Dissertation

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An exploratory investigation into urban planning, design and construction reactions to urban violence in Nigeria: a case study of Ibadan

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AN EXPLORATORY INVESTIGATION INTO URBAN PLANNING, DESIGN AND CONSTRUCTION REACTION TO URBAN VIOLENCE IN NIGERIA: A CASE STUDY OF IBADAN

BY

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BEING

A DISSERTATION SUBMITTED TO THE CENTRE FOR URBAN AND REGIONAL PLANNING OF THE FACULTY OF THE SOCIAL SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF URBAN AND REGIONAL PLANNING (MURP) OF THE UNIVERSITY OF IBADAN, IBADAN, NIGERIA.

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ABSTRACT

This study addresses the issue of crime in our society. It is observed that in recent years, violence/crime has become a common feature of our social environment. The general effect of this, especially on urbanites, is their susceptibility to fear and their crave for safety through the creation of safe environments; an attempt that falls within the purview of crime prevention through environmental design.

This study thus explores the response of planning, design and construction to the increasing wave of crime in our urban environment. To achieve this aim, a number of objectives were set forth. Inclusive are: an examination of both spatial and temporal variations in crime; an analysis of the relationship between crime rates and the affluence (socio economic characteristics) of inhabitants; an examination of security devices to inhibit crime and lastly, the effectiveness and costs of these devices.

Three hundred and fifty questionnaires were administered in some selected localities in Ibadan, the study area. Secondary information were also obtained from the Nigerian Police and several literature.

Two hypotheses were tested on the relationships between crime and socioeconomic status on one hand and age/design standard of building and security devices observed on the other hand.

In the study, a spatial distribution of crime was uncovered in Ibadan which could prove extremely useful for all planners. Also discovered were the social, economic and environmental effects of security devices on the people.

Based on findings, it is recommended that an integrated approach of crime prevention which will involve the police, the citizens and the environment will substantially reduce the wave of urban violence and crime in Nigeria.

FOOD FOR THOT: A CRIMEFREE WORLD

There is a WORLD that is devoid of crime
And the fear of it. A WORLD of your own
Where Peace, Love and Sound mind Reign.
A WORLD that is crime-proof and fear-proof,
God's new WORLD of Righteousness. You
Could live within it, if only you will pay
The price.

CERTIFICATION

It is hereby certified that this research work was carried out under my supervision by **Mr. A. A. Adeyemi** of the Centre for Urban and Regional Planning, Faculty of the Social Sciences, University of Ibadan, Ibadan, Nigeria.

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DEDICATION

To my faithful God.

ACKNOWLEDGEMENT

I appreciate you, the Almighty God. In Your faithfulness and Love, You have made me, You are making me and You will yet make me. You are my all in all; nothing accomplished could have been accomplished without You; to You be glory, both now and forevermore.

I congratulate you, daddy and mummy - the lucky parents. All through these years, you have been toiling through thick and thin, rain and shine, with persistent efforts and consistent hopes. God, your God is your faithful Rewarder.

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CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 INTRODUCTION

In August 1996, there were repeated shootings at the Apata end of Ibadan. A group of armed bandits had entered Ibadan through Abeokuta road and had been engaged in a gun battle by the Apata Divisional Police Force. Innocent citizens ran helter-skelter while others with a little boldness watched in horror as the bandits, with their superior arms, overpowered the police and shot their way into the city. They operated from Apata through Odo-Ona, Ringroad, Challenge to the new Lagos road through which they finally made their exit out of the city. Cars were hijacked, shops were robbed, stolen cars in previous operations were recklessly abandoned, many law abiding citizens were wounded.

On November 14, 1996, the hitherto peaceful atmosphere of Ibadan was again disturbed when a group of hired assassins broke into the Iyaganku residence of Alhaja Suliat Adedeji, a wealthy business tycoon, and murdered her. The incidence drove terrific fear into the hearts of both young and old.

The University of Ibadan, the nation's premier university also had her share of the wave of terrorism. Terrorism, as

unleashed by members of secret cults, almost grounded the pursuit of meaningful academic exercise on the campus during the 1990/91 and 1995/96 sessions. At a time, it was members of cults against one another and at other times, it was these terrorists against innocent students, with each wave accompanied by loss of lives and properties.

The story in Lagos is worse. Men and women from all works of life have, at various times, been attacked by different types of criminals. Most of them were murdered while the lucky few escaped from murder. Alhaja Kudirat Abiola (June 4, 1996), Alfred Rewane(6.10.95) Chief Mrs. Tejuosho (Sept. 19, 1996), Felix Ibru (escaped) were among the victims. 'Normal' crimes are daily being added to by brutal acts of terrorism and violence like Air crashes and Bomb blasts. For instance, between November, 1996 and January, 1997, there were four separate bomb blasts in Lagos resulting in loss of lives and properties.

The same story goes for most —— cities in Nigeria. From the relatively milder forms of violence like Industrial actions/strikes to the more heinous ones like Armed robbery, Residential burglary, Murder and Religious violence, urban violence and crime in Nigeria has been soaring. There are daily reports of cases of crime in the news media. Times

International (November 4, 1985) for example, reports that "there is crime everywhere in Nigeria today. Lives are no more safe ... the nation is being crippled by the insecurity problem posed by criminals". From the foregoing, it could be appropriate to say that crime has characterised our social environment.

The idea that people respond to their environment, either physical or social is not new; but the question is "What response to what environment?" The immediate response of people to this social menace of violence and crime is fear. Fear has been defined as an emotional reaction to danger (Kaplan & Kaplan, 1978). Thus, fear increases with danger, which in turn increases with violence. The response to fear is to begin to look for ways of ensuring safety.

There have been various attempts at ensuring safety. The conventional way has been the criminal - justice system while the others include: Social reorganisation, target hardening and building construction strategies. Of particular interest to this study is the attempt anchored on building designs and construction strategies, an approach that falls within the purview of crime prevention through environmental design. This approach inhibits crime by creating the physical expression of a residential unit that defends itself. It

entails the incorporation of physical or symbolic barriers into building designs and construction with a view to increasing the intrusion time of potential offenders or outrightly preventing them. This involves practices like burglar proofing, high wall fencing, natural and artificial surveillance, the alarm system etc. Any observer in our cities today would notice the general trend towards building walls round residential units; and houses intricately enamored with burglary proof, massive gates and strong locks all of which give credence to the assertion that "Our City architecture today is that of fear of burglary".

1.2 STATEMENT OF PROBLEM

Crime as a social problem has not been surpassed in terms of seriousness by any other social problem in the world (Harries, 1974). In the developed countries of America and Western Europe, it is a problem which, up till now, is devoid of a total solution. For instance, the American National Crime Index published in 1995 by the U.S. Bureau of Justice Statistics showed that a violent crime occurred every 19 seconds in 1994. In the less developed countries of Africa, Asia and Latin America, Crime and violence has been the major concern of most governments. The conclusion is that from

Europe to Africa, and from Oceanic to the Americas, increases in crime waves in recent years have been unprecedented. 'Awake' of October 8, 1996 quoted "The United Nations and Crime Prevention" as saying that "the number of recorded crimes worldwide rose from about 330 million in 1975 to nearly 400 million in 1980 and is estimated to have reached half a billion in 1990".

In Nigeria, the rate and incidence of crime is alarming. Despite the fact that most of the criminal cases go unreported, police records in 1980 still gave a total of 245,972 cases of crime, this rose to 325,073 in 1983 (Police annual report by states, 1983). Similarly, a Comparative Crime Statistics between 1990 and 1993 gave as much as 25 different types of crime in Nigeria with reported cases oscillating between 200,000 and 300,000 annually as shown in Table 1.1 below.

Adisa (1994) has categorised these crimes in Table 1.1 into Armed robbery, The rackets, Assassins or Hired killers, Street violence and Scams - 419. There are much more to the temporal distribution than those depicted by table 1.1, not only in Nigeria as a whole but in every Nigerian city.

With regards to spatial distribution and intensity of crime, Mukoro (1994) wrote that Ikoyi has the highest

TABLE 1.1: NATIONAL COMPARATIVE CRIME STATISTICS (1990-1993)

NO	OFFENCE	1990	1991	1992	1993
1.	Murder	1,546	1,502	1,453	1,684
2.	Manslaughter	89	53	48	34
3.	Felonious wounding	16,359	14,775	16,491	16,369
4.	Assault	52,007	51,312	53,320	51,987
5.	Other Crimes against Person	28,370	26,776	21,715	20,077
6.	Armed robbery	1,700	1,064	1,568	1,975
7.	Burglary, house breaking and store breaking	26,923	23,484	28,826	27,516
8.	Larceny	90,071	72,294	N.A.	N.A.
9.	Forgery & currency crimes	1,335	1,425	1,210	906
10.	Other crimes against property	38,584	43,897	21,715	20,077
11.	Bribery and corruption	297	314	137	139
12.	False pretence/cheating	12,885	11,936	13,899	13,845
13.	Unlawful possession and receiving stolen property	13,882	11,067	9,790	10,408
14.	Arson	1,302	1,155	1,519	1,716
15.	Perjury	7	10	11	73
16.	Other minor crimes	-	-	17,298	16,219
17.	Gambling	315	374	279	465
18.	Breaches of peace	9,613	9,256	9,258	9,950
19.	Escape from custody	963	808	843	748
20.	Local Acts	5,922	6,598	4,733	5,880
21.	Others	5,031	5,066	4,617	3,954
TOTAL OFFENCES		307,201	283,166	143,576	204,022

SOURCE: Federal Office of Statistics, Lagos (1994).

concentration of violent crimes in Lagos, closely followed by Apapa, then Victoria Island. Others are Oshodi, Ogba, Mushin, Shomolu, Ketu, Ilupeju and Surulere in descending order of concentration. Aguda (1994) also observed that the order of intensity of crime in Ile-Ife, Nigeria is the O.A.U. Campus; Sabo; Iremo; Modakeke; Okerewe; Ilare; Ilode and More. Such a pattern of distribution both in temporal and spatial terms could also be explored in Ibadan.

Such a trend of crime as explained in earlier paragraphs must not continue unabated. Over the years, the conventional way of controlling crime and criminal tendencies have been through the Criminal-justice System. This system is triggered off by the arrest of an offender, who may be charged to Court and if found guilty, sentenced to jail. Nigerian experiences show that little can be done through this means. For example, in 1993, out of the 204,022 cases of crime reported to the Nigerian Police, only 87,729 (43%) was said to be prosecuted; 104,663 (51.3%) still pending and 11,629 (5.7%) closed. See Table 1.2 for a detailed display of National crime reports and prosecution (1990-1993). The question that may be asked is "what happens to justice delayed in cases still pending investigation?".

TABLE 1.2 NATIONAL CRIME REPORTS AND PROSECUTION

YEAR	CASES REPORTED	CASES PROSECUTED	CASES PENDING INVESTIGATION	CASES CLOSED
1990	307,201	155,137	136,397	16,589
1991	283,166	137,619	128,274	17,273
1992	143,576	61,451	66,763	14,645
1993	204,022	87,729	104,663	11,629

SOURCE: Federal Office of Statistics, Lagos (1994).

Apart from this, in response to a cry of "Save us from the rule of hoodlums" by Nigerians (Nigerian Tribune, March 28, 1970), the Federal government promulgated Decree No. 47 of 1970, legalizing the public execution of robbers. Not much success has been achieved, because "almost two decades later, robbers are back in full force with new Vigour" (Sunday Times Magazine, April 26, 1992).

It is pertinent to note that with the exacerbation of crime in our cities and the unreliability of the criminal-justice system to provide a solution, the people have resulted to designing their physical environment to enhance security - target hardening. This involves practices like the erection of high wall fences round residential buildings, burglar proofing and alarm system etc. In some cases, the walls are so abnormally high that they distort the beauty of our cities,

and sometimes gives an impression of inmates of such houses living in cages. This is a common phenomenon in Ibadan. What with the costs of constructing such walls and massive gates, resources that could be diverted into some other uses. The extent to which these devices have helped in the reduction of crime and the associated costs are some of the problems examined in this study.

Lastly, modernization — urbanization has been seen as a major factor that triggered off the wave of crime in Nigeria (Adisa, 1994). Modernization in this case could be associated with the rising affluence of people. If this assertion is proved to be true, it then means that there are more cases of crime today than there were three decades ago. Not only this, it also means that the more affluent areas of our societies record more cases of crime. These issues are also investigated in this study with particular reference to Ibadan.

1.3 AIM AND OBJECTIVES

The aim of this study is to explore the response of planning, design and construction to the increasing wave of urban violence in Nigerian Cities using Ibadan as the case study.

The objectives are to:

(i) Examine intra-urban variations of crime in both spatial and temporal dimensions;

(ii) Examine the relationships that exist between rates of crimes and socio-economic status of neighbourhoods.

(iii) Examine people's reactions to urban violence in both spatial and temporal dimensions through planning, design and construction practices.

(iv) Determine what factors/criteria influence these practices and their associated costs.

(v) Proffer short and long term solutions to the problem of urban violence in Nigerian cities.

1.4 HYPOTHESES TESTED

It is hypothesised that

1. There is no relationship between the rates of crime and the socio-economic status of the different residential neighbourhoods in the study area.
2. There is no relationship between age/design standard of buildings and security devices adopted.

1.5 SCOPE OF STUDY

This study considers crime generally but particular emphasis is placed on residential burglary. The definition of residential burglary as used here is, however, wide. Inclusive are all other crimes that will involve the Culprit — gaining access into residential buildings before the crime is committed. The choice of these crimes has to do with the fact that they involve the planning, design and construction of buildings which is the preoccupation of this study.

Ibadan, the capital city of Oyo State is chosen as the case study (Fig 1.1). There are several reasons for the choice of Ibadan. First and foremost is the population and areal extent of the city of Ibadan. The population of Ibadan grew from 60,000 in 1856 to 627,000 in 1963 (Mabogunje, 1962; 1963 Census). Today, her population is put at 3,019,938 (NPC, 1991). In areal extent, Ibadan was estimated to be 176 sq km in 1984 (Adeniran, 1984), and with further development beyond the fringes, it has now increased beyond 214 sq km (Adebisi, 1989). Today, Ibadan is one of the most populous African cities as well as one of the highly urbanized areas in Nigeria. Since it has earlier been established in this study that urbanization is a major cause of urban violence and crime, Ibadan is thus an appropriate study area for crime and

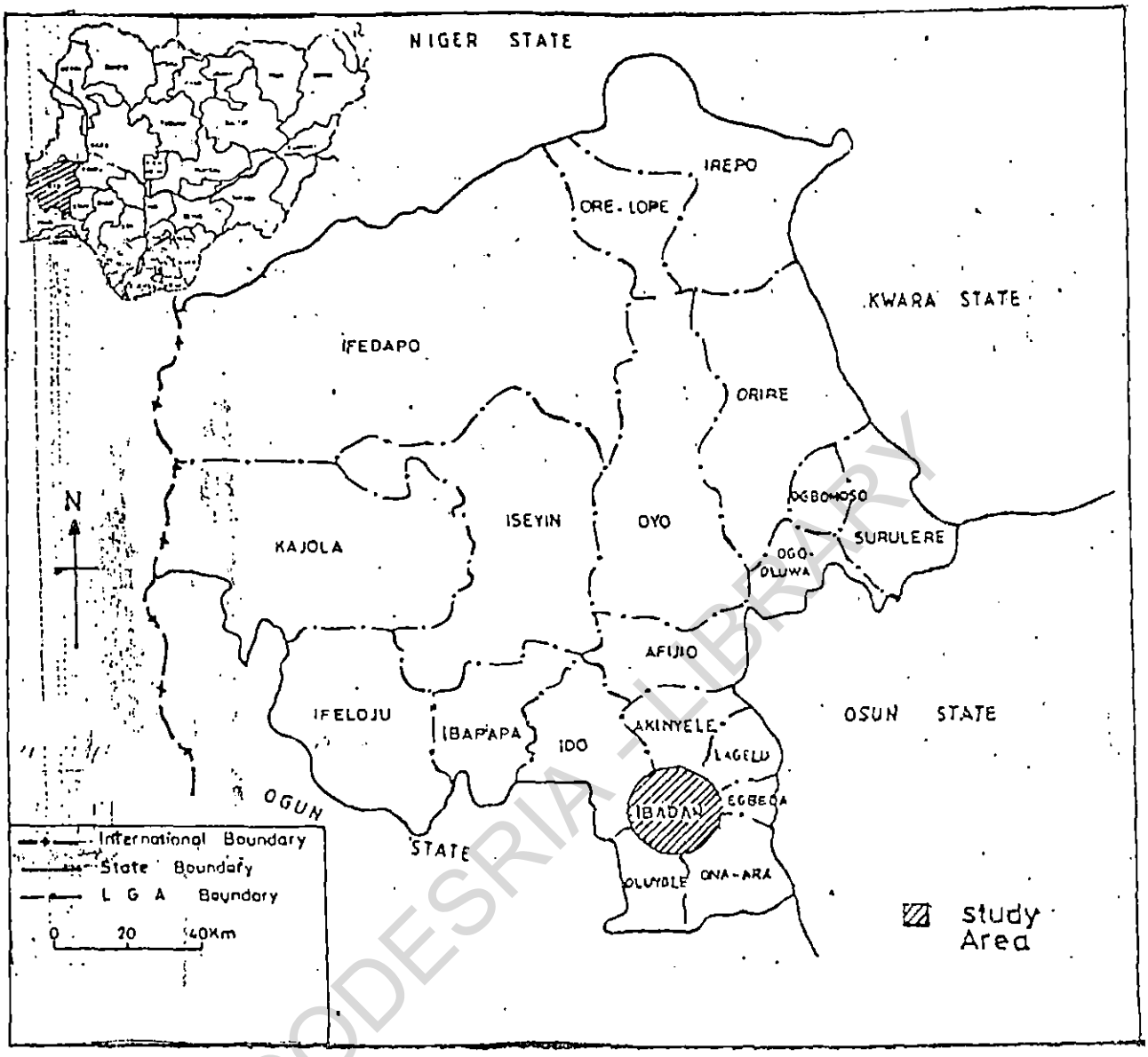


FIG 1.1 Map of Oyo state showing Ibadan

Source : Bureau of Lands, Housing and physical planning, Ibadan.

violence. This is substantiated with more facts and figures later in the study.

Another reason has to do with the crime rate of Ibadan, both on record and off record. For example, the crime report for Nigeria by states (1980) ranks Oyo as the fifth after Lagos, Bendel, Imo and Anambra with 19,190 cases. Ibadan is the capital, the most populous, the most urbanized and the most modern of all the cities in Oyo State. It could then be deduced that it contributed the highest percentage of the total crime reported in Oyo State.

Apart from this, the Lagos - Ibadan expressway has virtually turned Ibadan into a satellite of Lagos, the effect of which is the spill over of crime from Lagos into the city.

Lastly, there has been some studies of this nature especially on the patterning of crime in Lagos (Adisa, 1994; Mukoro, 1994); Kano (Albert, 1994); Ile-Ife (Aguda, 1994); Warri (Mukoro, 1986) but not one on Ibadan. This may be due to the general perception of Ibadan as a village and a relatively safe place to live in when compared with Lagos, Kano, Benin etc. despite its population and rate of urbanization. There is, however, no justification for this assumption as there has been no verifiable data on the number, tempo, intensity or spatial patten of crime in the city. This

is one major reason for the choice of Ibadan.

1.6 METHODOLOGY

1.6.1 SOURCES OF INFORMATION

The information used in this study were collected from both primary and secondary sources as determined by the information needed. Primary information like the types of housing design, the characteristics of houses, the planning, design and construction reactions of urban residents to urban crime, the factors influencing the particular reactions and the associated costs of such practices etc. were collected through observations, visual surveys, interviews with building owners, the use of questionnaires and the use of photographic images.

The secondary information like the rates and distribution of crime, the spatial distributions of residential neighbourhood etc. were sourced from police records and other government records. Other secondary data used are: the existing map of Ibadan showing the spatial distribution of the three residential districts and the spatial representation of the 100 localities on the map of the study area. Additional relevant information were also sourced from thesis, dissertations, books, reports, journals and other published

materials. The rates and distribution of crime was also garnered by interviewing vigilante groups and heads of households in the various localities under consideration. This serves as a complement to what was sourced from police records. As regards information on the socio-economic status of the residential localities, it is believed that people in the low density residential areas have a higher class socio-economic status than those of the other two areas. This bit of information was complemented by information on the socioeconomic characteristics of the people as elicited through the questionnaire.

1.6.2 METHOD OF DATA COLLECTION

Two sets of questionnaires were prepared for the collection of the data used for this study. The first set is an observation questionnaire into which all information observed in residential buildings were recorded. These observed information include: the characteristics of the residences, the types of housing design, the security devices, the residential localities etc. The second set of questionnaires - household questionnaire - was administered on building owners in order to elicit information like the socio-economic characteristics of the respondents, the age of buildings, security devices, reasons for the choice of

security devices, their associated costs and their effectiveness in the prevention of crime (See Appendices III and IV for the detailed questionnaires).

For the purpose of administering the questionnaires, Ibadan was zoned according to the National Population Commission (N.P.C) subdivision system of the city. The N.P.C. has divided the entire city of Ibadan into 100 localities and grouped them under three major residential districts viz: The traditional zones with the old buildings, the transitional zones of medium density and the new and government residential zones of low density. (See Figs. 1.2 and 1.3 and Appendix II for the groupings).

Since it is difficult to cover the entire city of Ibadan in the questionnaire administration, a sample frame of 30% of the 100 localities were selected out of the 100 localities identified by N.P.C., (1991). The proportional distribution of localities in the three major residential districts of Ibadan were as follows: High - 37, Medium - 46, Low - 17 localities each. A simple percentage ratio was used to get the number of localities that were interviewed in each district. The calculation is as follows:

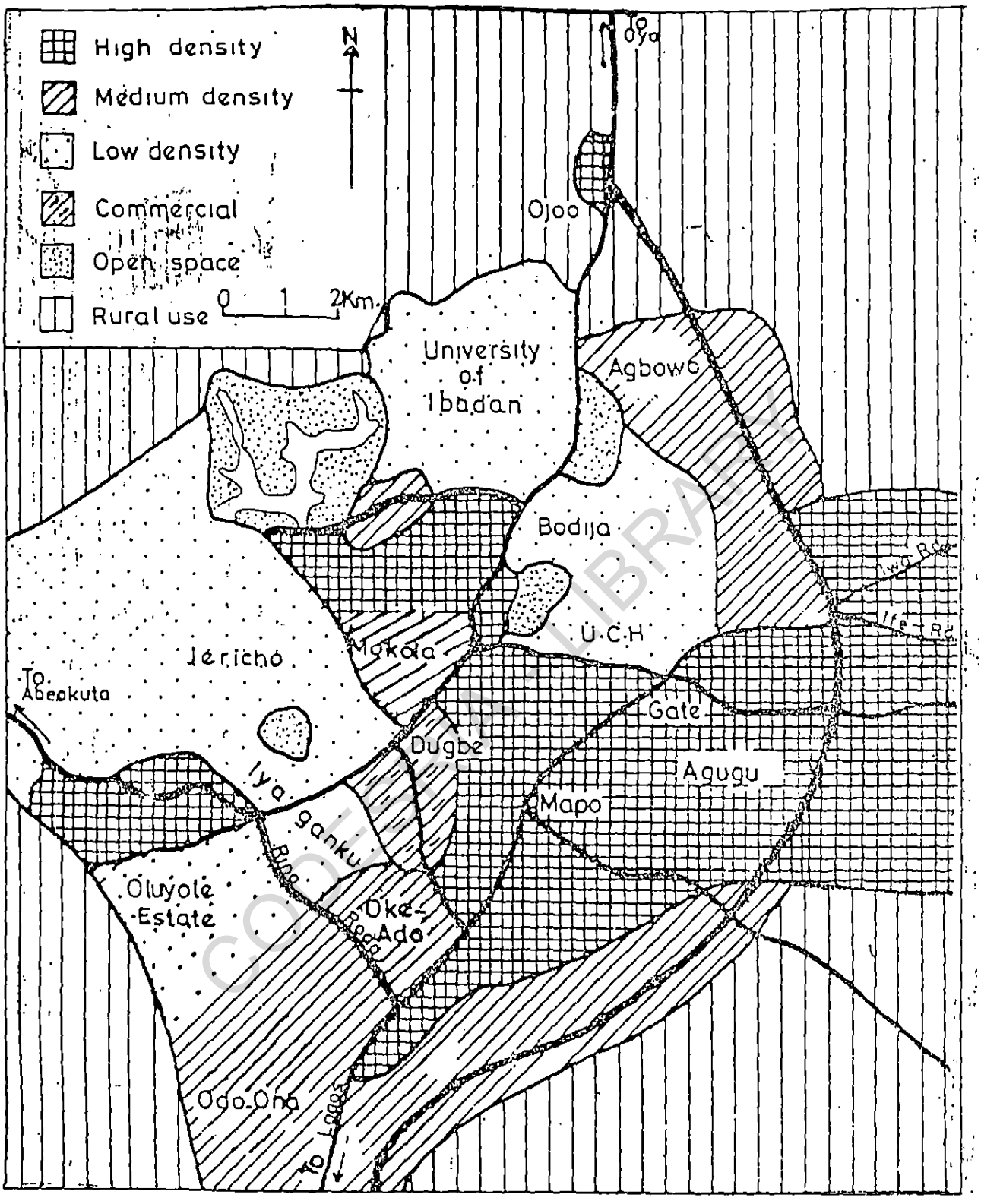


FIG1·2: Textured Map of Ibadan showing the Three Residential Districts and other Landuses.

Source: Bureau of Lands, Housing and physical planning, Ibadan.

