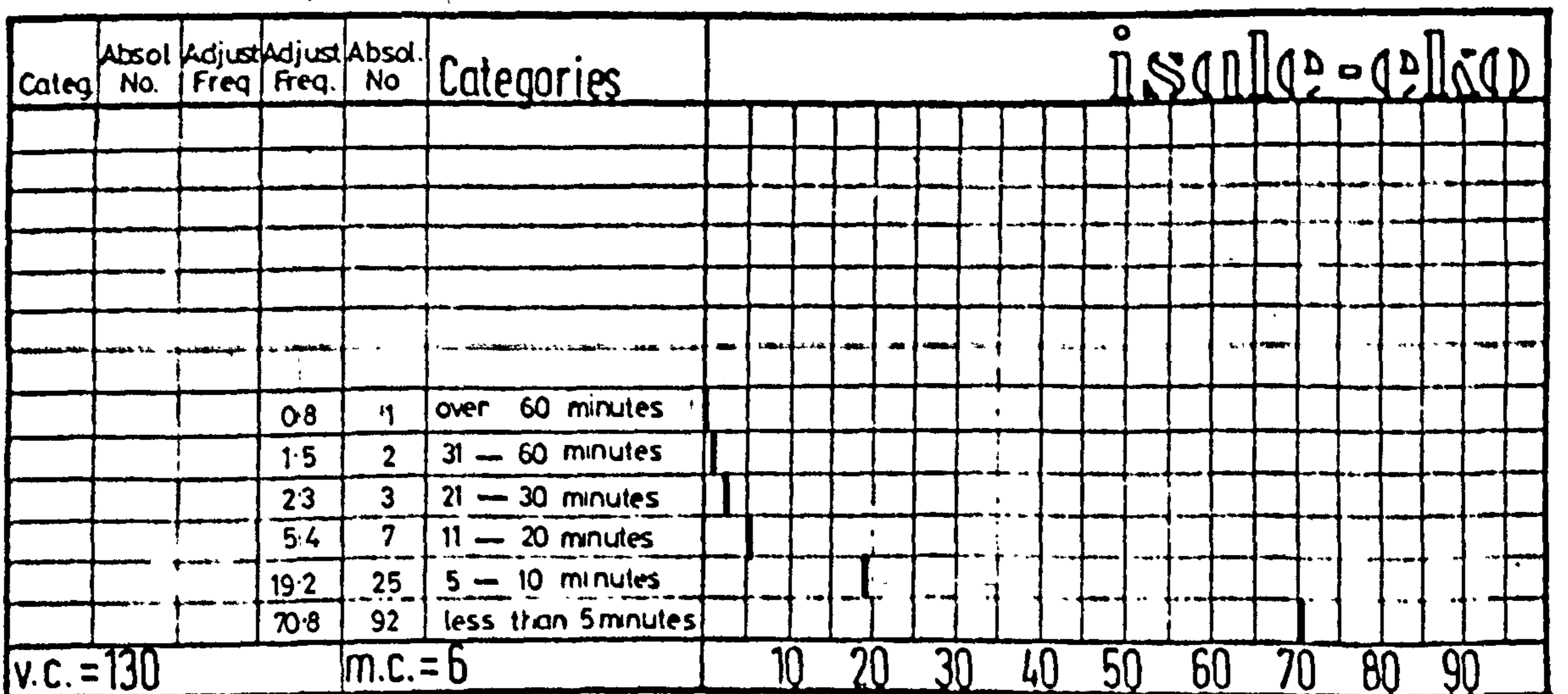
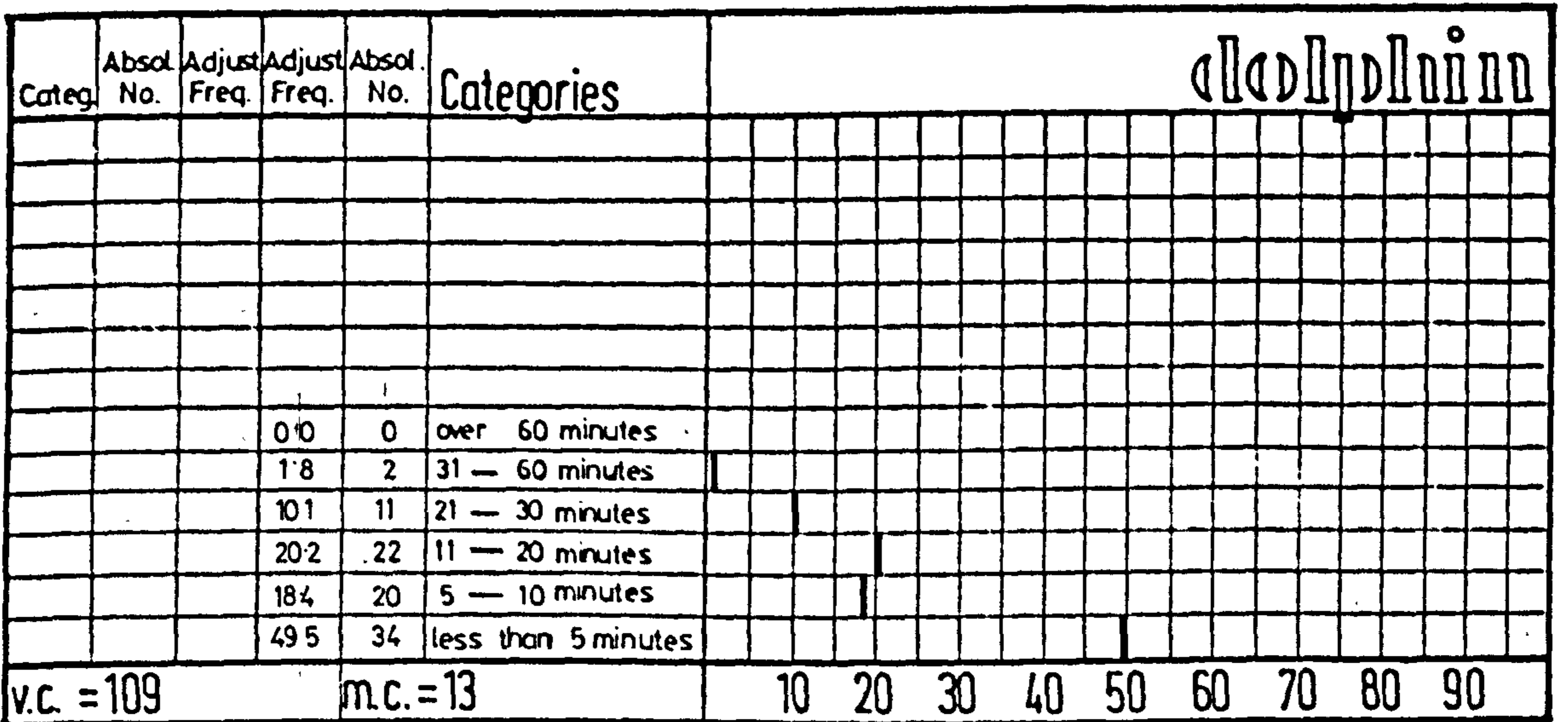
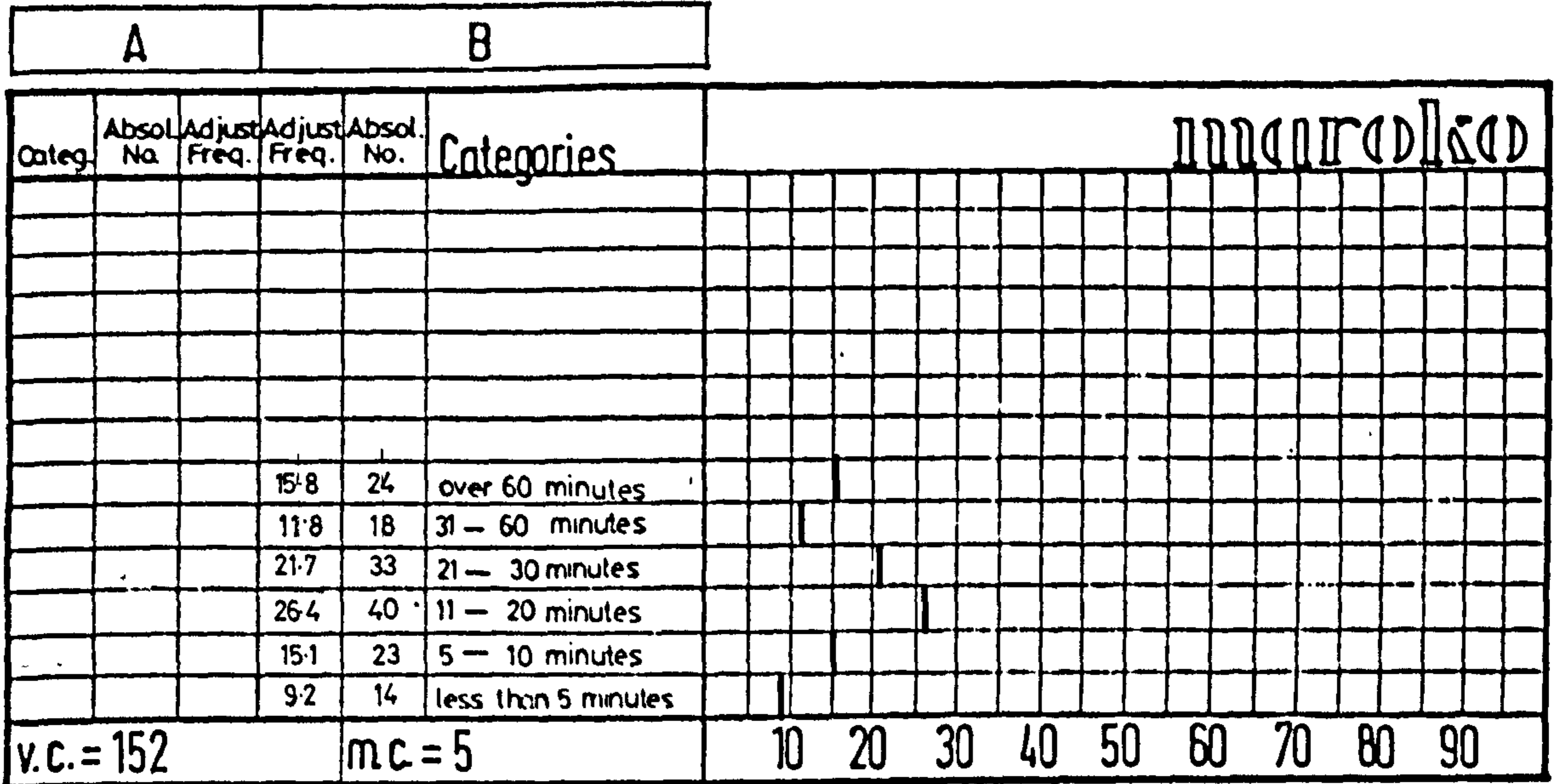


