

((RECREATIONAL UTILIZATION OF OPEN
SPACES IN NAIROBI CITY, KENYA.))

BY

PHILOMENA WAIRIMU MUIRURI

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A thesis submitted in partial fulfilment for the degree of
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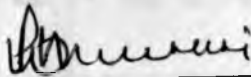
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W. OBUOHO
DEPARTMENT OF GEOGRAPHY
UNIVERSITY OF NAIROBI

DECLARATION

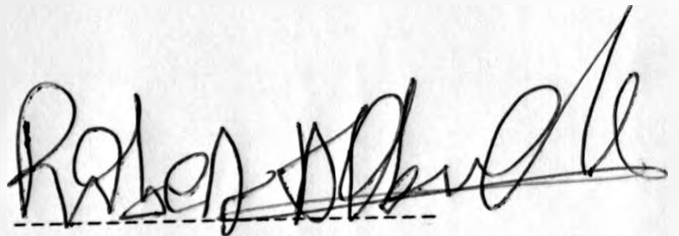
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BY



PHILOMENA WAIRIMU MUIRURI

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Dr. R. A. OBUDHO
DEPARTMENT OF GEOGRAPHY
UNIVERSITY OF NAIROBI

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As a result of two years work in advanced level

The DEDICATION is as follows:

This work is dedicated to my husband Mr. D. W. Muriithi for whom I am indebted for having provided both the moral and financial support during the course of my studies.

I am grateful to the University of Nairobi for the facilities which have enabled this research to be carried out. The Department of Geography at the University of Nairobi has kindly provided me with the necessary facilities for the entire period during which this work was undertaken. Special mention must be made of my supervisor Mr. Joseph N. Oyugi for his patience and advice which have been most invaluable to me and have greatly assisted the progress of this work.

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CHAPTER ONE

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ABSTRACT

There is mounting research on the general process of urbanisation in the less developed countries (LDCS). However little attention has been paid to the role of recreation in their urban centres. Research on urban recreation has been conducted almost entirely in the more developed countries (MDCS) urban centres. Here recreation is recognised as an important element in the lives of urban inhabitants hence its inclusion as a major land use.

On the contrary, most of the LDCs often give recreation low priority in the spatial planning of the urban areas. Nairobi as the capital city of Kenya lacks adequate recreational facilities compounded by the lack of exposure of the urban residents to the different recreational opportunities available. One such form of recreation is the use of open spaces which are available for recreation purposes. These open spaces are facing competition from the more economically challenging urban land uses such as residential, industrial, commercial, transportation among others.

This study examines the availability of these recreational facilities, their role and the factors influencing their utilization. Factors such as their location and spatial distribution exercise a significant influence in the use of these

facilities. Again the propensity to participate in outdoor recreation is also influenced by the social characteristics of the population such as age, sex, level of education, marital status, occupation, income, car ownership among others.

The fieldwork for this research was done during the months of November and December 1988 and January of 1989. The questionnaire, key informants, available records and personal field observations were the main data gathering tools. Four parks were selected for questionnaire administration to park visitors at random sampling. The data was assembled and analysed with the use of a computer. Hypothesis were formulated concerning the association between patterns of park visit (Y) and a number of independent variables (X) which included age, education, mobility, income and other variables.

The statistical tests used to determine the degree and direction of the relationships among the variables were the partial correlations, regression analysis using multiple and linear regressions and cross-tabulations. Use was made of the 't' and 'F' tests to test the significance of the results. In the findings, the characteristics of the participants showed that people from different social, economic and cultural backgrounds had different propensities to participate in outdoor recreation activities. The parks had different attraction rates with some having more visitors than others for different reasons. Passive recreation dominated in the parks while the major mode of travel to the parks was by foot.

Park visit is also influenced by factors such as the available leisure time, weather conditions, time/distances involved, the problems of accessibility and excessive demand. The demand for outdoor recreation facilities in the City of Nairobi (CON) cannot be overestimated especially as of now where these facilities are underprovided and there is a backlog of latent demand waiting to be satisfied. Participation in outdoor recreation is expected to rise as the impact of urbanization increases, which will influence changes in peoples attitudes and interest, and brings about higher education and income, increased car ownership which may affect future recreational preferences considerably.

In view of such conclusions, it is recommended that the present recreational facilities should be expanded and their quality improved. Cost sharing should be introduced to improve the management and maintenance of these parks, through introduction of chargeable activities in the parks.

Spatial imbalances of the distribution of the parks should be adjusted by locating the new parks in areas where there are more concentrations of population such as the low income residential areas. It is important to maximise the utilisation of the existing recreational facilities within the study area and at the same time create new parks for example, along the Nairobi River, on the waterfronts such as the Nairobi dam and also exploit the forests (Karura and Ngong) for their potential as recreational resources.

Recreational spaces need to be well planned ahead of the

expansion of the City of Nairobi and it is recommended that appropriate policy guidelines and research work be undertaken to necessitate provision of adequate and well managed recreational areas. This will go a long way in not only providing this most essential service to the urban population but also ensuring a good urban environment and retaining the status of the 'Green City' in the sun. To achieve this, requires a more pragmatic approach amongst the planners, the policy makers, the politicians and the public of City of Nairobi.

CHAPTER ONE

1.1

INTRODUCTION

Recreation is any form of activity in which an individual engages in from choice because of the personal enjoyment and satisfaction which he or she receives. Recreational activities are very diversified in nature and basically involve activity be it physical, mental or emotional and has no single form as the range of activities which people enjoy during leisure is almost limitless. Recreation is universally practised and sought and can take place in a variety of settings; it can be organised or unorganised and can be enjoyed alone or in groups. It can be classified as active or passive. In active recreation people participate directly in the activity for example, in sports such as football while spectators at such an event would engage in passive recreation. Far from being an alternative to work, recreation pre-supposes the existence of work so as to provide a contrast or compliment to it.

It performs three main positive functions in an urban society;

- a) It provides relaxation both mentally and physically from work and other necessary chores.
- b) It provides entertainment as an antidote to the boredom and repetition that are often involved in work and in personal and domestic chores.
- c) Finally, recreation provides a means for personal and social

development by allowing the individual to develop along lines which may contrast, significantly with the often restrictive thoughts and actions that work and other chores may permit.

Therefore, recreation is participation, in its broadest sense in any pursuits other than those associated with work and necessary tasks of a personal and social nature, which a person undertakes freely.

The term recreation is usually associated with the use of the term leisure. Leisure is free time over the use of which a person may exercise choice. Recreation is then the use that is made of this time.

There are basically two types of recreation activities. There are indoor activities that take place in build-up environments and outdoor recreation activities that are typically performed outdoors. Outdoor recreation activities are of concern in this study. They are numerous activities that can be performed in outdoor areas. Burton and Noad (1969) have classified them into three main groups namely:

- 1) The first is user-oriented areas which are of special concern in studies of urban recreation facilities and include such areas as parks and children's playgrounds. Their most important characteristic, is ready accessibility to users. Such areas are often small and their physical characteristics are not too demanding.

- 2) The resource based areas are at the other extreme. Their dominant characteristic is their outstanding

physical resources such as mountains, coastlines and lake shores. They usually lie at considerable distances from concentrations of population and therefore, involve considerable travel. Such areas are usually large units occupying large tracts of land.

3) Finally, there are the intermediate areas that lie between these extremes. Both geographically and in terms of use, they are well located to users and visits to them involve less travel time and include such facilities as game parks, water reservoirs etcetera.

This classification is not mutually exclusive as outdoor recreation areas of various sizes, location and characteristic form an inter-related system. This study is mainly concerned with user oriented recreational resources in the form of outdoor open spaces and especially public parks. Outdoor recreation activities are of particular significance geographically as they are diverse in their nature and scope and generally involve the use of large areas of land or water which are often in short supply in urban areas.

Leisure is becoming an increasingly important part of peoples lives as more free time and greater prosperity enables people to extend their free time activities. An increasing urban population that is more mobile will place a heavy demand on many outdoor recreational facilities hence the emergence of recreation as a major element in both urban and rural planning. This study only refers to a single facet of an individual's recreation experiences in the use of open spaces. The use of parks is one

outlet for the available leisure time. Today in the society, there are excessive pressures and strains of modern working conditions that can lead to stress conditions, mental illness among others. Studies have shown that the hectic life similar to that encountered in most urban centres of the size of Nairobi and bigger does not only adversely affect the people's behaviour but also their biological and mental well-being.

There is therefore, a need to place the role of recreation in its proper place among other basic life interests for the individual and society. As more and more people become urbanised recreation will become important in that man needs it for its own sake as a valuable element in a full rounded life and as an escape from the daily routine. Recreation has an important role to play in counteracting the monotonous and boring characteristics of many jobs.

1.2 STATEMENT AND NATURE OF THE RESEARCH PROBLEM

Recreation in Nairobi takes various forms. There is indoor entertainment such as cinemas, discohalls, bars and restaurants, arts, theaters, etcetera and there is outdoor recreation in open spaces such as parks which can be private, commercial or public and are designated as recreational facilities. Parks are important in

that they occupy land that can be used for other developments. In most cases it is central land that has a high profit margin. In MDCS, recent trends show that land devoted to open spaces is experiencing a reduction in size due to increasing pressures on urban land resources and competition in land use.

The demand for more urban recreation facilities in Nairobi and in other major urban centres in Kenya cannot be overemphasised. It is fast growing as evidenced by overcrowding in the few existing recreational areas and children playing on the streets at the risk of accidents especially in the estates.

Kenya can learn from the mistakes made by the MDCS in the provision of parks. There is a need to plan for adequate provision of parks and to expand the existing parks to reduce overcrowding and to cater for the ever increasing urban population. The supply of land is fixed but the population is growing and the planner is faced with the choice between alternative land policies. Opportunities must continue to be provided for outdoor recreation within the urban milieu but increasing pressures on urban land resources will necessitate precise objective arguments for the presence, location, and design of an open space if recreational land is to withstand competition from residential, commercial and transportation demands. Planning should also aim at overcoming constraints upon people seeking opportunities for leisure by overcoming deficiencies on the basis of demand and bearing in mind the

particular requirements of all sections of the community, young and old, active and handicapped, car owners and non-car owners between the rich and poor. The present research intends to fill the gap in the existing knowledge about the public's taste and preferences as they relate to the use of parks as a form of recreation. Balmer (1973) concluded that the function of the park is often not understood by planners. Park facilities play a range of roles on the individual visits experiences. One facility may perform different roles for different people. Thus it is important to provide a park whose role and function is considered in requirements of the local population.

Locational aspects of these parks are also important from the point of view of accessibility to the users.

There is a need, therefore, to see if the parks are balanced in their spatial distribution. A small park well placed and equipped sympathetic to the surrounding environment may serve a larger population better than a park ten times the size but, badly placed and equipped. Again participation in leisure activity is to be the provision of an environment to allow such activities to take place.

The study will also concern itself with the legislation that protects the provision of these parks and the by-laws that govern their use to see if there is any misuse and abuse of the parks. At the same time the study will look into the standards, management and maintenance of parks.

Testing management views on these issues will be necessary since

differences between their views and those embodied in subsequently adopted policies may require explanation.

A persons demand for recreation has been found to be largely determined by personal circumstances (Out-door Recreation for America 1962). The use of parks can be linked to the cultural and social and economic characteristics of the user. These factors are ethnic group, age, income, level of education social class sex, marital status, mobility that influence leisure time. As some of these factors change, it becomes possible to predict at least in general terms how use of the parks will change. Studies in the MDCS have indicated that demand for recreation is increasingly positively covarying with increased education, income. car ownership, urbanisation, reduced working hours and days of most of the urban employees. The higher the education of the individual and the higher his social- economic group, the more recreational pursuits he will be engaged in and the more diverse his recreational experiences will be. Changes in education and social structure are having a marked effect on recreation. It is therefore important to see if this is true in the City of Nairobi. There is also the question of facilities to make proper use of them, such as time available, distance involved and the associated problem of accessibility and excessive demand.

The City of Nairobi offers conditions that encourage more demand for recreation. The city has a multi-racial population of

approximately 1.5 million (1988), with an average annual population growth rate of 6.0 percent and is estimated to reach 3.4 million by the year 2000. It also has a high rate of literacy with two thirds of adults having at least secondary school level of education.