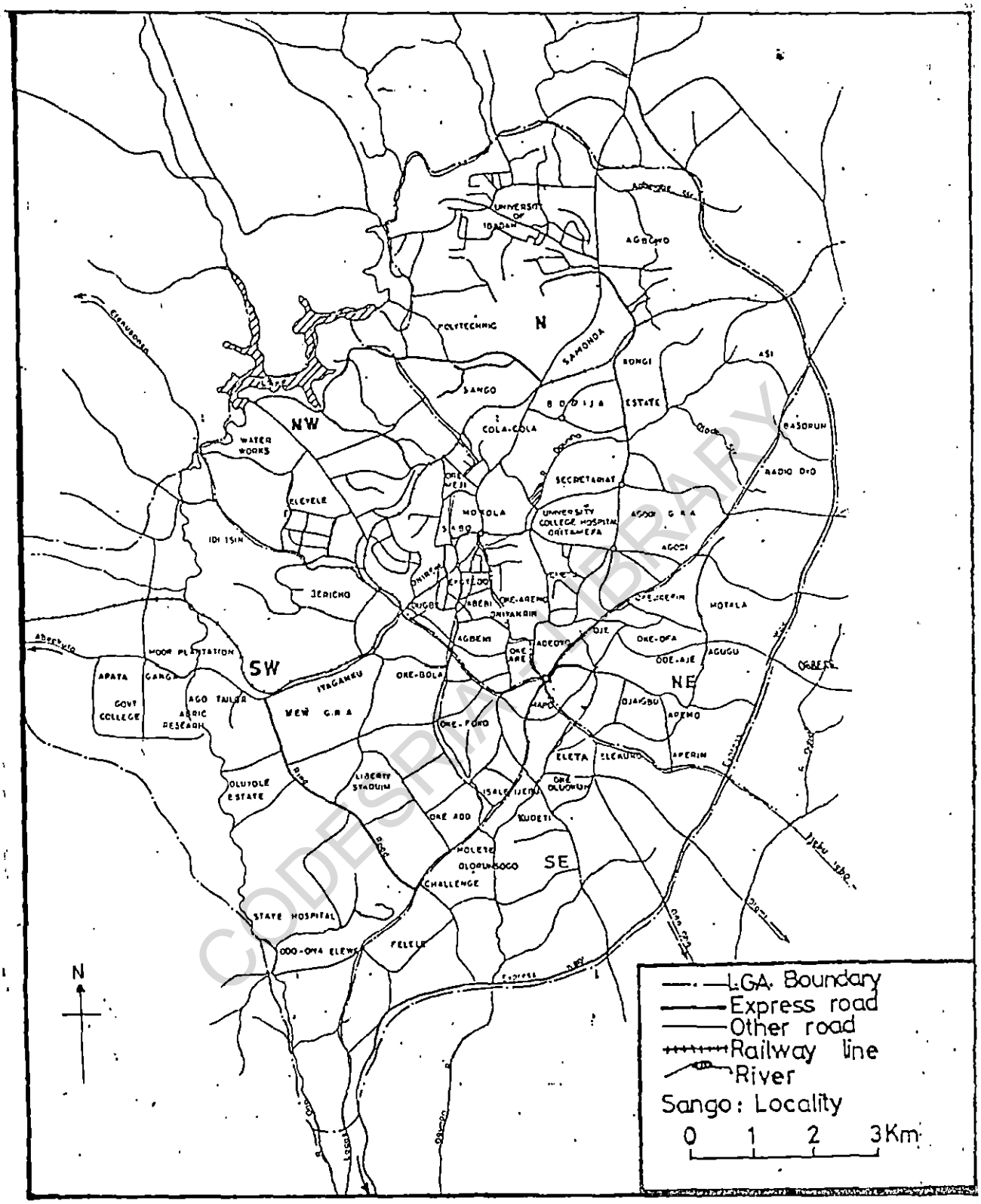


FIG 1·3 : MAP OF IBADAN SHOWING THE FIVE LOCAL GOVERNMENT AREAS AND SOME OF THE RESIDENTIAL LOCALITIES.

SOURCE : BUREAU OF LANDS, HOUSING AND PHYSICAL PLANNING IBADAN.

High density district = $\frac{37}{100} \times \frac{30}{1} = 11$

Medium density district = $\frac{46}{100} \times \frac{30}{1} = 14$

Low density district = $\frac{17}{100} \times \frac{30}{1} = 5$

In selecting the residential localities that were interviewed, in the different residential districts, localities were numbered 1, 2, 3, ... 37; 1, 2, 3 ..... 46; 1, 2, 3 .... 17, for High, medium and low residential districts respectively. Then 11, 14 and 5 localities were selected randomly. The table of random numbers was followed strictly in selecting the localities. The selected localities are as shown below in Table 1.3.

TABLE 1.3: RESIDENTIAL LOCALITIES THAT WERE SURVEYED

RESIDENTIAL DISTRICT	LOCALITY
HIGH DENSITY	Oje, Mapo, Agugu, Dugbe, Nalende, Beere, Yemetu, Agbeni, Elekuro, Kudeti, Adeoyo.
MEDIUM DENSITY	Iwo Road, Sabo, Oke Ado, Apata Ganga, Mokola, Sango, Odo Ona, Eleyele Water-Works, Ekotedo, Challenge, Felele, Agbowo, Orita Mefa, Orogun.
LOW DENSITY	Ikolaba, Old Bodija, Oluyole Layout, Idi- Ape, Jericho.

SOURCE: National Population Commission (1991)

To cover an appreciable number of houses in the localities selected, a total of 350 questionnaires were prepared and distributed proportionately in the three residential districts. There are a total of 23,456 houses in the 30 localities picked. Out of these, the high, medium and low density residential districts have 8,916; 11,912 and 2,630 housing units respectively. The proportion of number of houses that were surveyed in each residential district was arrived at using a simple percentage ratio. This is as follows:

$$\text{High density district} = \frac{8,916}{23,456} \times \frac{350}{1} = 133$$

$$\text{Medium density district} = \frac{11,912}{23,456} \times \frac{350}{1} = 178$$

$$\text{Low density district} = \frac{2,630}{23,456} \times \frac{350}{1} = 39$$

Therefore, 133 questionnaires were administered in the high density residential district, 178 in the medium density residential district and 39 in the low density residential district. In other to know the number of houses to be surveyed in each of the selected localities, the simple percentage ratio was again used (see Table 1.4 below).

TABLE 1.4: DISTRIBUTION OF HOUSES IN THE SAMPLED RESIDENTIAL LOCALITIES

RESIDENTIAL DISTRICT	LOCALITY	NO OF HOUSES PER LOCALITY	SAMPLE SIZE
HIGH DENSITY	Oje	681	10
	Mapo	387	6
	Agugu	954	14
	Dugbe	353	5
	Nalende	1,063	16
	Beere	675	10
	Yemetu	1,066	16
	Agbeni	665	10
	Elekuro	1,495	22
	Kudeti	614	9
	Adeoyo	963	14
	SUB TOTAL	8,916	132
MEDIUM DENSITY	Iwo Road	1,216	18
	Sabo	507	8
	Oke Ado	814	12
	Apata Ganga	695	10
	Mokola	682	10
	Sango	1,612	24
	Odo Ona	650	10
	Eleyele Water Works	418	6
	Ekotedo	982	15
	Challenge	614	9
	Felele	1,207	18
	Agbowo	927	14
	Orita Mefa	640	10
	Orogun	948	14
	SUB TOTAL	11,912	178
LOW DENSITY	Ikolaba	651	10
	Old Bodija	520	8
	Oluyole Layout	659	10
	Idi Ape	600	9
	Jericho	200	3
	SUB TOTAL	2,630	40
	GRAND TOTAL	23,456	350

SOURCE: Computed from N.P.C. (1991) Census Data.

In selecting the particular housing units for interview, the systematic sampling procedure was utilised. In this case, every 10th house was selected. Owners of the selected houses or the longest staying occupants of the house (incase of absence of the owners), were interviewed.

1.6.3 ANALYSES AND PRESENTATION OF DATA

The data collected were analysed by the use of simple statistical techniques such as frequency tabulation, percentages and ratio. Descriptive method is used to explain the trend, pattern and intensity of crime in Ibadan. Cartographic and pictorial representations like maps, charts/graphs and photographs (plates) are used in the analyses.

In testing the two hypotheses, the correlation statistical technique was used. The Spearman's rank correlation co-efficient

$$'rs' = 1 - \frac{6 \sum_{i=1}^{N} di^2}{N^3 - N}$$

is used in both cases.

1. In the first hypothesis, there was the need to explain the relationship between the rates of crime and socioeconomic status of the different residential neighbourhoods. The incidence of crime complemented by

the number of cases reported to the police serve as variables for crime rates while the socio economic status into which each neighbourhood was grouped according to community listing used for the 1991 Census by the NPC form the basis of the socioeconomic status of the neighbourhoods.

2. The second hypothesis requires the explanation of the relationship that exists between age/design standard of buildings and security devices. The years in which buildings were completed and the observed designs of buildings in terms of rooming apartments, flats, bungalows, duplex etc. were correlated with the security devices like burglar proofing, fencing, surveillance, alarm system etc.

This formula entails the ranking of the data in order to determine the direction of variation (positive or negative) of the variables. Having been determined, the direction of variation will indicate the form of relationship existing between the variables. The Significance of the 'rs' was tested using the 'T'-test

i.e. $$'t' = \frac{rs\sqrt{N-2}}{\sqrt{1 - rs^2}}$$

CHAPTER TWO

THEORETICAL BASES AND LITERATURE REVIEW

In this chapter, an attempt is made to present the theories that form the bases of the subject matter of this study. An attempt is also made to review previous works done on the subject matter.

2.1 THEORETICAL BASES

With regards to the theoretical bases, two theories are adopted to serve as foundation for issues raised in the study. These are: The theory of fear and the Defensible Space theory. The first is an attempt at theorizing the cause(s) of fear while the second - the Defensible space - is an alternative to fear. It is a model of crime prevention through urban design.

2.1.1 THEORIZING ABOUT FEAR

Fear is defined as an emotional reaction to danger (Kaplan & Kaplan, 1978); it is a feeling caused by the nearness or possibility of danger or evil. This means that when danger is sensed or perceived, there is susceptibility to emotional disturbance, and this emotional disturbance is

expressed as fear. An attempt has been made (Hebb, 1972) to theorize the cause(s) of fear. Hebb began with the proposition that emotional susceptibility increases with intellectual capacity. He states that "the development of a large cortex in mammals presumably increased their capacity to learn and to solve problems, but it also increased their susceptibility to emotional disturbance and their capacity for altruistic behaviour". Emotional susceptibility correlates with intelligence in the growing animal also. Thus, it is the older rather than the younger subjects that is most easily disturbed.

With increase in knowledge about danger, there is a corresponding increase in the fear of that danger. Conversely, an absence of knowledge about danger will make fear non existing. The more highly developed the intellectual capacity of an organism is, the more there is that can be comprehended and anticipated and therefore, the more the susceptibility to fear of danger. For example, it will take only strange surroundings for the generation of fear in rats; with the dog, a longer list of things is needed: strange persons, strange objects or situations etc, infact dogs that are bred for intelligence are more susceptible to fear than dogs bred as pets. With monkeys and apes, there are greater variety of

stimulants of fear than in dogs (Kaplan & Kaplan, 1978).

The above is also true of man, emotionality also increases as mental age increases in the growing child; thus human adults have more susceptibility to fear than children.

The possible application of the theory to this study may relate to the emotional susceptibility to affluence. In otherwords, greater income tends to bring with it, the possibility of added fear and consequently, added security devices. This could be seen in two ways. In the first sense, about 50 years ago, there was little fear of crime as evidenced from the precautions made against it in building designs. In the contemporary period of increased affluence and increased knowledge, there is an increased rate of crime with more and more people getting apprehensive of crime. Greater precautions are now being made against crime. In another sense, it is the more educated, the more well-to-do and the more affluent of the society - who are more susceptible to fear of crime - that embark upon sophisticated and expensive precautions to combat residential crimes as seen in the GRAs.

2.1.2 DEFENSIBLE SPACE (AN ALTERNATIVE TO FEAR)

"Defensible Space" is a theory of crime developed by Oscar Newman in his book "Defensible Space: Crime prevention through Urban design" published in 1973. This research work was based on the study of public residential projects in New York. In this study, Newman's goal was to present a model for residential environments which inhibits crime by creating the physical expression of a social fabric that defends itself. In simpler terms, his attempt was to solve the problem of getting a person to and from his or her living quarters without the fear (or occurrence) of crime. His first preoccupation was to make clear observations of the physical characteristics of housing projects which might encourage criminal activity. There were several observations he made.

The first observation is the large open spaces around project buildings which are often used as areas for recreation and leisure. He argues that since main building entrances are designed to face away from main streets and into the open spaces, there tends to be a general absence of traffic in those areas. In his words "the absence of traffic makes the open spaces the most feared part of the building project". Even at its busiest, anonymity makes it a no-man's-land and is thus avoided at night because they provide opportunities for

criminal violence without observations. Another observation is the high rise design of the buildings. This design entails the provision of long double loaded corridors, several elevators and fire stair requirements. All these, he said, often provide a criminal with multiple escape routes.

Newman also observed that the possibility for suveillance is defeated by the large number of residential units built. He argues that the more the units built,

> the less the ability of the residents to recognise strangers and thus become less involved in the control of the area surrounding the project. Lastly, New-man made an observation as regards the very definite negative identity attached to public housing. Such housing projects, by their designs, encourage feelings of isolation in their residents. This stigma is thus a flag that invites exploitation by criminals.

In correcting these observed anomalies in building designs, New-man suggested the defensible space model which will discourage the attempts of the criminal at committing crime. He presented defensible space as a surrogate term for the range of mechanisms - real and symbolic barriers, strongly defined areas of influence and improved opportunities for surveillance - that combine to bring an environment under the

control of its residents. A defensible space, therefore, is defined as a living residential environment which can be employed by inhabitants for the enhancement of their lives, while providing security for their families, neighbours and friends.

Defensible space, in terms of arrangement of building grounds to the interior grouping of apartments is therefore achieved when residents can easily perceive and control all activities taking place within it. Residents could thereby be seen employing full range of encounter mechanism to indicate their concerned observation of questionable activity and their control of the situation. The criminal, on the other hand, will perceive the spaces as being controlled by its residents, thus, exposing him as an intruder who could be easily recognized and dealt with. The defensible space or environment extends the area of the residential unit into the street and within the area or felt responsibility of the dweller in a given environment.

New-man lists four elements of physical design that contribute, separately or together, to the creation of secure environments. These are: Territorial Ownership, Natural Surveillance, image and milieu and Functional location of buildings.

Territorial ownership refers to the territorial definition of space in development, reflecting the areas of influence of the inhabitants. In ensuring a territorial ownership, New-man emphasizes the importance of number - of space and of the occupants. In simple terms, he said "reducing the number of people sharing a given access space increases the chance of spotting suspicious visitors, as well as increasing the pride of collective maintenance". Since in principle, territoriality extends to the lobby and the grounds, for its workability then, the residential environment will have to be subdivided into zones on which residents could easily adopt proprietary attitudes (see Fig. 2.1 below)

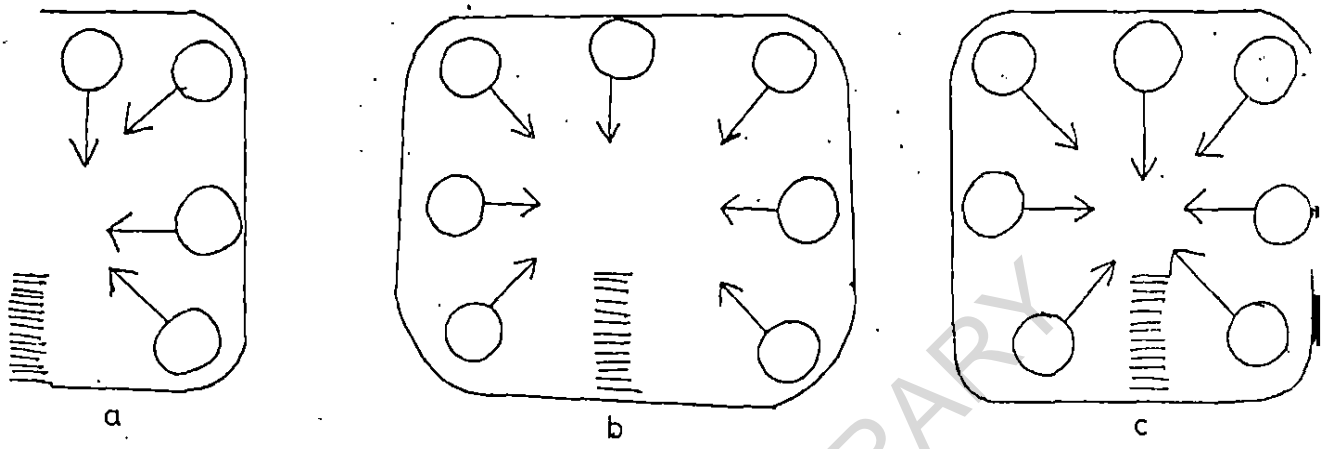


FIG. 2.1 Defensible space schematic sketch illustrating territorial definition reinforced with surveillance opportunities. The Figure is a residential environment subdivided into three zones a, b and c. With the subdivision, the residents (shown by arrow) in each zone will easily adopt proprietary attitude over their entire area including the open spaces at the centres of the zones.

SOURCE: New-man (1973), Page 9.

New-man went further to discuss the possibility of hierarchy of Defensible Space involving public, semi public and private projects. He advocated that entrance grounds be treated in a manner indicating that they lead to non public area. Such indicators could be earth mounding, a few steps, symbolic or actual gateways, a change of walkway material or texture or any device which indicates that, past that point,

any ambiguous activity might be questioned (See Fig. 2.2 below)

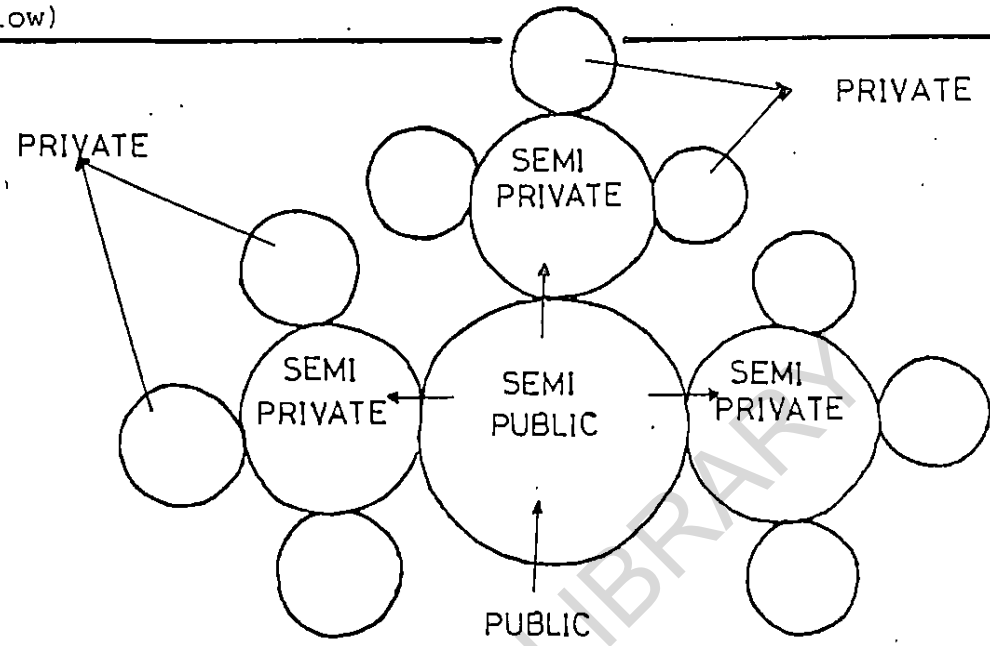


FIG. 2.2 Hierarchy of Defensible Space. Schematic diagram illustrating evolving hierarchy of defensible space from public to private. Arrows indicate entries at different levels of the hierarchy.

SOURCE: New-man (1973), Page 9.

Natural Surveillance refers to the positioning of apartment doors, windows, corridors, elevators, mail boxes, stairways etc. and the manipulation of plan configuration in such a way that the residents will be allowed to naturally monitor activities outside the unit and also inside and outside the spaces. New-man states that the knowledge, by both residents and intruders, that constant observation is

possible, can allay fears and deter criminals. New-man observed that "most crime in housing occur in the visually deprived semipublic interior buildings: lobbies, halls, elevators, fire stairs" and that surveillance ability on these areas will definitely make them less palatable to criminals. He made the following recommendations.

(i) Main entrances should not be located in obscure locations.

(ii) Elevators, mail boxes and stair cases should not be tucked around a corner in a blind spot.

(iii) Plant shrubs or trees should not be planted at points of curvature since they can provide natural hiding places for criminals.

New-man, however, warns that surveillance should not be seen as panacea, in itself, but rather should be coupled with security outfits. In his words "If there is no provision for the residents to call for ready help, mere observation cannot be relied on for total crime prevention".

Image and Milieu refers to the adoption of building forms and idioms that avoid the stigma of peculiarity which allow others to perceive the vulnerability and isolation of the inhabitants. In his observations of the American public housing projects, New-man discovered that their heights,

number of buildings (i.e project size), materials, amenities and general design make them stand out and easily recognized as distinctively different residential complexes. In his words "this differentiation serves in a negative way to single out the project and its inhabitants as easy hits". New-man really emphasized the dirty environments of the projects resulting from their poor upkeep and maintenance. He said that because these projects carry an institutional identity, no one really shows concern for their upkeep and maintenance. It is thus commonplace to find physical evidence of trash, poor plumbing and the stink that goes with it, rats and other vermin which portrays a notion of outcasts on the residents. In this later part, New-man shared the view of Lee Rainwater (1966) in his article "Fear and the House-as-Haven in the lower class". His conclusion is that if all these negative notions could be avoided, public houses will be made less crime-targets.

Lastly, functional location refers to the location of residential developments in functionally sympathetic urban areas or activity areas where crime attempts would easily be detected and curtailed. New-man feels that residential projects located close to, adjacent to or opposite parks, commercial areas or school facilities are safer than those in

interior/quiet places. This feeling originates from the idea that users of these activity areas - store owners and staff, school children and staff, visitors to parks etc. - add security by concerned surveillance at least during operation hours. New-man, however, stated that the effectiveness of functional location, should still be checked by the other three principles to ascertain that inactive periods do not produce detrimental effects.

The four goals of defensible space as outlined above are germane to this study. They are all expressed, though, in some cases, implicitly, in the housing designs and construction strategies observable in Ibadan - the study area. Territorial ownership, for example, is expressed in the creation of buffers and boundaries through hedges, walls and fences around buildings (see plates 7, 8 and 9). Within these boundaries, a very strong sense of ownership and involvement exists. Any stranger would be expected to justify his presence there, and the residents readily adopt maintenance responsibilities. The principle of surveillance is also expressed in the positioning of windows, doors and other openings in the residential unit in places where vigilance will be made possible. This apart, there has been an increasing use of artificial surveillance gargets like camera

which monitors activities outside the unit and then send signals into terminals placed inside the unit (see plate 1).

The location and designs of some buildings within the study area also have bearings on the two goals of image and milieu and functional location. This is further expatiated in later chapters.

In conclusion, the intent in this work, among many others, is to examine how expressive the observable housing designs and construction strategies in Ibadan are of the principles of Defensible space. This, as confirmed later in the study, gives credence to the assertion that "our city architecture today is that of fear of burglary".

2.2 LITERATURE REVIEW

As regards the literature review, it has been discovered that various studies have been done on crime by Sociologists, Political scientists, Criminologists, Penologists and of recent, Urban planners. These studies were however pioneered by Sociologists and Criminologists. The late arrival of planners into this field of study is probably rooted in a general lack of knowledge of the relationship between land use patterns and crime. A review of literature shows that, there are four major issues of concern in the study of violence and

crime. These are: The conceptualization of urban violence, the patterning of crime, The prevention of crime and the costs of crime - both social and monetary. This literature review is anchored on these four issues.

2.2.1 CONCEPTUALIZING URBAN VIOLENCE

The literature search reveals that there is no consensus yet about the definition of violence. Scholars view the concept (from which to derive the definitions) from the perspective of their various disciplines. While some scholars hold the view that the state is the only body which has the moral right to embark on any act of violence (Webber, 1947; Walter, 1964 and Anifowose, 1982), others are of the opinion that violence serves different purposes. To buttress this fact, Anifowose (1982) observed that violence has been used by groups seeking power, by groups holding power and by groups in the process of losing power. He further stated that violence has been pursued in the name of justice by the oppressed and in fear of displacement by the threatened.

Arising from the above, therefore, violence may be referred to as "any act that involves threat to, or destruction of lives and or property". Osaghae (1994), however, noted that violence is subject to cultural, ideological and religious idiosyncracies. The classification

of what to include in the term violence and whether to regard violence as a subjective or objective phenomenon still pose serious problem to the academic world.

Right from the time of Thomas Aquinas' notion of legitimate revolt against tyranny (quoted in Osaghae, 1994), violence has been defined by the Political Scientists with reference to the state. This has led to the distinction between "legitimate" or "justified violence" and "illegitimate" or routine violence". The former has been viewed by some Political Scientists as rebellion, civil strifes, internal war and political conflicts. It should, however, be noted that the latter has been neglected by the Political Scientists because it is not relevant to the state. Shupilov (1981) distinguishes between "progressive violence" which he regards as the struggle against capitalist oppression and tyranny from "destructive violence" which is mostly of a criminal kind and often involves the personal aspirations of the individual pursuing his own personal aims.

Gurr (1970) limits his own definition of violence to political violence against the state. He classified violence into three, namely: turmoil (that is, relatively unorganised and spontaneous political violence with substantial participation such as riots, strikes, demonstrations and

localised rebellions); Conspiracy (that is, highly organised political violence with limited participation such as assassination, coup d'etat and small scale guerilla wars) and internal war (that is, highly organised violence with mass participation designed to overthrow a regime or state-large scale terrorism, mass-based guerilla warfare and revolution).

From the foregoing definitions, an all inclusive definition of violence is still needed. According to Galtung (1981), the best way to arrive at such an encompassing definition is to identify what is common to all phenomena termed as violent. He suggested two commonalities. These are: destruction of lives and property; and in a more abstract level, anything avoidable that impedes human self realization. The later, being inherently subjective, is liable to difficulties in observation but shows that violence is not always a directly observable phenomena.