Chart 068. Travel Time to Respondent's Medical Services

A		B																		
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	uncolored														
v.c. = 152				m.c. = 5		10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	colored														
v.c. = 105				m.c. = 17		10 20 30 40 50 60 70 80 90														

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	isolate-colored														
v.c. = 128				m.c. = 8		10 20 30 40 50 60 70 80 90														

Chart 069. Travel Time to Respondents Recreational Areas

A		B																				
Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	unclassified																
				59.0	79	over 60 minutes																
				12.7	17	31 - 60 minutes																
				11.2	15	21 - 30 minutes																
				5.2	7	11 - 20 minutes																
				6.7	9	5 - 10 minutes																
				5.2	7	less than 5 minutes																
v.c. = 134				m.c. = 23			10	20	30	40	50	60	70	80	90							

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	classified																
				0.0	0	over 60 minutes																
				6.8	5	31 - 60 minutes																
				5.4	4	21 - 30 minutes																
				5.4	4	11 - 20 minutes																
				22.9	17	5 - 10 minutes																
				59.5	44	less than 5 minutes																
v.c. = 74				m.c. = 48			10	20	30	40	50	60	70	80	90							

Categ.	Absol. No.	Adjust. Freq.	Adjust. Freq.	Absol. No.	Categories	classified																
				0.0	0	over 60 minutes																
				1.5	1	31 - 60 minutes																
				9.1	6	21 - 30 minutes																
				22.7	15	11 - 20 minutes																
				40.9	27	5 - 10 minutes																
				25.8	17	less than 5 minutes																
v.c. = 66				m.c. = 70			10	20	30	40	50	60	70	80	90							

Table 042. Priority Needs Index PNI -Maroko Study Area

Variable List	Variable Number	Extensivity Index	Intensivity Index	PNI value
(i) Building and Dwelling				
BUILD01	M1	14.6	4.4	15.249
BUILD02	M2	13.7	5.2	14.645
BUILD03	M3	12.4	3.9	12.999
BUILD04	M4	16.9	5.2	17.682
BUILD05	M5	17.7	5.9	18.657
BUILD06	M6	17.0	5.2	17.778
DWESAT01	M7	11.2	4.2	11.962
DWESAT02	M8	13.2	4.4	13.914
DWEFAC01	M9	76.8	29.3	82.199
DWEFAC02	M10	86.3	35.8	93.431
DWEFAC03	M11	41.6	10.2	42.832
DWEFAC04	M12	34.8	6.5	35.402
DWEFAC05	M13	38.7	11.7	40.430
DWEFAC06	M14	69.8	32.5	76.995
DWEFAC07	M15	82.2	39.2	91.069
DWEFAC08	M16	79.3	43.1	90.256
OWNREN01	M17	18.3	2.9	18.528
Sub-Section				40.426
(ii) Neighbourhood				
COMFAC01	M18	79.3	28.7	84.343
COMFAC02	M19	79.1	28.1	83.943
COMFAC03	M20	37.1	9.8	38.372
COMFAC04	M21	55.9	11.0	56.972
COMFAC05	M22	33.3	9.5	34.629
COMFAC06	M23	34.2	8.2	35.169
COMFAC07	M24	26.8	8.0	27.969
COMFAC08	M25	70.6	25.0	74.896
COMFAC09	M26	80.0	34.4	87.082
COMFAC10	M27	90.0	37.9	97.655
COMFAC11	M28	84.9	36.3	92.335
COMFAC12	M29	91.3	37.7	98.777
COMFAC13	M30	91.5	41.1	100.307
COMFAC14	M31	92.3	41.3	101.119
Sub-Section				72.397
(iii) Social and Community				
SOCENV01	M32	27.3	18.2	32.811
SOCENV02	M33	33.3	11.1	35.101
SOCENV03	M34	11.5	3.4	11.992
SOCENV04	M35	10.5	4.6	11.463
COMASS01	M36	6.3	2.1	6.641
COMASS02	M37	5.5	2.1	5.887
COMASS03	M38	7.5	2.7	7.971
COMASS04	M39	10.4	2.8	10.770
Sub-Section				15.330
(iv) Locational				
LOCAT01	M40	24.4	6.6	25.277
LOCAT02	M41	35.5	9.7	36.801
LOCAT03	M42	36.1	12.0	38.042
LOCAT04	M43	30.8	7.9	31.180
LOCAT05	M44	20.5	5.3	21.174
LOCAT06	M45	64.9	21.2	68.275
LOCAT07	M46	72.1	28.6	77.565
LOCAT08	M47	87.0	37.7	94.817
LOCAT09	M48	83.9	37.2	91.777
LOCAT10	M49	24.2	10.1	26.223
LOCAT11	M50	15.4	7.7	17.218
Sub-Section				48.032