Most of the city's inhabitants are within the range of 24-45 years. This is the active age group that pursue recreational interests which are most diverse and intense. The income level is generally increasing and coupled with the recent Government of Kenya (GOK) reduction of working days from 6 to 5, majority of the urban employees now have more leisure time.

This large increase in population and its characteristics must generate a higher demand for outdoor recreation. The concept of demand in recreation is almost synonymous to consumption in respect to recreation facilities. These public parks are available for general use at no direct costs. To the user there is no fee or charge. Therefore, changes in consumption will reflect primarily changes in supply of the existing facilities. Clawson and Knetch, (1974) have shown how an understanding of present demand and the manner in which they are changing over time has become of immense importance in recreation resource planning and policy formulation.

The volume of demand for each park need to be known in order to realise the adequacy of present provision and probable future requirement. The interest in this study is with supply and demand

and particularly with the interrelationship between them. The purpose will be to find ways of measuring and projecting rates of use of recreation facilities given certain assumptions about their availability and the freedom to use ones leisure time in their own choice.

Finally the research centres on the general role of parks as a form of recreation in Nairobi city. How do the visitors to the parks see its use and their attitude towards these parks.

1.3

JUSTIFICATION

In Nairobi, much of the recreational literature work is mainly on recreation in the residential areas with issues such as provision of community centres and playgrounds, emerging as major recommendations. Parks are important as facilities for outdoor recreation but as yet their role has not been properly understood. They can efficiently be used to alleviate the shortage existing for recreation outlets and they are also an important land use.

The City of Nairobi is fast developing with more land being expanded and utilised for such uses as commercial, residential, industrial, transportation and yet there are very few plans proposing the opening of more land for recreation purposes

especially in form of open spaces such as parks. The present existing parks are few and they are not efficiently utilised, thus they are inadequate for the increasing population in the city. There is therefore a need to plan for more parks and this study is important in that it intends to bring out the role of parks in the urban areas and their importance as a form of outdoor recreation. Open space must be planned recognizing its total role in the urban community and primarily for the satisfaction of passive or active recreation demands.

The study attempts to analyse and place in perspective the survey undertaken at various recreation parks in the City of Nairobi. The research was designed to augment and update existing information on patterns of park visit by the residents as currently little attention has been paid to this aspect.

Much of the recreation planning being attempted by the Nairobi City Commission (NCC) can be described as facility based rather than 'people based'. One of the problem is that planners have very little 'people based' information - that is ; they know a lot about supply but very little about demand. Again even after a park has been established there is little evaluation of its success eventhough evaluation should not take place in isolation. One park may be successful because it compliments the facilities of another park in the same area so minimising conflict between those who need a noisy active environment and those who want peace and quiet.

The research aims at getting such information together. The study will bring out users and non-user views, the planners and administrators options on the role of parks and such information will guide decision makers on suitable policies to adopt. As yet no such intergrated information is available. Open spaces provision should be based on peoples attitudes and the resulting common options and policies identified, could help to form the basis for guidelines to planners. Such information will improve the services to existing users and will also attract new users. Policies might be designed to meet needs in terms of the nature of services offered. For example, if there is a demand for increasing the social element, refreshment facilities might be introduced or the parks physical appearance might be renovated to the ideal image of actual or potential users.

Again there is a need to look at the spatial distribution of these parks within City of Nairobi. Examining their location in relationship to the population distribution will show if the parks are easily accessible from the major residential areas or are inaccessible to most of the potential and existing users. Such information can help correct the situation by aiding planners in getting the best location for future parks.

The image of the country is mirrored by its national capital. This is quite true and therefore, for aesthetic reasons these are valid justifications for the provision of open space in our capital city. Nairobi as the capital city houses government ministries, representatives from foreign countries, seats the

headquarters of UNEP and has regional offices for the other United Nations Agencies. It has foreign and national corporations and is host to many tourist attractions. There is therefore the need to make it an attractive city popularly known as 'Green City in the Sun' through planning that caters for green open spaces well maintained that will be a refreshing scene from the already built up environment.

1.4 Operational Concepts And Definitions

Recreation consists of a broad spectrum of leisure time activities generated as a result of many individual decisions and personal preferences. One aspect of it is outdoor recreation through the use of parks. In this research various concepts of recreational geography will be used and they need to be defined in order to avoid the confusion there in. Recreation is not easily defined but in this context it is taken to mean human activities outside those in which he engages for his livelihood. It covers, broadly, any pursuits taken up during leisure time other than those to which people are normally highly committed. Recreation will, therefore, be participation in its broadest sense in any pursuits other than those associated with work and necessary tasks of personal and social nature which a person undertakes freely. Visitors to any of the parks in Nairobi will be assumed that they are there for recreation purpose.

The identification of recreation activities is in many respects subjective, but they can be grouped into five broad categories, namely,

- a. Those taking place in and around the home (watching television, listening to music, reading books gardening;
- b. Activities with high social context (entertaining, drinking and or eating out in bars and restaurants.
- c. Cultural and artistic pursuits i.e. visiting theatres, arts exhibitions, concerts.
- d. Active (physical recreation) pursuits such as sports (football, swimming, golf, hockey).
- e. Informal outdoor activities picnicking, walking, sight seeing).

Nairobi residents participate in all the above recreation activities. Consequently, urban parks and other recreational areas of the city should be designed to fulfil the many needs of the users.

Outdoor Recreational Spaces refers to the public outdoor parks for passive and or active enjoyment.

Outdoor Recreation: These include recreational activities outside buildings. They may be classified into:

- a. Daily recreation, essentially using urban park facilities for

short periods during the day (lunch break) or after work or during weekends. This is more appropriate considered as part of urban planning.

b. One - day recreation including excursions to the fringes of urban areas or farther into the country within easy reach.

Recreational facilities will be taken to mean any development on the land being used as a park availed with the intention of encouraging or facilitating the use of that park.

Leisure, is used to refer to free time, that is time over the use of which a person may exercise choice. Recreation is then the use that is made of this time.

Open Space, the term is used to refer to the land left vacant and not developed within the city boundary and designated as a park for aesthetic reasons to break the monotony of the concrete structure and to be used for recreation purposes. The study considers only the public open spaces as opposed to the private and commercial open spaces.

Supply is taken to refer to available facilities for outdoor recreation.

Urbanism is a concept used to refer to all aspects political economic, social among others of the urban way of life.

Urbanisation is taken to mean the movement of people from rural to urban places who engage in non agricultural activities and also change their lifestyle from rural to urban ways of life and

its associated values, attitudes and behaviours.

City is essentially a political designation, referring to a place governed by some kind of administrative body.

Urbanised area is taken to be the built up areas, where building, roads and other urban land uses predominate.

Tourism: overlaps with recreation as way of using leisure and with other activities involving travel. A tourist is a temporary visitor staying at least 24 hours or overnight in the country or place visited whose journey is for the purpose of:

a. Leisure (holiday, recreation, sport)

b. Business (family, mission, meeting, health, study or religion).

For the purpose of this analysis, it is necessary to consider both foreign and domestic tourism.

Nairobi is visited by all the above categories of tourists. There are frequent international and national conferences. These foreign tourists visit the parks such as Uhuru Park, City Park and the Arboretum within the city. Again visitors and students from the countryside frequently visit Nairobi for various purposes including viewing wildlife in the Nairobi National Park and the animal Orphanage. Nairobi's position and its good communications network ensures that visitors and especially tourists make it the beginning and departure place for all their trips in the country.

Demand for Recreation: Demand is an economic term used to refer

to a relationship between quantities and price but will in this study be used to mean consumption in respect of recreation facilities, - that is the number of people who visit an urban park and the distance travelled to this parks.

1.5 OBJECTIVES

The objective of this study is to investigate the general use of public outdoor recreational resources in the city of Nairobi;

1. Look at the socio-economic factors of the park visitors and how they influence leisure behaviour.
2. Look at the physical attributes of the parks, the recreational facilities available, their standards and management.
3. Look at the present supply of parks, their distribution, and the future planning requirements with reference to the growth and spatial planning of Nairobi city.

1.6 HYPOTHESES

In connection with the issues under investigation and the major objectives advanced above, this study advances two major hypotheses (or assumptions) namely that:

a) Social and economic characteristics have emerged as major factors that influence park visits.

Ho - There is no significant relationship between socio-economic characteristics and park visits.

Hi - Alternative.

b) Physical attributes of the parks play an important role in attracting visitors to a particular park.

Ho - There is no significant relationship between the physical characteristics of a park such as location, accessibility, distance, attractiveness and the rate and frequency of park visitors.

Hi - Alternative.

1.7 THEORETICAL FRAMEWORK

What is envisaged is a situation where in a defined area there are a certain number of existing facilities of a given type. The body responsible for the provision of this facility knows the location of existing facilities for those it owns and for others it does not own. It is prepared to build new facilities or expand present ones if this is thought necessary.

The first requirement is to understand the existing situation thoroughly. This can be represented diagrammatically as in figure 1. This represents an administrative or planning area in which there are a given number (N) of facilities. All of these facilities may not be owned by the local authority concerned, but they must all be located and taken into consideration. Thus, for example, a local authority will not necessarily own all parks within its area, but it cannot plan new ones without taking private clubs into consideration. This identification of the location of existing facilities represents the first gap in the knowledge concerning use of parks in recreation. In this study the simplifying assumption is made that only parks from within the administrative area are under consideration. Equally it is assumed that people within the planning area cannot use facilities outside it. These assumption can later be removed and it is then necessary to examine patterns of use of the park facilities, and try to determine how the introduction of new facilities will affect these patterns.

Within the planning area, there will be a given population some of whom will make use of the facilities and some will not. And of those who use the facilities some will use one particular facility and some will use another while others may use several. It would be important to know which are the factors that attract one to a particular facility. These relevant factors can be divided into two groups: Supply consideration and socio-economic factors.

In the closed system postulated above if there were no parks

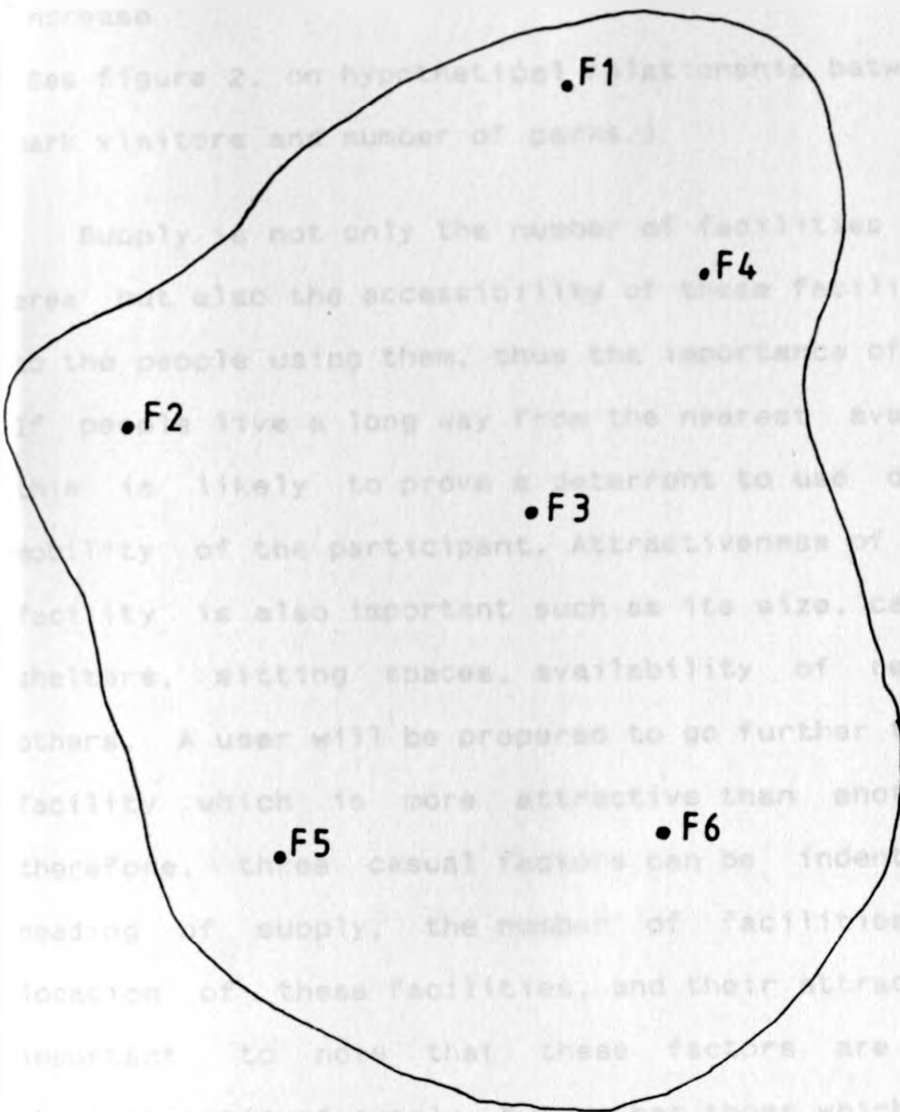


Figure 1 : The distribution of recreation facilities in a hypothetical planning area

then nobody would visit them. But if the parks are many or they are increased then the number of park visitors would also increase

(See figure 2. on hypothetical relationship between number of park visitors and number of parks.)