Most of the violence committed in contemporary times are found in the urban areas (Uyanga, 1982). Though violence may occur in rural areas, the incidence is more prevalent in big urban centres where there is more competition for facilities. As noted by Uyanga incidence of violent crimes and personality disorders are higher in big cities than in small ones. However, there is no single definition of an urban centre.

Different disciplines such as Geography, Demography, Sociology, public administration and a host of other disciplines studying urban centres define the concept of "an Urban area" from the perspective of their disciplines. Also, a report published by the United Nations Economic Commission for Africa (ECA, 1968) had shown that there are no common criteria by which African Urban Centres can be defined. It has shown for example that where as the typical Nigerian city had a population of 20,000, cities in Ghana had 5,000; Kenya 2,000; and Gabon 1,000. Therefore, the variation in the nature of African cities, demographically speaking, makes it difficult to lay down any common criteria for determining urban centres in Africa. For the purpose of this study, we shall adopt the U.N. standard which defines a city as a settlement of 20,000 or more population.

The cause of Urban violence has been related to the rate of urbanization (Adisa, 1994). In the developing countries of the world, migration from the rural areas is a major factor responsible for the growth of our urban centres in Africa. The impact of overpopulation is manifested in several ways and affects negatively, the quality of life. Breese (1966) called this "subsistence urbanization". Duru (1974) also described the inability of urban resources to cater adequately for their

residents in the cities as "Urban hypertrophy". The logical consequence of Breese's "Subsistence Urbanization" and Duru's "Urban hypertrophy" are tension and stresses that could manifest practically as urban violence such as murder, arson, rape, armed robbery, suicide etc. (Albert, 1994). Duru links his concept with such other problems as prostitution, drug abuse, criminal tendencies, juvenile delinquency and other related crimes. He further noted that these "Psychosomatic conditions" bear adversely on African Urban housing systems and architectural designs.

2.2.2 THE PATTERNING OF CRIME

There have been several studies on the spatial pattern of crime, generally referred to in the literature as the "Geography of Crime". In all of these studies, it is revealed that Crime co-varies with socio-economic status. For example, Brantingham and Brantingham (1975) who studied an American City, Tallahassee, Florida discovered that burglaries occur at high rates on the borders of some natural areas and at much lower rates in the interiors of the natural areas. Thus, for the first time, a spatial distribution of burglary, which was later to prove useful to planners, was uncovered. Furthermore, Harries et al (1984) postulated that crime is a social problem with a decidedly territorial component. In

their study, using the neighbourhood unit as an appropriate areal unit of analysis, Harries et al discovered a strong correlation between neighbourhood socio-economic status and the occurrence of crime. In support of this, Brantingham and Brantingham (1984) show that the rates of homicide and assault related inversely to socio-economic status. A number of other studies have confirmed this view (Harries, 1974 and Harries & Stadler, 1986).

In Nigeria, Mukoro (1994) studied the spatial distribution of crime in metropolitant Lagos. From a table he presented, Ikoyi was shown as having the highest concentration of violent crime, closely followed by Apapa and Victoria Island respectively. Other neighbourhoods of high concentration included Oshodi, Ogba, Mushin, Shomolu, Ilupeju and Surulere in descending order of concentration, while Yaba, Onikan, Ikeja etc. are relatively peaceful. He then went on to relate some violent crimes to socio-economic status of the neighbourhoods and concluded that the severity of crime in Lagos tends to be related to the socio-economic status of neighbourhoods with their severity increasing as their socio-economic status improves. In a similar study done in Ile-Ife, Nigeria, Aguda (1994), focusing on two major crimes - burglary and robbery, analysed the spatial distribution of crime in the

ancient city. These are, in order of intensity, OAU Campus, Sabo, Iremo, Modakeke, Okerewe, Ilare, Ilode and More. It is pertinent to note that this order corresponds with the socio-economic disparity of the neighbourhoods, thus helping to corroborate the earlier assertion.

2.2.3 PREVENTION OF CRIME

With regards to crime prevention, studies (Yong Cho, 1974; Bowker, 1980 etc.) have shown that the conventional approach is the criminal-justice system. This approach "represents the entire array of governmental institutions that function as the instrument of a society to enforce its standards of conduct necessary for the protection of the safety and freedom of individual citizens and for the maintenance of order of the society "(Yong Cho, 1974). This task is performed by means of detecting, apprehending, prosecuting, adjudicating and sanctioning those members of the society who violate the established rules and laws of the society. The authors (i.e. Yong Cho; Bowker etc.) concluded that the main thrust of the criminal-justice system is directed toward the control of crime and criminal offenders after the crime is committed - a palliative role - rather than the prevention of crime before the crime has occurred - a preventive role. Given the performance of this role, crime

becomes a symptom rather than a cause of violent and other deviating behaviour and it is based on this ground that the criminal justice system is faulted.

A relatively new approach to crime prevention, pioneered by Sociologists and Victimologists is "Crime prevention through social development". This approach began on the premise that there is a well-established body of research that identifies a number of factors that contribute to crime. It is the effects of these contributing factors that "crime prevention through social development" strives to alleviate. The efforts of this approach include initiatives to reduce poverty and to increase the availability of proper housing, employment, education opportunities and adequate playing and recreational facilities. Proponents of this approach (Abodunrin, 1981; Aguda, 1994; Obateru, 1994; Audy, 1995 etc.) all agree that there is a group of people in the society who bear the brunt of social injustice. They are the down trodden and poverty-vulnerable groups. Having come to the end of their wits, these people resort to crime in order to correct the societal imbalances. Abodunrin (1981), for instance, wrote that there is a dichotomy in the mode of life of the robber and his victim. The robber is often half literate and unsuccessful, while his victim is often successful, either by

education or trade. For the Criminal, his daily social contacts reinforce his feelings of impotence, erode his self confidence and make remote the possibility of improving the quality of his life. Having been closed out of the game of success psychologically, he resolves to criminal behaviour with the intent of changing the rules. Abodunrin recommended what he called 'social harmonization' to bridge the gap between the rich and the poor, thereby discouraging criminal tendencies of the poor.

In his study on the spatial distribution of crime in Ile-Ife, Nigeria, Aguda (1994), after discovering a relationship between crime and the characteristics of the environment in which crimes occur, recommended what he called "Societal restructuring" in the prevention of crime. His contention is that most of the societal crimes are committed out of frustration and desperation by the poor; and to prevent crime, "the way out is to totally restructure the national economy so that everybody, especially the low and middle income classes (including the security agents, serving or retired), can have access to good food, job, shelter, clothing and transportation and be able to take good care of their children". Obateru (1994) was also of this opinion when he wrote that planned urban growth promotes urban efficiency and consequently urban

productivity, which in turn reduces urban crime and violence through the raising of the standard of living of urban residents. The threesome of Abodunrin, Aguda and Obateru were writing from the point of view of African urban violence where the high rate of urbanization and the increasing rate of modernization and their attendant problems have contributed immensely to the increasing wave of urban violence.

On the international scene, Audy (1995), former president of Quebec association of police and fire chiefs; and a one time Director, Hull Police force, wrote to give strength to the view of the 'social developers' when he said that certain factors make people to be more involved in a whole range of antisocial behaviours, including criminal acts and that when these factors are addressed through social planning, crime can be reduced and other beneficial results may be realised. In his view, such social planning benefits or advantages include: less truancy in schools, fewer health related problems, increased and better employability, independent living, effective parenting and productivity of citizens. He, however, did not fail to add that these are long term programs to crime prevention whose positive impacts and cost effectiveness may take a long time to materialize. The words of Professor S. A. Aluko, of Obafemi Awolowo University,

Nigeria (quoted in 'Awake', October 8, 1996, Page 11) appropriately capture the essence of this approach when he said "the poor cannot sleep at night because they are hungry; the rich cannot sleep because the poor are awake; when there is no more social injustices that breed crime, no more haves and have-nots, then, there will be no more assassinations, poison-gas attacks, or terrorist bombs!".

Perhaps, the most modern approach to crime prevention which has been receiving attention from various authors is "Crime Prevention Through Environmental Design" or CPTED (pronounced Sep-ted). CPTED is basically concerned with the manipulation of the physical environmental elements in order to deter crime. It is not intended to create an impregnable fortress, but merely to make penetration more difficult and time consuming.

At the forefront of this approach is Jane Jacobs (1961) who put forward the notion that the physical environment and criminal behaviour were related in an architectural context. Jacobs believe that the development of activity area within the city, such as commercial, industrial, financial, educational etc. has led to the reduction of surveillance of streets and other public areas and consequently, reduction of community cohesion, feeling of territoriality and

responsibility for one's turf. This brought about the classic statement - "streets with eyes are safe streets" which triggered off further investigations.

Angel (1968), following the steps of Jacobs studied the city of Oakland. His findings are that crime takes place in areas where the density of pedestrian use of street is at a critical level. According to him, "when intensity is low, there will be virtually no crime as not enough potential victims are present and the likeliness of rewarding opportunity is small. At this low intensity of use, the neighbourhood is safe. As intensity of use increases, enough potential victims are on the scene to warrant the attention of potential offenders, but there are not enough people to provide for an adequate surveillance function. This is the critical intensity zone, where most crimes take place. As intensity increases further and the street or section becomes populated, the street becomes safe again (Angels, 1968). It is noteworthy that, both Jacobs and Angel saw in surveillance, the solution to the intrusion of criminals into residential buildings.

A theory of crime which has attracted considerable publicity over times is that developed by Oscar New-man in his book "Defensible Space: Crime Prevention Through Urban Design"

in 1973. This work was based on an action research project in New York. In the "Defensible Space Concept", Newman suggested territorial ownership, natural surveillance, image and milieu and functional location as measures of mitigating residential crime in Urban areas. This concept is being adapted as the theoretical basis for this study and has earlier on been discussed in detail.

Another important work is "Crime prevention through environmental design" by Jeffery, C. R. (1977). Jeffery discussed the theoretical issues concerning human behaviour and learning. He opined that man responds to his environment when environment threatens his existence. He puts forward "Crime" as a threat on man from his environment. In his conclusion, he appreciates the potential role of target hardening in curbing crime.

Some CPTED approaches to crime prevention tend to focus on the distance travelled by different criminals to reach their targets. Notable among these are those of Davidson (1980) and Harries (1974). Davidson, in his study of residential burglary in Christchurch (New Zealand), sheds light on the travel pattern of burglars. In his words "Burglars are opportunists and, therefore, commit their offences within a short distance of the location of their

activities". He cites the example of England where 54% of breaking-in offences occurred within one mile of the offenders' residence. The reason for this, he said, was that getting in and out quickly is of more importance to the criminal than maximising his haul. Davidson (1980) concluded that "If burglars are so opportunistic, increased police patrol are unlikely to do more than displace the event to another place or time". He then recommended foreclosure of opportunities through target hardening.

In his book "the Geography of Crime and Justice", Harries (1974) presented the spatial pattern of crime in selected cities by using published crime statistics. In his analysis of the observed pattern, Harries noted that the new techniques of burglary could be likened to that of "Smash and Grab" in which the offender, "like a thief in the night" - comes in, grabs whatever he wants and one-two-, he's gone. With this "Smash and grab technique", Harries posited, the criminal operated on the assumption that his intrusion time (Ti) will be short enough to ensure escape by the time police arrives. The Ti factor and the Time of police arrival are intercorrelated and also closely related to the micro-environment. To control crime, therefore, the Ti factor could be lengthened through various environmental design and

security strategies.

Mukoro (1986) in his work "curbing residential burglary through environmental design: A prospect in Warri" wrote that the response to the problem of crime in our society has been in different guises, one of which he identified as Fear of Burglary Syndrome (FOBS). In his analysis, the elements of FOBS do not bring about a total decline in the general level of occurrence of residential burglary. With a view to curbing residential burglary, therefore, he proposed a new concept which is geared towards regulating movement patterns, providing space that engenders social cohesion and enhances surveillance. For already built-up areas, Mukoro (1986) recommended that:

(i) Individuals should block trespassing routes, landscapes and provide security lights in their compounds.

(ii) Neighbourhood associations should organise themselves into vigilante groups in addition to using Posters and Signposts to warn criminals.

(iii) Environmental designers should provide appropriate designs that inhibit crime and enhance surveillance and

(iv) Government should provide street lights and public telephone booths within residential areas and also make access roads motorable.

It is pertinent to note here that the views held by Jacobs (1961), Angels (1968) and Mukoro (1986) emphasize the need for surveillance and is more of a community approach to crime prevention as different from the personal approach of "target hardening" - a view held by Harries (1974), Jeffery (1977) and Davidson (1980).

Recent literature on CPTED have further widened the scope of the concept beyond mere improvement in security hardware and site design to the knowledge of psychology in crime prevention. Notable among these writers are: Gardner (1995). Audy (1995) and Mckay (1996). In their works, these recent writers have generously added to the elements of CPTED. Gardner, for example wrote "To understand fully how CPTED is used, one must examine its components and the philosophy behind them. Although crime prevention, Through Design is itself relatively new, its individual elements are common security techniques". The elements of CPTED they put forward include the following: Territorial behaviour strategy, Surveillance, Barriers, Lighting, Landscaping, and the Scare tactics. These are discussed sequentially in details below.

TERRITORIALITY BEHAVIOUR STRATEGY

Territorial Behaviour strategy as an element of CPTED involves individual's perception of and relationship with his/her environment. A strong sense of territoriality encourages an individual to take control of his/her environment and defend it against attack. A sense of territoriality is fostered by architecture that allows easy identification of certain areas as the exclusive domain of a particular individual or group. This feeling is enhanced when the area involved is one the individual can relate to with a sense of pride and ownership or proprietorship. It is not enough for a person simply to be able to define his environment; he must also WANT to defend it. The WANT results from territorial feelings of pride and ownership.

The term OWNERSHIP when used in this context does not necessarily mean actual legal ownership. It can be and very often is, a perceived ownership resulting from an individual's relationship with his/her environment. Office workers, for instance, may feel a sense of ownership from the office in which they work. In physical design, territoriality is achieved or supported by the construction of Fences, buffers or walls round one's properties. Within this micro boundary, the property owner maintains ownership by familiarity and he

is prepared to defend any attack against anybody within the boundary.

SURVEILLANCE STRATEGY

Surveillance as an element of CPTED refers to the ability of legitimate occupants of an area to exercise a high degree of visual control over the entire area. This is a principal weapon in the protection of a defensible space in the sense that criminals are least likely to act when there is a high risk of their actions being witnessed. There are two forms of surveillance viz Natural or informal Surveillance and Artificial or formal surveillance. Natural surveillance occur as a direct result of architectural design. Designs that minimize visual obstacles and eliminate places of concealment for potential assailants offer the most protection against crime. Some of the accompanying design strategies under natural surveillance include the following:

(i) Ensuring that landscape materials - trees, shrubs, flower beds do not block the vision of the legitimate users of the property, and must not also create areas of concealment where intruders could hide to perform their nefarious activities.

(ii) Ensuring that trees, telephone or electric poles or any other objects do not provide climbing paths to the upper level of buildings.

(iii) The use of glazing windows, expansive windows or any other form of windows that will allow a 'See through' where ever the occupants of buildings are in the house.

(iv) Ensuring that the type of fencing materials do eliminate areas of concealment in the building.

Artificial Surveillance refers to other means of ensuring visual control over space when natural Surveillance alone cannot sufficiently protect an area. The strategies include:

(i) The use of fixed guard (human guard) posts.

(ii) Organized security patrols; example is the activities of vigilante groups.

(iii) The use of guard dogs or security dogs. Suffice it to be said here, that the primary intention of the three strategies above is not any physical defence against intruders - one may ask "what would a poor, old, poorly armed 'mei-guard' do against an armed bandit?" - the intention is to identify any strange occurrence or intruder into the guarded space and quickly contact security agents.

(iv) Electronic monitoring which involves the use of electronic gadgets like camera which are positioned in a concealed environment outside the building to record all activities that take place within its view range and send signals into a terminal located within the building. The most Sophisticated of these electronic monitoring devices is the Closed Circuit Television (CCTV) (See Plate 1). The CCTV uses a powerful video recorder that transmits images into the screen. Though a costly venture, the CCTV is a reliable way of Surveillance. Its effectiveness in crime prevention, however, depends on ability to watch the video at all times and the speed of getting help from police when strange activities are relayed on the screen and reported to the police. This last condition is very important in the sense that, ability to survey without help to defend is useless. The use of Artificial Surveillance method could be justified in elevators, interior corridors, parking lots and exterior pedestrian pathways.

LIGHTING

Lighting as an element of CPTED refers to the illumination of all areas that surround the guarded space. Security lighting could be discussed under four headings viz The type, the Colour, the qualities of a good lighting system and the importance of lighting as a security device. With regards to type, there could be bulbs, fluorescent tubes, flood lights and search lights. Search lights present the best form of lighting for security purposes.

This lighting system moves to and fro or round-about in a searching manner at regular intervals. Flood lights are next in hierarchy. They are powerful forms of lighting that brings to focus any object within view range. They are unlike search lights in that they are stationary. Lights produced by bulbs are better for security purposes than those produced by fluorescent tubes. The reason being that fluorescent tubes work better when used within an enclosed area especially a room where reflections from the four walls of the room add to the intensity of the light. In an open space, there will be no walls to reflect lights from the tube to add to its intensity; and this is why it is not often used externally.

With regards to colour, four major categories of light could be identified according to the amount and quality of

colour they facilitate. These are Mercury Vapour, Metal halide, HPS and Low Pressure Sodium (LPS). Mercury vapour lights do not offer accurate representation of colour. They enhance blue-green and distort reds and yellows. Though they are of high quality, they are expensive to buy and operate, and therefore not considered a cost-effective security solution. Metal halide lights are more energy efficient than mercury vapour lights and radiate a white light that brings out strong colours in objects. This light is most often used in sports facilities where distinct colours make the teams and the environment more attractive. HPS lights are used in most security lighting programmes and thus may be the best for security purposes. LPS lights are monochromatic and are mostly common on major highways. LPS lights make objects appear black and white.

A good lighting system should allow for overlapping of lights. This will ensure that no area within the guarded space is unlit. A good lighting system should not expose users to attackers but should expose attackers to users. In other words, the object is to light up the criminal without spotlighting the victim, this will enable the user to see the intruder without himself (the user) being seen by the intruder.

The importance of lighting as an element of CPTED lies in the fact that it drives away fear from legitimate occupants and brings confidence into their minds. It is a good strategy for surveillance as well as a strategy that encourages the feeling of ownership and proprietorship of the environment of the user. Thus, lighting when adequately used could combine with other elements of CPTED to effectively deter criminal activities.

SECURITY BARRIERS

Barriers as an element of CPTED reduces crime by restricting access to the target area (a building, a street or park etc.) to people who have valid reasons for being there. There are two types of barriers viz physical barriers and symbolic barriers. Physical barriers, as the name implies, are substantial in nature and physically prevent movements/accesses. Examples include barriers of fence, burglar proofing, heavy metallic doors, locked doors and or gates, small windows, unbreakable glass windows and some forms of landscaping.

Symbolic barriers are less tangible. Nearly anything could serve as a symbolic barrier. The only requirement is that it defines a boundary and may not prevent physical

movement. What it does is that it leaves no doubt as to who should access and when access should be made. Examples include the use of low decorative fences, flower beds, changes in side walk patterns or materials and prominent use of Signage e.g. "No trespassing" etc. A good use of security barriers could enhance territoriality behaviour of legitimate occupants.

LANDSCAPING

Landscaping is versatile and can be used to perform a variety of design functions. As an element of CPTED, it could combine effectively with symbolic barriers, surveillance and territoriality to ensure a protected environment. As a symbolic barrier, landscaping can mark the transition between zones. Features such as decorative fencing, flowerbeds, ground cover and varied patterns in cement work can clearly show separation between zones. If more substantial barriers are needed, shrubbery such as evergreen hedges can be used to create more formidable obstacles.

From a Surveillance standpoint, landscaping can be critical. Factors such as growth characteristics of plants and their placement in relation to potentially vulnerable areas are extremely important. Visual corridors must be

maintained in open park-like areas as well as in densely planted areas - this can be maintained by limiting shrubbery to a maximum height of 3ft and trees to a minimum height of 6ft at the lowest branches. This approach ensures that visibility between 3 and 6ft from the ground will always be relatively unimpaired.

Landscaping also functions in crime prevention through aesthetic. Aesthetics bring attractiveness and appreciation. An appreciated environment will generate a sense of pride and ownership in occupants.

SCARE TACTICS

As an element of CPTED, scare tactics function by scaring intruders away from the protected environment. This could be achieved through the use of the Alarm system, Electrocution, Signages like "Beware, Arksego dogs on Patrol" and the use of howling dogs. One may add to this list, the use of the African Traditional Protective Devices (ATPDs) like charms.

All these are the elements of CPTED and they are examined in relation to Ibadan in chapter four of this study. In conclusion, "CPTED is most useful if it is designed into the architects original plan, and it can dramatically change criminal activity on and around a site" (Mckay, 1996).

2.2.4 THE COSTS OF CRIME

The costs of crime refer to the effect of crime on people. In the literature, two types of costs of crime are identified. These are: the monetary costs of crime and the social costs of crime. Studies on monetary costs of crime are done by economists (Sullivan, 1996) while those of social costs are spearheaded by sociologists, victi-mologists and environmentalists (Abodunrin, 1981; Carter & Jones, 1989). Each of these costs of crimes could be Direct or Indirect. Direct costs are the costs incurred by the physical victims of crime while indirect costs are those incurred by potential victims in trying to prevent crime i.e. costs of security devices. Thus we can have four combinations of costs of crime.

(i) Direct monetary costs.

(ii) Indirect monetary costs.

(iii) Direct social costs.

(iv) Indirect social costs.

Direct monetary costs of crime include all monetary costs incurred by victims of crime. In a nationwide cost estimate done in 1983, Reynolds (1986) included in his calculation of direct monetary costs, such costs like personal losses: homicide, rape, assault, robbery (cost of injury); Property

losses: Burglary, larceny theft, Robbery (property losses), Motor vehicle theft; and Business losses: Arson, shoplifting, Employee theft and business fraud.

In a related study "Crime victimization survey (C.V.S.) done by the Bureau of Justice Statistics (1994 Feb.) in U.S.A., direct costs of crime include losses from property theft or damage, cash losses, medical expenses, amount of pay lost because of injury or activities related to the crime and others like costs of psychological counselling, increased insurance premiums as a result of filling claims, decreased productivity at work, moving costs incurred when moving as a result of victimization and intangible costs of pain and suffering.

Indirect monetary costs include all monetary costs incurred by the potential victim in an attempt to prevent the occurrence of crime i.e. monetary costs of crime prevention. Reynolds (1986) included in his calculation of this type of cost the costs of engaging the services of police, courts and legal services costs of corrections, opportunity cost of improvement. Inclusive here are the costs of security personnels, watch dogs, electronic surveillance apparatus, costs of burglar proofing, fencing and walling etc.

The Direct Social Costs of crime relate to the social effects of crime on victims or potential victims. The primary social cost of crime is the fear of crime that is generated in people. Carter and Jones (1989) wrote that "In its social and behavioural impact, fear of crime may be as potent as victimization, itself". Fear of crime generate anxieties about crime in people "which may make them change their life-styles, withdraw to themselves, no longer go out at nights, shun association with strangers and live a localized social life". (Abodunrin 1981). Many have been known to change their residences, change their jobs, build to a particular design etc. and as Smith (1986, quoted in Carter and Jones, 1989) emphasizes, this can be extremely debilitating, subjecting people not only to emotional stress but constricting their movements and imposing all manner of personal and even financial costs on them. The major impact of these costs may be felt more on the elderly and the children who are most prone to this feeling of vulnerability. Fear of crime may not necessarily be related to the experience of victimization itself or to the statistical probability of victimization. While it is natural for crime victims to express more anxieties than non victims, there are many categories of non victims for whom the possibility of

victimization is a daily worry. For this group of people, they live in perpetual fear, confined to portions of secure time and space - a socially isolating life (Smith, 1986).

The last combination of crime is the indirect social costs of crime. This costs of crime refer to the social (including environmental) effects of the security devices put in place to combat crime, either on the occupants themselves or on their neighbours. Inclusive here are: the cutting away of occupants of walled buildings from their social environments, restriction of air circulation in case of small windows, difficulty of escape from fire outbreaks in heavily burglar proofed buildings, incessant howling of security dogs and a host of others. All of these costs are examined in relation to the study area.

In conclusion, literature on crime and violence do not have a singular focus, since the views mostly represent the diverse interests of the disciplines and researchers studying them.

CHAPTER THREE

CRIME IN IBADAN: AN OVERVIEW

3.1 INTRODUCTION

This section presents a general survey of crime in Ibadan in both spatial and temporal dimensions. Crime is considered generally, but in some cases, particular emphasis is placed on residential burglary (as defined in section 1.5 above). There are two sources of information on crime rates, viz: primary sources and secondary sources. Crime rates collected from police records form the secondary sources. These rates cover the period between January 1990 and July 1996. However, the rates for 1996 cover only 7 months which are the rates as at the time of data collection. Crime rates from secondary source perhaps could have formed the bulk of the analysis of data on crime but for the fact that the data were collected on the basis of divisions rather than on the selected localities which are of more importance in this study. According to the Nigerian Police records, Ibadan is divided into 7 Divisional Police Offices, viz: Eleyele, Iyaganku, Agodi, Bodija, Challenge, Apata and Moniya divisions.

These divisions above do not correspond with the neighbourhoods/localities in Ibadan. It is for this reason that the crime rates sourced primarily through the use of questionnaire had to be relied upon to complement the ones from the police since it was done on the basis of the neighbourhoods in Ibadan. This chapter also discusses the monetary and social costs of crime in Ibadan.

3.2 CHARACTERISTICS OF RESPONDENTS

For the purpose of presenting the analysis of the characteristics of the respondents in a meaningful way, Ibadan was divided into the three geographical zones of (i) the high density district, comprising mainly of the core areas of the city; (ii) the medium density district which is a transitional zone between the high and the low density districts, and lastly (iii) the low density district which comprises mainly of the GRA and planned housing estates in the city. As would be observed in the following analysis of the respondents by the different socioeconomic indicators, each of these districts differ in almost all respects.