Table 043. Priority Needs Index (PNI) -Dolphin

Variable List	Variable Number	Extensivity Index	Intensivity Index	PNI value
(i) Building and Dwelling				
BUILD01	D1	7.8	0.0	7.800
BUILD02	D2	3.7	0.9	3.808
BUILD03	D3	3.3	0.8	3.396
BUILD04	D4	2.3	0.8	2.435
BUILD05	D5	6.7	1.7	6.912
BUILD06	D6	3.3	0.8	3.396
DWESAT01	D7	2.6	1.7	3.106
DWESAT02	D8	0.0	0.0	0.000
DWEFAC01	D9	15.2	4.2	15.770
DWEFAC02	D10	4.3	0.9	4.393
DWEFAC03	D11	3.3	0.8	3.396
DWEFAC04	D12	1.6	0.8	1.789
DWEFAC05	D13	3.4	1.7	3.801
DWEFAC06	D14	8.1	5.1	9.572
DWEFAC07	D15	11.8	5.9	13.193
DWEFAC08	D16	4.4	0.9	4.491
OWNREN01	D17	0.0	0.0	0.000
Sub-Section				5.133
(ii) Neighbourhood				
COMFAC01	D18	55.3	26.4	61.278
COMFAC02	D19	23.3	7.5	24.477
COMFAC03	D20	25.6	6.8	26.488
COMFAC04	D21	37.6	11.1	39.204
COMFAC05	D22	10.2	4.1	10.993
COMFAC06	D23	12.2	3.7	12.749
COMFAC07	D24	6.1	0.9	6.166
COMFAC08	D25	74.1	38.8	83.644
COMFAC09	D26	44.4	25.9	51.402
COMFAC10	D27	8.6	5.2	10.050
COMFAC11	D28	10.4	1.9	10.572
COMFAC12	D29	12.3	3.8	12.874
COMFAC13	D30	29.8	14.0	32.945
COMFAC14	D31	30.2	15.5	33.945
Sub-Section				29.769
(iii) Social and Community				
SOCENVO1	D32	1.8	0.9	2.012
SOCENVO2	D33	1.6	0.8	1.789
SOCENVO3	D34	25.0	0.0	25.000
SOCENVO4	D35	1.8	0.9	2.012
COMASS01	D36	4.8	1.0	4.903
COMASS02	D37	3.0	2.0	3.606
COMASS03	D38	3.9	1.0	4.026
COMASS04	D39	3.0	0.0	3.000
Sub-Section				5.794
(iv) Locational				
LOCAT01	D40	9.7	2.9	10.124
LOCAT02	D41	25.0	3.2	25.204
LOCAT03	D42	19.8	6.2	20.748
LOCAT04	D43	15.2	3.4	15.576
LOCAT05	D44	6.3	1.8	6.552
LOCAT06	D45	66.1	29.4	72.343
LOCAT07	D46	35.6	18.2	39.982
LOCAT08	D47	65.8	33.3	73.746
LOCAT09	D48	45.7	27.6	53.388
LOCAT10	D49	21.4	10.7	23.926
LOCAT11	D50	22.3	9.1	24.085
Sub-Section				33.243

Table 044. Priority Needs Index (PNI) -Isale-Eko

Variable List	Variable Number	Extensivity Index	Intensivity Index	PNI value
(i) Building and Dwelling				
BUILD01	I1	22.8	7.1	23.880
BUILD02	I2	21.5	9.2	23.386
BUILD03	I3	21.7	8.5	23.305
BUILD04	I4	23.0	9.2	24.772
BUILD05	I5	22.3	7.7	23.592
BUILD06	I6	20.7	6.9	21.820
DWESAT01	I7	21.3	8.2	22.824
DWESAT02	I8	25.0	10.0	26.926
DWEFAC01	I9	25.0	14.1	28.702
DWEFAC02	I10	17.1	3.9	17.539
DWEFAC03	I11	20.5	5.3	21.174
DWEFAC04	I12	22.2	6.9	23.248
DWEFAC05	I13	34.8	12.1	36.844
DWEFAC06	I14	27.7	13.4	30.771
DWEFAC07	I15	27.5	13.3	30.547
DWEFAC08	I16	20.4	10.2	22.808
OWNREN01	I17	19.2	6.4	20.239
Sub-Section				24.847
(ii) Neighbourhood				
COMFAC01	I18	53.8	21.2	57.826
COMFAC02	I19	19.0	12.9	22.965
COMFAC03	I20	8.2	1.6	8.355
COMFAC04	I21	28.8	7.2	29.686
COMFAC05	I22	6.2	3.1	6.932
COMFAC06	I23	4.2	2.1	4.696
COMFAC07	I24	4.6	2.3	5.143
COMFAC08	I25	22.5	6.2	23.339
COMFAC09	I26	40.4	21.3	45.671
COMFAC10	I27	18.4	7.2	19.759
COMFAC11	I28	15.4	3.6	15.815
COMFAC12	I29	57.3	20.9	60.993
COMFAC13	I30	27.2	9.8	28.912
COMFAC14	I31	34.1	8.3	35.096
Sub-Section				27.496
(iii) Social and Community				
SOCENVO1	I32	2.6	0.0	2.600
SOCENVO2	I33	3.4	1.7	3.801
SOCENVO3	I34	4.4	1.1	4.535
SOCENVO4	I35	3.3	2.2	3.966
COMASS01	I36	5.4	2.7	6.037
COMASS02	I37	5.8	2.9	6.485
COMASS03	I38	7.4	1.5	7.550
COMASS04	I39	11.9	1.5	11.994
Sub-Section				5.871
(iv) Locational				
LOCAT01	I40	30.9	10.3	32.571
LOCAT02	I41	17.0	6.4	18.165
LOCAT03	I42	24.6	8.6	26.060
LOCAT04	I43	13.2	3.9	13.764
LOCAT05	I44	4.4	0.0	4.400
LOCAT06	I45	38.8	9.7	39.994
LOCAT07	I46	48.5	10.6	49.645
LOCAT08	I47	36.3	6.7	36.913
LOCAT09	I48	47.7	26.2	54.422
LOCAT10	I49	8.1	3.7	8.905
LOCAT11	I50	13.3	7.4	15.220
Sub-Section				27.278