Supply is not only the number of facilities available in the area but also the accessibility of these facilities in relation to the people using them, thus the importance of their location. If people live a long way from the nearest available facility, this is likely to prove a deterrent to use depending on the mobility of the participant. Attractiveness of each individual facility is also important such as its size, car parking space, shelters, sitting spaces, availability of refreshments among others. A user will be prepared to go further to make use of a facility which is more attractive than another. To sum up therefore, three casual factors can be indentified under the heading of supply, the number of facilities available, the location of these facilities, and their attractiveness. It is important to note that these factors are not only the characteristic of supply, but rather those which directly affect demand for or use of facilities.

Socio-economic factors relate directly to the population. The way in which age, sex, education, class, income and so on affect the likelihood of a person engaging in particular types of activity should be discussed. Such characteristis are all factors which will tend to affect a persons desire and ability to participate in given activities.

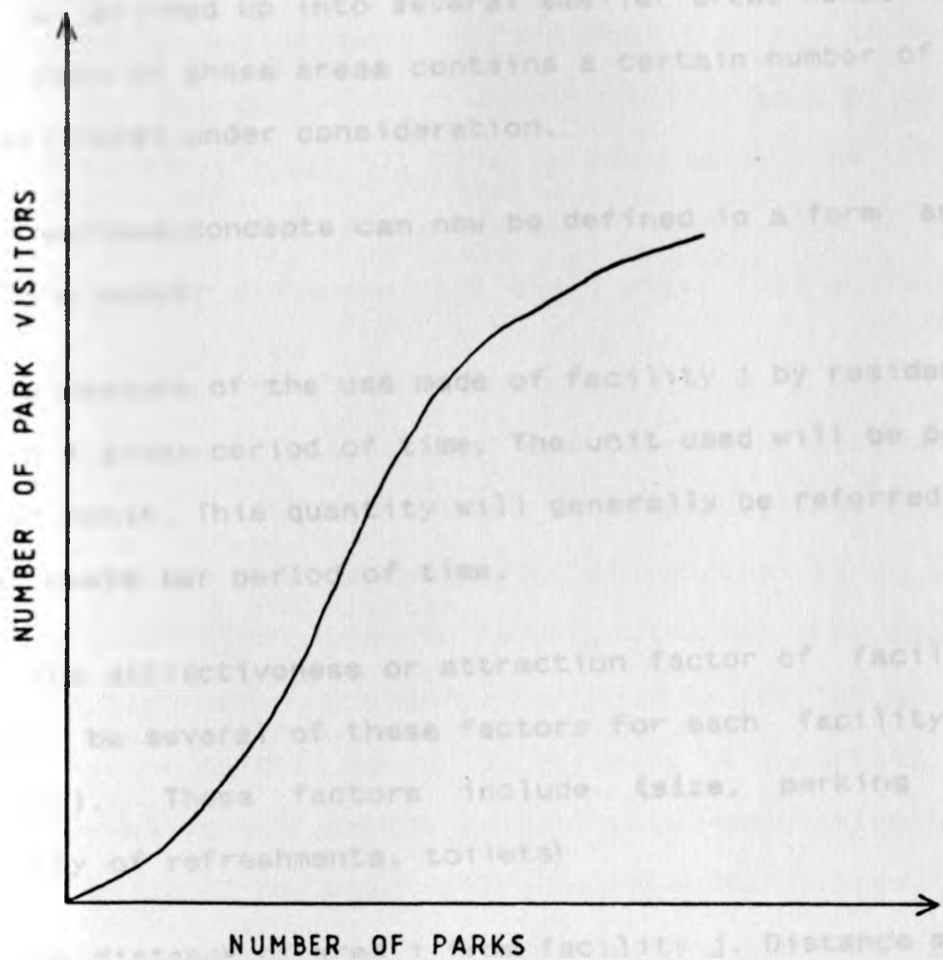


Figure 2 A hypothetical relationship between number of park visitors and number of parks.

To aid in formalizing the above concepts, the study area (Nairobi) is divided up into several smaller areas numbered from I to N). Each of these areas contains a certain number of users of the facilities under consideration.

These various concepts can now be defined in a form suitable for use in a model;

X_{ij} : is a measure of the use made of facility j by residents in area i , in a given period of time. The unit used will be person-visits per month. This quantity will generally be referred to as number of users per period of time.

A_j : is the attractiveness or attraction factor of facility j . There may be several of these factors for each facility (A_{1j} , A_{2j} ,.... A_{qj}). These factors include (size, parking space, availability of refreshments, toilets)

D_{ij} : is the distance of area i from facility j . Distance might be measured, in kilometres as the 'crowflies' or in terms of time taken to travel from that area to the park.

E_i : represents one or more socio-economic characteristics of the population for example age, level of education.

P_i : is the resident population of area, i .

There are assumed to be N facilities and n zones in the administrative (planning) area.

X_{ij} : is the dependent variable whose value depends on the value

of the other variables. Thus, the more attractive (A_j) a facility is, the more people will use it, or the more intensively they will use it. The farther away (D_{ij}) a facility is, or the less accessible it is, the fewer people will use it or less intensively they will use it. This is because of the deterrent effect of distance - and inconveniences of overcoming it and because at greater distances people are often less aware of the existence of a facility.

The socio-economic structure of the population (E_i) will also affect participation rates so that, for example, an area with a lot of old people will, other things being equal tend to have fewer active recreation pursuits (sports) than an area containing a high proportion of young people. For some recreation activities the income levels of the population may also be important, their education level as well as the overall total population (P_i) of the area. The aim of the study will be to measure these factors in particular situations to find out how they are related in a quantitative way.

The object^e is to produce a system whereby it can be said that if an area with given socio-economic and population characteristic (E_i, P_i) is a known distance, (D_{ij}): from a facility with an attraction factor (A_j), then it is possible to determine the number of people (X_{ij}), who will use that facility.

Once it is possible to predict using this model, Then it will be possible to make local decisions about the location and appropriate size of new parks.

The aim of carrying out a review of related literature here is to evaluate and reveal valuable aspects that are of interest to this particular study. The review examines the weakness of existing similar studies and the gaps left out and have not been filled, such that the intended study will not duplicate what has already been done through research. In this way it will instead add to the knowledge available and make comparative studies more interesting. It will also introduce new facts, ideas and other theories on this area of research.

In most urban centres of the MDCS, urban recreation and tourism have received relatively reasonable attention over centuries. Urban communities, large and small make plans for urban recreational areas and facilities (Patmore, 1971). Numerous textbooks and research reports exist on the subject recreation.

Much of the related literature in regard to outdoor recreation is still from the MDCS and not much has been done in LDCS. In the former countries recreation is recognised as an important element in the lives of urban inhabitants, hence its inclusion as a major land use in the urban centres. Britain was a pioneer in the public open space movement of the nineteenth century but it is now realised through research how little is known about the role of open spaces and recreational land in the

urban environment. On the contrary, most of the LDCS often give recreation low priority in the spatial planning and development of the urban areas and Nairobi is no exception, (Maina 1982).

Supposedly economically lucrative programmes have often guided goal formulation and implementation at the expense of those programmes perceived as less economically viable. Open spaces for recreation make little appeal to the cost benefit analysts in the various urban centres. They often pay no direct rates, they are expensive to acquire, landscape and to maintain. This secondary consideration of recreation facilities is demonstrated not only by the inadequacy of recreational facilities within the neighbourhoods and estates but also by the lack of exposure of the urban residents to different touristic opportunities within most of our towns. Their emphasis has tended to be placed on the supposedly economically challenging urban land use programmes such as residential housing, industrial and commercial.

As the demand for outdoor recreation grows, more pressing questions will be asked about the relative merits of spending increasing amounts of money on recreation rather than on the many alternatives available (Smith, 1979). The case for recreational facilities is made more complex by the fact that their utility cannot be economically quantified. Given housing and recreational needs for example, under budgetary constraints what gets first priority are likely to be the housing planners who can produce statistically convincing arguments like the number of squatters in the city. While the recreational planner due to lack of

available statistics cannot effectively advance his argument. The situation of urban recreation is worsened by failure of other basic services such as health, housing, sewerage, water and education to keep up with urban requirements.

But with outdoor recreation gaining importance in the urban society, economists are of the opinion that the benefit of recreation need to be measured in some way and also with the cost of providing the recreation facilities. The benefits of recreation can be expected to be related to the demand for the facilities. Clawson (1959) showed that it is necessary to measure present demand, predict future demands and then to associate with the demands a measure of recreation benefits.

Nairobi is rapidly becoming more urbanised both in terms of size and in its population. Some physical manifestation of these fast urbanisation rates are increasingly becoming apparent such as overcrowding, unemployment, increase in number of slum and squatter settlements, drug abuse, pollution and family disorganisations, among others. Consequently, there are limited recreational areas. The few existing are inadequately planned and poorly managed. Most of them lack proper facilities and are located far from the major residential areas of the urban centres.

Many of the open spaces consist primarily of parking lots, dumping grounds and vacant land, most of which are infact undeveloped plots meant for other land uses. In some estates, residents in desperate need for recreation have turned some of

the open spaces into play - fields. Many people spend a long time in bars, perhaps, due to lack of well provided outdoor recreation. Children so often have no alternative but risk being run over by vehicles as they turn roads into play grounds. Yet Nairobi city has enormous recreation opportunities within it and in its immediate environs. Nairobi contains the world reknown Nairobi National Park and affiliated Wild Animal Orphanage both of which are hardly mentioned when the city's growth and spatial planning is discussed. The city has certain potentially attractive areas such as the Nairobi river banks and other water fronts like the Nairobi dam which have not been exploited as yet.

Proper urban planning in the physical and social sectors should fully acknowledge the indispensability of open green spaces and encouragement in activities other than work. Balmer (1971) stressed that the latent function of all urban space is to provide the user with a set of physical, social and psychological satisfaction such as those derived from active and passive recreation and the appreciation of ones urban milieu.

In his defence for ample recreational space for all ages in all urban environments, Lederman (1959 p.6) concluded that

"Play is of decisive importance for the psychological development and the maturing of man. The consequences of insufficient possibilities for active and creative play clearly show results such as poor imagination, nervousness and instability of children, waste of spare time, craving for entertainment, aggressiveness of many teenagers"

He observed that man clearly needs to associate with nature in the process of his self-recreation. Man must have contrast, change and challenge. Recreation activities not only give man the ability to cope up with environmental stress but also allows him to exercise his power over elements like seas and mountains at his own pace. Here, play is seen as having a vital role particularly in child socialisation as part of a learning process, and also as a source of satisfaction of achievement and self - realisation. To a worker particularly in the urban areas, recreation is an important element in many ways, it will provide a means of relaxation for him and with relaxation he will feel envigorised, and re-created.

Studies also have shown that the hectic life similar to that encountered in most cities, of the size of Nairobi does not only adversely affect the peoples behaviour but also their biological and mental well - being. The importance of recreation in human life is perhaps best summarised by the following quotation.

"Recreation is not a major secondary matter in the health of an individual or the health of a nation, not a matter of something you do in your activity that you prescribe for patients so - called free time. We cannot relegate recreation to a position of secondary importance". (Band-Bouy 1977).

Man needs to recreate. Recreation activities not only give human being the ability to cope with environmental stress but also provide them with long term health benefits. Provision of

well planned areas also help in maintaining a good environment and in addition, it offers educational and aesthetic opportunities. If properly organised, recreational pursuits can generate enormous income. All these benefits of recreation can be realised in Nairobi.