3.2.1 GENDER CHARACTERISTICS OF THE RESPONDENTS

Majority of the respondents were male. The implication of this is that male population constitute the majority of household heads with about 83% of the total respondents. There are, however, variations as regards the residential districts. For example, the female constitutes the majority (69%) in the high density district. This means that there are more women household heads in the core areas in Ibadan than men. The reason for this is obvious. Most of the male household heads are dead leaving the management of the household to their surviving wives. The number of female household heads is least in the low density district where they constitute a meagre 10% as shown in Table 3.1 below.

Table 3.1: CHARACTERISTICS OF RESPONDENTS BY GENDER

RESIDENTIAL DISTRICT	NO. OF MALE	NO. OF FEMALE	TOTAL
High Density	91	40	132
Medium Density	161	17	178
Low Density	36	4	40
Total	289	61	350
%	82.6	17.4	100

Source: Field Survey, 1996

3.2.2 AGE CHARACTERISTICS OF THE RESPONDENTS

Majority of the respondents are over 60 years of age with this age group constituting more than half (50.9%) of the total number of respondents. This is an indication of the authenticity of the information garnered from them. Only two of the respondents are below 21 years of age and these, found only in the middle income area, are not household heads, they merely stood in for their parents who were not available at the time of the interview. It is worthy of note that it is only one respondent that heads a household at an age below 41 years in the core areas of Ibadan. This is not surprising since most of the buildings are even older than the 41 - 60 age group (See Table 3.2).

Table 3.2 CHARACTERISTICS OF RESPONDENTS BY AGE

RESIDENTIAL DISTRICT	AGE GROUP				TOTAL
	0-20	21-40	41-60	Above 60	
High Density	-	1	47	84	132
Medium Density	2	11	88	77	178
Low Density	-	3	20	17	30
Total	2	15	155	178	350
%	0.6	4.3	44.2	50.9	100

Source: Field Survey, 1996

3.2.3 EDUCATION CHARACTERISTICS OF RESPONDENTS

The breakdown of the educational status of the respondents indicates that 102 people constituting 29.1% have no access to formal education. Majority of this people are, however, in the low income areas where they constitute more than 78% of the illiterate respondents. This posed some difficulties at the time of data collection, since most of the questionnaires have to be filled in by the researchers. Apart from this, it took the researchers longer time to explain each question to the respondents. There is no record of illiteracy in the high income districts. Majority of the respondents here (72.5%) have education up to the tertiary level. The highest level of education at the low income areas is secondary education while this level forms the least at the high income areas with 3.5% and 10.5% secondary school leavers respectively found in them (Table 3.3).

Table 3.3: CHARACTERISTICS OF RESPONDENTS BY EDUCATION LEVEL

RESIDENTIAL DISTRICT	EDUCATIONAL LEVEL				TOTAL
	No. Educ	Pry Schl	Sec Schl	Tertiary	
High Density	83	46	3	-	132
Medium Density	19	59	73	27	178
Low Density	-	-	9	29	40
Total	102	106	86	56	350
%	29.1	30	24.3	16	100

Source: Field Survey, 1996

3.2.4 OCCUPATIONAL CHARACTERISTICS OF RESPONDENTS

In terms of occupational structure of the respondents, 35.1% of all of them are into business or trading and this cuts across the residential districts. The G.R.A.'s and the planned estates, have the least number of business men (11.4%) compared with what obtains in the other two residential districts. There are more civil servants in the middle income area than other occupations (44.9%). This may explain why there are more retirees (captioned 'Others' in Table 3.4 below) in the middle income areas than the other districts put together. The ratio of public servants to Artisan in the low income area is 1.5:54.9%. While this may be staggering, it is not, however, unconnected with their literacy level (See Table 3.4).

Table 3.4 CHARACTERISTICS OF RESPONDENTS BY OCCUPATION

RESIDENTIAL DISTRICT	OCCUPATIONAL STRUCTURE					TOTAL
	Civil Service	Public Service	BIZ/ Trading	Artisan	Others	
High Density	4	2	52	73	1	132
Medium Density	80	16	57	13	12	178
Low Density	8	11	14	-	7	40
Total	92	29	123	86	20	350
%	26.3	8.3	35.1	24.6	5.7	100

Source: Field Survey, 1996

3.2.5 LONGEVITY OF RESIDENCY IN IBADAN

Majority of the respondents (72.3%) have lived in Ibadan for more than 40 years. This fact would seem to give credit to whatever information they supply because, the longer one stays in a place, the more one knows about that place and the more reliable the information one supplies about the place especially in terms of security of the area. Only 2 of the respondents have stayed more than 30 years in the GRAs and planned estates. The reason being that, these areas are relatively new with many still undeveloped plots in places like Old Bodija, Akobo and Oluyole Layout. In the core/indigenous areas where over 60% of its respondents have been residing there for more than 50 years, undeveloped plots are rare to come by (See Table 3.5).

Table 3.5 CHARACTERISTICS OF RESPONDENTS BY LONGEVITY OF OCCUPANCY (IN YEARS)

RESIDENTIAL DISTRICT	LENGTH OF STAY IN HOUSE (IN YEARS)						TOTAL
	0-10	11-20	21-30	31-40	41-50	OVER 50	
High Density	-	-	-	2	48	82	132
Medium Density	1	-	23	40	85	29	178
Low Density	10	18	9	3	-	-	40
TOTAL	11	18	32	45	133	111	350
%	3.1	5.1	9.1	12.9	38	31.7	100

Source: Field Survey, 1996

3.3 INTRA-URBAN VARIATIONS OF CRIME: A TEMPORAL ANALYSIS

Available records from the Nigerian Police show over 27 types of crime in Ibadan. These include robbery, murder, assaults, residential burglary, house breaking, rape and indecent assault, store breaking, unlawful possessions, etc. (See Table 3.6 below). However, there are differences in the rate at which each crime is committed in the city. Crimes like suicide, child stealing, demanding with menace, abortion and unnatural offences (i.e. crimes against nature or condemned by nature), though not totally absent, are uncommon in Ibadan. Theft and stealing, assaults, burglary, store-breaking, house breaking, assault and occultic harm, unlawful possession and false pretence, cheating and fraud are of

TABLE 3.6: TEMPORAL VARIATIONS OF CRIME IN IBADAN (1990-1996)

	OFFENCES	1990	1991	1992	1993	1994	1995	1996	TOTAL	%
1	Armed robbery	81	76	48	42	56	36	29	368	0.6
2	Murder	11	18	14	6	14	11	9	83	0.1
3	Theft and other stealing	2203	2584	2872	2768	2740	2952	1572	17691	31.1
4	Assaults	806	1244	1485	1407	1166	1134	770	8012	14.1
5	Demanding with menace	3	4	-	-	-	-	1	8	0
6	Child stealing	-	3	I	3	3	2	1	13	0
7	Kidnapping	21	18	35	36	27	20	36	193	0.3
8	Arson	14	9	10	4	10	8	3	58	0.1
9	Burglary	604	619	695	681	464	671	382	4116	7.2
10	House breaking	526	617	611	470	489	485	280	3478	6.1
11	Store breaking	433	538	470	439	577	501	380	3338	5.9
12	Unlawful possession	352	306	401	391	277	275	169	2171	3.8
13	Breach of public peace	130	222	225	165	152	149	70	1113	2
14	Grievous harm/wounding	60	33	16	17	12	34	21	193	0:3
15	Escape and rescue	5	4	6	-	8	3	-	26	0
16	Rape and indecent assault	61	87	77	91	99	86	42	543	1
17	False pretences, cheating & fraud	275	380	397	348	335	387	230	2352	4.1
18	Forgery and currency crimes	16	24	12	12	9	8	5	86	0.2
19	Suicide	-	4	-	I	-	-	-	5	0
20	Attempted suicide	-	-	2	1	-	-	2	5	0
21	Receiving stolen properties	11	10	5	9	-	5	6	46	0.1
22	S.U.D.	14	13	10	12	8	17	4	78	0.1
23	Abortion	1	1	3	1	1	1	-	8	0
24	Conduct	14	35	7	2	20	87	82	247	0.4
25	Unnatural offences	5	-	-	4	1	1	-	11	0
26	Assault and occultic harm	297	488	335	232	221	219	135	1927	3.4
27	Other offences	1340	1391	1743	1408	1873	1887	1162	10804	19
	TOTAL	7283	8728	9480	8550	8562	8979	5391	56973	
	%	12.8	15.3	16.6	15	15	15.8	9.5	100	

SOURCE: NPF Annual Crime Reports, Eleyele, Ibadan (1996).

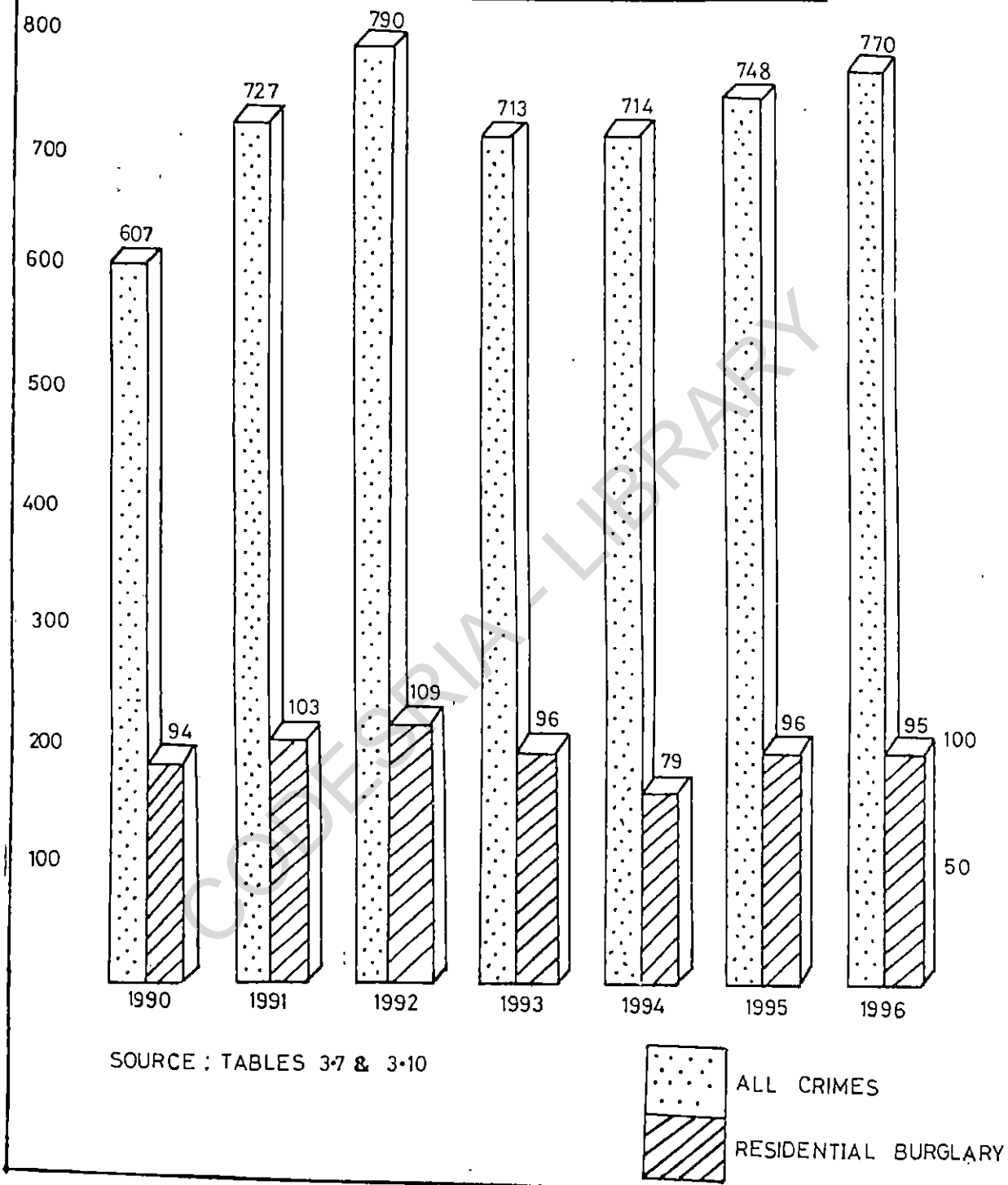
relative importance in the study area.

The period covered in this analysis of crime variations in Ibadan is between 1990 and 1996. The total crime reported to the police within this 7 years of analysis is 56, 973. The highest rate was recorded in 1992 with about 17% (9,480) of the total crime reported. The least was recorded two years before with a rate of 7,283, about 13% of the total crime reported. The 1996 rate may not be considered the least due to the fact that it covered only 7 out of the 12 months covered by the others. Compared with the 1990 rate, the 1996 rate has a mean of 770 while the former has a mean of 607. With the mean value, the 1996 rate is next to the 1992 rate in intensity. This temporal variation in crime is shown in Table 3.6 and depicted graphically in Fig. 3.1.

Two forms of variation could be seen in Table 3.6. The first is the "within crime variation" which refers to the variation that occurs within a particular crime from one year to the other and the second is the "between crime variation" which shows the form of variation occurring between one crime and the other crime in a particular year.

With regards to the within crime variations, it could be said that from 1990 to 1996, variations are minimal. Except in some few cases where particular crimes are non-existing in

FIG. 3·1 GROUP BARS SHOWING YEARLY AVERAGES OF ALL CRIMES AND RESIDENTIAL BURGLARIES IN IBADAN



SOURCE : TABLES 3·7 & 3·10

certain years, most of the crime rates are within the same range. For example, in the case of the 5 violent crimes of armed robbery, murder, burglary, house breaking and grievous harm and wounding, it is observed that there are little variations all the years through. The highest rate of 81 recorded in 1990 for robbery has a mean value of 6.75, while the lowest rate of 29 recorded for the same crime has a mean value of 4.12. The mean-value-range is thus 2.63 which is an indication of minimal variation. The same could also be said of burglary. With a maximum rate of 695 recorded in 1992, the mean value of burglary is 57.9 while its minimum rate of 382 recorded in 1996 has a mean-value of 54.6. The mean-value-range of 3.3 is an indication of little variation within burglary.

Little exceptions, however, exist in a few "passive crimes" like suicide, attempted suicide and demanding with menace. There are no records of crimes in certain years. For instance, from 1992 to 1995, there was no reported case of demanding with menace in the whole of Ibadan. In the case of suicide, there was no record in the first year, the third year and the last 3 years of analysis. Unnatural offences also fall into this category. There was no record in 1991 and 1992, and up till the time of data collection, none had been

recorded in 1996 in the whole of Ibadan. One could, therefore, say that the rate of crime in Ibadan is within the same range from year to year when the within crime variation is considered.

With regards to the between crime variation, a lot of variations could be seen in Ibadan. Theft and stealing is observed as the most important crime in the city with a total of 17691, i.e. 31.1% of the total crime rates committed in Ibadan within the period of analysis. From 1990 to 1996, this particular crime records the highest rate of single crime, apart from 'other offences' which is a combination of some crimes like perjury, bribery and corruption, gambling, narcotics, slave dealing, traffic offences, etc. Thus, when theft and stealing is compared with a crime like attempted suicide with a total of 5 which is 0.009% of the total crime rate, a great variation will be apparent. Other crimes of importance in Ibadan are assaults; burglary; house breaking; store breaking; false pretences, cheating and fraud; assault and occultic harm; and unlawful possession. These eight crimes including theft and stealing constitute 75.6% (43085) of the total crime rate in Ibadan during the period of analysis. In other words, about 8 out of every 10 crimes committed fall into this group of crimes while 4 out of every

10 crimes committed in this group are thefts and stealing (41.1%).

It is worthy of note that theft and stealing (including larceny) is a very serious crime in Ibadan. In each of the years, it records about 30% of the crime committed. In other words, 3 out of every 10 crimes committed every day are thefts and stealing. This, when compared with the rate of a crime like demanding with menace with a total crime rate of 8 (0.014% i.e. 1 out of every 10,000 crimes committed) will reveal a great between crime variation. Table 3:7 below depicts a better comparison.

Table 3.7: *PASSIVE CRIMES Vs ACTIVE CRIMES (in %)

No.	CRIMES	1990	1991	1992	1993	1994	1995	1996	TOTAL
1.	Theft & Stealing	30.2	29.6	30.3	32.4	32	32.9	29.2	31.5
2.	Assaults	11.1	14.3	14.8	16.5	13.6	12.6	14.3	14.1
3.	Burglary	8.3	7.1	7.3	8	5.4	7.5	7.1	7.2
4.	Child Stealing	0	0.03	0.01	0.04	0.04	0.02	0.01	0.02
5.	Unnatural Offences	0.1	0	0	0.05	0.01	0.01	0	0.02
6.	Abortion	0.01	0.01	0.03	0.1	0.01	0.01	0	0.01
	TOTAL	100	100	100	100	100	100	100	100

Source: Computed from Table 3.6

*Note: 1-3 "Active Crimes"; 4-6 "Passive Crimes"

These results show that while there is more of between crime variations, there is less of within crime variations in Ibadan in temporal dimensions. (See Table 3.7)

3.4 INTRA URBAN VARIATIONS OF CRIME: A SPATIAL ANALYSIS

As in the temporal variations, crime records were collected based on police divisions in Ibadan. Each of the 7 Police Divisions (noted above) in Ibadan is headed by a Divisional Police Officer (DPO) who is at the Divisional Headquarters. Each of the divisions is further subdivided into districts headed by a District Officer (D.O). A police district could have the status of a Police Station or a Police Post. The distribution of neighbourhoods/localities into police districts is done on the basis of contiguity. In other words, contiguous neighbourhoods are likely to fall under the same district headquarters. The implication of this is that the residential district to which a locality belong does not matter in the choice of its Police Division.

For example, Oluyole Layout, a low density residential area belongs to the Challenge Division where, also, are Felele, Ring road and Challenge which are all in the medium density district. Also, Ikolaba and Idi-Ape of the low density district are in the Agodi division where Iwo Road,

Orita-mefa (in the medium density) and Yemetu, Oje, Elekuro and Adeoyo (in the high density district) are and the rates of crimes collected in these areas are lumped together for the whole division.

Table 3.8 below is a spatial variation of crime in Ibadan between 1990 and 1996. Just as in the case of temporal variation, the spatial variation could be analysed in two ways, namely: the "within crime variation" which is the variation occurring within a particular crime from one division to the other and the "between crime variation" which refers to the form of variation occurring between one crime and the other within a particular division.

With regards to the within variations, police records show a lot of disparities in crime. For example, where Iyaganku records only 14 which is 3.8% of the total armed robbery in Ibadan within the period of analysis, Bodija division has a rate of 104 (i.e 28.3% of the robbery cases). The percentage range is 24.5 which is an indication of a wide variation. In the case of assaults, while Moniya records 257 (3.2%) cases, Iyaganku records 2556 (31.9%) which is 10 times that of Moniya. There is also a wide spatial variation in the cases of grievous harm and wounding. While Moniya records less than 1% (1), Eleyele has a record that is almost 120

TABLE 3.8: SPATIAL VARIATIONS OF CRIME IN IBADAN (1990-1996)

	OFFENCES	AGODI	IYAGANKU	MONIYA	CHALLENGE	BODIJA	APATA	ELEYELE	TOTAL	%
1	Armed robbery	31	14	46	74	104	42	57	368	0.6
2	Murder	16	18	22	2	2	4	19	83	0.1
3	Theft and other stealing	1822	3693	478	2077	3255	2413	3953	17691	31.1
4	Assaults	544	2556	257	500	1452	1553	1150	8012	14.1
5	Demanding with menace	-	2	-	-	-	-	6	8	0
6	Child stealing	-	5	1	-	2	3	2	13	0
7	Kidnapping	-	2	9	28	65	88	1	193	0.3
8	Arson	-	5	21	10	9	13	-	58	0.1
9	Burglary	772	763	310	657	545	412	657	4116	7.2
10	House breaking	290	626	202	773	696	567	324	3478	6.1
11	Store breaking	292	673	195	573	563	367	675	3338	5.9
12	Unlawful possession	217	465	42	558	335	260	294	2171	3.8
13	Breach of public peace	56	497	29	208	180	143	-	1113	2
14	Grievous harm/wounding	6	32	1	15	17	8	114	193	0.3
15	Escape and rescue	-	5	6	4	7	4	-	26	0
16	Rape and indecent assault	59	107	12	53	107	109	96	543	1
17	False pretences, cheating & fraud	273	839	70	64	96	207	803	2352	4.1
18	Forgery and currency crimes	-	23	13	8	14	9	19	86	0.2
19	Suicide	-	-	4	-	-	-	1	5	0
20	Attempted suicide	-	-	5	-	-	-	-	5	0
21	Receiving stolen properties	-	-	33	6	5	2	-	46	0.1
22	S.U.D.	-	-	-	10	29	39	-	78	0.1
23	Abortion	8	-	-	-	-	-	-	8	0
24	Conduct	-	-	-	16	101	130	-	247	0.4
25	Unnatural offences	-	-	11	-	-	-	-	11	0
26	Assault and occultic harm	285	1642	-	-	-	-	-	1927	3.4
27	Other offences	972	3005	384	2303	1493	1424	1223	10804	19
	TOTAL	5643	14972	2151	7939	9077	7797	9394	56973	
	%	9.9	26.3	3.8	13.9	15.9	13.7	16.5	100	

SOURCE: NPF Annual Crime Reports, Eleyele, Ibadan (1996).

times (114 i.e 59.1%) that of Moniya. Even with uncommon crimes like suicide and conduct (i.e crimes relating to morals), there are wide spatial disparities. Eleyele has a record of 130 (52.6%) conduct cases while the same crime is not even on record in Agodi, Iyaganku, Moniya and Eleyele. Certain crimes such as attempted suicide, abortion, unnatural offences and assault and occultic harm are even the exclusive prerogatives of divisions like Moniya, Iyaganku and Agodi.

The between crime variation is also very significant. Some divisions are more noteworthy in some crimes while they are not noticeable in some other crimes. For example, the bulk of armed robbery in Ibadan is done in Bodija (28.2% i.e 3 out of every 10 robbery cases) while this division loses this position to Moniya in the case of murder. It is also observed that while Apata division has the highest number of kidnapping and rapes and indecent assaults (i.e 45.6% and 20.1% respectively), it accounts for less than average for theft and stealing, store breaking and grievous harm/wounding.

With regards to the highest risk of offences, Bodija division is at the highest risk for armed robbery; Iyaganku for breach of public peace, false pretence, cheating and fraud, forgery and assault and occultic harm. Agodi, apart from leading in the case of burglary, is the only division

where abortion is committed. Moniya is a risky area for murder, arson and unnatural offences. Challenge leads others in house breaking and unlawful possession and Apata in child kidnapping and conduct. Furthermore, Eleyele contributes almost 60% of the grievous harm and wounding crime in Ibadan and also leads in the crime of theft and stealing (i.e. unarmed robbery, including larceny). On a final analysis, the spatial severity of crime in Ibadan could be arranged in a descending order as follows: Iyaganku (26.3%), Eleyele (16.5%), Bodija (15.9%), Challenge (13.9%), Apata (13.7%), Agodi (9.9%) and Moniya (3.8%). There is, however, no area that does not lead the others in one crime or the other.

Because of its importance to this study, a particular reference is made to residential burglary. Its importance lies in the fact that it is the crime that involves the breaking through of barriers into a residential building. Because of this definition, house breaking (which in police parlance means burglary in day time) is included in the analysis. Table 3.9 below displays both the spatial and temporal distribution of residential burglary in Ibadan.

It could be gleaned from Table 3.9 that there was a steady increase in the rate of residential burglary from 1990 to 1992, a fall in 1993 which continued in a greater dimension

in 1994 and then a rise a year later. This trend is more visible in the case of Bodija and Apata while in the others, there are little variations. Three of the divisions (Bodija, Iyaganku and Challenge) have total rates that are above average while Agodi, Eleyele, Apata and Moniya's are below average.