Table 045. Satisfaction Index Value (SIV) -Maroko Study Area

Variable List	Variable Number	Positive Index	Negative Index	SIV value
(i) Building and Dwelling				
BUILD01	M1	0.772	0.147	0.625
BUILD02	M2	0.725	0.137	0.588
BUILD03	M3	0.658	0.125	0.533
BUILD04	M4	0.621	0.170	0.451
BUILD05	M5	0.599	0.178	0.421
BUILD06	M6	0.582	0.170	0.412
DWESAT01	M7	0.692	0.112	0.580
DWESAT02	M8	0.682	0.131	0.551
DWEFAC01	M9	0.071	0.768	-0.697
DWEFAC02	M10	0.021	0.872	-0.851
DWEFAC03	M11	0.329	0.416	-0.087
DWEFAC04	M12	0.355	0.348	0.007
DWEFAC05	M13	0.270	0.387	-0.117
DWEFAC06	M14	0.098	0.707	-0.609
DWEFAC07	M15	0.089	0.823	-0.734
DWEFAC08	M16	0.063	0.810	-0.734
OWNREN01	M17	0.411	0.186	0.225
Sub-Section				0.032
(ii) Neighbourhood				
COMFAC01	M18	0.047	0.802	-0.755
COMFAC02	M19	0.084	0.800	-0.716
COMFAC03	M20	0.462	0.371	0.091
COMFAC04	M21	0.228	0.559	-0.371
COMFAC05	M22	0.238	0.333	-0.095
COMFAC06	M23	0.241	0.301	-0.060
COMFAC07	M24	0.544	0.268	0.276
COMFAC08	M25	0.119	0.716	-0.597
COMFAC09	M26	0.066	0.827	-0.761
COMFAC10	M27	0.007	0.907	-0.900
COMFAC11	M28	0.055	0.855	-0.800
COMFAC12	M29	0.030	0.940	-0.910
COMFAC13	M30	0.043	0.915	-0.872
COMFAC14	M31	0.042	0.853	-0.811
Sub-Section				-0.520
(iii) Social and Community				
SOCENV01	M32	0.455	0.273	0.182
SOCENV02	M33	0.444	0.333	0.111
SOCENV03	M34	0.711	0.114	0.597
SOCENV04	M35	0.638	0.105	0.533
COMASS01	M36	0.688	0.063	0.625
COMASS02	M37	0.681	0.056	0.625
COMASS03	M38	0.623	0.075	0.548
COMASS04	M39	0.590	0.104	0.486
Sub-Section				0.463
(iv) Locational				
LOCAT01	M40	0.487	0.243	0.244
LOCAT02	M41	0.323	0.355	-0.032
LOCAT03	M42	0.265	0.337	-0.072
LOCAT04	M43	0.415	0.303	0.112
LOCAT05	M44	0.580	0.207	0.373
LOCAT06	M45	0.180	0.653	-0.473
LOCAT07	M46	0.123	0.721	-0.598
LOCAT08	M47	0.034	0.870	-0.836
LOCAT09	M48	0.053	0.871	-0.818
LOCAT10	M49	0.644	0.242	0.402
LOCAT11	M50	0.731	0.154	0.577
Sub-Section				-0.102

Table 046. Satisfaction Index Value (SIV) -Dolphin Study Area

Variable List	Variable Number	Positive Index	Negative Index	SIV value
(i) Building and Dwelling				
BUILD01	D1	0.843	0.078	0.765
BUILD02	D2	0.890	0.037	0.853
BUILD03	D3	0.916	0.034	0.882
BUILD04	D4	0.942	0.025	0.917
BUILD05	D5	0.867	0.067	0.800
BUILD06	D6	0.884	0.033	0.851
DWESAT01	D7	0.965	0.026	0.939
DWESAT02	D8	0.973	0.000	0.973
DWEFAC01	D9	0.797	0.153	0.644
DWEFAC02	D10	0.897	0.043	0.854
DWEFAC03	D11	0.949	0.034	0.915
DWEFAC04	D12	0.975	0.017	0.958
DWEFAC05	D13	0.949	0.034	0.915
DWEFAC06	D14	0.816	0.082	0.734
DWEFAC07	D15	0.810	0.120	0.690
DWEFAC08	D16	0.930	0.044	0.886
OWNRENO1	D17	0.915	0.000	0.915
Sub-Section				0.852
(ii) Neighbourhood				
COMFAC01	D18	0.364	0.554	-0.190
COMFAC02	D19	0.675	0.233	0.442
COMFAC03	D20	0.658	0.256	0.402
COMFAC04	D21	0.500	0.379	0.121
COMFAC05	D22	0.867	0.102	0.765
COMFAC06	D23	0.854	0.122	0.732
COMFAC07	D24	0.896	0.061	0.835
COMFAC08	D25	0.148	0.748	-0.600
COMFAC09	D26	0.417	0.444	-0.027
COMFAC10	D27	0.802	0.086	0.716
COMFAC11	D28	0.774	0.104	0.670
COMFAC12	D29	0.821	0.123	0.698
COMFAC13	D30	0.614	0.298	0.316
COMFAC14	D31	0.638	0.302	0.336
Sub-Section				0.373
(iii) Social and Community				
SOCENVO1	D32	0.921	0.018	0.903
SOCENVO2	D33	0.890	0.017	0.873
SOCENVO3	D34	0.750	0.250	0.500
SOCENVO4	D35	0.866	0.009	0.857
COMASS01	D36	0.817	0.048	0.769
COMASS02	D37	0.901	0.030	0.871
COMASS03	D38	0.843	0.392	0.451
COMASS04	D39	0.891	0.030	0.861
Sub-Section				0.761
(iv) Locational				
LOCAT01	D40	0.845	0.097	0.748
LOCAT02	D41	0.807	0.151	0.656
LOCAT03	D42	0.691	0.198	0.493
LOCAT04	D43	0.765	0.151	0.614
LOCAT05	D44	0.839	0.063	0.776
LOCAT06	D45	0.220	0.661	-0.441
LOCAT07	D46	0.438	0.355	0.083
LOCAT08	D47	0.192	0.658	-0.466
LOCAT09	D48	0.429	0.457	-0.028
LOCAT10	D49	0.719	0.215	0.504
LOCAT11	D50	0.694	0.223	0.471
Sub-Section				0.310

Table . 047. Satisfaction Index Value (SIV) -Isale-Eko Study Area

Variable List	Variable Number	Positive Index	Negative Index	SIV value
(i) Building and Dwelling				
BUILD01	I1	0.437	0.230	0.207
BUILD02	I2	0.426	0.217	0.209
BUILD03	I3	0.445	0.219	0.226
BUILD04	I4	0.442	0.233	0.209
BUILD05	I5	0.450	0.225	0.225
BUILD06	I6	0.457	0.209	0.248
DWESAT01	I7	0.516	0.213	0.303
DWESAT02	I8	0.458	0.250	0.208
DWEFAC01	I9	0.602	0.250	0.352
DWEFAC02	I10	0.628	0.171	0.457
DWEFAC03	I11	0.443	0.206	0.237
DWEFAC04	I12	0.439	0.223	0.216
DWEFAC05	I13	0.400	0.351	0.049
DWEFAC06	I14	0.451	0.279	0.172
DWEFAC07	I15	0.504	0.274	0.230
DWEFAC08	I16	0.458	0.203	0.255
OWNREN01	I17	0.532	0.192	0.340
Sub-Section				0.244
(ii) Neighbourhood				
COMFAC01	I18	0.379	0.538	-0.159
COMFAC02	I19	0.599	0.189	0.410
COMFAC03	I20	0.844	0.082	0.762
COMFAC04	I21	0.376	0.288	0.088
COMFAC05	I22	0.856	0.062	0.794
COMFAC06	I23	0.904	0.043	0.861
COMFAC07	I24	0.953	0.023	0.930
COMFAC08	I25	0.488	0.225	0.263
COMFAC09	I26	0.383	0.404	-0.021
COMFAC10	I27	0.840	0.184	0.656
COMFAC11	I28	0.600	0.155	0.445
COMFAC12	I29	0.136	0.573	-0.437
COMFAC13	I30	0.568	0.273	0.295
COMFAC14	I31	0.523	0.341	0.182
Sub-Section				0.362
(iii) Social and Community				
SOCENV01	I32	0.872	0.026	0.846
SOCENV02	I33	0.868	0.033	0.835
SOCENV03	I34	0.826	0.044	0.782
SOCENV04	I35	0.839	0.032	0.807
COMASS01	I36	0.795	0.055	0.740
COMASS02	I37	0.783	0.058	0.725
COMASS03	I38	0.750	0.074	0.676
COMASS04	I39	0.716	0.119	0.597
Sub-Section				0.751
(iv) Locational				
LOCAT01	I40	0.608	0.308	0.300
LOCAT02	I41	0.734	0.170	0.564
LOCAT03	I42	0.691	0.247	0.444
LOCAT04	I43	0.814	0.132	0.682
LOCAT05	I44	0.949	0.041	0.908
LOCAT06	I45	0.373	0.388	-0.015
LOCAT07	I46	0.265	0.485	-0.220
LOCAT08	I47	0.400	0.363	0.037
LOCAT09	I48	0.346	0.477	-0.131
LOCAT10	I49	0.816	0.081	0.734
LOCAT11	I50	0.793	0.133	0.660
Sub-Section				0.360