Tankel (1970) writing on importance of open space in the urban pattern recognised four functions of open spaces; namely for productive, ornamental, protective and recreation purposes. He maintains that open spaces is not a question of how much land is to be allocated to recreation, but of where in relation to development that is the buildings and the people in them. This research in this regard intends to analyse how far the existing parks are spatially located and distributed in relation to the residential areas. Location is important in that once an urban park is located far from centres where population is concentrated then distance becomes important as a factor influencing the use of the park.

Veal (1974) in his study on environmental perception and recreation notes that participation in recreation is as a result of choice influenced by personal and facility factors and others which are less tangible. He criticized the fact that many open spaces are often planned on the basis of standards that is, so many acres per so many people. Whereas the criteria should not be the amount of open space but its role and function in relation to the local population. In the city of Nairobi with its varied population it would be expected that the parks have many roles they play to each individual.

Planning, management and provision of urban recreational areas and facilities in most of our urban areas is primarily the responsibility of the Government of Kenya and the local authorities.

In Nairobi most of the recreational parks are provided and managed by the central government and the NCC (currently the city commission). There are also a number of recreational areas owned by parastatal and private organisations. Usage of those provided by the central government and the city commission except for sports centres and stadiums, and for certain specific facilities within some of the recreational areas such as boating in Uhuru park, are basically free and open to the public. The usage of the privately owned ones is in most cases restricted to members only.

White et al (1948) in drawing up the first master plan for the Nairobi city noted the importance of open spaces. This importance grew with the mounting intensity of modern industrial and commercial life. Therefore, towns must preserve adequate open spaces. They observed that open spaces were more than mere preservations which needed conscious treatment, landscaping and utilisation for enjoyment. The early parks were planned on basis of races mainly for the European, Asian and the African but with independence race restrictions were removed. However, with the current population increase that has more than trebled since then, the existing parks may not meet the demands of the population and, therefore, there is need to plan for more land to be allocated for recreational purposes, while the existing parks

should be well preserved.

The failure to plan for provision of social facilities is one of the many criticisms levelled against the NCC. In Kenya, post-independence legislation and development in planning procedures did much to increase the abilities and power of local authorities to plan. But their abilities and powers to provide facilities were less fully developed partly because of the shortage of resources and the low priority given to recreation compared with other local authority concerns such as housing, education, health, and transport among others. In addition to direct provisions, they can influence provisions by aid to voluntary associations and in a rather different way through their planning powers. Probably the most important point to note in relation to local authority powers is that they are powers and not obligations. The importance of planning for open space is that the acquisition of open space was only the beginning of the process and acknowledged that constant vigilance would be necessary to prevent the ultimate development of the areas. The land should be used as intensively as possible without seriously modifying the environment. But today, increased requirements for the growth of Nairobi city has caused untold impacts on the recreation areas.

In another study in the Town Planning Review (1976) on recreational management, Smith revealed that if public lands are to be managed so as to be of benefit to the public, then decision-makers require information on social, economic, personal and scientific value. The study appreciates the increasing value

attached to land for competitive uses as a consequence of the rapidly increasing population and industrialisation. It observes that land agencies in the U.S stand in particular need for information to enable them to set priorities on land use and manage public lands to meet broad range of user and public needs if they are to continue to meet outdoor recreation demand.

This need is of importance to Nairobi city in planning for recreation. A report on recreational use of the West Midlands countryside by Judy White and Michael Punn (1974) detailed the personal characteristics which included age, sex, marital status occupation, social class and socio-economic groups of respondents. These were carefully analysed, and significant relationships with other variables for example, frequency of visits, length of stay, time taken to reach site were investigated so as to discuss the implications for the site management and overall urban recreation strategies.

Relatively, little research has been done in Kenya on recreation and the use of open spaces. Of the few studies done in the country the emphasis is mainly on the foreign tourist and the affluent section of the Kenyan society. Such information is usually found on official guidebooks to the City of Nairobi. In one of the few documentations of planning of recreation on a township scale, Dosio (1977) carried out research on recreation planning in Kisumu town.

He stratified the town into three socio-economic groups: Low, medium, and high income from which samples were drawn. He looked

at four basic items; demand for recreation, areas and facility with emphasis on individual demand as influenced by personal attributes such as ethnic groups, sex, age, marital status, education, income and so on. He found that effective demand for outdoor recreation was great in the town and occupied over 33% of overall weekly leisure time. He observed that factors such as education and climate were the most significant recreational demand determinants.

He went further to examine the standard and management of these recreational facilities and found that they followed no set out standards, and that they were poorly managed. He concluded that recreation demand was frustrated by unfair distribution of planned places from the residential areas, despite a great demand for recreation places in town. Economic reasons for the utilisation of recreation facilities were found to be paramount but non - economic factors were not to be underestimated. The study was quite comprehensive but it dealt with a wide range of outdoor recreation activities including sports, parks, playground, private clubs, so no one particular activity was detailed.

The present study therefore, intends to dwell on the use of parks in Nairobi city as a form of outdoor recreation alone, so as to give a detailed report on their use from the visitors point of view and according to the planners and to the researchers' own observations. Otherwise, a study on all outdoor activities would only give a very general conclusion.

Maina (1982) in her study of recreational open spaces in

Nairobi's highly populated Eastlands of Nairobi, observed that provision of open spaces and recreational facilities were inadequate. She found that demand for them was above average despite their deficiency. A major drawback of the study is that it only considered open spaces in the Eastlands area where there is a shortage of recreational open spaces. She examined the possible development of Nairobi River belt into an elaborate urban liner park system connecting the now Kamukunji open air market and the Nairobi Arboretum. She suggested that this would alleviate the shortage of recreation spaces more acute in the Eastlands residential suburbs. But even if the park is developed, Planners would require information on the socio-economic characteristics of the users, their views and opinions and problems they face in the use of these park. So that the planners can give the people what they want. She also found out that other open spaces were being developed into buildings thus leaving few inadequate open spaces. The study proposes provision of more social halls and recreation places to correct existing deficiencies. The study is very relevant especially with new estates coming up and the need to plan for a neighbourhood unit.

Recently user surveys in Britain indicated that demand was moving into a pattern of neighbourhood response, therefore, it becomes clear that any identifiable local community should have access to a wide range of recreation and leisure situations. She recommends that recreation as a matter of choice should, therefore, be given greater priority from the city authorities. This study intends to look at public open spaces within the city

of Nairobi at a detailed analysis in relation to residential areas of the users. For example, since most of Eastlands has few or no open spaces then most of the people living there should be frequent visitors to the established parks within the city boundary. But is this the case?

Rukenya (1980) underscores the fact that Nairobi's population is rapidly increasing and there is need to plan for the parks more efficiently so that they can serve more people as one form of outdoor recreation. Consequently, urban parks and other recreational areas of the city should be designed to fulfil the needs of the users. Different recreational areas should reflect different moods, offering different types of recreational pursuits. This study intends to gather such information so that it can be utilised for public benefit by the planners.

So far the most comprehensive report on out-door recreation in Nairobi is by Mwaniki (1977) which was later revised in 1982 by the NCC engineers department. The report covered all open places within the city boundary and the only weakness is that it is very general and it is biased towards the Eastlands areas. She recognised the inadequacy in the provision of open spaces in this part of the city.

She mentions increased population as one of the reasons for the need of provision and development of open spaces. Population statistics indicate that Nairobi had an average growth rate of 4.9% per year which is higher than the national average of 4% per year, (Central Bureau of Statistics). Such a large population increase demand on an elastic land supply points to a serious

need for comprehension towards planning including in the field of outdoor recreation. Again, of the total population majority of it is young which makes planning important because it is at this age (15-39) years that recreational interests are at their most diverse and intense in demand. This study will look at age of respondents in the parks and attempt to analyse the age-group that most utilises the park.

Increased education is another factor influencing recreation. There is a direct causal relationship between education and the use of leisure time. A pilot national recreation survey carried out in Britain in 1962, noted that interest and participation in many recreational pursuits is closely related to the amount of education that one has received. (Outdoor Recreation Resources Review Committee 1962). This research intends to study the influence of education on utilisation of outdoor parks especially in view of the trend for more and higher education in Nairobi.

In MDCS, research has shown that income is a crucial factor affecting levels of participation in recreation activities. According to the Nairobi Urban Study Group (1983), Nairobi's Gross Domestic Product is projected to increase eight times between 1990 and the year 2000. The average income per household will be expected to rise by 60%. But the question of income is associated with the residential areas, high, middle and low and the location of recreational facilities. Thus it is expected that a person with low income will travel far less for recreation as compared to a person with high income. Therefore, if a

recreational facility is located far from a residential area then the probability of a potential user having an effective demand on that facility drops considerably. Balmer 1971 observes that the real weakness in the contemporary urban open spaces centres on the question of location. While the importance of correct location is constantly stressed, practical guidelines on what is correct are non-existent.

One of the broad aims of a recreation policy is to increase opportunities for recreation and ensure the availability of recreational opportunity. People need to be able to get to them, that is the opportunities need to be geographically or spatially accessible to potential users, who have varying capacities for using different travel methods as determined by the level of ones income. It is the purpose of this paper to examine the consideration given in research and policy documents to accessibility, to personal mobility and to the travel component of recreational activity. To enable decisions to be taken on extending the availability of recreational opportunities, decision makers need to have a comprehensive understanding of present patterns of the park visit.

From the foregoing literature review, several weaknesses and gaps in the past studies related to this particular study can be observed. One observation is that Nairobi has little information concerning outdoor recreation and especially in the use of parks. Most people are not aware of the various parks available and what they offer in terms of recreation.

Past research efforts have tended to concentrate on only certain

parts of the city with little attention to others such as the Central Business Districts. Why do people who live in areas deficit of open spaces not utilise the parks within the city boundary. A gap exists on how these parks as resources are utilised.

Again who are the park visitors, their social and economic characteristics, their reasons for visiting the park and the problems they experience in the use of these parks. Also these people's views and perceptions on the parks should be investigated to aid the the policy makers. For example, little has been done to investigate the existing relationships between location of open spaces and the state of utilisation. Also, little has been done in an attempt to examine the use of open spaces against notable social features such as ethnicity, sex, education, income e.t.c in a bid to understand what factors influence the use of such an open park. Little is known about the demand of such facilities in the local situation. How many people will visit this park at any one time and how does the demand vary over a period. These are some of the issues that will be attempted in the present research.

The study examines the conditions of recreation in the use of parks with reference to the growth and spatial planning of the city. First the status areas of the existing recreational areas is discussed covering in particular their locations and the associated infrastructures.

Secondly, planning and management standards for various

recreational parks is outlined. The study also looks at the impact of the growth of the city on existing recreational spaces and the future provision of recreational areas, a necessity in the spatial planning and development of urban areas.

CONCLUSION

...and the every day life of our forefathers...
...it be established, we are certain that they are fully and...
...effectively and can maintain recreation in their own way...
...for (recreation) had with activities as, dancing, swimming...
...and various and various sports. However, since the...
...period the provision of formal recreational activities...
...the development of a recreation culture.

...of this formal recreation is more of an urban...
...in terms. If the urban areas have many parks and...
...and sports facilities, it is necessary to...
...to provide for social activities and...
...recreation. This also requires a detailed...
...initial stage to be done by the urban...
...development authority and...
...of the need for recreation and...
...recreation and a...
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CHAPTER TWO

2.1 BACKGROUND TO THE STUDY AREA

Although recreation and the every day life of our forefathers could not be dichotomized, we are certain that they led full and relaxed lifestyles and had maximum recreation in their own way. They, for instance, had such activities as dancing, wrestling, hunting, swimming and walking among others. However, since the colonial period the provision of formal recreational activities encouraged the development of a recreation culture.

Inspite of this, formal recreation is more of an urban activity in Kenya. In the urban areas many Kenyans live in congested and poorly ventilated houses, do monotonous jobs and experience severe space constraints inside and outside their home environment. They also experience a polluted environment, through noise, traffic jams adding on to the urban impersonality. In the developed countries these conditions have severely compounded the need for recreation and ample provision of related services. Within MDCS, research has shown a high correlation between non or minimal provision of these facilities and services with various disorders such as mental illness, obesity, stress among others.