Table 3.9: SPATIO-TEMPORAL VARIATIONS OF *RESIDENTIAL BURGLARY IN IBADAN (1990-1996)

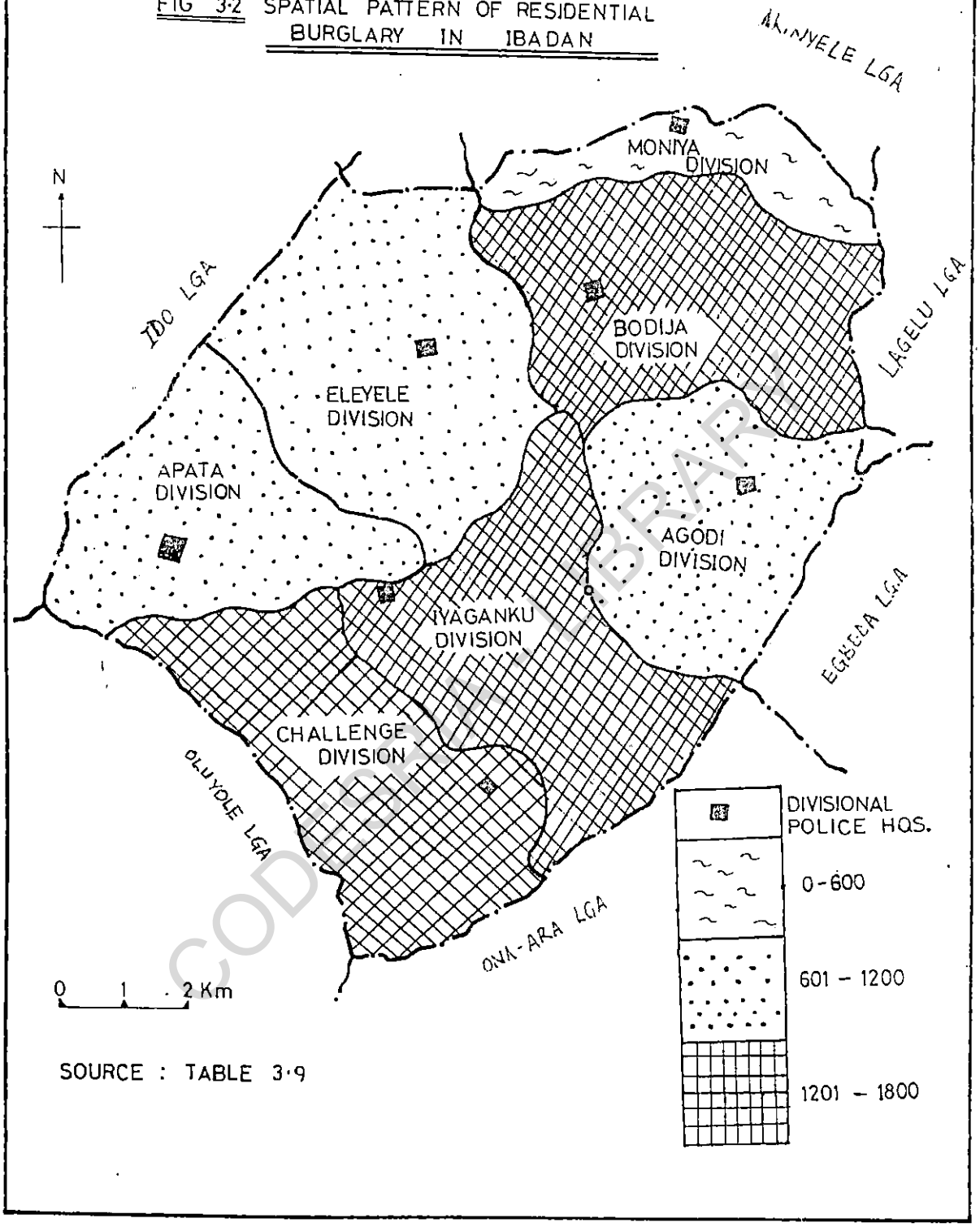
DIVISION	1990	1991	1992	1993	1994	1995	1996	TOTAL	%
Agodi	166	155	182	271	125	97	66	1062	14
Bodija	118	164	288	201	181	195	94	1241	16.3
Moniya	62	76	63	56	98	113	44	512	6.7
Challenge	120	242	211	225	188	273	171	1430	18.8
Apata	129	177	232	136	79	129	97	979	12.9
Iyaganku	364	303	212	140	154	140	76	1389	18.3
Eleyele	171	119	118	122	128	209	114	981	12.9
TOTAL	1130	1236	1306	1157	953	1156	662	7594	
%	14.9	16.3	17.2	15.2	12.5	15.2	8.7	100	

Source: NPF Annual Crime Reports, Eleyele, Ibadan (1996)

* Residential Burglary = Burglary + House Breaking

Moniya records the lowest cases of residential burglary in all the years except 1995 when it recorded more cases than Agodi division. The spatial pattern is depicted in Fig. 3.2.

FIG 3·2 SPATIAL PATTERN OF RESIDENTIAL BURGLARY IN IBADAN



SOURCE : TABLE 3·9

This spatial variation can be better appreciated if it is considered according to the different localities in Ibadan. This is shown by the response of people to the occurrence of residential burglary in their locality and presented in Table 3.10 below. The table shows that Sango, Ekotedo, Agbowo, Oke-Ado, Orogun, Elekuro, Nalende, Yemetu, Sabo, Mokola and Felele have incidence of residential burglary that are above average while the other localities score below average. It is noteworthy that Sango with the highest incidence (48) is in the Bodija division while Jericho that records the least is in Eleyele division. This is an indication of complementarity in the two data. Furthermore, the average rates for the high, medium and low density districts are 17.3, 24.5 and 11.4 respectively. Only the medium density residential district has an average that is greater than the overall average (19.5). This means that the incidence of residential burglary is greater in the high density than the low density areas but greatest in the medium density areas.

An hypothesis was tested to determine the relationship between the rates of crime and the socio economic status of the localities (refer to 1.6.3 for the choice of variables). The test shows a negative correlation of -0.3 with a coefficient of determination i.e $rs^2 = 0.09$. The negativity

TABLE 3.10: INCIDENCE OF RESIDENTIAL BURGLARY IN LOCALITIES

	LOCALITY	INCIDENCE	%	RESIDENTIAL DISTRICT
1	Oje	15	2.6	
2	Mapo	12	2.1	
3	Agugu	17	2.9	
4	Dugbe	9	1.5	HIGH
5	Nalende	21	3.6	DENSITY
6	Beere	16	2.7	
7	Yemetu	21	3.6	
8	Agbeni	19	3.3	
9	Elekuro	25	4.3	
10	Kudeti	16	2.7	
11	Adeoyo	19	3.3	
	Sub Total	190	32.6	
12	Iwo Road	31	5.3	
13	Sabo	19	3.3	
14	Oke Ado	28	4.8	
15	Apata	15	2.6	
16	Mokola	26	4.5	MEDIUM
17	Sango	48	8.2	DENSITY
18	odo-Ona	15	2.6	
19	Eleyele Water Works	10	1.7	
20	Ekotedo	32	5.5	
21	Challenge	16	2.7	
22	Felele	30	5.1	
23	Agbowo	35	6.0	
24	Oritamefa	13	2.2	
25	Orogun	25	4.3	
	Sub Total	343	57.7	
26	Ikolaba	13	2.2	
27	Old-Bodija	13	2.2	LOW DENSITY
28	Oluyole Layout	14	2.4	
29	Idi-Ape	14	2.4	
30	Jericho	3	0.5	
	Sub Total	57	9.7	
	GRAND TOTAL	584	100	

SOURCE : Field survey, (1996)

of the correlation index shows an inverse relationship between crime rates and socio-economic status of the localities i.e. the higher the socio-economic status, the lower the rates of crime. The reason for this may be as a result of the higher level of sophistication in crime preventive devices used in the high income residential areas. This is discussed in detail in later chapters.

Furthermore, given the negative relationship, socio-economic status has only 0.09 (i.e 9%) effect on the crime rates of the localities, this is a very weak negative relationship. The hypothesis when subjected to test even at 5% significance level leads to the acceptance of the null hypothesis (Ho) at the expense of the alternative (See Appendix V(a) for the detailed analysis). In support of the result of the test, more people perceive the low density areas as safer than either of the two other districts. In Table 3.11 below, 160 (i.e 46%) of the respondents perceive the low density areas of Jericho, New Bodija and Ikolaba as the safest in Ibadan, while 126 (36%) and 64 (18.3%) see the medium and the high density areas respectively, as being the safest. Table 3.12 does not even record any low density area as being dangerous as respondents would even prefer to live in them if they have the choice.

Table 3.11 SAFEST LOCALITIES IN IBADAN

LOCALITY	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Agugu	9	-	-	9
Nalende	21	-	-	21
Yemetu	2	-	-	2
Elekuro	10	-	-	10
Adeoyo	16	6	-	22
Orita-mefa	18	5	-	23
Felele	5	16	10	31
Apata Ganga	16	39	-	55
Eleyele	-	17	-	17
Jericho	17	24	16	57
New Bodija	18	28	10	56
Ikolaba	-	43	4	47
TOTAL	132	178	40	350

Source: Field Survey, 1996

In all, 12 localities were declared as being the safest, Jericho, New Bodija and Apata Ganga have the highest respondents while Mokola, Sabo and Agbeni are seen as the most dangerous localities for anybody to live in (See Table 3.12).

Table 3.12: MOST DANGEROUS LOCALITIES IN IBADAN

LOCALITY	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Agbeni	8	32	-	40
Kudeti	11	4	-	15
Dugbe	10	-	3	13
Yemetu	-	8	-	8
Sango	15	-	2	17
Mokola	42	76	13	131
Agbowo	-	31	-	31
Sabo	18	26	20	64
Iwo Road	3	-	-	3
TOTAL	107	177	38	322

Source: Field Survey, 1996

3.5 MONETARY AND SOCIAL COSTS OF CRIME

Criminal activity, anywhere, imposes two types of costs and these are monetary and social costs and Ibadan is no exception.

With regards to monetary cost, crime has, on several occasions, led to the destruction of properties and of lives or caused injuries for which a considerable amount of money is spent to treat. Table 3.13 presents the value of property damaged or lost due to residential burglary during the period of analysis.

Table 3.13: VALUE OF PROPERTY DAMAGED OR LOST TO RESIDENTIAL BURGLARY (IN ₦)

VALUE OF PROPERTY (₦)	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
≤1000	16	18	-	34
1001-2000	12	6	-	18
2001-3000	-	-	-	-
3001-4000	-	-	-	-
4001-5000	-	28	-	28
Above 5000	-	21	11	32
TOTAL	28	73	11	112

Source: Field Survey, 1996

It is observed from Table 3.13 above that 46.4% of the respondents lost between ₦500 and ₦2000 to residential burglary. Majority of people in this category are in the low income and middle income groups. The amount, though little, cuts deep into their meagre income. Precisely 53.6% of the respondents lost properties worth over ₦4000 to residential burglary at one time or the other. The greatest loss is, however, felt in the middle income group with (65.1%) 73 people having suffered loss at one time or the other.

Residential burglary has also been known to cost peoples' lives on several occasions. A total of 57 lives were lost to residential burglary during the period of analysis as shown in Table 3.14.

Table 3.14: LOSS OF LIVES DUE TO RESIDENTIAL BURGLARY

RESIDENTIAL DISTRICT	NO. OF RESPONDENTS		TOTAL
	YES	NO	
High Density	6	126	132
Medium Density	37	141	178
Low density	8	32	40
TOTAL	51	299	350

Source: Field Survey, 1996

From Table 3.14 above, it is observed that 51 (14.6%) respondents agree that they have at one time or the other lost some relatives to residential burglary. Very few of this happened in the low income areas with only 4.5% (6) of its respondents affirming loss of lives; 20% (8) in the high income group and a little above that (37, i.e 20.8%) in the middle income group. The reason for the low cases in the high density area may not be unconnected with the fact that, less rate of burglary is recorded there.

With regards to the social cost of crime, it is observed that crime is the chief reason for peoples' change of residence. Close to 30 respondents agree to have left their former places of residence due to the incidence of crime in the place. Infact, it also affects the choice of building form and location. People have been known to locate their

buildings in areas where they have a feeling of security. It is also the chief reason for the location of some new houses in Akobo area of Ibadan. Responding to a question on the reason for choice of building location and pattern, respondents gave several reasons like availability of land, inherited property, Nearness of location to working place, serenity of the environment, availability of infrastructure and safety purposes. About 10% of the people ascribe the location of their dwelling to the need for security. Majority of this people, however, are in the low density districts (55.5%). Security consciousness is not all that important in the high density districts.

Another social cost of residential burglary in Ibadan is the feeling of insecurity that the people have about their environment. This feeling or 'fear of burglary syndrome' is the major reason why so many houses are bizarre in outlook due to undue protective measures, and this is of particular interest in this study. Table 3.15 gives a break down of peoples' perception of their environment due to burglary.

Table 3.15: FEELING OF INSECURITY

RESIDENTIAL DISTRICT	NO. OF RESPONDENTS		TOTAL
	YES	NO	
High Density	121	11	132
Medium Density	79	99	178
Low density	28	12	40
TOTAL	228	122	350

Source: Field Survey, 1996

From the table above, 34.9% (122) of the respondents in Ibadan feel insecure in places where they stay as a result of crime. Majority of this people (99, 81.1%) are however in the middle income group where crime rate is known to be highest (see Table 3.10). Fear of burglary is, however, lowest in the low income area where only 8% (11) of the respondents agree to have feelings of insecurity. The aftermath of this is either to adapt to the situation or move out. A lot of respondents indicated the desire to live outside Ibadan if they have the choice (see Table 3.16).

Table 3.16: A WISH TO LIVE OUTSIDE IBADAN

RESIDENTIAL DISTRICT	NO. OF RESPONDENTS		TOTAL
	YES	NO	
High Density	9	123	132
Medium Density	33	145	178
Low density	1	39	40
TOTAL	43	307	350

Source: Field Survey, 1996

From the table, it is observed that 43 respondents showed indication to live outside Ibadan. Majority of this people are in the middle income district. Ilorin, Akure, Ile-Ife and Lagos were given as likely destinations.

CHAPTER FOUR

PLAN, DESIGN, CONSTRUCTION AND SECURITY CONSCIOUSNESS: A TIME DIMENSIONAL ANALYSIS

4.1 INTRODUCTION

The arrangement of space, to a large extent, affects man's activities, just as man's activities affect spatial configurations.'' This explains the subject matter of man - environment interraction. From time immemorial, man has structured his environment - social or physical, to satisfy his physical, social and psychological whims and caprices. He has designed parks and lots to engender social interactions and comforts, he has used arts and architecture to improve the aesthetics of his environment and designed space and structures (no matter how crude) to protect himself.

On the other hand, the environment, variously altered by man, also alter man - positively or negatively. Wright (quoted in Gibson, 1977) puts this succinctly when he wrote that "first we mould our cities and then our cities mould us". Wright was saying that it is possible to influence man's attitude by firstly influencing his environment. Since our environment can influence our behaviours and attitudes, then, it could be designed to inhibit crime. This idea will be

better appreciated when we consider the fact that a culprit has to move through space to reach his or her target. The arrangement of this space, the target inclusive, will, to a large extent, determine the success of his goal.

Any form of environmental design that will make the goal of an intruder unachievable (or at the very worst, delayed) is a crime preventive measure and the whole idea of crime prevention through environmental design (CPTED) revolves round this.

From time past, this idea has been in practice implicitly or explicitly in Ibadan, through building design and construction, street planning and many other practices and today, more and more sophisticated (or complicated) strategies are being employed. All these are examined in this chapter. Also examined here is the effectiveness of the security devices and a discussion on the associated costs of these security devices.

4.2 AGE AND TYPES OF HOUSING IN IBADAN

There are variations in the ages of residential buildings in Ibadan; just as in human beings, there are as many ages as there are buildings and this may pose a little complication to analysis. The pattern of analysis adopted in this study,

however, allows for only minimal complications. Ibadan has been zoned into three residential districts of high density, medium density and low density with each density having more-or-less similar characters. Table 4.1 below shows the age of buildings according to residential districts.

The oldest buildings in Ibadan are found in the core, traditional areas, all of which are in the high density residential district. In this district, no building is below 40 years with some as old as 150 years. Some of the respondents claim that their buildings have passed through about 3 generations!

Table 4.1: AGE OF BUILDINGS (IN YEARS)

AGE (IN YEARS)	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
⩽10	-	-	16	16
11-20	-	-	14	14
21-30	-	52	8	60
31-40	-	31	2	33
41-50	51	56	-	107
> 50	81	39	-	120
TOTAL	132	178	40	350

Source: Field Survey, 1996

Indeed, the façade of these buildings is not at variance with this declaration. Majority of the houses in Nalende, Oranyan, Isale Osi, etc, are dilapidated (Plate 12). At a glance, one may jump to the conclusion that they are abandoned, only to be stunned at seeing children and old women trooping out of such houses.

The next in age hierarchy, naturally, is the medium density residential buildings. All the houses in this density are aged from 21 to greater than 50 years, with no house younger than 21 years. As the ages increase, the number of buildings reduce. This is understandable, since the zone is transitional, and occupied by migrants who have for long embraced settlers status. Other residents of this zone are indigens who have graduated from a near slum life at the core areas to establish residents at the relatively more modern areas. This movement and settling down took place from about 30 years ago.

The youngest buildings and of course the newest and most modern buildings in Ibadan are found in the high income, low density residential districts. No building in the zone is up to 41 years with the majority of them (75%) within the age of 20 years and below. The buildings are modern (Plate 13) and streets are well layed-out.

Most of these buildings have remained as described above since their completion, with the exception of very few ones (26.9%) that have undergone remodelling as a result of burglary (See Table 4.2).

Table 4.2 REMODELLING OF BUILDING DUE TO BURGLARY

RESIDENTIAL DISTRICT	NO. OF RESPONDENTS		TOTAL
	YES	NO	
High Density	6	126	132
Medium Density	80	98	178
Low density	8	32	40
TOTAL	94	256	350

Source: Field Survey, 1996

Even with this rate, only the medium density district has close to 45% of its buildings remodelled, and this improves their appearances. Majority of buildings in other zones still carry their old appearances. The case of the low density buildings is explicable by the fact that, they are still new and modern and any new form would have been conceived and implemented along with the construction. The low income residential district has less than 5% of its buildings remodelled and this is responsible for the vast number of dilapidated buildings observable in the area (Plate 12).

Building remodelling takes different forms. Most of the buildings especially those in the low income districts and some in the middle income districts are remodelled for the purpose of improving their aesthetic quality. There are a few of these houses in Beere, Agugu, Kudeti, Oje and Ekotedo. The case of Ekotedo is even clear for the fact that it is an adjoining locality to Dugbe, which is within the CBD of Ibadan. Due to the constant congestion at Dugbe, a lot of the working class people have moved their residences and consequently their businesses to Ekotedo. For Ekotedo to adequately play this role, therefore, some of the buildings have to be remodelled. The remodelling was for two purposes, one is to improve aesthetics and thus command higher rents and the other is to provide for safety against burglary in the houses that now serve for both residential and commercial purposes. A drive from Dugbe through Alawo to Queens Cinema will show a lot of these buildings.

The form of building remodelling is categorised into major and minor (Table 4.3). Major remodelling which takes 36% of all remodelling done involves change of building structures - windows, doors, staircases, balconies, roof styles; addition of shops, etc.

Table 4.3: FORM OF BUILDING REMODELLING

RESIDENTIAL DISTRICT	FORM OF REMODELLING		TOTAL
	MAJOR	MINOR	
High Density	-	6	6
Medium Density	32	48	80
Low density	2	6	8
TOTAL	34	60	94

Source: Field Survey, 1996

While none of the houses in the core area went through any form of major remodelling for the purpose of preventing burglary; 100% of the remodelled ones have minor changes in the form of raising or strengthening the fence, adding burglary proofs to building openings, increasing surveillance opportunities, etc. Middle income buildings top the list in both major (94%) and minor (80%) remodelling and these cut across all housing types in the study area.

The housing types observed in Ibadan could be grouped into five. These are: the Brazilian housing type (i.e the rooming apartments or face-me-I-face-you); flats; bungalows; duplex and storeyed buildings (Table 4.4).

Table 4.4: HOUSING TYPES IN IBADAN

HOUSING TYPES	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Rooming Apartments	126	58	-	184
Flats	6	73	6	85
Bungalows	-	10	21	31
Duplex	-	3	9	12
Storeyed Buildings	-	34	4	38
TOTAL	132	178	40	350

Source: Field Survey, 1996

The rooming apartment type of residential buildings, as the name implies, are built in single rooms, all rooms open to a long, sometimes, wide corridor used by every occupant of the apartments. The rooms directly face each other from opposite sides. More than half of the buildings surveyed (52.6%) fall into this category, with 68.5% of them found in the low income, high density residential districts while the high income, low density district is totally devoid of them. This form of housing is characteristic of the low income group, with a family of up to five living in a single room; thus leading to severe overcrowding for this type of housing especially when it is observed that some of the buildings surveyed have more than 10 rooms. 72.3% of these buildings

have 6 rooms and above and majority of them are in the high density residential district where they constitute nearly 70% of all the rooming apartments there as shown in Table 4.5 below.

Table 4.5: NUMBER OF ROOMS IN ROOMING APARTMENTS

RESIDENTIAL DISTRICT	NO. OF ROOMS			TOTAL
	0 - 5	6 - 10	OVER 10	
High Density	39	68	19	126
Medium Density	12	33	13	58
Low Density	-	-	-	-
TOTAL	51	101	32	184

Source: Field Survey, 1996

The flats are better housing types than the rooming apartments in terms of design and occupancy ratio. They are often referred to as single family housing flats. Flats could be in one or more blocks. It is observed from Table 4.4 above that 80% of the flats observed in Ibadan are found in the medium density residential district. They are thus characteristic of the middle income group. The number of rooms in a flat could be between 5 and 10 while the number of flats in a block or an estate could be between 3 and 9 (Table 4.6) or even more depending on the height of the blocks.

The low density residential districts have over 30% of its blocks made up of between 7 and 9 flats. Majority of the blocks in the middle income, medium density residential area (82%) and all those in the low income, high density residential area have less than 4 flats.

Table 4.6: NUMBER OF FLATS

RESIDENTIAL DISTRICT	NO. OF FLATS				TOTAL
	0 - 3	4 - 6	7 - 9	OVER 9	
High Density	6	-	-	-	6
Medium Density	60	13	-	-	73
Low Density	3	1	2	-	6
TOTAL	69	14	2	-	85

Source: Field Survey, 1996

The bungalow types of housing are structured to occupy single families. Some are found in the middle income districts where more of the public servants/civil servants reside, but majority of them are in the low density residential district. Table 4.4 shows that less than 10% of the houses surveyed in Ibadan belong to this type and out of this, 68% are in the low density residential district, and none in the high density district.

Duplexes are the highest in the hierarchy of single family housing types. They belong to the luxury type of housing characteristic of the high income districts. Very few of this housing type was observed in Ibadan, (about 3%) and out of this number, 75% are in the low density, high income district of Ibadan and none in the high density, low income district.

Storeyed buildings are made up of several storeys or floors, and thus are of high rising type. One storeyed buildings (i.e. buildings with 2 floors) were not included in this group. Storeyed buildings are not common features in the low density districts, the very few found in them are almost in adjoining localities. Nearly 90% of those observed in Ibadan are in the middle income districts with none in the low income districts (as shown in Table 4.4).

Some of the houses observed have multiple uses. Table 4.7 shows that 38.3% of the houses observed are used for other purposes apart from their use for residential purpose, 28% (98) of all the houses observed are used for commercial purposes (alone) alongside residential use, 44.8% in the high density, 49% in the medium density and 6% in the low density. It is common feature in the high and medium density areas for retailing shops, saloons, artisan shops, etc to be located at

the frontage of buildings facing the access roads. This is characteristic of the buildings that dot the left and right sides of Ekotedo, and also Queen Elizabeth road in Mokola (see Plate 6). Some of the residents of the low density districts have also turned their garages into shops and stores for retailing purposes, these are common features in Kongi in Bodija Estate.

Some residential buildings also combine educational status with their primary status. All these are observed in the medium density areas where lower floors of buildings or main buildings are used as primary/nursery schools or for day-care services while the upper floors or boys quarters are used as residences by the proprietor and members of his staff. Examples are in Agbowo, Iwo road and Basorun.

Table 4.7: USE OF HOUSE IN IBADAN

USE OF HOUSE	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Residential/Commercial	44	48	6	98
Residential/Educational	-	33	-	33
Residential/Recreational	-	3	-	3
Residential only	88	94	34	216
TOTAL	132	178	40	350

Source: Field Survey, 1996

Very few of the houses are used for recreational purposes (less than 1%) and all these houses are observed in the medium density residential areas, where some residential houses are used for public video shows. There are a few of these at Agbowo and Orogun. The other houses observed are purely residential and these constitute more than 60% of all the houses surveyed. 'Residential only' buildings constitute 85% of the houses observed in the low density areas, 52.8% of the medium density and 66.7% of those in the high density districts (see Table 4.7).

Apart from the use to which houses are put, majority of the houses observed have one or more activities located close to them. 299 (i.e. 85.4%) of the houses observed fall into this category; over 90% of the high density buildings, 91% of the medium density buildings and 45% of the low density buildings, have activities located close to them (see Table 4.8).

Table 4.8: ACTIVITIES LOCATED CLOSE TO HOUSE

TYPE OF ACTIVITY	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
None	13	16	22	51
Educational	-	40	4	44
Place of Worship	41	14	6	61
Sports	-	-	-	-
Oba's Palace	3	-	-	3
Govt. offices	6	-	-	6
market	22	32	-	54
Shops	38	56	7	101
Filling Station	9	20	1	30
TOTAL	132	178	40	350

Source: Field Survey, 1996

The activities observed are educational, places of worship, sports, Oba's palace, government offices, markets, shops and shopping complexes and filling stations. Shops take the highest percentage (28.9%) of these buildings. Some houses, in Oja-Oba are closely located to the Olubadan's palace while some in Mapo are located closely to the Ibadan North-East Local Government Secretariat at Mapo and the F.M Radio Station around the same place. Some of these activity areas are as close as 10m to the residential buildings. (see Table 4.9).

Table 4.9: DISTANCE OF ACTIVITIES FROM HOUSE (Metres)

DISTANCE(In Metres)	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
≤ 10	51	65	2	118
11-20	18	22	11	51
21-30	24	45	5	74
31-40	20	18	-	38
Above 40	6	15	-	21
TOTAL	119	165	18	302

Source: Field Survey, 1996

About 60% of the buildings observed in Ibadan are within a radius of 20 metres to one activity or the other. While very few buildings (7%) are more than 40 metres from an activity. The implication of distance of activity area to buildings, the use of buildings and the housing type on the security of the buildings will be discussed later in this chapter.

4.3 STREET DESCRIPTION

Streets in Ibadan, take one of four forms. There are major streets, access or minor streets, cul-de-sacs or closes and streets with no defined road system as shown in Table 4.10 below. The major streets constitute 31.7% of the buildings surveyed and more than half of these (59.5%) are found in the

medium density areas. Some of the major streets have well layed out road system, with good lighting system, especially where they link a locality with a functional area of Ibadan. Examples are the Queen Elizabeth road

Table 4.10: MAJOR STREET TYPES BY RESIDENTIAL DISTRICTS

STREET TYPES	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Major Street	32	66	13	111
Access Street	57	110	21	188
Cul-de-sac	-	2	6	8
No defined route	43	-	-	43
TOTAL	132	178	40	350

Source: Field Survey, 1996

that links Mokola with the University College Hospital; the Obafemi Awolowo Way that links Oke-Ado through Oke-Bola with Dugbe, the CBD; the Ring Road - Liberty Stadium, - Oke-Ado road, the Iwo Road that leads to gate, etc all are major roads in medium density areas. Some of the roads have security check points located at irregular intervals and manned by security agents especially at night. Some of them, however, do not have functional street lights (see Tables 4.11 and 4.12).

Table 4.11: CHARACTERISTICS OF STREET

TYPES OF STREET SECURITY	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Gates/Barriers	42	96	30	111
Bumps	120	101	14	188
Security Check Point	-	48	6	8
Warning Signs on Restrictions	31	57	-	43
TOTAL	132	178	40	350

Source: Field Survey, 1996

The access roads are more common in the medium and low density areas where they directly lead to buildings. A total of 188 buildings out of the 350 surveyed are located along access roads.