Table 048. Relative Habitability Index (RHI) -Maroko Study Area

Variable List	Variable Number	Actual Score	Max.Pos. Score	RHI value
(i) Building and Dwelling				
BUILD01	M1	507	680	74.11
BUILD02	M2	559	765	73.07
BUILD03	M3	364	760	47.90
BUILD04	M4	537	765	70.20
BUILD05	M5	524	760	68.90
BUILD06	M6	526	765	68.60
DWESAT01	M7	515	715	72.00
DWESAT02	M8	483	685	70.50
DWEFAC01	M9	200	495	40.40
DWEFAC02	M10	168	470	35.70
DWEFAC03	M11	386	685	56.40
DWEFAC04	M12	408	690	59.10
DWEFAC05	M13	390	685	56.90
DWEFAC06	M14	170	410	41.50
DWEFAC07	M15	149	395	37.70
DWEFAC08	M16	233	635	36.70
OWNREN01	M17	430	670	64.20
Sub-System				59.20
(ii) Neighbourhood				
COMFAC01	M18	169	430	39.30
COMFAC02	M19	193	475	40.60
COMFAC03	M20	409	660	62.00
COMFAC04	M21	354	680	52.00
COMFAC05	M22	240	470	51.10
COMFAC06	M23	212	365	58.10
COMFAC07	M24	467	690	67.70
COMFAC08	M25	291	670	43.40
COMFAC09	M26	229	605	37.90
COMFAC10	M27	234	695	34.90
COMFAC11	M28	267	725	36.80
COMFAC12	M29	228	670	34.00
COMFAC13	M30	242	705	34.30
COMFAC14	M31	244	715	34.10
Sub-System				44.20
(iii) Social and Community				
SOCENV01	M32	33	55	60.00
SOCENV02	M33	27	45	60.00
SOCENV03	M34	541	745	72.60
SOCENV04	M35	536	760	70.50
COMASS01	M36	530	720	73.60
COMASS02	M37	433	570	76.00
COMASS03	M38	531	730	72.70
COMASS04	M39	503	720	69.90
Sub-System				72.10
(iv) Locational				
LOCAT01	M40	497	760	65.40
LOCAT02	M41	271	465	58.70
LOCAT03	M42	234	405	57.30
LOCAT04	M43	495	760	65.10
LOCAT05	M44	338	750	45.00
LOCAT06	M45	343	750	45.70
LOCAT07	M46	329	770	42.70
LOCAT08	M47	262	730	35.90
LOCAT09	M48	232	660	35.20
LOCAT10	M49	509	745	68.30
LOCAT11	M50	490	780	62.80
Sub-System				52.80

Table 049. Relative Habitability Index (RHI) -Dolphin Study Area

Variable List	Variable Number	Actual Score	Max.Pos. Score	RHI value
(i) Building and Dwelling				
BUILD01	D1	481	575	83.70
BUILD02	D2	462	545	84.80
BUILD03	D3	510	595	85.70
BUILD04	D4	515	600	85.80
BUILD05	D5	495	600	82.50
BUILD06	D6	509	605	84.00
DWESAT01	D7	505	575	87.80
DWESAT02	D8	499	565	88.30
DWEFAC01	D9	473	590	80.20
DWEFAC02	D10	489	580	84.30
DWEFAC03	D11	505	590	85.60
DWEFAC04	D12	441	590	74.70
DWEFAC05	D13	501	590	84.90
DWEFAC06	D14	398	490	81.20
DWEFAC07	D15	405	500	81.00
DWEFAC08	D16	500	570	87.70
OWNREN01	D17	211	235	89.80
Sub-System				84.10
(ii) Neighbourhood				
COMFAC01	D18	319	605	52.70
COMFAC02	D19	428	600	71.30
COMFAC03	D20	401	585	68.50
COMFAC04	D21	366	580	63.10
COMFAC05	D22	387	490	79.00
COMFAC06	D23	322	410	78.50
COMFAC07	D24	491	575	85.40
COMFAC08	D25	236	575	41.00
COMFAC09	D26	301	540	55.70
COMFAC10	D27	451	580	77.80
COMFAC11	D28	404	530	76.20
COMFAC12	D29	428	530	80.80
COMFAC13	D30	388	570	68.10
COMFAC14	D31	391	580	67.40
Sub-System				68.60
(iii) Social and Community				
SOCENV01	D32	498	570	87.40
SOCENV02	D33	508	590	86.10
SOCENV03	D34	16	20	80.00
SOCENV04	D35	472	560	
COMASS01	D36	419	520	80.60
COMASS02	D37	415	505	82.20
COMASS03	D38	415	510	81.40
COMASS04	D39	429	505	85.50
Sub-System				83.90
(iv) Locational				
LOCAT01	D40	413	510	81.10
LOCAT02	D41	364	465	78.30
LOCAT03	D42	298	405	73.60
LOCAT04	D43	447	595	75.10
LOCAT05	D44	480	560	85.70
LOCAT06	D45	256	545	47.00
LOCAT07	D46	364	605	60.20
LOCAT08	D47	269	600	44.80
LOCAT09	D48	293	525	55.80
LOCAT10	D49	439	605	72.60
LOCAT11	D50	439	605	72.60
Sub-System				67.50

Table .050. Relative Habitability Index (RHI) -Isale-Eko Study Area

Variable List	Variable Number	Actual Score	Max.Pos. Score	RHI value
(i) Building and Dwelling				
BUILD01	I1	415	630	65.90
BUILD02	I2	417	645	64.70
BUILD03	I3	419	640	65.50
BUILD04	I4	421	645	65.30
BUILD05	I5	421	645	65.30
BUILD06	I6	426	645	66.00
DWESAT01	I7	408	610	66.90
DWESAT02	I8	385	600	64.20
DWEFAC01	I9	433	640	67.70
DWEFAC02	I10	496	645	76.90
DWEFAC03	I11	431	655	65.80
DWEFAC04	I12	424	650	65.20
DWEFAC05	I13	399	655	60.90
DWEFAC06	I14	347	555	62.50
DWEFAC07	I15	362	565	64.10
DWEFAC08	I16	381	590	64.60
OWNREN01	I17	164	235	69.80
Sub-System				65.80
(ii) Neighbourhood				
COMFAC01	I18	367	660	55.60
COMFAC02	I19	464	660	70.30
COMFAC03	I20	497	610	81.50
COMFAC04	I21	397	635	63.50
COMFAC05	I22	413	485	85.20
COMFAC06	I23	409	470	87.00
COMFAC07	I24	615	640	96.10
COMFAC08	I25	431	645	66.80
COMFAC09	I26	271	470	57.70
COMFAC10	I27	442	625	70.70
COMFAC11	I28	388	550	70.50
COMFAC12	I29	263	550	47.80
COMFAC13	I30	434	660	65.70
COMFAC14	M31	440	660	66.70
Sub-System				70.20
(iii) Social and Community				
SOCENVO1	I32	166	190	87.40
SOCENVO2	I33	421	605	69.60
SOCENVO3	I34	387	460	84.10
SOCENVO4	I35	386	465	83.00
COMASS01	I36	306	365	83.80
COMASS02	I37	281	345	81.40
COMASS03	I38	270	340	79.40
COMASS04	I39	267	335	79.70
Sub-System				80.00
(iv) Locational				
LOCAT01	I40	372	535	69.50
LOCAT02	I41	359	470	76.40
LOCAT03	I42	294	405	72.60
LOCAT04	I43	512	645	79.40
LOCAT05	I44	650	680	95.60
LOCAT06	I45	400	670	59.70
LOCAT07	I46	360	660	54.50
LOCAT08	I47	418	675	61.90
LOCAT09	I48	290	535	54.20
LOCAT10	I49	560	680	82.40
LOCAT11	I50	444	675	65.80
Sub-System				70.30