These problems can still be the same for people in the LDCS who are deprived of recreation. In the poor residential estates with absence of recreational space, most vacant small open spaces are at the weekend full of spectators, adults and children

playing games such as football. This goes to show that the need for recreation is strong in our situation.

Not much attention has been directed towards recreation in Kenya or for that matter in the LDCS. This is partly because the development and organisation of recreational resources for the public have been overlooked as increasing emphasis is placed upon the development of the tourist industry. This imbalance exists because the tourist industry is a major source of foreign exchange in Kenya.

As a result there is an inadequacy of recreational facilities within the neighbourhoods and estates and also lack of exposure of the urban residents to the different touristic opportunities within most of our urban areas. Emphasis has tended to be placed on the supposedly economically challenging urban land use programmes such as residential, housing, industrial and commercial.

Nairobi is rapidly growing both in its size and population. With this increased urbanisation, is the rising incomes, higher education, increased car ownership, increased leisure time among others. These changes are expected to increase the demand for outdoor recreational resources of which the demand may be difficult to fulfil unless planning for these open spaces is considered to avert the problem of overcrowding in the few parks. If this potential is exploited then overcrowding would ease in the parks and most people would have at least access to a park and all benefits of recreation required can be realised in

Nairobi.

Therefore, this research examines the conditions of urban recreation with reference to the growth and spatial planning of Nairobi city in Kenya. The status of the existing recreation and tourism areas is discussed considering their locations and the associated infrastructures. The impact of the growth of the city on existing recreational areas is also analysed. The work also gives description of individual activities, levels of participation and the characteristic profiles of the participants. This will give the details to determine whether people from different social, economic and cultural backgrounds have greater or lesser propensities to participate in park visits for recreation purposes. The choice of recreation and range of variables considered is greatly influenced by the amount of time available for leisure and by many other personal factors such as age, marital status, income and educational background. There is also the question of availability of suitable resources and the facilities to make proper use of them: time/ distance involved and the problems of accessibility and excessive demand. The study intends to concentrate on the major issues in the provision and use of recreation.

2.2 THE STUDY AREA

Since its establishment as a railway depot in 1899, Nairobi has grown tremendously both in size and population. Before independence, Nairobi city boundary encompassed the urban area only, some 30 square miles extending about 6 miles East to West

5 miles North to South. This area had remained generally unchanged since 1927. After independence there was a change in the city boundary. The 1963 change enlarged the city from 84 square kilometres to 689 square kilometres and this new boundary provided a much more reasonable framework for the administration of the city. (See Figure 2.)

Table 2.1 AREA AND POPULATION.

<u>YEAR</u>	<u>AREA</u>		<u>POPULATION</u>
	<u>Acres</u>	<u>Square Miles</u>	<u>Population</u>
1901	4,480	7.0	-
1919	6,270	9.8	11512
1948	20,542	32.4	
1962	22,400	35.0	266794
1963	170,364	266.0	342,76
1988	698 Km. sq		1.5 million

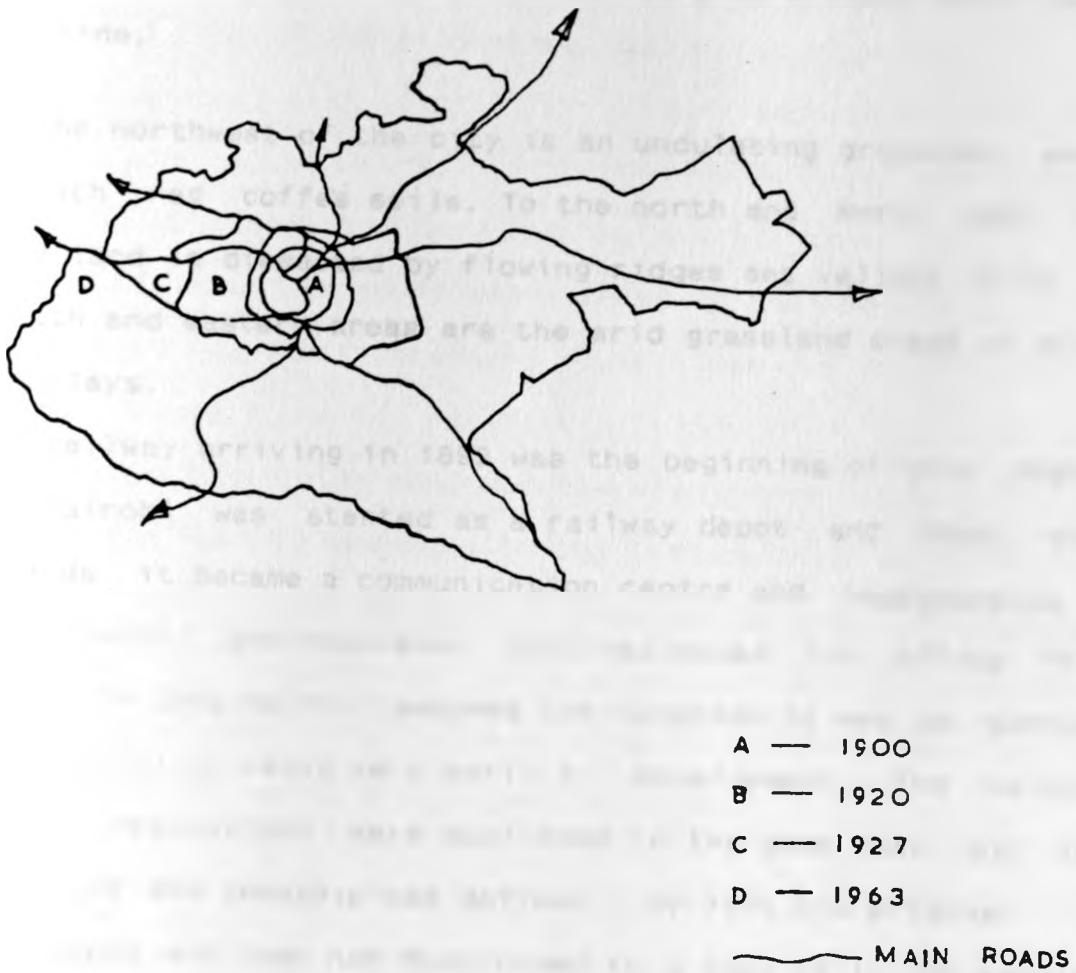
Source Morgan: (1967)

Obudho R.A. (1987)

Nairobi on the western edge of Athi-Kapiti plains and at the foot of the Kikuyu highlands is some 140 km south of the equator and some 480 km from the Indian Ocean coast. Because it lies 1700 metres above sea level, the climate is cool and healthy; Seasonal

Fig 3

NAIROBI : BOUNDARY CHANGES SINCE 1900



Source: Morgan, W. T.(ed) 1967

changes in temperature are small but there is a wide range of temperatures throughout the day. In the hottest month of the year from January to March temperatures rise above 27 degree centigrades (80 f) in the day time while the nights are cool. There are two rainy seasons, the long rains between March and May and the short rains between October and December. But even in the rainy season it is uncommon for a day to pass without some hours of sunshine.

To the northwest of the city is an undulating grassland areas with rich red coffee soils. To the north and North east the sloping land is dissected by flowing ridges and valleys while to the south and eastern areas are the arid grassland areas of black cotton clays.

The railway arriving in 1899 was the beginning of this modern city. Nairobi was started as a railway depot and camp, soon afterwards it became a communication centre and headquarters of the provincial administrator that had moved its office from Machakos. In 1900 Nairobi assumed the function it was to perform as a capital of Kenya very early in development. The Nairobi municipal regulations were published in the same year and the boundary of the township was defined . By 1906 the original railway depot and camp had mushroomed to a town of 11,000 people. The layout which formed inside this first municipal boundary was to dictate the subsequence growth of the city. Definite lands uses had appeared by chance and choice of the inhabitants. In 1907, Nairobi was made the capital of Kenya a position it has maintained to date.

In the early years, the town grew without any co-ordination of development other than those areas within the city. By 1909 much of the internal structure of Nairobi especially the road network in the central area was already established. There was a major review of the towns structure and development which was led by Justice Feethan in 1928 commissioned by the local government. It proposed boundary changes which absorbed within the new municipality most of the previously autonomous housing areas and also defined a peri-urban area under separate government administration called Nairobi Extra Provincial District (NEPD). Neither the Municipal boundary nor the overall disposition of the zones established within it was altered in the "Master plan for the colonial capital" prepared by a team of south African Planners in 1948. Land for residential, industrial and other uses was earmarked with guidelines for the development pattern of the city for the next 20 years. Following independence in 1963, the boundary of Nairobi was enlarged to embrace an area of 690 square kilometres including Nairobi peri-urban settlements and other important features such as large areas of ranging land in the eastern sides, the national park and airports.

Nairobi as the capital city is the economic, administrative, social and cultural centre of Kenya. It is also the major industrial and financial centre supported by an extensive transport and communication network which connects with all other parts of the country. It is the centre of several local, national, regional and international organisations including United Nations, UNEP and Habitat. It is also the headquarters to

the majority of the African based multinational and transnational corporations. Nairobi is the primate centre in Kenya. As shown in Table 2.2, the primacy index of Nairobi has been consistently high from 1948 to 1979. In 1948, the population of Nairobi accounted for 41.6% of the total urban population while in 1962 the percentage declined to 33.8% of the total urban population. In 1969, the total population increased to 47.2% due to the boundary extension as well as the high rate of rural urban migration. In 1979 however, Nairobi's total urban population fell to 35.9% despite the fact that the primacy index was at 123.4%

Table 2.2 Nairobi: Primary index:

Year	1948	1962	1969	1979
Nairobi's population	118,976	266,794	509,286	827,775
4 Largest cities	232,246	508,076	835,941	1,498,737
primacy index				
largest city as percentage of four largest cities	51.2%	52.5%	60.9%	55.2%

Source: Wayne Mackim, "Patterns of spatial interaction in Kenya." In R.A. Obudho and V.D.R.F. Taylor, (eds). The Spatial Structures of Development: A study of Kenya. (Boulder, Colorado West View Press, 1979), P. 191.

Although it contains just a percentage of the country's total population its dominant place in the urban hierarchy is suggested by the fact that it accounted for nearly 50% of all urban residents living in Kenya. The population structure is multi-racial with the Africans forming the majority. (See Table).

Table 2.3 Population changes in Nairobi 1901 - 1979

YEAR	TOTAL POPULATION	EUROPEANS	%	ASIANS	%	AFRICANS	%
1901	EST.						
1906	EST.	11512	579	5.0	3582	31.1	6351 55.8
1931	EST.	47919	5195	10.8	15988	33.3	26761 55.8
1948	CENSUS	118976	10830	9.1	43749	35.2	64397 55.6
1962	CENSUS	266795	21476	8.1	87454	32.7	196900 57.3
1962	O	343500	28100	8.1	86900	25.3	196900 57.3
1969	CENSUS	509286	19185	3.7	67189	13.1	421079 82.6
1979	CENSUS	835000					

NOTE: * Approximate figure

O Including changes 1963 boundary changes

SOURCE: Estimated figures from Morgan (1967), Soja (1972) and official census reports 1979.

The ethnic structure of Nairobi's population has been changing with the political development of the nation. In 1969, Africans constituted the majority 82.6% of the urban population. The population of Europeans and Asians shows a sharp decline after 1962. This is because the majority of the non-Africans emigrated from Kenya following the independence of the country. The sex ratio and age sex composition of the population show further interesting structural characteristic.

Table 2.4 Sex Ratio Changes Among the Africans in Nairobi

YEAR	(CENSUS)	RATIO
1948	Census	386 Adult males to every 100 adult women
1962	Census	250
1969	Census	210
1979		138

Source: Hake 1977, 1979 Census.

In 1962, the total sex ratio for Nairobi was 154 which for the African population was 187. By 1969 the sex ratio had decreased to 147, while that of Africans had decreased to 158. By 1979, the sex ratio for Nairobi had only decreased to 138. Most of the African males during colonial period were engaged in temporary jobs and had homes in the rural areas, where they left their wives. But with independence, the restriction imposed on male migration to towns was removed thus more men have migrated to Nairobi with their families.

The above figures reflect the extent of labour migration to

Nairobi mostly by males. Table 2.5 shows the age-sex distribution in Nairobi, and Table 2.6 gives the estimated projections for the year 2000.