These access roads are about 12m wide of 2 lanes with walkways and drains at one or both sides. Most of the access roads in the low density districts have bumps (or sleeping policemen), street gates (Plate 10) with warning inscriptions. The lighting system is also commendable. With the Petroleum Trust Fund (PTF), most of the access roads in Mokola have been put to better shapes and facilitated with functional street lights. This, notwithstanding, very few of the streets observed in Ibadan (32.3%) have functional street lights.

Table 4.12: AVAILABILITY OF FUNCTIONAL STREET LIGHTS

RESIDENTIAL DISTRICT	NO. OF RESPONDENTS		TOTAL
	YES	NO	
High Density	24	108	132
Medium Density	58	120	178
Low density	31	9	40
TOTAL	113	237	350

Source: Field Survey, 1996

Cul-de-sacs (or closes) are common features at the low density districts. Their characteristics are also similar to those of the access roads. 75% of the closes observed are found in the low density districts.

There are also streets with no defined route. More than 30% of the houses surveyed in the low income, high density district of Ibadan fall into this category (see Plate 11). The houses have a clustering pattern, and are of few metres apart. The narrow gaps between buildings often dirty and winding are used only by pedestrians as streets; devoid of street facilities.

The type of street, the characteristic features of the streets and the availability of functional street lights all have implications on the security of the residences, these are examined in the next section.

4.4 TEMPORAL ANALYSIS OF SECURITY DEVICES BY HOUSING TYPES

Human beings have sometimes been referred to as a selfish, egocentric animal, concerned only with his security, without minding the security of others. Without any attempt at justifying or disproving this statement, one needs to understand that a rational being must use his initiative to manipulate his environment in order to effect specific social or economic goals. One prominent social goal - crime reduction - has been of great concern to man from ages and man has widely used his initiative to effect this goal the world over, Ibadan being no exception.

In the study carried out within the city of Ibadan, several security devices were observed on buildings and streets. These include: the burglar proofing system, fencing system, surveillance system, the alarm system, the use of security and guard dogs, the use of human guards, the lighting system, the electronic monitoring devices (e.g. CCTV) and the African traditional protective devices (ATPDs) (Table 4.13).

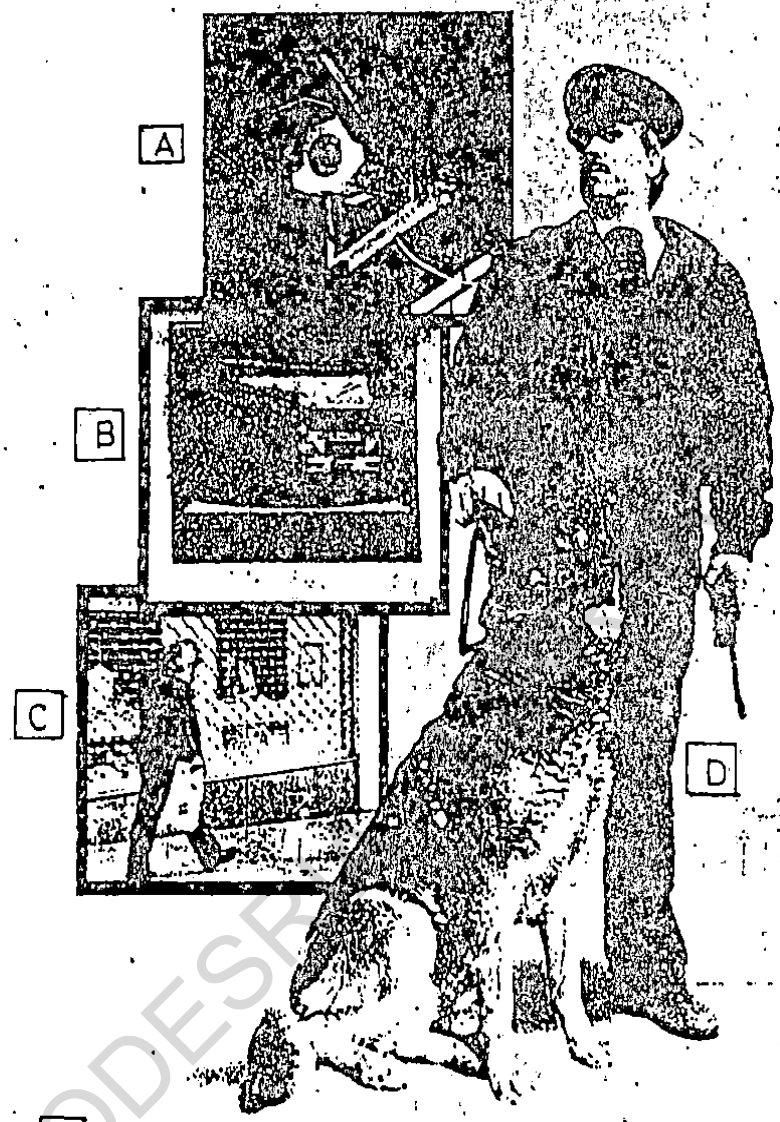
The intent in this section is to examine these security devices and their uses over time in Ibadan.

Table 4.13: SECURITY DEVICES AVAILABLE IN HOUSES

SECURITY DEVICES	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
ATPDs	124	96	-	220
Burglary Proof	51	173	37	261
Fencing	11	89	31	131
Alarm System	-	-	18	18
Surveillance	2	136	22	160
Guard Dogs	-	-	16	16
Security Dogs	11	76	13	100
Human Guard	-	32	26	58
Lighting	6	48	30	84
CCTV	-	-	2	2
TOTAL	132	178	40	350

Source: Field Survey, 1996

In all the 350 houses surveyed in Ibadan, there is no single house that is not facilitated with one security device or the other. Some houses even have more than one device installed in them. There are, however, variations in the type of device used from one district to the other and from one locality to the other.



A = CCTV Camera
B = CCTV Monitor
C = Roll-down steel gate
D = Guard with a trained dog

PLATE 1 : Some security devices

AFRICAN TRADITIONAL PROTECTIVE DEVICES (ATPDs)

ATPDS is an African method of ensuring safety of oneself and of one's properties. Its most prominent use is in form of charms, visible or invisible. The visible charms are more common, they are made of different types of objects or materials like brooms, gourds, animals' horns or hoofs, feathers, cowries, snail shells, threads tied to a bundle, round pebbles, the head part of birds, etc. These common objects, after being smeared with blood or painted and used for a very long time, later put on weird appearances that are enough to scare off any stranger. These charms are usually hung on the lintel of the main entrance to the house or on all the openings of the house. There are others that are not visible at all, either hidden by the users in some parts of the house or made of powdery or watery substances that had long been sprinkled on the surroundings of the house.

ATPDs are prominently used in Ibadan. Of the 350 houses surveyed, 220 (i.e over 60%) of them were observed to have this form of protection. More than half of the houses are, however, in the high density, low income residential district of Ibadan while 43.6% are in the middle income district and none observable in the low density, high income districts. The device is most important in the core/traditional areas

where about 94% of its buildings are protected with ATPDs.

The origin of ATPDs could be traced to the time when man began to have a feeling of insecurity; and, suspecting his neighbours, he deviced a means of protecting himself and all that belonged to him. Interviews revealed that, at its inception, ATPDs were so big that any stranger would easily notice them upon entrance into the building. Perhaps, this gave rise to the view that ATPDs were mere scare tactics deviced by talented Africans to scare away intruders from their properties. As the years went by, the size of the objects reduced and today, a visible charm could be the size of a needle while invisible ones have reduced to mere incantations. Though not observed in any of the luxurious, low density residential buildings, there are possibilities that such tiny charms could be hidden under carpets.

A lot was said about the effectiveness of this device. While some hail it as a very effective device, some other people reduced it to mere myths and scare tactics. This is discussed in a later section of this chapter.

BURGLARY PROOFING SYSTEM

The use of burglary proofs as a system of curbing residential burglary could be dated to the 1950s, when man began to have valuables like jewels and cocoa produce kept in

the house. It was thought then, that there was the need to physically prevent the entrance of burglars into the house and so the ATPDs were seen as inadequate to do this. The burglar proofing system could perhaps be described as the earliest form of CPTED since ATPDs have more of psychological effect on people. The earliest attempt at burglar proofing in Ibadan was in terms of designing buildings with very small windows as a measure to prevent an easy access into both the living rooms and the bedrooms through the windows. These types of windows are still observable in the core/traditional areas of Ibadan where most of the buildings have passed through up to three generations. See Table 4.14.

Table 4.14: MATERIALS FOR BURGLAR PROOFING

MATERIALS	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Small Windows	13	-	-	13
Planks/Woods	11	23	-	34
Wire Mesh	21	42	-	63
Iron/Steel Works	6	106	33	145
Concrete Mullions	-	2	4	6
TOTAL	51	173	37	261

Source: Field Survey, 1996

In the high density residential areas made up of the traditional buildings of the rooming apartments (face-me-I-face-you) 25.5% of the houses that are burglar proofed use the small window system.

There are several of such buildings in Agugu, Nalende, Isale-Osi, Beere, Kudeti, Mapo and some other core areas in Ibadan. A typical bedroom window in such areas has an area of 2500cm^2 (50x50cm). Apart from the small size of these windows, they are located high up on the walls (see Plate 2) at about 3 metres from the ground, in an attempt to completely remove them from the reach of intruders. The rate of crime at this period, showing from interviews was very minimal. From about 1960, people became conscious of the need for proper ventilation in residential buildings. Windows were, therefore, increased in size. In other to still achieve the goal of crime prevention, planks were placed at regular intervals at the windows in order to make it difficult for intruders to gain access into the house through the windows. 13% of the houses observed (see Table 4.14) in the study area still retain planks on their windows, but they are all in the rooming apartments type of buildings found in the core and transitional areas. While some buildings in Beere, Foko, Oke-Ado, Malefalafia, etc have had their planks replaced with

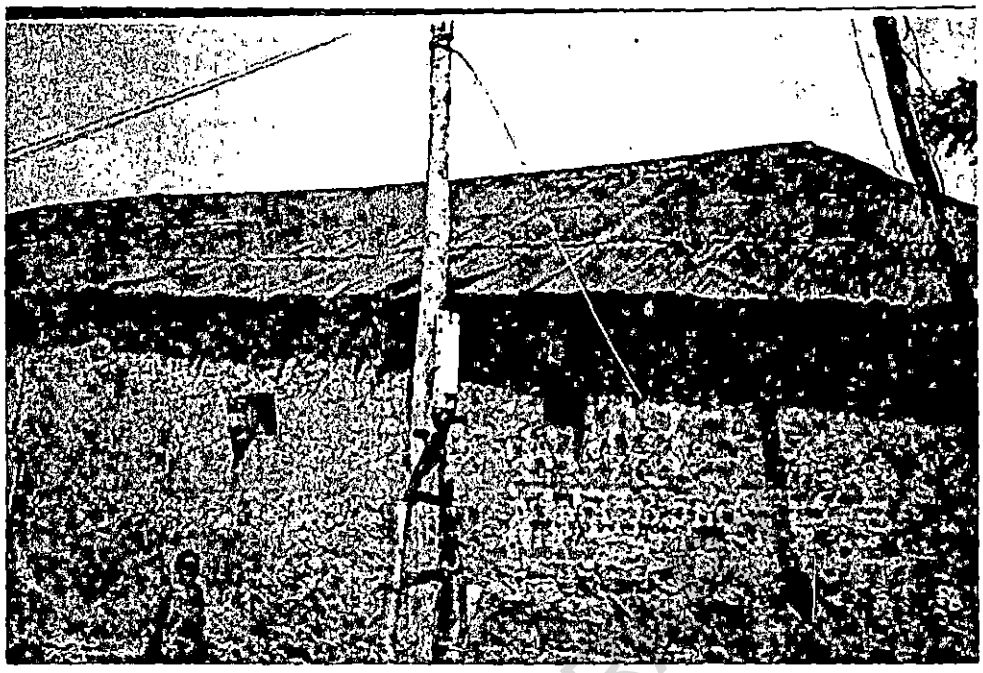


PLATE 2: Small windows serving the purpose of a Security Device against burglary in Beere, a high density locality in Ibadan.

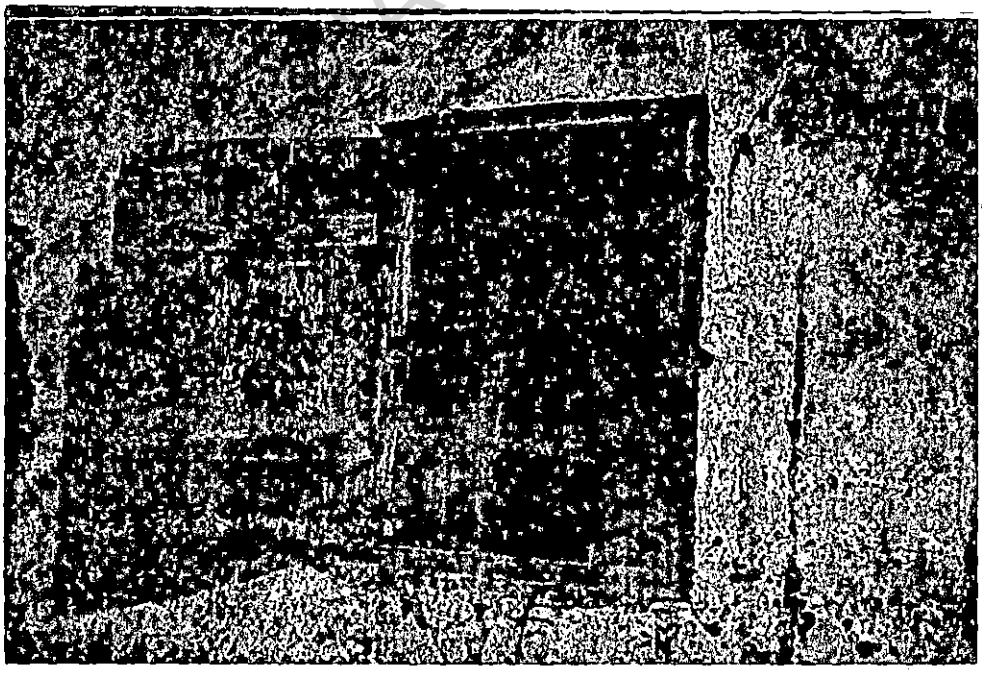


PLATE 3: A wooden burglary proof, later reinforced with iron rods, a common feature in Isale-osi, one of the high density localities in Ibadan.

steel at the time of remodelling. Some of the buildings in Isale-Osi still retain their planks but have now been reinforced with iron rods (see Plate 3).

As the rate of residential burglary increased despite the installed protective measures and as more modern houses were being built, the planks later gave way to wire meshes. 24.1% of the burglar proofed houses in Ibadan are protected with wire meshes. All these houses are, however, in the high and medium density residential districts with none in the low density area (see Table 4.14). 41% of all the burglar proofed houses in the core areas use this method as seen in Oje, Kudeti, Agbeni and Elekuro (See Plate 4).

From the middle to the late 1960's, when people were becoming more affluent and the rate of unemployment was increasing, there was an alarming increase in the rate and incidence of burglary in Ibadan. Coupled with this fact was the construction of low density residential buildings in the GRAs by the government. There was the need to introduce a more dependable method of burglar proofing. This period also extends to the oil boom era when, people started constructing more modern houses of the storeyed type and blocks of flats. Window sizes are now of planning standards or close to it, doors, balconies and other openings into the house needed to

be burglar proofed. To protect real properties from the reach of burglars, wire meshes were seen as inadequate and incongruous with the now imposing buildings and the use of iron rods as burglary proof material became the vogue. This material of burglar proofing is overwhelmingly used in Ibadan.

For instance, more than half (55.5%) of the buildings burglar proofed in Ibadan used iron/steel work, and even in the low density buildings they are the most widely used material (89.2%). They are, however, not very common in the low income, traditional areas. The iron/steel system as observed could be designed variously, thus, apart from serving as security devices they could also add to the aesthetic of the buildings, Apart from this, because they are cast into the concrete finishing of buildings and are, therefore, not easily removable, it is often believed that they will last through the life of the building. Experiences have, however, proved this not to be so.

As a result of the inadequacies of the iron/steel burglary proof materials in crime control, the use of concrete mullions on windows and sometimes doors is now becoming very important in Ibadan. Concrete mullions, apart from serving as barriers, also serve as sun breaker and can therefore, keep the interior of the building cool. Apart from this, it could

be used for aesthetic purposes when painted periodically. Concrete mullions are not susceptible to weathering action which is one of the inadequacies of the steel/iron rods and will harden with time. Because of all these merits, concrete mullions are becoming more important especially in the construction of duplexes and bungalows in the GRAs of Bodija and Oluyole Estates. As at now only 2.3% of the houses observed with burglary proof are protected with mullions in both low and medium density areas and non in the high density areas. There is, however, prospect in it, especially among the high income groups in Ibadan.

The position of burglary proof on buildings depend on several factors. Inclusive are: the taste of the building owner, the affluence of the building owner, the intensity of residential burglary in locality determining the intensity of burglar proofing, etc. In some buildings where the felt need is the windows, only the windows are burglar proofed. Infact 56.7% of all burglary proofs are on windows only and apart from the use of metal doors (also of the same percentage) windows are the most widely burglar proofed (See Table 4.15).

Some buildings also have burglary proofs not only on windows but also on doors and some, still; on all openings in the house - including balconies, entrances to staircases and

Table 4.15: POSITION OF BURGLARY PROOFS

POSITION OF BURGLARY	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Absence of B.P	81	5	3	89
On Windows only	49	78	21	148
On Windows & Doors	2	62	13	177
Metal Doors	-	124	24	148
On all Openings	-	11	17	28
Steel Bars	-	18	6	24
TOTAL	132	178	40	350

Source: Field Survey, 1996

fire escapes, openings for airconditioners, etc (see Plate 5). About 11% of the houses are burglar proofed on all openings in the study area, most of these are the residential/commercial houses, where there is an added need to protect the businesses. Some of these buildings are observable on the left and right sides of Iwo road and Queen Elizabeth road in Mokola, Ibadan (see Plate 6), there is, however, none in the high density areas.

Of importance also is the use of metal doors and steel bars on doors and windows. These are also observable in the residential/commercial houses and some residential/educational houses in the middle and low density areas.

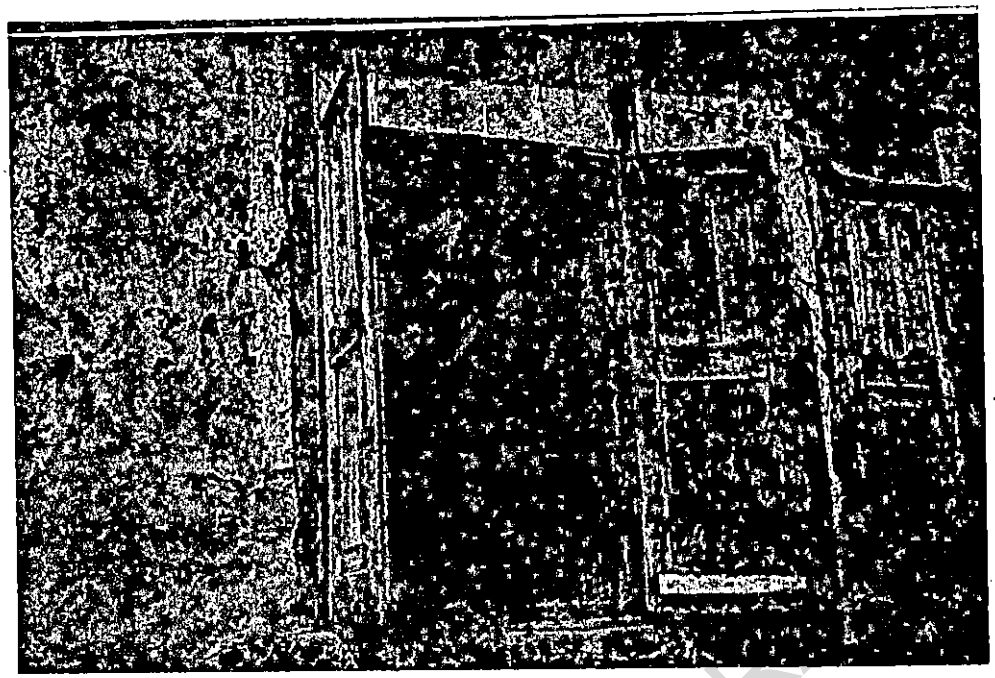


PLATE 4: Windows burglar proofed with wire meshes are common features in Oje, a high density locality in Ibadan.

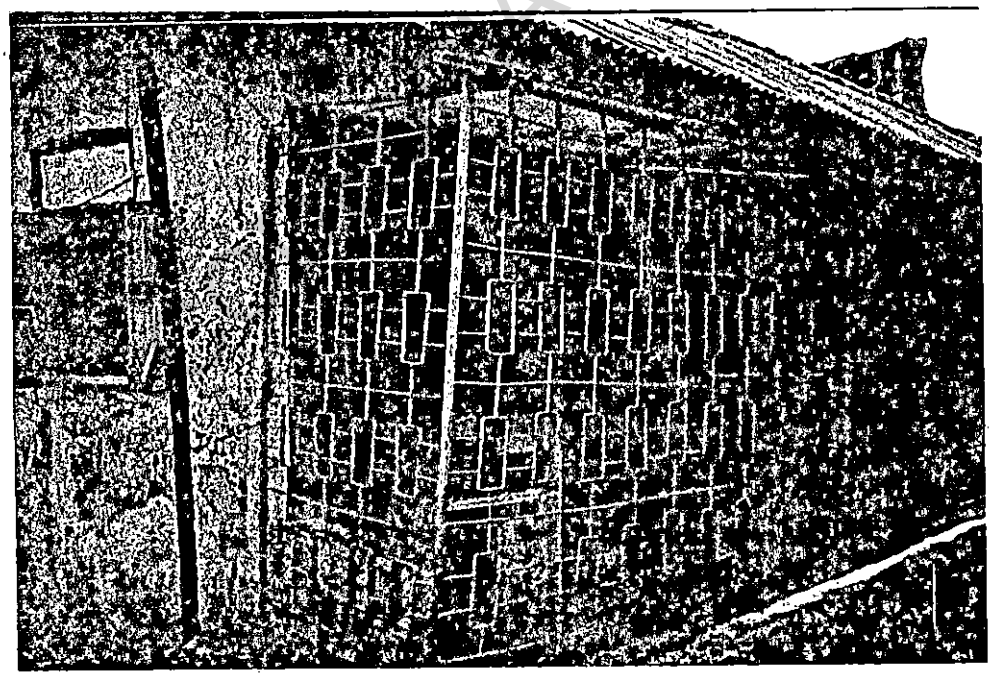


PLATE 5: The entire balcony of a house in Ekotedo covered with steel work.

A lot of views have been expressed about the effectiveness of burglar proofing, its monetary and social costs especially when overdone, this is considered in a later section of this chapter. Whatever the view about burglar proofing is, the fact remains that it has for a very long time being an important crime preventive device in Ibadan and still today is the most widely used of all security devices in Ibadan (see Table 4.13).

FENCING SYSTEM

Fencing is another important security device observed on residential buildings in Ibadan. In all the 350 houses observed, 37.4% of them are fenced. The proportion of fenced houses is, however, greatest in the low density residential district where out of the 40 houses observed, 31 (77.5%) of them have fences round them. In the middle income area, half of the buildings observed are fenced round while less than 70% of those in the high density areas use this security device (see Table 4.13). Fencing as a security device is so common that there is no locality in Ibadan where it is not observed. Today, it has even gotten to an extent that the sight of fences around buildings in Ibadan has become part of the city's architectural scenery.

Theoretically, fencing is used in CPTED to achieve two purposes viz: the achievement of security barrier and that of territorial behaviour (section 2.3.3). Security barrier as an element of CPTED is used to restrict access to the target area while territoriality refers to the capacity of the physical environment to create perceived zones of territorial influences (Newman,1973). The question that one may ask is "how does fencing as a security device achieve these two goals of CPTED?"

With regards to security barriers, it is widely known that fences round a building restrict the entrance to the immediate environment to the only entrance provided through the fence, usually, a gate. So whatever form or type of fence used, movement into the fenced area is reduced, thus achieving the element of security barrier. Furthermore, fencing as a security device has been used for a very long time to define the boundary of properties. Even in some cases, undeveloped properties are fenced round in order to be able to establish a territorial claim on such properties by the owner. With developed residential properties, fences ensure that the enclosed property is buffered from the view of the public, and the occupants will be able to challenge any intruder into the enclosed area. Intruders themselves become uncertain and

unsure of themselves in such fenced properties making it possible for them to be easily identified. Thus, fencing achieves the purposes of the two goals of CPTED.

The use of fencing in Ibadan precedes the colonial days when people who owned properties (especially landed ones) started to demarcate the boundaries of their properties. This seems to suggest that the aim then was to establish territorial claims. This is quite true, because, during this time the territorial claims were done through the creation of buffers around buildings. As population increases, land started to increase in value thus the need arose for more real barriers to be used to demarcate boundaries. Temporary fences, shrubs and hedges were introduced. This fencing method is fast giving way to real, physical fences as none was observed at the high density residential area of Ibadan. However, in the low density residential areas, hedges have been made sophisticated by being well managed. A few of those houses found in Agbowo adjoining Bodija (Plate 7) are made more attractive by the well kept hedges around them. In some buildings, hedging and some other fencing techniques are used simultaneously.