Appendix XII.

Federal Housing Authority (FHA).

Established by Decree No.40 in 1973, the main functions of the FHA are the preparation and submission of National Housing Programmes to the Government. Besides this it also makes recommendations to the Government on such aspects as urban and regional planning, transportation, communication, electric power, sewage and water supply development as may be relevant to the successful execution of housing programmes appearing before the Government.

Its organisational structure (fig 102.) is headed by a Board of Directors consisting of a chairman and ten others, who constitute the policy making body. Immediately below is the chief executive - the general manager of nine departments. These are the administrative and supplies department which is made up of the administrative, purchasing and stores divisions, the audit department, the engineering and services department which is made up of the civil and structural engineering divisions aswell as the electrical and mechanical engineering divisions, the legal department, the accounts department, the inspectorate department, the environmental design services department which is made up of the housing, commercial and socio-cultural properties, land survey, welfare and sanitation divisions and the planning and research department.

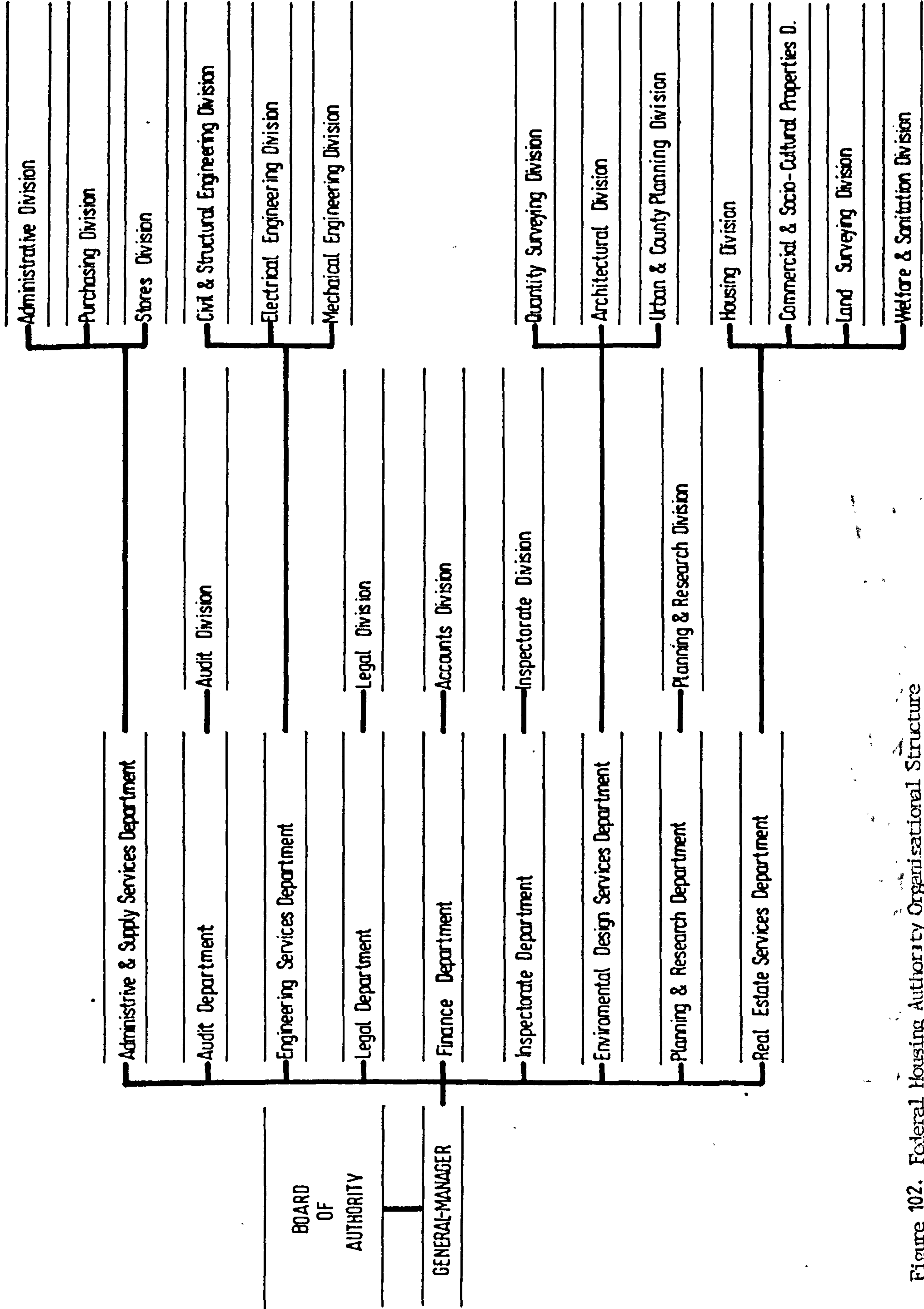


Figure 102. Federal Housing Authority Organisational Structure

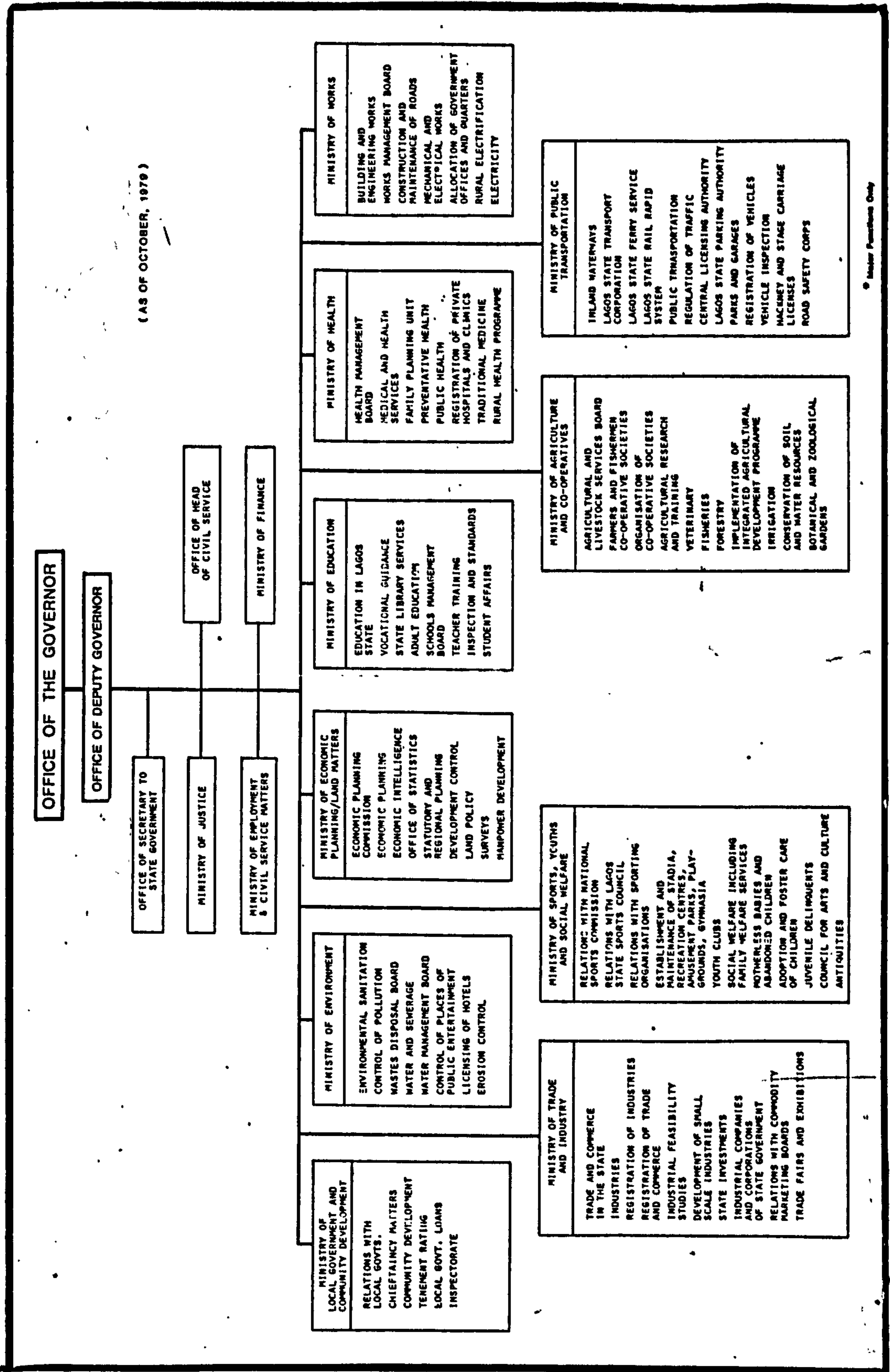


Figure 103. Lagos State Government Administrative Structure. (1979).

Appendix XIV.

Land Utilisation Models

- (i) Table of Lots and Layouts.
- (ii) Graphs of Unit Circulation Lengths and Percentages of Land for Semi-Private Utilities.
- (iii) Graph of Costs of Utilities per Lot.
- (iv) Table and Diagrams of Circulation Modes, Users and Road Characteristics.

(ii).

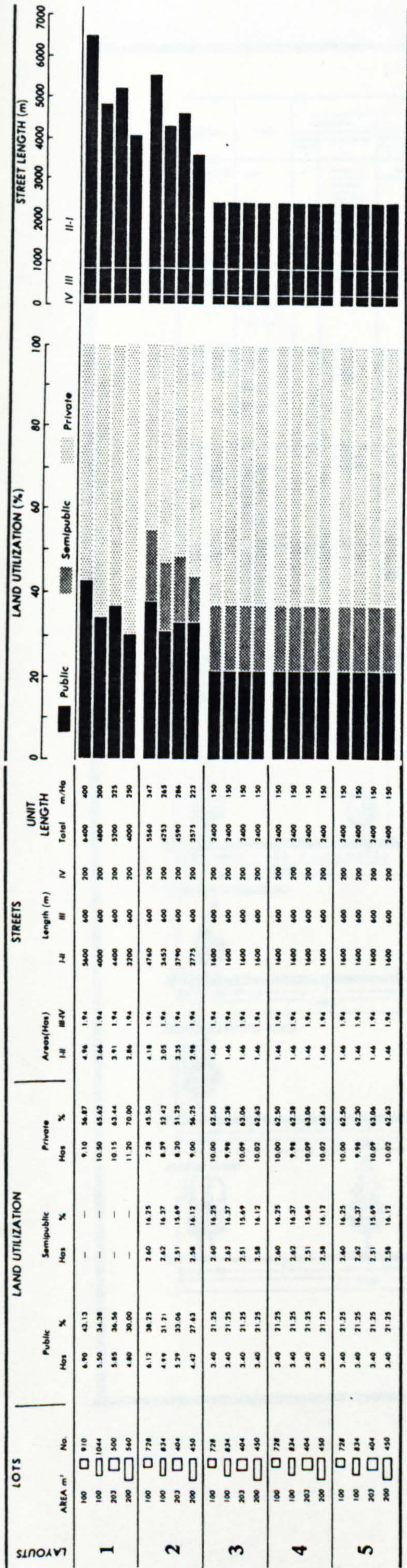


fig. 051

Figure 1 (above): TABLE OF LOTS AND LAYOUTS, with land utilization areas and percentages, and circulation lengths. Layouts: 1 GRIDIRON REPRESENTING GEOMETRIC FORM; 2 GRIDIRON INCORPORATING SEMIPUBLIC LAND; 3 GRIDIRON MINIMIZING PUBLIC LAND; 4 GRID DIFFERENTIATING PRIVATE LAND; 5 GRID EXPANDING SEMIPRIVATE LAND. Circulation modes: I and II. INTERNAL STREETS: III and IV. PERIMETER STREETS.

(i).

(iii).

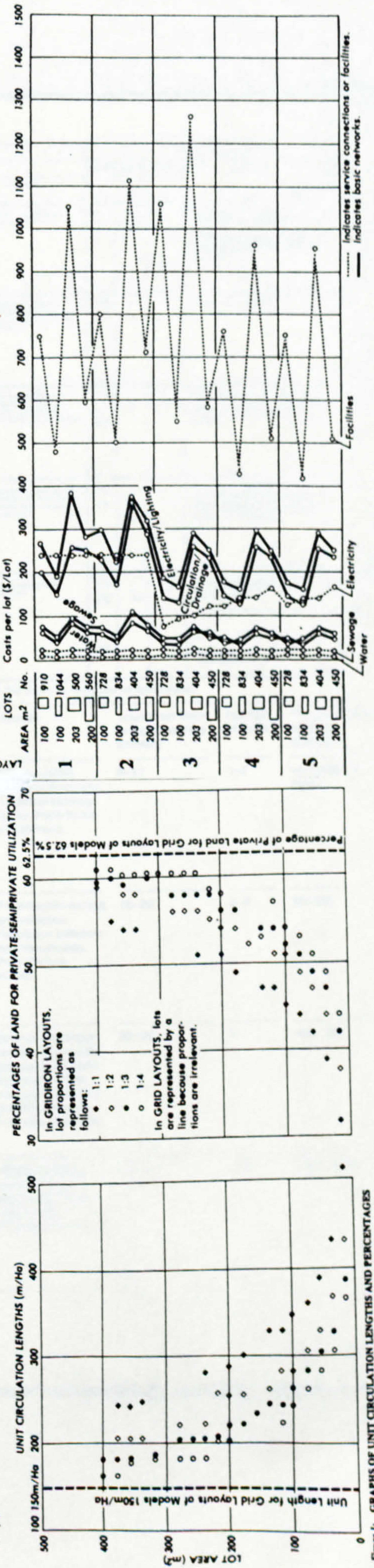


Figure 2: GRAPHS OF UNIT CIRCULATION LENGTHS AND PERCENTAGES OF LAND FOR PRIVATE-SEMPRIVATE UTILIZATION. Values taken from tables in figure 1, pages 114-115. For: lot areas 20m² — 400m²; lot proportions 1:1 to 1:4; layouts incorporating 2.50Ha — 2.61Ha (16%) of semipublic land.

fig 052

Figure 1 (pages 150-151): GRAPHS OF COSTS OF UTILITIES PER LOT.