Table 2.5. Nairobi Population By Age And Sex 1979

Age	Male %	Female %
0 - 4	7.6	7.5
5 - 9	6.0	5.8
10 - 14	4.0	4.2
15 - 19	4.5	4.7
20 - 24	8.2	5.7
25 - 29	8.1	4.4
30 - 39	11.1	4.4
40 - 49	5.9	2.1
50 - 59	2.5	1.1
60+	1.6	0.6
<hr/>		
TOTALS	59.6	40.4
<hr/>		

Source: Ominde S.H 1984

Table 2.6 Nairobi Population By Age & Sex: 2000
Both Projections.

Age	Male	Female
0 - 4	6.6	6.8
5 - 9	6.0	6.1
10 - 14	5.2	5.3
15 - 19	4.5	4.6
20 - 24	4.6	4.3
30 - 39	10.3	2.0
40 - 49	7.7	4.0
50 - 59	3.9	1.7
60 +	1.5	1.0

Totals	55.2	44.8
=====		

Source: Ominde S. H 1984

There is a clear distortion between ages 15 and 49 years particularly for males. This indicates the large number of persons of working age in Nairobi. The proportion of females is small with most of them below the age of 35. There is, however, an increasing equality of the sex ratios, with young ladies entering into the job market. And there is also a broad base consisting of very young children, both males and females. One of the best methods of appreciating the growth of Nairobi is analysing its population:

Table 2.7 Population of Nairobi 1906 to 1979

Year	Population	% Increase
1906	11,512	
1926	29,864	159.4
1936	49,600	66.1
1944	108,900	119.6
1948	118,900	9.3
1962	266,794	124.2
1963	342,764	28.5
1969	509,286	48.6
1979	837,775	62.5

SOURCE: Republic of Kenya various population Census 1948, 1962, 1969, 1979, as well as other sources from Kenya National Archives in Nairobi, Kenya.

In 1969, Nairobi had a population of 509,286 and in 1979 the population had risen to 837,775, implied annual growth rate of 5.3% compared with national average of 4% over the same period. In 1985 it is estimated that Nairobi had a population of 1.2 million and is expected to reach nearly 2million in 1995 and 3.9 million in 2000 at an average growth rate of 4.9 per annum. This assumes that in migration would decline at an increased steady rate over the period. On these assumptions the population would increase naturally by a little under 2.6 % per annum with net immigrations therefore increasing at a rate of 7.2% per annum of Nairobi's total urban population.

Total fertility rate has dropped to 4.0 as a result of better education, medical and clinical facilities and increased recognition of the economic advantages of smaller families. Mortality rate has declined resulting in life expectancy at birth by the year 2000 to 66 years for females and 62 years for males.

The primary source of population growth in Nairobi has been migration from the rural areas. In 1962 only less than 25% of Nairobi's population had been born in the city (Ominde, 1968). Immigration is one problem being experienced in Nairobi. Experience in other countries at all stages of economic

development has shown that in-migration to primate cities is a continuing phenomenon which national policies can at best cause to moderate but are powerless to prevent.

Attractions to Nairobi must be expected to grow at least for the next twenty years or so. New problems must therefore, be anticipated and there is a need to improve urban facilities. Again even the most optimistic projections show that the growth in the number of modern sector jobs will barely keep pace with the natural increase of population let alone with its total increase including that by in-migration. The problems of unemployment and underemployment already present are likely to increase in intensity and the possibility of employment will correspondingly be reduced for in-migrants as for others. This is compounded by the 'push' from the rural areas with population pressure on the land causing an overspill to the urban areas where more people are now competing for jobs in the non-agricultural sector.

To curb this problem, the GoK has formulated a national policy which aims at nucleation of new physical development to serve the rural areas into a hierarchy of growth centres, and that of designating a number of major growth centres into which important administrative and commercial development would be channeled in order to build up poles of counter - attraction to the dominant and disproportionately fast growing centres of Nairobi and Mombasa.

Nairobi developed without industries in the colonial period

and most of the employment was administrative and service oriented. This legacy has been difficult to change in the post-independence period. A large proportion of employees in Nairobi are still engaged in administrative and service jobs. There has been a concerted effort to develop industries, for example, by attracting foreign investment and even encouraging the informal sector to grow. Table 2.8 shows the most recent comprehensive employment statistics for Nairobi. The number of unemployed was 78,000 in 1979 and about 124,000 in 1985 or 27.7% of active labour force.

Table 2.8 NAIROBI SECTORIAL EMPLOYMENT 1971-1985

	Manufacturing	Primary	Services	Informal	Total
Year	Number				
1971	55638	6558	107917	30800	200913
1979	93236	7188	124326	35582	260326
1985	137306	7688	138160	39431	322585

Nairobi Labourforce and Employment 1971-1985

	Potential Labour Force	Total Employed As Percentage Of Potential Labour Force
1971	283818	70.79
1979	470609	55.30

Source: Ominde S.H. 1984.

In Nairobi the population is distributed in varying densities over the city. There is a general pattern of decline in population densities with distance away from the CBD. The pattern reflects the colonial policies that forced majority of the people to live away from the central city in crowded houses while the greater part of the city was occupied by spacious homes for the high income earners. Recent changes in population densities have generally been highest at the periphery of the city.

Table 2.9 CITY OF NAIROBI: ACCOMODATION AND POPULATION DENSITIES

	Upper Nairobi	Parklands & Eastleigh	Nairobi South	Eastlands
Total				
No. of Dwellings	6150	7354	1683	22,873
38061				
Net Density,				

elling Per Acre	1.15	4.47	8.46	26.00
70				
otal Population	31944	76708	9394	110,720
8766				
st Density of opulation				
er Acre	6.0	46.6	47.2	125.9
3.4				
ersons per welling	3.2	9.5	4.7	4.8
.5				

Source: Nairobi City Council

The most rapid expansion has occurred in Eastlands which has most people living there at a growth rate of 16% per annum which is more than double the rate for Nairobi as a whole. The city of Nairobi, therefore, offers conditions that encourage more demands for recreation. In addition to its population structure as discussed before, the city's population is estimated to reach 3.4 million by the year 2000. It has a high literacy rate with two thirds of the adults having at least secondary school level of education and most of the city's inhabitants are within the range

24 - 45 years. The income level is generally increasing and coupled with the recent government reduction of working days from 5 to 4 majority of the urban employees now have more leisure time.

Within the city there are facilities for both indoor and outdoor recreation activities. Different types of recreation and tourism areas have also simultaneously evolved. These have developed basically in response to the expanding recreational needs of the population. The city has six major public open spaces including Uhuru/Central parks, Jamhuri and City parks, and Arboretum and two forests areas, all serving the entire city population.(Figure.3). In addition, there are several public playfields, sports centres and a number of privately owned urban parks in various parts of the city, all combined form the hierarchy of urban parks of Nairobi. Figure 5 shows their spatial distribution in the city.

1. UHURU/CENTRAL PARKS: The Uhuru (12.9 Hectares) and Central Parks are situated within the centre of the city and are along Uhuru Highway. The park is landscaped and has facilities for recreation and they are well drained and properly maintained. They are conveniently located near the city centre to be used as picnic sites for lunch breaks by the CBD employees. Over weekends they are intensively used for boating, picnicking, although most of their facilities have broken down. On the basis of weekly attendance they are the busiest in Nairobi. Recently a childrens traffic park for road safety education was added to the park. Besides its recreational uses, Uhuru park is occasionally used as