The earliest form of shrubs, later were seen as inadequate for territorial definition and security barrier,

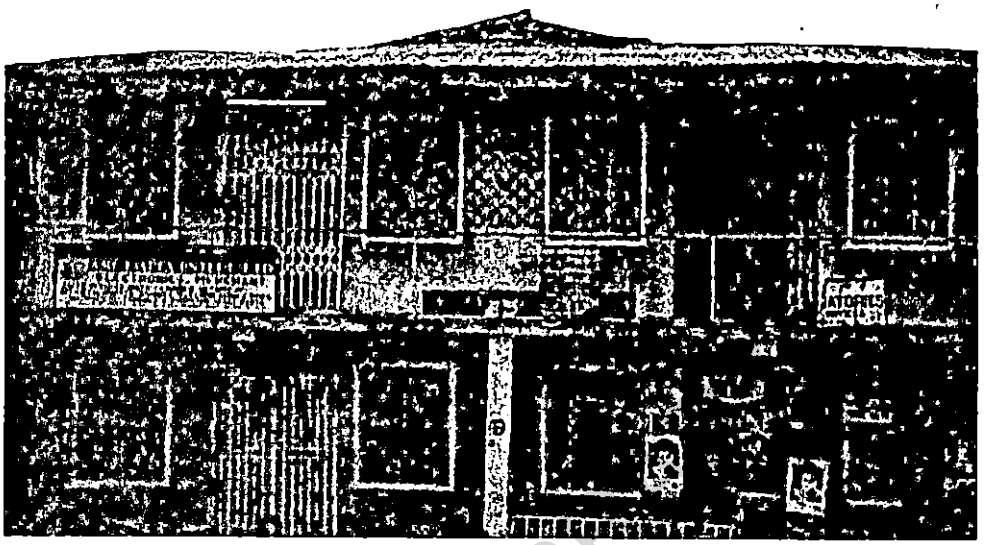


PLATE 6: A residential - Commercial building along Queen Elizabeth Road, Mokola, Ibadan protected on all openin with burglary proofs.

PLATE 7: A building in Agbowo-Bodija, Ibadan with hedges defining its territorial limits.

thereby leading to the introduction of bamboo and wood. Of the 131 buildings that are fenced round in the study area 16% of them are fenced with bamboo/wood, (see Table 4.16) with all the areas in the low and middle income districts. Most of the buildings fenced with bamboo are of the rooming apartments type (face-me-I-face-you). In some cases only the right left and rear sides are fenced leaving the frontage unfenced. Perhaps, animals are reared at the enclosed areas.

In the early 1970s, when the need for stronger fences arose, barbed wires were introduced. Over 20% of the fenced buildings in Ibadan are of the barbed wire types (see Plate 8), some of these have even been electrified in the low density districts (i.e. 15.3%).

Table 4.16: TYPES OF FENCE

FENCE TYPES	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
None at all	121	89	3	219
Hedges	-	2	3	5
Bamboo/Wood	7	14	-	21
Barbed Wire	4	20	4	28
Electrified B. Wire	-	-	20	20
Concrete Walls	-	53	31	84
TOTAL	132	178	40	350

Source: Field Survey, 1996

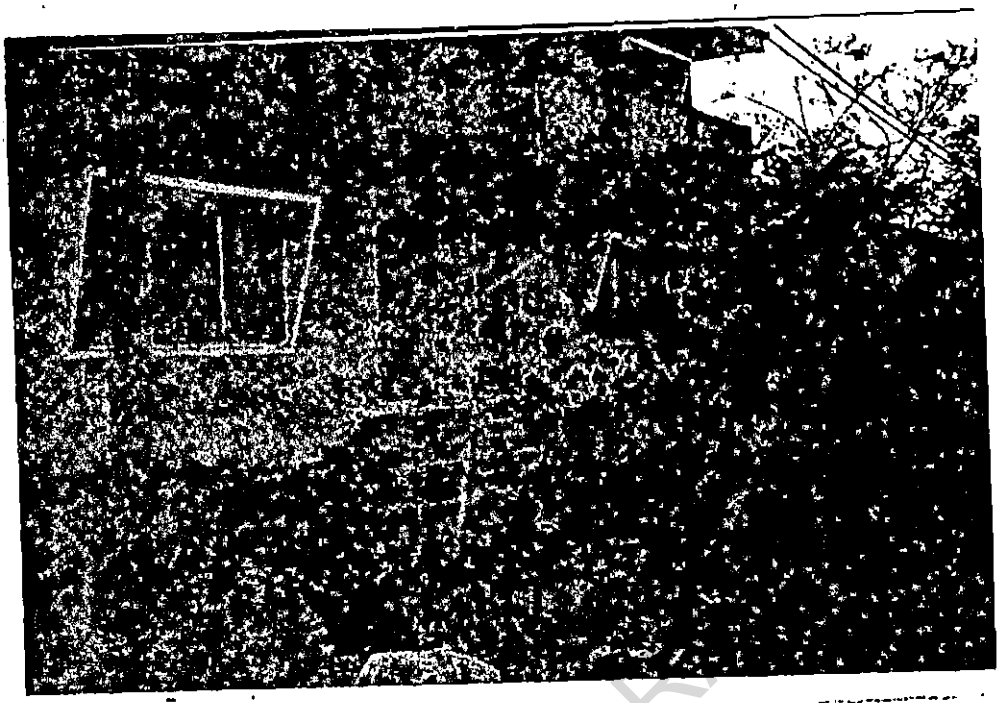


PLATE 8: A building protected with a network of barbed wire

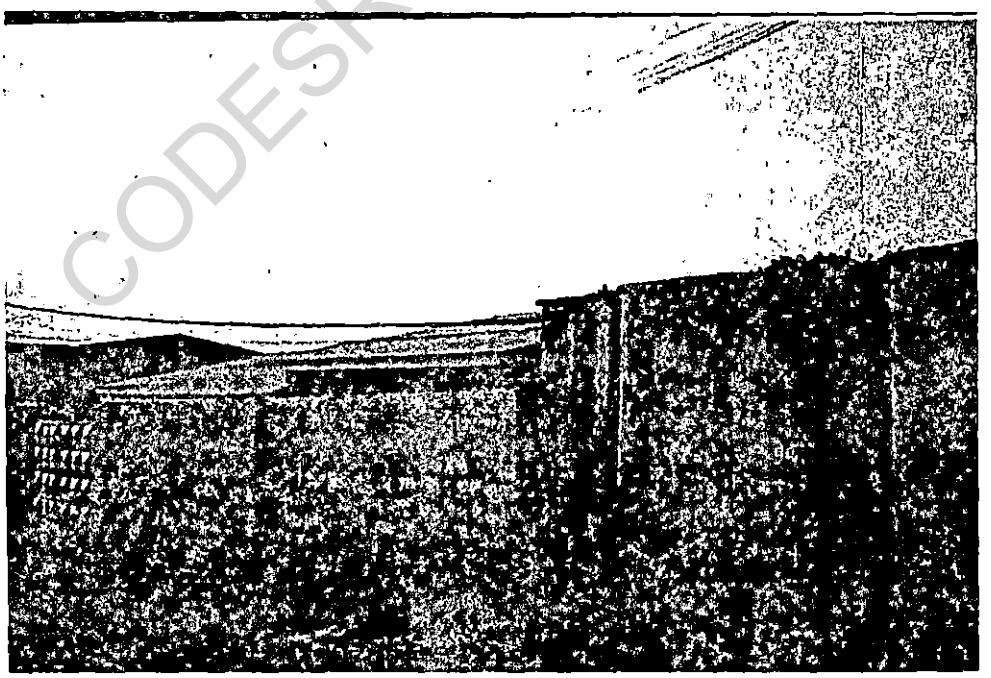


PLATE 9: A house with an abnormally high wall surrounding it.

Today, the commonest type of fencing is that done by the use of concrete walls. These are common features in both the medium and low density districts. Infact, 77.5% of the houses in the low density areas have walls round them. The houses are the modern, single storeyed, bungalow and duplex types.

In some places, the walls are at window level while the top of it is further reinforced with the use of broken bottles, spikes, net of barbed wires or spiral layers of barbed wire. There are variations in the use of these materials on walls (see Table 4.17).

Table 4.17: MATERIALS ON WALLS

WALLING MATERIALS	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
None	-	16	18	34
Broken bottles	-	11	11	22
Spikes	-	4	20	24
Net of Barbed Wire	-	-	1	1
Spiral layers of bared wire	-	-	3	3
TOTAL	-	31	40	350

Source: Field Survey, 1996

The height of the walls may determine the material on top of it. In some cases where the wall is built to about 0.5m, the remaining part of the fencing is done with strong steel in other to inculcate surveillance possibility into the houses. Majority of the houses (78.6%) observed are above the height of 2 metres; and it is on these walls that other materials are added. (see Table 4.18).

Table 4.18: HEIGHT OF CONCRETE WALLS (IN METRES)

HEIGHT(IN METRES)	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
< 1m	-	4	6	10
1 - ~~109~~ 1.9	-	6	2	8
2 - ~~209~~ 2.9	-	38	3	41
3m and Above	-	5	20	25
TOTAL	-	53	31	84

Source: Field Survey, 1996

64.5% of the buildings in the low density residential district have walls that are 3m and above (see Plate 9). Infact, in Bodija, Idi-Ape and Ikolaba localities, it is possible to walk the whole length of a drive without seeing the main structure of a single residence. This has generated a lot of views

against the indiscriminate use of fences, this is considered in a later section of this chapter. Another issue of importance is the distance of fences from the main buildings. Some of the houses have their fences close to them thereby generating a lot of inconveniences. This too will be considered later.

Along streets too, fences are used to restrict the movement of intruders. Some are provided with large and strong gates (see Plate 10) which are opened at certain hours of the day and locked at certain hours. About 75% of the houses in the low density residential district are provided with this street walls and gates (see Table 4.11).

SURVEILLANCE

Surveillance refers to the ability of the occupants of an area to have a high degree of visual control over the whole area. It is a check against having irrational fear and anxieties of danger; and thus ensures a self satisfactory attribute of safety in residential buildings. Literature on CPTED identify two types of surveillance - natural or informal surveillance and artificial or formal surveillance (section 2.2.3). This section will only focus on natural surveillance, while other strategies of artificial surveillance will be

PLATE 10: Street gates with signage, a peculiar feature in Bodija one of the low density residential localities in Ibadan.

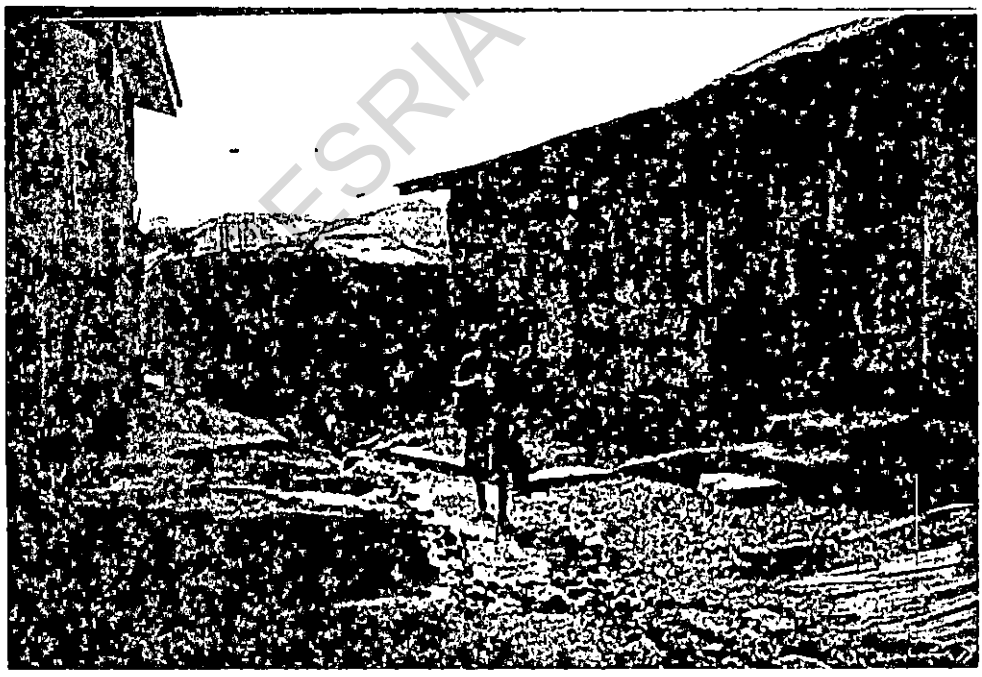


PLATE11: Houses in the high density districts of Ibadan are barely few metres apart, an orientation towards the concept of collective responsibility.
The narrow gaps between buildings are used by pedestrians.

considered as distinct security devices in Ibadan.

Natural surveillance as a security device is also very important in Ibadan. Table 4.13 shows that a total of 160 houses (i.e 45.7%) are provided with surveillance opportunities. of this, 85% are in the medium density residential areas. With regards to the low density areas, 55% of their houses are provided with surveillance opportunity. However, the security device is not very common in the high density, low income area of Ibadan as only 2 out of the 132 houses observed have anything to show for natural surveillance.

Natural surveillance as a security device involves, the design of lobby, corridor, staircases, windows, landscape elements and arrangement of the physical features of the environment of a house to allow a 'see through' into the whole area. With this in mind, one can trace the origin of natural surveillance in Ibadan to the beginning of the 1970s. Prior to this time, as evidenced from the buildings in the core areas, natural surveillance was not important. The buildings have very small windows of about 2500cm^2 (50x50cm), they are not provided with balconies, the corridors that separate the rooming apartments are narrow, usually dark and stuffy; all which are characteristics of the 'face-me-I-face-you' building

type. All these inhibit surveillance opportunity and this is responsible for the rarity of this device in the core area (Table 4.13). Apart from this, the buildings are so clustered together (see Plate 11) that a building will naturally block the view of anyone who intends to survey the entire area. To buttress this fact, Table 4.19 below indicate that buildings constitute the greatest barrier to surveillance in the high density residential area.

Table 4.19: FEATURES THAT IMPEDE SURVEILLANCE OPPORTUNITIES

SURVEILLANCE OBSTRUCTION	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Fence	-	18	6	24
Trees/Shrubs	-	3	9	12
Other buildings	130	21	1	152
Electric/Telephone Poles	-	-	2	2
None	2	126	22	160
TOTAL	132	178	31	350

Source: Field Survey, 1996

From about 1970, the need to inculcate surveillance opportunity into the design and construction of buildings was seen and this is responsible for the importance of this security device in the medium density residential district

(Table 4.13). Most of the blocks of flats and storeyed buildings built in this district in the early 1970s have wide windows of about 1.8m wide for 2-panelled windows and 0.9m for windows with one panel, the average height of windows is about 0.5m from ground level and the length of the windows, about 1m, all which are of planning standards. Balconies are also provided in the houses, and there were enough spaces between buildings all which afford the opportunity for surveillance. In fact, Table 4.13 shows that 76.4% (136) of the houses observed in the medium residential area have surveillance opportunities inculcated into them.

As time went on, the importance attached to surveillance did not die down. In the 1980s, or a few years before then, the houses that were built in the low density areas also have surveillance opportunities in them. These housing types are the bungalows, duplexes, and in some cases flats. There are wide and high windows, staircases, lobbies and balconies planned with the buildings. A lot of these houses also have ample space around them all which give room for surveillance. However, some impediments were observed in some buildings in the GRAs. Some of these are fences, trees/shrubs, and poles (Table 4.19). Some fences are so close to the house that they block vision and thus restrict surveillance opportunity.

Apart from this, there are fruit trees - mango trees, citrus trees, palm trees and other decorative elements in the surrounding of some houses thereby preventing surveillance. Sometimes along the streets, the fences are abnormally high thus creating what Newman (1973) referred to as 'streets without eyes'. This is characteristic of the low density residential districts (see Table 4.18).

SECURITY LIGHTING

Lighting provides illumination of the environment and affords the opportunity of surveillance and also increases the chance of detecting any intruder. This security device is observed in 84 out of the 350 houses surveyed in Ibadan (Table 4.13). However, it is of greatest importance in the low density residential district where 75% (30) of the houses surveyed are lit for security purposes.

The use of security lights came with the electrification of Ibadan, and this is why this strategy is not much appreciated in the low income area where almost all of the houses there predated the electrification of the city. In the very few houses that are facilitated with security lights, the use of bulbs are uppermost (See Table 4.20), while more effective security lighting types like flood lights and search lights are non-existent.

Table 4.20: TYPE OF SECURITY LIGHTING

LIGHTING TYPES	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Bulbs	5	28	7	40
Florescent tubes	1	17	4	22
Flood lights	-	3	18	21
Search lights	-	-	1	1
TOTAL	6	48	30	84

Source: Field Survey, 1996

In the low and medium density areas, flood lights are used while search lights was observed in only one building in the low density residential area.

With regards to the colour of lights used, it was observed that 75% of the houses use security lights with white colour. However, most of the houses in the medium density area (87.5%) use white colour (see Table 4.21)

Table 4.21: COLOUR OF SECURITY LIGHTING

RESIDENTIAL DISTRICT	WHITE	YELLOW	TOTAL
High	6	-	6
Medium	42	6	48
Low	15	15	30
Total	63	21	84

Source: Field Survey, 1996

The principle of 'lighting the criminal without spotlighting the victim' is observed more in the low density district than the two other districts. In this area, the balconies, kitchen, living rooms and other places used are either provided with less brightly coloured lights or enhanced with window blinds while the spaces around the house where the intruder could hide are brightly lit with flood lights. Most of the streets on this residential district are provided with street lights (Table 4.12) where 77.5% of the streets are well lit, thus, enhancing security by light in the area.

THE ALARM SYSTEM

The alarm system is one of those security devices categorised under CPTED as scare tactics. It is a device which when activated produces an alarm as any unsuspecting intruder comes in contact with it. As the alarm goes on, the entire household and even the neighbours become aware of the impending danger around the house. Apart from this, the intruder himself will realise that he will be detected and will thus avoid the vicinity. The alarm system was observed only in the low density residential district where 18 houses out of the 350 surveyed are facilitated with this device. This is a very recent device and also expensive and this may explain why it is not found in the older buildings.

OTHER ARTIFICIAL SURVEILLANCE DEVICES

The artificial surveillance devices are those used to complement natural surveillance. In the study area, four of them were observed. These are: the electronic monitoring system (CCTV), the human guard system, the guard dogs and the security dogs.

The closed circuit television (Plate 1) is an electronic device that is facilitated with a T.V camera and a monitor. The TV camera is stationed at a place where it is able to record the activities around the building and transmit such information into the monitor placed inside the building. Only two houses were observed in the low density residential district to be having a closed circuit television. The reason is not far fetched, this is a very expensive surveillance device that only the well-to-do can afford. Apart from this, it is a device that must be kept in secret, and care must be taken not to reveal the secret to intending burglars who may try to deactivate the system. Infact, the researcher encountered a lot of difficulty before he could convince the respondent to say a few things about the CCTV. The conclusion then is that, there may still be a few other houses where this equipment is installed but the owners do not want to reveal them. The CCTV is a modern security device and was introduced

to the study area only in the 1990s, but because of their effectiveness, it is expected that prominence will be given to their use as the years roll by.

The use of professional human guards as an artificial surveillance security device started in Ibadan in the 70s, but before this, there had been village or locality vigilante groups that guard the localities against the incursion of night marauders. The use of human beings as professional guards in Ibadan is a recent phenomenon and this is why none of the houses in the high density residential area has this facility. (Table 4.13). The 58 houses where they were observed are only in the middle and high income districts. In most of the houses where they are found in the low density zone, a small house called 'security post' is always attached to the main building, always near the gate for the human guard to stay.

In some occasions, the human guard is provided with a guard dog well trained, and functions together with the human guard. (Plate 1). The guard dogs were only observed in 16 houses and all the 16 houses are in the low density zone. (Table 4.13).

The last of the artificial surveillance devices observed in Ibadan is security dogs. Security dogs may be trained or

untrained. Whether trained or untrained, there is an intuitive ability possessed by dogs to carry out surveillance. All dogs possess this ability; and when any strange object is noticed, they let out a growling that either scare off the intruder or alert the entire householders. The use of security dogs in Ibadan started from a long time and that is why the strategy is observed in the very old houses in the core areas of Ibadan. 11 houses were observed to be guarded by dogs in those areas while 42.7% of the houses in the middle income areas are guarded by security dogs (Table 4.13)

One important thing that must be borne in mind concerning the use of all these artificial surveillance devices is that, there must be a ready supply of defence and protection to back up their surveillance ability. Newman (1973), wrote that "without any provision for the residents to call for ready help, mere observation cannot be relied on for total crime prevention". By this, he means that, when the image of a culprit is sighted on the T.V Monitor, or when the human guard noticed the presence of a culprit or a guard dog barked as a warning indicating the presence of an intruder, these are not just ends in themselves, the people must be able to call for help against what is observed. Not only this, the speed with which the help comes must be put into consideration or else,

the havoc will have been done before helps arrive . This is one major factor working against this security device in Ibadan.

First of all, 275 (78.6%) out of the 350 people interviewed said they have never called the police for help of any kind. Even in the high income residential area where the residents are more enlightened, the request for police is about 47% (Table 4.22).

Apart from this, when requests are made, it takes several hours before the police arrives, and that is if they ever show up at all. Table 4.23 shows that 72% of the respondents declared that the response of the police to their request for help is always after 2 hours, and in such a situation, the crime would have been committed before the call for help arrived. This will end up defeating the purpose for surveillance.

Table 4.22 REQUEST FOR POLICE HELP

RESIDENTIAL DISTRICT	YES	NO	TOTAL
High	3	129	132
Medium	53	125	178
Low	19	21	40
TOTAL	75	275	350

Source: Field Survey, 1996

Table 4.23 PROMPTNESS OF POLICE HELP

POLICE HELP (HRS)	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
⩽ 1 hour	-	7	3	10
1.1 - 2 hours	1	5	5	11
2.1 - 3 hours	-	-	10	10
3.1 - 4 hours	-	22	-	22
4.1 - 5 hours	-	6	1	7
> 5 hours	2	13	-	15
TOTAL	3	53	19	75

Source: Field Survey, 1996.

Another important thing that must be considered in the section is the relationship between all these security devices and the age/design standard of the buildings where they are located. Ordinarily, the relationship is positive, and this is why, the crudest or oldest form of security devices, e.g. ATPDs, the use of small windows, bamboo fences, wooden burglary proofs, etc are prevalent in the core/traditional areas of old buildings while the more sophisticated security devices like the alarm system and the CCTV are found more in the younger, duplexes and bungalows of the low density residential areas. An hypothesis was tested to confirm this relationship (see section 1.6.3 for the variables). The age of buildings and their observed design standard was ranked in a descending

order, i.e from 1950 to date while values were assigned to the security devices from the oldest device to the most sophisticated one. For example, 1 was assigned to ATP and 15 to CCTV. Then to reduce the variation between the two sets of scores, the log of these values were determined and correlated with each other. The result showed a correlation index, rs = 0.94 and a coefficient of determination, rs^2 of 0.88 (88%). The result shows a strong positive correlation to the effect that as buildings increase in sophistication, the level of the sophistication of security device increases.

The result when tested was found to be significant at 1% level of significance and therefore the null hypothesis of no correlation is rejected (see Appendix V(b) for the detailed test).

4.5 EFFECTIVENESS OF OBSERVED SECURITY DEVICES

The security devices discussed in the previous section are not ends in themselves, but means to an end. In other words, they are not installed in building just for their own sake but for the purpose of crime reduction. Thus, the effectiveness or otherwise of a security device is to be measured by the rate at which it reduces the rate of crime. If a security device after its installation does not deter

crime, then it is ineffective and has not fulfilled its purpose. We can adopt this strategy to determine the effectiveness or otherwise of the security devices used in Ibadan.

The study shows that out of the 122 cases of burglary confirmed by the respondents, 69.6% of them took place before the security devices were installed while 30.4% (34) of them happened after the security devices were installed (see Table 4.24).

Table 4.24: EFFECTIVENESS OF SECURITY DEVICES

TIME OF CRIME	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Crime before device	13	56	9	78
Crime after device	15	17	2	34
TOTAL	28	53	11	112

Source: Field Survey, 1996

It should be noted that, generally speaking, the security devices have been helpful in the reduction of crime. As the Table above shows, there has been a 43.6% reduction in crime as a result of the security devices installed. The percentage

reduction in the low density areas is 22.2% while that of the medium density is 30.4%. However, despite the security devices, Table 4.24 revealed a 13.3% increase in the rate of crime in the high density district. This is an indication of the ineffectiveness of the security devices observed in the high density areas. These include the ATPDs, the small window system, the use of bamboo fences, the wooden burglary proofs, and the use of wire meshes.

4.6 ASSOCIATED COSTS OF SECURITY DEVICES

The security devices used in preventing crime impose indirect costs on the people. These indirect costs could be monetary and could be social (see section 2.3.4). The indirect costs of crime in Ibadan was examined and these are presented under two headings viz: monetary and social.

The security devices, as examined in earlier sections of this chapter impose costs on the people. Sometimes, such costs run to several thousands. In Table 4.25 below, it is observed that 37.7% spend below ₦5,000.

Table 4.25: COSTS OF SECURITY DEVICES (IN ₦)

RANGE OF COSTS	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Below 5,000	76	56	-	132
5,000-10,000	48	29	-	77
10,000-15,000	8	81	6	95
15,000-20,000	-	7	27	34
Over 20,000	-	5	7	12
TOTAL	132	178	40	350

Source: Field Survey, 1996

While the majority expend between 5,000 and 20,000, and this constitute over 60% of the people. 12 out of the 350 people interviewed spend over 20,000 in installing the security devices and majority of these people are in the high income districts where the most sophisticated equipments are used. The cost of the CCTV for instance is put at several thousands of Naira, while the human guards are paid regular salaries. In fact, the cost of security personnel, watchdogs and in some cases electronic surveillance apparatus required to keep the house safe is beginning to rival the building maintenance costs. In some of the low density houses where concrete fences are used, construction works normally begin with the construction of the fences, so that even before the main

building is constructed, several thousands of Naira would have been spent on the fences, a lot of respondents complain bitterly about this. The case of those who keep security dogs is not better; some of them spend ₦5,000 per month just for feeding the dogs not to talk of the cost of regularly taking them to veterinary clinics. For those who embarked on building remodelling as a result of burglary, the cost is alarming as depicted by Table 4.26.