(iv).

MODES 1	TYPES 2	USERS						ROAD CHARACTERISTICS					
		PEDESTRIAN		AUTOMOBILES				WIDTH 9	LANES 10	GRADES 11	FUNCTION 12	Approved SPAN (m) 13	
		SPEED Km/H 3	CHARACTER 4	SPEED Km/H 5	CAP V/L/M 6	CHARACTER 7	CONTROL 8						
PEDESTRIANS	Park	4	Pedestrian circulation and other social functions. Children games, people gathering, waiting for cars, etc.	NOT APPLICABLE		NOT APPLICABLE	Unit emergency vehicle access	Is established by the design, the street layout and use	3-4	NOT APPL.	00	Serve primarily for pedestrian access to service lots and occasional parking facilities. Secondary for limited and restricted access of service and emergency vehicles such as fire trucks, ambulances, police patrols, etc.	00 200
PEDESTRIANS (dominant) AND VEHICLES	Residential Street Neighbourhood Street Minor Street Local Street	4	Pedestrian circulation, walking	30 20		Pedestrian dominant over vehicles. Usually local traffic limited to pedestrians and private, emergency, urban vehicles.		Control of traffic frequency, character and speed are mainly established by the street layout and use	7-12 12-16	2 3	22	Give access to residential property	00 200
VEHICLES AND PEDESTRIANS	Cultural Street Secondary Street - Commercial Street	4	Pedestrian circulation, walking	30 40	300	Vehicles dominant but do not control circulation. Usually local and through traffic for all kinds of vehicles and pedestrians		Controls are established for the protection of pedestrians: curbside, traffic lights, road, overpass and underpass.	12-16 16-22 22-28	3 4	5 15	Provide for through traffic. May dominate neighbourhood give access to recreational parking lots, pedestrian paths, service streets and are used for secondary transport routes.	000 200
VEHICLES (dominant) AND PEDESTRIANS	Inter-Community Access Minor Arterial Districtal Primary Street Main Spine II	4	Pedestrian circulation	60 80	600 800	Vehicles dominant strongly over pedestrians. Usually through traffic for all kinds of vehicles and pedestrians.		Stricter controls are established for the protection of pedestrians: road traffic lights, overpass and underpass.	22-28 28-36	4 6	5 15	Provide access to the locality from inter-community highways and also usually determine major transportation routes within locality forms the principal focus in space of the development	1200 1000
VEHICLES	Major Arterial Expressway Inter-Community Highway Freeway Thruway Through Road	NOT APPLICABLE		55-72 60-80 70 100	1000 1000	Exclusive use by vehicles, relatively high speed with large volume of traffic flow. Through traffic for all kinds of vehicles.		Control for driving safety are established.	30-36 60-76 60-80	6 or more	2 to 4	Provide unity throughout extensive urban area. Usually form boundaries for neighbourhoods. Provide metropolitan and city continuity and unity. Provide regional and metropolitan continuity and unity.	2000 1200 1000 1000 Variable

Str Figure 1: TABLE OF CIRCULATION MODES, USERS, ROAD CHARACTERISTICS. For modes of circulation see opposite page.

Street type	Function	Total street width, or Rights of Way (metres)	Number of lanes	Recommended spacing (metres)
<p>Access street</p>	Provides direct access to plots, and circulation between blocks. Pedestrians predominate.	8-12	1-2	varies with plot sizes.
<p>Local street/distributor</p>	Provides plot access and vehicular circulation between neighbourhoods. Potential bus routes.	15-20	2-4	80-200
<p>District distributor street</p>	Bounds neighbourhoods and provides plot access. Caters for general urban vehicular circulation and through traffic. Probable bus route.	20-30	4	400-1000
<p>Arterial street</p>	Minimal frontage access city or regional vehicular movement. Probable bus routes.	20-30	4-6	1000-5000

fig. 104.

Appendix XVI.

Notes.

Introduction

(1)

Shelter, food, water, education, health, employment and others have been expressed by Leipziger (1981), Streetan (1977) as constituting as amongst the most important of basic human needs.

(2)

However, when evaluating these quantitative and qualitative conditions, (that are clearly unacceptable when compared to the way most Europeans or North Americans live) there are a number of points to bear in mind:

a) Most of the criteria by which the conditions are judged are highly subjective and ethnocentric, and rarely do they take into account the different cultural, social and environmental conditions.

b) Access to services such as water, drainage, electricity and health facilities in the urban environments compare very favourable as compared to access to be found in the surrounding rural areas where few if any of these services are available.

c) Although the need for services is more acute in the crowded urban areas than in rural, when coupled in the light that the quality of the construction is not too dissimilar between urban and rural areas, it becomes understandable why it has been suggested that the urban families live rather better (Gilbert & Gugler, 1982 at p.96).

d) Some case-studies have revealed that the living standards of the average urban low incomes are at least ten times that which he could hope to obtain in the rural areas (Juppenlatz, ndp).

e) A similar finding has been found by Samir Bastra (1977 at pp.113-124).

Chapter 1.

(1)

The structural analysis of economic and employment activities in terms of the formal informal structure, views the informal activities as those activities which existed before, and continued in the face of Western capitalist production, and views the formal activities as those which result directly from foreign influence and investment, the application of advanced technologies and the advent of sophisticated professional and governmental activities.

(2)

A peripheral economy is essentially regarded as a combination of capitalistic and petty capitalistic forms of production under the control of the former. The function of the petty capitalistic sector in this relationship is to provide an economic and social environment which permits the continual dominance of the capitalistic element. Thus its activities revolve around the small scale operations which are not profitable enough for the modern or formal industrial firms. The under employment and low income resultant from this situation ensure the continuation of a cheap supply of surplus labour which can be used and discarded when needed, thus keeping factory wages low. The petty production sector also enables fluctuations in demand to be absorbed within the existing system by sub-contracting to informal sector producers, at peak periods. In this way profits are retained without the experience of new capital investment. It is also claimed that the existence of a large body of petty capitalist is supported by the public sector both nationally and internationally because it offers opportunities for minimising overheads of social welfare

without jeopardising the political acquiescence of the urban poor.

(3)

The following is a full list of the Idejo Chiefs - some of these titles are more or less extinct

- | | | | |
|-------------|----------------|-----------------|-------------|
| 1. Oluwa* | 2. Aromire* | 3. Ojora* | 4. Onitano* |
| 5. Oniro* | 6. Onikoyi* | 7. Onisiwo* | 8. Oloto* |
| 9. Onitoko* | 10. Olumegbon* | 11. Elegunshim* | 12. Alawun |
| 13. Ojumu | 14. Janikin | 15. Onilado | 16. Oto Oba |

* Titles still in existence.

Chapter 4.

(1) At the turn of the century Isale-Eko was more a penninsula being seperated by swamps, creeks and undeveloped land.

Chapter 5.

(1)

Roughly calculated this works out at a shared capital income of over ₦10,000 for each household. Equivalent to three to four times the annual income of those below the 60th percentile of respondent households.

(2)

Initial designs based on government structure before military coup of January 1984.

(3)

Even though direct construction programmes have been halted in all but four states of the Federation and that the construction still in continuing is essentially of a finishing off nature.

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