Fig. 4

MAJOR RECREATIONAL / OPEN SPACES IN NAIROBI

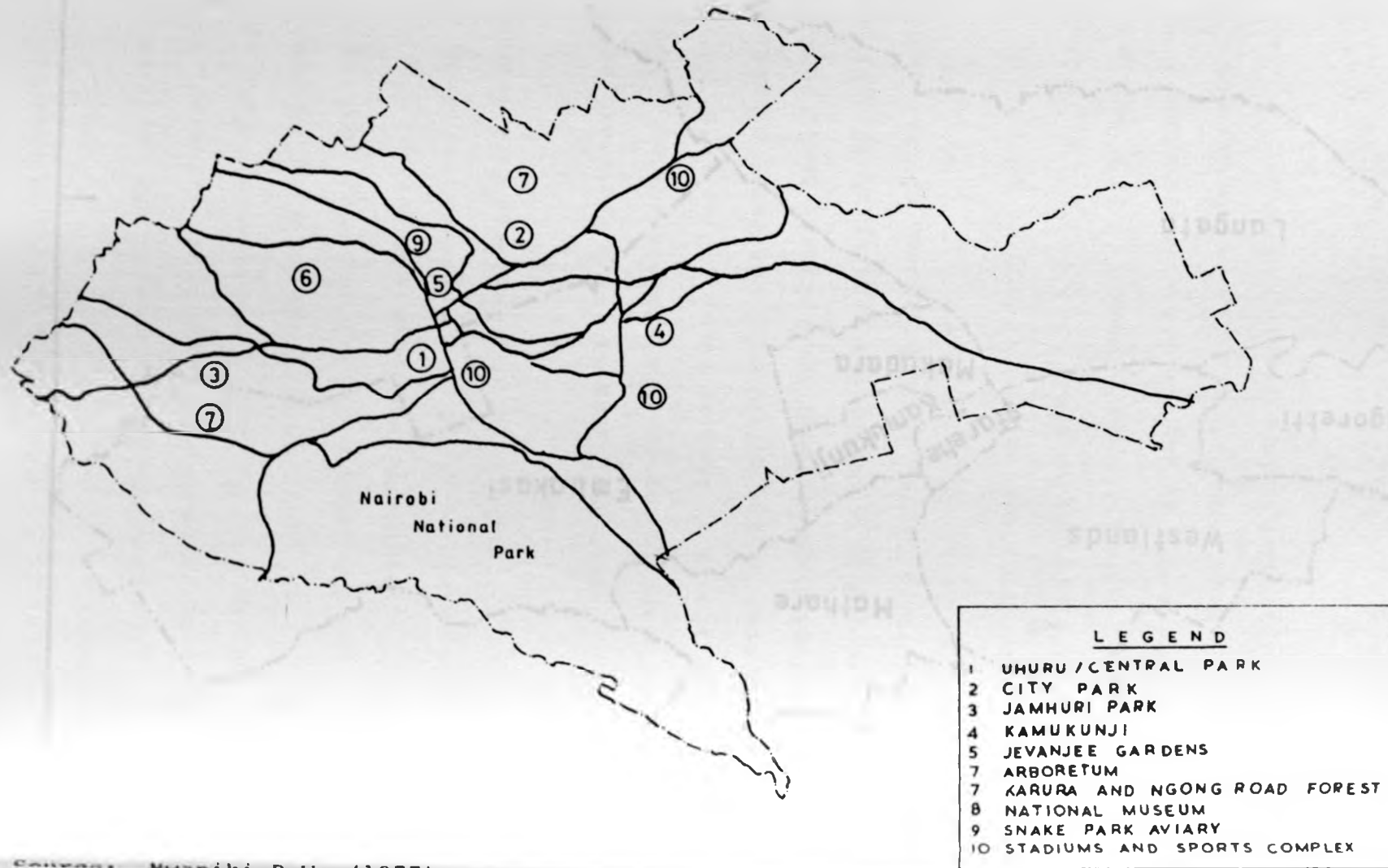


Fig. 5

CITY OF NAIROBI

36° 50' E

37° 60' E

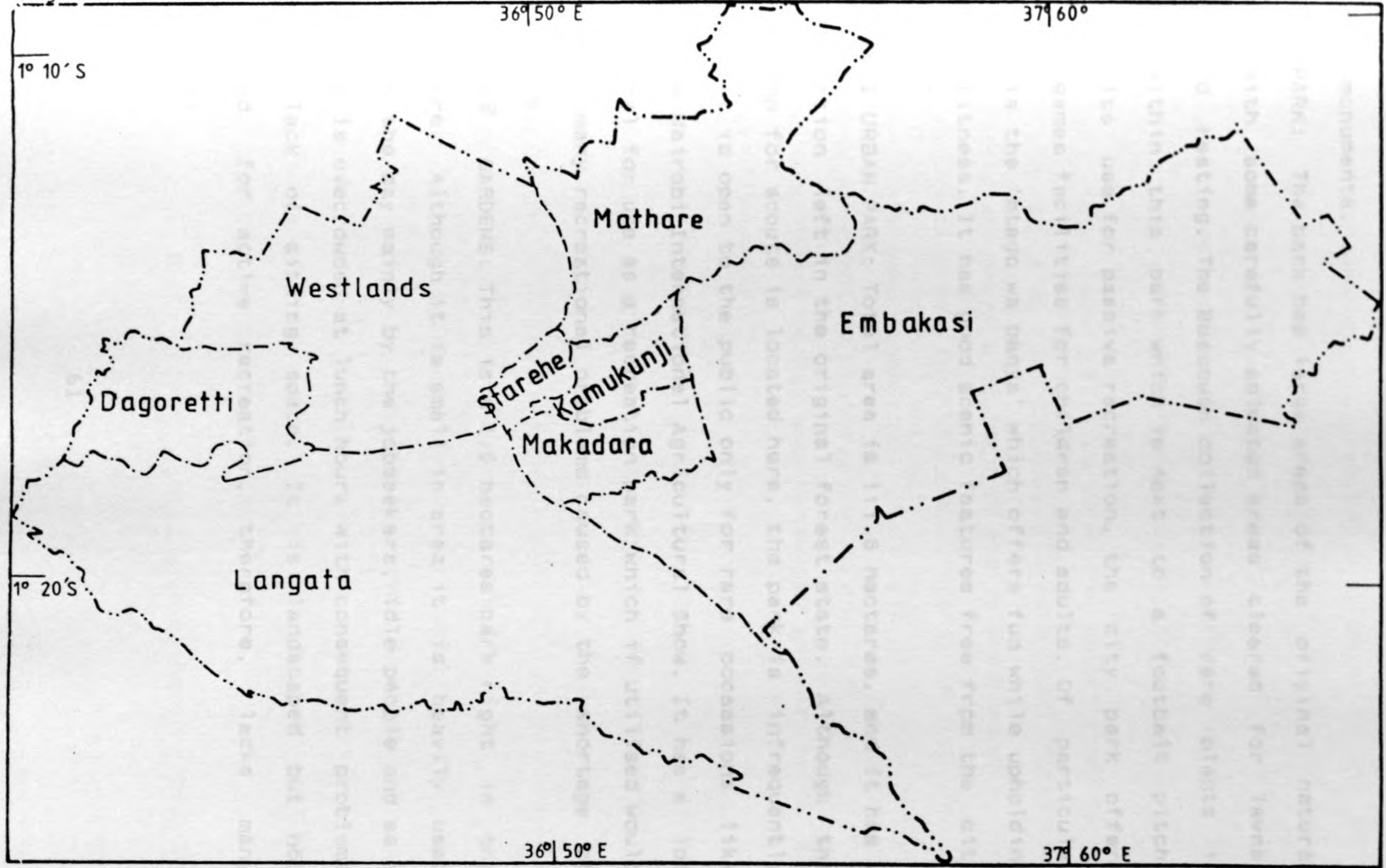
1° 10' S

60

1° 20' S

36° 50' E

37° 60' E



a venue for presidential rallies and gospel crusades. It is maintained by NCC and is open to the public. It also contains the national monuments.

2. CITY PARK: The park has large areas of the original natural forest with some carefully selected areas cleared for lawns, walks and resting. The Boscowen collection of rare plants is housed within this park which is next to a football pitch. Besides its use for passive recreation, the city park offers various games facilities for children and adults. Of particular interest is the 'mtego wa panya' which offers fun while upholding physical fitness. It has good scenic features free from the city traffic.

3. JAMHURI URBAN PARK: Total area is 111.6 hectares. and it has a large portion left in the original forest state. Although the Rowall camp for scouts is located here, the park is infrequently used as it is open to the public only for rare occasions like during the Nairobi International Agricultural Show. It has a lot of potential for use as a recreation park which if utilised would alleviate many recreational problems caused by the shortage of urban parks.

4. JEVANJEE GARDENS: This is a 1.6 hectares park right in the city centre. Although it is small in area it is heavily used throughout the day mainly by the jobseekers, idle people and as a result it is overcrowded at lunch hours with consequent problems such as lack of sitting space. It is landscaped but not facilitated for active recreation, therefore, lacks many facilities.

5. KAMUKUNJI PARK: It is 12 hectares and is a riverine trip zone of open space and is next to the Country Bus Station. It has a lot of potential for use if developed properly as it is the only major public open space in the Eastlands. It is neither landscaped nor provided with any facilities for recreation though the park is well planted with trees to provide shade. But on the whole it receives minimal maintenance from the NCC.

6. ARBORETUM: This 30.4 hectares park is under the forest department and is 2.4 km from the CBD. The park has facilities for both active and passive recreation and is used mainly over the weekends. It also has many tourists since it is included in the official guide book to Nairobi. It is less utilised because it is little known and is inaccessible to the non car owning Nairobi resident. Again it has poor access by public means and has problems of security.

7. KAPURA AND NGONG ROAD FOREST:-

They are not open for recreational use and have thick undergrowth and are quite insecure. They have a lot of potential for recreation especially if they are developed. Most people are not aware of the forest as recreation grounds and these two do not attract many people because of the imminent dangers that they portray. However, with finance and enough security measures they do have a high potential for recreation. At the present, the forest are conserved until conditions are appropriate for their future development as recreational areas.

8. NAIROBI NATIONAL PARK:- It is located within the city boundary

and covers an area of 177 square kilometres and is 8km from the CBD. It is a good recreational facility for those who can afford it. This park is patronised by many international tourists while the adjacent animal orphanage is also a major attraction.

This is because the National Park is more oriented towards foreign tourists and the more well to do residents. There is a need to make this natural resource more available to a wider public. In 1985 and 1986 the park was visited by 110,577 and 93,254 visitors, earning the government a revenue of Kshs. 1,753,573 and 1,911,051 respectively.

The scope of the research does not include private outdoor recreation facilities owned and administered by private clubs and including clubs linked to industrial or business concerns. It also does not include commercial facilities operated by individual and organisations with the express purpose of making a profit. The parks under study are those provided by the NCC as open space for general recreational activities. This is basically the result of the segregation policy of the colonial urban planning of the early stages of its development. No major recreational areas were provided for comfort of the natives consequently most areas of the Eastlands, which then belonged to the natives have relatively fewer recreational amenities and open spaces. Those that exist are located further away from these areas and coupled with the ever rising transporting costs, fewer people make use of these facilities found outside most of these low income residential areas.

2.3 REASONS FOR THE CHOICE OF THE STUDY AREA:

Nairobi as the capital city of Kenya has been a popular centre of various studies. Studies carried out have covered almost all the major land use categories with exception of recreation. It is clear that recreation has been one area that has not received a reasonable attention from the studies of this town while it is supposed to be an important land use for the needs of the residents. Thus there is a need to study the role of recreation in the city of Nairobi so that such information can add to the increasing literature on the city of Nairobi.

Nairobi has a climate that requires sufficient provision of outdoor recreational places distributed all over the city. But some of the existing parks are located far from the densely populated residential areas showing these existing parks are not fairly distributed. Some of them are inaccessible to the majority of the potential users, while others are intensively used causing overcrowding, while yet others are closed to the public and are only opened on special occasions. There is, therefore, a need to correct the existing situation by exposing such problems and providing solutions to them so that every resident of Nairobi has a chance to enjoy his/~~her~~ leisure time for recreation purposes.

Again potential recreation resources have not been fully exploited. There is improper maintenance of the existing parks and a general lack of attention to recreation facilities with no proposals in plan for the provision of new places. Although on purely cost benefit analysis basis the provision of recreation facilities may not compare with the provision of other services,

recreation facilities if well managed and planned could become income generating and in the long run be economically self sufficient.

Again Nairobi must maintain its spacious standards and further enhance its beauty because of the position it commands both nationally and internationally. The saying that the image of the country is mirrored by its national capital cannot be underestimated. After all the first impression lasts the longest. Thus it is important to conserve our cultural and historical relics which need to be protected from adverse development and developed for various relevant purposes as funds become available.

Finally Nairobi is becoming rapidly urbanised both in its population and in its size. Notwithstanding any reasons that may be put forward for the provision of open spaces in the city, aesthetics alone and the resultant reafforestation of the battered environment is a justification enough. Development without any open spaces in our city is 'ugly'. Therefore, it is up to the authorities to give them an environment that does not suffocate; an environment that upholds health and stimulates mental and spiritual development.

CHAPTER THREE

3.1 INTRODUCTION

The effect of the quantitative revolution in the social sciences have been wide spread with extremely small samples subjected to complex statistical analysis. Yet the field of recreational site surveys has remained relatively immune to such analytical procedures - partly perhaps because of lack of statistical expertise among research workers in recreation planning but partly because of the form in which the data has (necessarily) been collected.

The nature of the data directly influences the type of analysis which can be implemented in a number of ways. In the present case, the variables expressed is either nominal, for instance recreation sites were either 'known or unknown' to respondents or ordinal, for example comparison between the parks. Only few of the variables were measured on an interval scale for example length of stay in the park, distance etc.

For the interpretation of univariate distributions of great consequences; alternatives to the mean as a measure of central tendency are reasonably accurate. But the information to be gained from straight counts is limited, and much more is revealed by an examination of the inter-relationship between variables. The literature of recreational survey offers little guidance on the choice of appropriate methods of analysis. In the few instances of interval scale data, conventional methods such as correlation or regression have been utilised, for example the

aspect of 'demand' for recreation, formulated as of distance decay function which has proved most susceptible to modelling (Clawson, 1959).

The majority of site survey data cannot be incorporated in such models, however and conclusions have been reached on basis of relatively simple analysis. The lack of an accepted methodology for analysis of recreational data inhibits comparison of studies and the invalidity of sophisticated statistical procedures is an obstacle both to the development of such a methodology and to the achievement of universally acceptable conclusions. The solution, given the nature of the information sought in site survey is not immediately apparent.

Accepting the relationship between variables is likely to be of more general value than univariable distributions in explaining the pattern of use of recreation sites; the characteristics of visitors to such parks and accepting also the need for non parametric statistical analysis.

3.2 METHODOLOGY

In this research, the method utilised to investigate bivariate relationships was that of cross-tabulation, with the statistical significance of such relationships measured by the chi-square test.

The expected frequency for any cell is calculated from

$$E (C_j R_j) = \frac{C_t \times R_t}{N}$$

where Ct = Column total, Rt = Row total

N = Sample size.

The chi - square model is given as

$$\chi^2 = \sum_{i=1}^k \left(\frac{f_o - f_e}{f_e} \right)^2$$

where f_o - is the observed number

f_e - expected number

k - number of categories

In the present case, the sample size was 300; for the smallest expected frequency to equal five, the numerator in the above expression must be greater than 1500. Problem arise however with skewed distribution an obvious example here is travel mode. Where 86% of the data is located in one category (non - ownership of car) such that expected frequency for the other categories are almost certain to fall below 5, whatever the distribution of the other variable in any cross - tabulation.

The volume of the data necessitated the use of a computer for the analysis, using the statistical package for the social sciences.

It gave the frequencies for each variable, mean, standard deviation. Straight counts were produced for the total samples for each park and cross tabulations were processed for those pairs of variables for which a relevant relationship was postulated.

Use was also made of multivariate analysis, correlations and regressions. The linear regression of Y (response variable) on two or more X's (independent variables) is called the multiple linear regression - The general model is given as follows:-

$$Y_i = B_0 + B_1X_1 + B_2X_2 + \dots + B_pX_p + \xi_i$$

The study used stepwise multiple regression where equations were built up commencing with one independent variable and adding others which are effective in the presence of those already in the equation. The least squares represents the best estimate of the regression equation.

Regression coefficient is given in all the calculated regression equations. It is also called the slope of the regression line and it indicates the magnitude of the change in Y for a unit change in X.

A B larger than unit indicates a steeper slope. If $B=0$, there is no linear relationship between X and Y. If B is negative there is a negative relationship between the two variables.

Correlation may be referred to as the interrelation between two or more variables. They may either be directly or inversely correlated. In the former an increase in one of the variables say the independent variables usually results in an increase in the remaining variable. Such variables are referred to as being positively correlated. Alternatively an inverse correlation occurs when an increase in one of the variables results in a

decrease in the other and such variables are said to be negatively corrected.