Table 4.26: COST OF BUILDING REMODELLING (IN ₦)

COSTS (IN ₦)	RESIDENTIAL DISTRICT			TOTAL
	HIGH DENSITY	MEDIUM DENSITY	LOW DENSITY	
Below 5,000	6	18	-	24
5,000-10,000	-	8	1	9
10,000-15,000	-	20	-	20
15,000-20,000	-	31	5	36
Over 20,000	-	3	2	5
TOTAL	6	80	8	94

Source: Field Survey, 1996

Majority of these people are in the medium density, middle income group who expend their meagre salaries on building remodelling as a check against crime.

Apart from the monetary costs of the devices, there are also social costs imposed by these devices on the inhabitants of Ibadan. Most of these security devices are inconveniencing to the users and their neighbours (see Table 4.27). The burglary proofs and high wall fencing systems are a case in this regard. Some authors (Abodunrin,1981; Mukoro,1986,1996) referred to the systems as target hardening which "rather than evoke the impression of a living environment, create the mental image of cages made to prevent some dangerous animals from escaping into the city of man" (Mukoro,1996). Infact, this current trend of erecting high wall fences if continued unchecked may likely lead to the creation of streets having high wall fences running through their lengths. This would mean that one could move through such streets without necessarily setting eyes on a building (except multi-storey ones). People in the compounds may not see those on the street and vice versa. This means that such streets will be streets "without eyes" and surveillance will be hampered. This may be counter productive in terms of so much desired urban security.

Table 4.27 INCONVENIENCING OF SECURITY DEVICES

RESIDENTIAL DISTRICT	YES	NO	TOTAL
High Density	23	110	133
Medium Density	75	103	178
Low Density	15	24	39
TOTAL	113	237	350

Source: Field Survey, 1996

Some of the respondents also complain that the use of burglary proof and fencing sometimes prove to be dangerous in cases of emergency. Most of these devices are elaborate and therefore not easy to dislodge in order to escape. There are reports of people being trapped in buildings during fire outbreaks as a result of security devices installed.

The extent to which movement could be restricted by these practices cannot be overemphasised. In the first place, people who have good reasons to move late at night face a lot of constraints. They are not only faced with the obstacle posed by street gates, but also that of their destination, this has helped in crippling night life in Ibadan. Apart from this, the high(wall) fences hinder the free movement of air, so also is the use of the small windows in the core areas, the long run effect of air circulation restriction

may be terrible. The high wall fencing also cut away inhabitants from their social environments, the situation is like people living in cells with no interactions with their neighbours.

Some people also complain that the howling of security/guard dogs especially in the middle of the night has always made them to have sleepless nights and that their neighbours have also complained bitterly about this.

Lastly, another social effect of the security devices observed in Ibadan relates to natural surveillance. Some respondents complain that since surveillance by principle requires the cutting down of trees and others objects that may serve as hiding places for intruders, it has hampered their desires of growing fruit bearing trees in their compounds.

PLATE 12: A dilapidated building in Nalende Area in the high Density District of Ibadan.

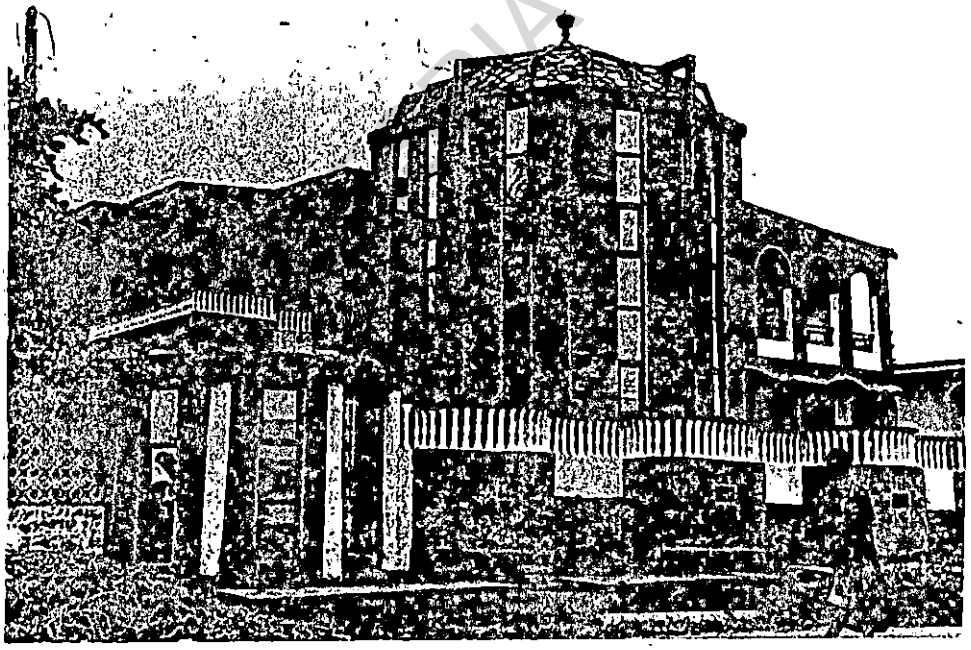


PLATE 13: A luxury house located in Oluyole Estate in a low Density District of Ibadan.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.1 SUMMARY

This study addresses the issue of crime in our society. It is observed that crime is a worldwide tragedy to which every government has been struggling to find a solution all without much success. Domestically, crime in Nigeria in recent years has accelerated far beyond the reach of the citizens and perhaps, the government. Crime by organised criminal groups has expanded to alarming proportions that the Nigerian News media reports daily, cases of car thefts, organised robbery, assassinations, attempted murder, inter-tribal conflicts, religious riots, rapes, mysterious bomb blasts and other acts of terrorism and predatory, all which have serious consequences on the lives and properties of Nigerians.

Ninety-nine per cent of these acts of violence are concentrated in the urban environment of Nigeria without exempting the city of Ibadan, Oyo State capital as well as an adjoining city of Lagos, the commercial/industrial capital of Nigeria. It is a general belief that the Lagos - Ibadan

expressway has turned Ibadan to a satellite city of Lagos with the consequence of an influx of criminal activities into the former. With this situation in Ibadan, several issues bother one's mind, among which are: what has been the intensity of crime in Ibadan, how is crime distributed within the city, what relationship has crime with the well-being of the inhabitants, what efforts have been made over time to inhibit crime, how effective are these efforts and what costs accompany each of these efforts.

In an attempt at finding answers to these questions, several theories were discussed to serve as foundations for the issues that were raised and addressed. These theories include the theory of fear and the defensible space theory, which is an alternative to fear. Apart from the theories, several literature were reviewed to give substance to the subject matter. Of particular importance is the literature on crime prevention through environmental design (CPTED), a principle that captures the essence of this study.

With regards to crime intensity in Ibadan, study reveals that with the total crime rate of 56973 from 1990 to 1996 July in Ibadan, crime is still moderate compared to what obtains at the national setting (Table 1.1). This rate, however, varies from year to year. 1992 has the highest rate of crime while 1990 has the least. All through the 7 years of analysis,

crime has generally been stable, with little rise and fall. Spatially, crime shows more intensity in some divisions than others. However, every of the divisions have a share in the risks of offences. Bodija is noted for robbery, Iyaganku for breach of public peace, etc, Agodi for burglary, Moniya for murder, Challenge for house breaking, etc, Apata for child kidnapping and Eleyele for thefts and stealing. On a final analysis, it was observed that spatial severity of crime in Ibadan follow a descending order of Iyaganku, Eleyele, Bodija, Challenge, Apata, Agodi and Moniya. With regards to localities, it is observed that Sango, Mokola, Iwo road, Ekotedo, Oke Ado, Agbowo, etc have more incidence of crime while places like Jericho, Eleyele Waterworks, Dugbe, Ikolaba, Old Bodija have the least incidence of crime. It was observed that the affluence of the people measured by the socio-economic status of the localities have insignificant impact on the rates of crime in the localities. This is buttressed by the fact that, the highest incidence are recorded in the middle income areas while the low income and high income regions have less incidence.

From times past, several efforts have been made to combat crime in Ibadan. These efforts began with the traditional methods involving the use of charms as characteristic of the old buildings at the core areas. Inadequacies observed in

that effort and the need for a better and more reliable device against crime culminated in the design of small and high windows in the face-me-I-face-you housing types as evidenced from several houses that still dot the landscape of the core areas of Ibadan. Several strategies follow until the most recent and the most sophisticated ones like the alarm system, the walling system and the closed circuit television system, mostly common at the low density, high income regions are adopted.

Analysis revealed that the age of the buildings and the design standard of the buildings in Ibadan have tremendous roles to play in the use of security devices in Ibadan. In other words, the old security devices like the ATPDS, small windows, use of wire meshes, etc were peculiar to the old buildings at the core areas while more of the modern security devices were found at the luxury houses of the GRAs and government quarters.

All these security devices however impose both heavy monetary and social costs on the inhabitants. It is observed that, the costs of installing the security devices now almost rival the costs of putting up the structures. Socially, certain devices like fencing, walling, burglar proofing, etc now reduce citizens to caged animals and inhibit human relationships that characterise African society. This is,

however, not to suggest that all the devices adopted in Ibadan against crime have proved ineffective, most of them only require modifications.

5.2 RECOMMENDATIONS

The fact that Ibadan has had a steady rate of crime overtime means efforts should be made to curtail crime rate not only in the places with high incidence but in the entire city.

It is observed that the police alone cannot handle the issue of crime control in Ibadan. They need the citizens. The citizens too cannot do it without the police while the two together cannot do much without a conscious effort at urban design to curb crime. To individualize efforts or to concentrate the role of crime control on any of these three - citizens, police or environmental design - is to completely loose the battle against crime. Their relationship has to be interwoven. That is, the environment needs to be arranged to aid the citizens to exercise full control over their properties and discourage criminal tendencies, the citizens should be able to have prompt help from the police when the need arises and the police needs to be helped and informed by people through vigilante groups and individual efforts. A security device that will encompass these will be the most

result oriented.

Towards achieving this, the following recommendations are made:

1. The citizens of Ibadan need to be more security conscious by setting up effective and selfless vigilante groups.
2. The police needs to be equipped in order to ensure promptness in their response to calls for help.
3. The streets to be well lit and well layed-out such that dark corners will be non-existing along the streets.
4. The present situation where "too many people get nothing and too few people get everything" is not the best. There has to be a deliberate effort at reducing inequality in the society. Most importantly, flagrant display of wealth (especially ill-gotten ones) should be discouraged. It is believed that a reduction in the precipitating condition for crime could minimise it. By this, the threat to life/security in Ibadan will be minimised.
5. With regards to the socially debilitating devices that make human beings to become prisoners behind their own doors, it is recommended that, the principles and techniques of CPTED as discussed in the text should be followed strictly and such should be integrated into the architectural designs and construction of building rather

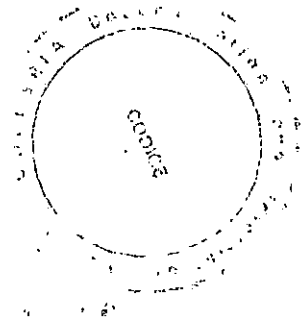
than added to the building later. This will offer a better protection without resorting to the prison camp approach to security.

5.3 CONCLUSION

This study has shown that the incidence of crime in Ibadan today calls for the attention of the government and the citizens alike. Though people have been involved over time in environmental planning and building designs and government through the criminal justice system, there is a need for a re-visitation of the approach to inhibiting crime.

The crime prevention through environmental design (CPTED) technique was discussed and its principles highlighted. The bearings which the observed security devices in Ibadan have to this technique the effectiveness as well as the costs of these devices were also discussed.

In the final analysis, it is observed that a technique that will adequately prevent crime in Ibadan and the nation as a whole should see crime as a socio-cultural-econo-environmental problem that needs an integrated approach for its amelioration. It is hoped that if rightly implemented, the recommendations would substantially reduce, if not totally eradicate crime and the fear of it.



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APPENDIX I

The Commissioner of Police,
Directorate of Fin/Admin.,
The Nigeria Police,
State Headquarters,
Eleyele - Ibadan.

CB. 1010/OY/VOL.2/128 19th July, 1996

The Divisional Police Officers,
Iyaganku/Apata/Challenge/Bodija/
Moniya/Agodi/Eleyele
The Nigeria Police,
Ibadan.

REQUEST FOR CRIME STATISTICS IN YOUR DIVISION

This is to introduce to you, Mr Adeyemi A½ Adebisi a Post-graduate Student in Faculty of the Social Sciences, University of Ibadan (Centre for ~~Ibadan~~ Urban and Regional Planning)

His desire is to collect informations on crime Statistics within your locality, ranging between 1990 and date.

Gratefully render him the assistance he desires.

(J. B. ONWUBUYA) DCP.,
DEPUTY COMMISSIONER OF POLICE,
FOR: COMMISSIONER OF POLICE,
OYO STATE.

APPENDIX II

RESIDENTIAL LOCALITIES IN IBADAN

RESIDENTIAL DISTRICTS	LOCALITIES
HIGH DENSITY	Dugbe, Abebi, Idikan, Oje, Agbeni, Oniyanrin, Oke Are, Yemetu, Igosun, Oke Irefin, Motala, Oke-Offa, Ode-Aje, Agugu, Oja-Igbo, Oke Aremo, Elekuro, Mapo, Odinjo, Bode, Ilupeju, Ile-tuntun, Odo-Oba, Isale-Osi, Oke-Foko, Itamaya, Kudeti, Eleta, Opoyiosa, Apete, Oke Oluokun, Adeoyo, Beere, Nalende, Ogunpa, Olorunsogo, Aliwo.
MEDIUM DENSITY	Samonda, Coca-cola, Mokola, Oke-Ado, Odo-Ona, Oke-Bola, NTC, State Hospital, Elewura, Molete, Challenge, Yejide, Liberty Stadium, Sango, Felele, Imalefalafia, Orogun, Ekotedo, Iwo Road, Yidi, Sabo, Elewe, Apata, Ago-Taylor, Apata Ganga, Moore-Plantation, Alalubosa, Eleyele Water Works, Eleyele Market, Army Barracks, Ashi, Sango Motor Park, Oluwo, Radio OYO, Orita-Basorun, N.T.A., Orita Mefa, Ijokodo, Agbowo, Olopometa, Eleyele Barracks, Oke Itunu, Okoro Village, Bodija Ojurin, Orita-Aperin, Aperin.
LOW DENSITY	Secretariat, Polytechnic, Old Bodija, New Bodija, Baptist Grammar School, Iyaganku, Agodi, Idi-Ape, University of Ibadan, Ikolaba, Kongi, Onireke, Link Reservation, Idi-Isin, Jericho, Oluyole Layout, Oluyole Extension.

SOURCE: National Population Commission, 1991.

APPENDIX III

CENTRE FOR URBAN AND REGIONAL PLANNING (CURP)
FACULTY OF THE SOCIAL SCIENCES
UNIVERSITY OF IBADAN

THE ARCHITECTURE OF FEAR: AN EXPLORATORY INVESTIGATION INTO PLANNING, URBAN DESIGN AND CONSTRUCTION REACTION TO URBAN VIOLENCE IN NIGERIA.

SECTION A (FILL IN BY OBSERVATION)

1. Location of House:
   (i) House No..... Street.....
   (ii) Locality.....
   (iii) Local Government Area.....

2. Residential District: High ( ) Medium ( ) Low ( )

3. Type of House:
   (i) Rooming Apartments ( ) No. of Rooms ( )
   (ii) Flats ( ) No. of Flats ( )
   (iii) Bungalow ( )
   (iv) Duplex ( )
   (v) Others (Specify).....

4. Type of Street; Major Road ( ) Access Road ( ) Close ( )

5. Characteristics of Street; which of the following are present in Street?
   (i) Gates ( ) (ii) Bumps ( )
   (iii) Security check point(s) ( )
   (iv) Warning signs on restrictions ( )
   (v) Others (specify).....

6. Are there functional street lights? Yes ( ) No ( )

7. (a) Burglary proof: (i) Absent ( )
   (ii) Present on windows only ( )
   (iii) Present on windows and doors ( )
   (iv) Doors made of metals or steel bars ( )
   (v) on all openings including balcony, etc ( ) ~~steel bars~~
   (b) Materials for burglary proof (if present);
   (i) Planks ( )
   (ii) Wire mesh ( ) (iii) Iron/Steel work ( )
   (iv) Concrete million ( )
   (v) Others, (specify).....

8. Fencing/wall
(a) Type of fence: (i) Hedges ( ) (ii) Bamboo/wood ( )
(iii) Barbed wire/Electrified barbed wire ( )
(iv) Concrete walls ( ) (v) None ( )
(vi) Others (specify).....

(b) If concrete walls:
(i) Height in metres (Approx.).....
(ii) Materials on wall: Broken bottles ( )
Spikes and net of barbed wire ( )
Spiral layer(s) of barbed wire ( )
Others (specify) .....
(iii) Distance of fence to house in approx. Metres
Right Hand side.....Metres
Left Hand side .....Metres
Rear .....Metres
Front.....Metres

9. (a) Is any activity area close to the house?
Yes ( ) No ( )
(b) What activity?.....
(c) What is the approximate distance?.....

10. Security Lighting:
(i) Colour.....
(ii) Type: Bulbs ( ) Fluorescent tubes ( )
Flood Lights ( ) Search Lights ( )
Others (specify).....

11. (a) Does any feature impare surveillance in any way?
Yes ( ) No ( )
(b) What feature?.....

12. Which of these security facilities are available in house?
(i) Guard dogs ( ) (ii) Security dogs ( )
(iii) Human guards ( ) (iv) Alarm system ( )
(v) Closed circuit television system ( )
(vi) Others (specify) .....

13. What is the house used for?
(a) Commercial/Residential ( )
(b) Educational/Residential ( )
(c) Recreational/Residential ( )
(d) Residential Only ( )

APPENDIX IV

CENTRE FOR URBAN AND REGIONAL PLANNING (CURP)
FACULTY OF THE SOCIAL SCIENCES
UNIVERSITY OF IBADAN

THE ARCHITECTURE OF FEAR: AN EXPLORATORY INVESTIGATION INTO PLANNING, URBAN DESIGN AND CONSTRUCTION REACTION TO URBAN VIOLENCE IN NIGERIA.

SECTION B (HOUSEHOLD QUESTIONNAIRE)

Dear respondent,

This questionnaire is connected with a post-graduate study on urban violence (with particularly reference to residential burglary) In Nigeria, Ibadan being the case study. You are kindly requested to answer the questions set out below. The study is purely an academic exercise and the information supplied will be treated as confidential.

Thanks for your co-operation.

1. Residential Address:.....

2. Sex (i) Male ( ) (ii) Female ( )

3. Age (i) Below 21 Yrs. ( ) (ii) 21 - 40 yrs ( )
(iii) 41 - 60 yrs ( ) (iv) Above 60yrs ( )

4. Educational level: (i) None ( ) (ii) Primary school ( )
(iii) Secondary school ( ) (iv) Post Secondary ( )
(v) Others (specify).....

5. Occupation.....

6. For how long have you been residing here?.....

7. When was this building completed?.....

8. Have you remodelled this building in anyway because of burglary? Yes ( ) No ( )

9. If Yes,
   (i) When.....
   (ii) How.....
   (iii) At what monetary cost? ₦.....

10. What type of security strategies do you have in this house?
   (a) Burglary proof ( ) (b) Fencing ( )
   (c) Surveillance ( ) (d) Alarm system ( )
   (e) Guard dogs ( ) (f) Security dog(s) ( )
   (g) Human guard ( ) (h) Lighting ( )
   (i) Closed circuit television ( )
   (j) African traditional preventive strategies (charms,etc) ( )
   (k) Others (specify).....

11. How much did it cost you to put up the security strategies? ₦.....

12. If you use guard or security dogs, how much does it cost you to feed them per month? ₦.....

13. If you use alarm system, what do you do in case of electricity failure? .....

14. Do you have a functional electric generator? Yes ( ) No ( )

15. Is the security strategy put in place inconveniencing to you in any way? Yes ( ) No ( )

16. If Yes, in what way(s)? .....

17. (a) Do you think the security strategy is inconveniencing to your neighbours? Yes ( ) No ( )
   (b) If Yes, in what ways?.....

18. Why did you choose to locate your building here?.....
.....

19. How often does burglary occur in this areas?
   (a) Sparingly ( ) (b) Frequently ( )
   (c) Very Frequently ( )

20. Have thieves, at any time, broken into your house?
Yes ( ) No ( )

21. If Yes, (a) Before you put up the security strategy ( )
(b) After you put up the security strategy ( )

22. In the incidence,
(i) Has there been loss of lives? Yes ( ) No ( )
(ii) How many Lives: .....
(iii) Has there been loss of properties? Yes ( ) No ( )
(iv) What is the value of properties stolen? ₦.....

23. Do you feel secured in this area? Yes ( ) No ( )

24. State the reason for your answer above.....
.....

25. Which area in Ibadan do you think is the safest to live in? .....

26. Which area in Ibadan do you think is the most dangerous to live in? .....

27. By your assessment of violence in Ibadan, if you have the choice, do you which to live outside Ibadan? Yes ( ) No ( )

28. Have you ever called on the police in times of armed attack? Yes ( ) No ( )

29. If Yes, within how many hours did they respond?.....

30. What would you generally recommend to reduce burglary in Ibadan?.....

Thank you.

APPENDIX V(a)

Test of the nature of relationship between crime rates and affluence (i.e socio-economic status) of the different residential neighbourhoods (localities).

VARIABLE Y = The socioeconomic status of the neighbourhood as measured by the residential district in which the locality is found. Y1 = High Density localities; Y2 = Medium Density localities; Y3 = Low Density localities.

VARIABLE X = The incidence of crime in localities as shown in Table 3.10

RANKING is done in an ascending order, i.e 1, 2, 3 .. etc, 10,20, 30 from the highest in value to the least.

LOCALITY	Y	X	Rank Y	Rank X	Y-X	$di^2(Y-X)^2$
Oje	1	15	30	19	11	121
Mapo	1	12	30	27	3	9
Agugu	1	17	30	15	15	225
Dugbe	1	9	30	29	1	1
Nalende	1	21	30	10	20	400
Beere	1	16	30	16	14	196
Yemetu	1	21	30	10	20	400
Agbeni	1	19	30	12	18	324
Elekuro	1	25	30	18	12	484
Kudeti	1	16	30	16	14	196
Adeoyo	1	19	30	12	18	324
Iwo road	2	31	20	4	16	256
Sabo	2	19	20	12	8	8
Oke-Ado	2	28	20	6	14	196
Apata Ganga	2	15	20	19	1	1
Mokola	2	26	20	7	13	169
Sango	2	48	20	1	19	361
Odo Ona	2	15	20	19	1	1
Eleyele	2	10	20	28	-8	64
Ekotedo	2	32	20	3	17	289
Challenge	2	16	20	16	4	16
Felele	2	30	20	5	15	225
Agbowo	2	35	20	2	18	324
Orite-mefa	2	13	20	24	-4	16
Orogun	2	25	20	8	12	144
Ikolaba	3	13	10	24	-4	196
Old Bodija	3	13	10	24	-4	196
Oluyole Estate	3	14	10	22	-2	144
Idi Ape	3	14	10	22	-2	144
Jericho	3	3	10	30	-10	400

$\sum = 5830$

Formula for Spearman's rank correlation =

$$rs = 1 - \frac{6 \sum_{i=1}^{n} di^2}{n^3 - n}$$

where $di^2 = (Y-X)^2 = 5830$

$$rs = 1 - \frac{(6)5830}{27000-28} = 1.30$$

$$rs = 1 - 1.30 = -0.3$$

Coefficient of determination (rs^2) = 1% (0.09)

Test for the significance of rs, using students 't' test

$$t = \frac{rs\sqrt{n-2}}{\sqrt{1 - rs^2}} \qquad t = \frac{-0.3\sqrt{28}}{\sqrt{1-0.9}}$$

$$t = \frac{-1.59}{0.95} \qquad t = -1.67$$

$\therefore$ Calculated Value = -1.67

Table value at 28 degrees of freedom is 2.05 and is insignificant even at 5% significant level.

Ho: There is no relationship between the rates of crime and the socio economic status of neighbourhoods.

H1: Relationship exists between the rates of crime and the socio economic status of neighbourhoods.

The calculated value is less than the tabulated value, then it is agreed that rs is insignificant, thus, Ho is accepted.

(b)

Test for the nature of relationship between age/design standard of buildings and security devices adopted.

VARIABLE Y: The year of building completion in Table 4.1 was ranked in a descending order.

VARIABLE X: The observed security devices in buildings as shown in Table 4.13 values were assigned to the devices based on their level of sophistication. For example, 1 for ATPDs and 15 for CCTV.

NOTE: The logs of the values are taken to minimise variations in the data.

No.	Y	X	LOG Y	LOG X	Y-X	$di^2(Y-X)^2$
1	6	4	0.8	0.6	0.2	0.04
2	5	4	0.7	0.6	0.1	0.01
3	4	5.5	0.6	0.7	-0.1	0.01
4	3	10.5	0.5	1.0	-0.5	0.25
5	2	10.5	0.3	1.0	-0.7	0.49
6	1	11.75	0	1.1	-1.1	1.21
					$\sum =$	2.01

Formula for Spearman's rank correlation

$$rs = 1 - 6 \frac{\sum_{i=1}^{n} di^2}{n^3 - n}$$

where $di^2 = (Y - X)^2 = 2.01$

$$rs = \frac{1 - (6)2.01}{6^3-6} = 0.06$$

$$rs = 1 - 0.06 = 0.94$$

Coefficient of determination $(rs^2) = 88\%$

Test for the significance of rs, using students' 't' test

$$t = \frac{rs\sqrt{n-2}}{\sqrt{1 - rs^2}} \qquad t = \frac{0.94\sqrt{4}}{\sqrt{1-0.94^2}}$$

$$= \frac{0.94(2)}{\sqrt{1-0.88}} = \frac{1.88}{0.35} = 5.4$$

$\therefore$ Calculated value = 5.4

Table value at 4 degrees of freedom is 4.6 and is significant at 1% significant level.

Ho: There is no relationship between the age/design standard of buildings and the security devices observed in buildings.

Hi: Relationship exists between the age/design standard of buildings and the security devices observed in buildings.

The calculated value is more than the tabulated value, then it is agreed that rs is significant, thus, Ho is rejected and Hi is accepted.