In this study use has been made of simple correlation coefficient which involves the correlation between one independent variable and one dependent variable. Visit to the park remains the dependent variable, while the other factors (education, income, age) are independent variables. In this analysis, correlation coefficient of determination (r-squared) were obtained through this formula:-

$$r = \frac{\frac{1}{N} \sum (x-\bar{x})(y-\bar{y})}{O_x \cdot O_y}$$

Where

r=Correlation coefficient

$X-\bar{X}$ = Mean deviations from X

$Y-\bar{Y}$ = Mean deviation from Y

O_x = Standard deviation of X

O_y = Standard deviation of Y

N = Number of data observations

The result obtained indicate the degree of interdependence of the two variables being correlated. But it should be noted that

the information which it provides is liable to be misleading unless the problem is correctly stated. Thus high correlation may be found to exist between two variables not related as cause and effect, while very low correlation may be found to exist between variables which are highly related. In order to avoid such a pit fall, it was essential to have a thorough knowledge of the nature of the variables correlated.

In the calculation of the correlation coefficient there is always the possibility that the coefficient correlation obtained could have occurred by chance. As a result of this it was necessary to test for a chance occurrence. The null hypothesis in this study were therefore tested for statistical significance at a 99% level of probability. The significance level was decided at 0.05 or 5% meaning that if differences at least as great as those of the problem data would occur under five times in a hundred, then H_0 is so unlikely to be true that it is rejected.

This study has made use of both the t- test and F- test. The t- test is the standard against which the power - efficiency of other tests is measured. It makes use of the t- distribution and is used to determine the significance of the difference between two groups of data measured on an interval scale. The t- test is a difference of mean test and t- distribution can be considered as a special case of the F distribution. The formula is as follows:

$$t = \frac{\bar{x} - \mu}{s/\sqrt{N-1}}$$

where

\bar{x} -----Sample mean

μ -----Population mean

s-----Sample standard deviation

N----- Number of variates.

The f-test is an analysis of variance test. If the values of t with N - 2 degrees of freedom are computed they are exactly the same as those for an F with I and N - 2 degrees of freedom.

This means that exactly the same conclusions will be reached in each case whether we use analysis of variance or the difference of means test.

3.3 SAMPLING TECHNIQUES

Sampling is inevitable in research due to the constraints of time and resources that researchers always encounter. However, for a sample to be useful and meaningful it must be a fair representative of the population from which it is drawn such that its statistics provide adequate knowledge for making inferences about the corresponding population parameters. In this study the population is all the parks within the NCC boundary. It would have been impossible to interview all the people in the parks during the research which was conducted between November and

January 1989. Nine parks were delineated as the units of observation since Nairobi has many other open spaces in the residential areas. To include all of them would have resulted in a mere general survey in terms of recreation instead of a more intensive coverage. Thus only the official parks were included. The study sampled different number of people in each of the parks. This was on the grounds that some parks are more crowded and there is much internal variability in their sizes thus warranting more intensive coverage than others.

From the point of view of recreation studies, there are two particular problems which occur frequently in drawing samples, namely determining the size of the sample that is required, and securing, a sample which is representative of the larger population that is the subject of the study. The former problem arises from the nature of recreation itself - a collective term embracing a wide range of diverse pursuits. From previous studies, the level of participation in any particular recreation activity are not very high in terms of the number of people taking part. Thus unless the sample is relatively large it is unlikely to pick up sufficient numbers of persons who take part in pursuits such as recreating in the park to make statistical analysis worthwhile and meaningful. This study chose a sample size of 300 persons.

Random sampling was done and interviewers were instructed to carry out interviews continuously. Such random sampling was likely to produce a biased sample in that interviewing on particular

days of the week at particular times of the day may produce a sample which is not representative of users on the other days. To remove this bias it was decided to carry out interviews throughout a two week period at each park both during weekends and weekdays to get a representative sample. This source of bias was not likely to be reduced merely by increasing the size of the sample.

But on whole, the major difficulty was in obtaining an unbiased sample. This was largely due to the fact that there was no list of the population from which a strictly random sample could be drawn.

3.4 SOURCES OF DATA

Primary data was collected with the aid of a recording schedule administered both by three research assistants and the principal investigator. In the park some people were capable of completing the questionnaire on their own, while others who were illiterate or semi illiterate, the interviewer had to ask each question one by one, translate each into Kiswahili, elicit and record the answers themselves. The personal contact type of interview was preferred over others because of the nature of the study. Again personal contact helps the interviewer in probing the respondent to give correct answers and it also gives the respondent the chance to ask questions about points that are not clear to them. Thus the method ensures the reliability of the results received.

There were also interviews with heads of departments

concerned with the general, physical and economic planning of the parks and also their administration.

During the period of research personal observations were made about the parks which may be difficult to obtain formally, for example, the state of parks in terms of cleanliness.

Secondary data was used to supplement the primary data and the major sources were documents from the NCC, libraries and other published materials of interest to the research.

CHAPTER FOUR

FACTORS INFLUENCING PARK VISIT

4.1 Introduction:

This is an analysis of the relative significance of socio-economic profile variables influencing recreation behaviour in park visit. Data about the profile characteristics of respondents are important in recreation surveys. One reason for this is to facilitate comparison between the findings of different studies. Another reason is to provide the background data about respondents that are generally used as inputs in models and system that attempt to forecast future levels of recreation activity. But the general evidence is that many profile characteristics are highly correlated with recreation behaviour.

4.2 Demographic profile:

While the size of the total population in Nairobi is significant in determining the demand for recreation facilities, the population distribution and the age structure are of immediate importance. There are wide variations in distribution of the total population in Nairobi. In 1974, for instance, 56% of the total population resided in Eastlands and Eastleigh / Pangani area. These very densely populated areas in Nairobi will remain overpopulated with new estates coming up. Nevertheless these areas are the least recreationally serviced in the whole city.

The age composition in Nairobi has undergone significant changes in recent years. In 1979, 34% of the total Nairobi population was under 15 years old. It is this stage and young adulthood (15-39 years) that recreation interest are at their most diverse and intense.

Age was found to be significant when regressed against number of visits to the park per month. F calculated was 4.450 which was higher than F critical at 3.89 with 1,298 degrees of freedom at 0.05 significance level. The age classification adopted was based on the age thresholds used in the census but modified for this research.

Table 4.1 Age Distribution Of Respondents:

Age	Total	Percentage	Cumulative Percentage
No answer	15	5	5
Under 15	5	1.7	6.7
15 - 24	115	38.3	45
25 - 44	120	40	85
45 - 64	42	14	95
65 & over	3	1	100.0
Total	300	100	100.0

=====

Source: Sample Survey (1989)

As might be expected few respondents were children under 15 years of age. This may be largely accounted for by their relative immobility although dis-interestedness may also play a part. Most of the young children do not visit the park unless accompanied by adults. Again during weekdays they are in school and it is only over the weekends that they accompany adults to the park for a visit.

Lower proportions of the middle aged group, 45 to 64 and over 65's were recorded while the 25 to 44 age group were very much over represented. Only 1% of the respondents were 65 or over. This is because this age group is supposed to have people retired from active duty who usually retire to their rural homes. Few of them will continue living in towns unless they have no alternative. Thus the low frequency of retired group is normal since although they probably have the greatest amount of leisure time, the constraints of age, immobility and low income are more important than in any other group.

Therefore, the city will have to meet the prime recreational needs of its population that is still active, although the effect of age in participation in passive recreation is much less than active recreation. Nevertheless there is a general tendency for park visits to decline with age.

The significance of sex in influencing recreation activity was

classified using the obvious physiological ones, male and female. Out of the 300 persons interviewed 60% of them were males and 40% were females. Thus the grouping by sex indicated a clear difference in park visit between males and females, with the males dominating. Consider the sex ratios tabulated below:-

Table 4.2 The Nairobi City Sex Ratio:

YEAR	MALES	FEMALES
1962	163	100
1969	146	100
1979	138	100

Source: Central Bureau of Statistics.

The sex ratio is levelling off which points to more family units in the city a fact which has a direct bearing on the effective demand for open spaces, as these families need more leisure activities. Less families travel every weekend to their rural homes due to rising transportation costs and as a result they need an outlet for their leisure activities.

On the question of park visit, one reason there are more males than females related to the question of security and fear of being mugged. Even in a central park like Jeevanjee the number of male job seekers is higher than females. Because most of the people searching for jobs in the city are most likely staying

with their relatives, while such a man is more free in the house to go to town and search for job a female jobseeker is obliged to help in the household chores and her free time is curtailed.

Marital status was another demographic profile analysed. It had been hoped that marital status could be examined within a fivefold grouping; Single, married separated, divorced and widowed.

Unfortunately there were insufficient numbers of respondents in the last three categories for a valid statistical analysis to be made of these. Therefore, only two categories on 'married' and 'single' were used. In cross-tabulation, marital status was found to be insignificant in influencing park visit. A chi-square test calculated gave 1.860 with 3 degrees of freedom at a significance level of 0.05 while chi-square critical was 7.815. But among the frequencies between the two categories single person accounted for 59% of all respondents and married ones were 41% of total number. A married person has more family obligations as compared to a single persons who is less committed. A mother has to perform many household chores if she is not working during the day, therefore, she has less time for leisure activities. It is equally unlikely for a man with family responsibilities to lie idle in the park at all times. But over the weekend it was different as there was more family based recreation especially in car-owning households.

4.3 EDUCATION

The causal relationship between education and use of leisure was clearly demonstrated by the Pilot National Recreation Survey carried out in Britain in 1967. The survey confirmed that interest and participation in many recreation pursuits is closely related to the amount of education that one has received. This finding was confirmed by that of the outdoor Recreation Resources Review Committee which noted that education in itself has a significant bearing on outdoor recreation even after the influence of other variables like income, age etc is controlled. Information was sought on the education backgrounds of respondents relating to the level reached. This was divided into six categories, primary, secondary, high school, university, college and no-education. The results are tabulated below.

Table 4.3 EDUCATION STATUS OF THE RESPONDENTS

Level of Education	Frequency	Percentage.
Primary	42	14
Secondary	176	58.67
High school	44	14.67
University	29	9.67
College	7	2.33
No Education	2	0.67

Total 300 100
=====

Source: Sample Survey (1989).

A simple regression analysis was used to test the following hypothesis.

H₁: People educated upto the secondary school level are more likely to visit the park than others.

H₀: Education plays no role in influencing park visit.

X:0.05, n=300

Standard deviation 0.49

Mean 0.59

T': 1.688 T*:1.645

Y=5.83 + 1.209 X.

T' calculated is greater than T* critical at this level of significance. Therefore the null hypothesis is rejected and the alternative is accepted. In the frequencies, it was realised that 59% of the respondents had secondary school education. One explanation is that most of the migrants to the city come with at least some level of schooling. The type of education they receive especially in the rural areas usually prepares them for a white collar job. Since they do not want manual work they migrate to

the town in search of better jobs. Thus the literacy rate is higher in the city of Nairobi than in any other part of the country. Two thirds of the adult population have at least secondary level of education.

A person with little or no education is less likely to migrate to Nairobi as the competition for jobs is stiff. Such people are even less likely to appreciate and know about parks as recreation places. Again people with high levels of education are infrequent park users. This follows that for example, a university graduate is likely to have a better paying job and with the increased income they can afford to visit recreation places that are not free. But on the whole, high levels of education have been found to stimulate participation in a wide variety of leisure activities. It does not only increase the opportunity to participate in leisure activities but it also increases awareness and desire. This is partly a reflection of the influence that education has on occupation and income. But more important is the interest in recreational activities which is fostered in school and other education establishments and which is carried on into later life.

It should be noted that there has been an increase in the number of educated Kenyans which adds to the need for increased recreational facilities and open spaces. Primary school enrollment has more than trebled since 1967 i.e. 1,133,179 students as compared to 2,894,617 in 1976. Secondary schools, teachers training and technical institutions have also more than doubled their enrolment. Quite clearly, the trend for more and

higher education is rapidly rising. This, however, does not mean that all and only those educated in Nairobi get employed in the city. However, due to Nairobi's primacy it gets the lions share of Kenya's most educated and best trained manpower.

Table 4.4 OCCUPATION STATUS OF RESPONDENTS

<u>Occupation</u>	<u>Frequency</u>	<u>Percentage</u>
Employed	133	44.33
Self - Employed	43	14.33
Housewife	14	4.67
Students	49	16.33
Unemployed	59	19.67
Retired	1	0.33

Total	300	100.00
=====		

Source; Sample Survey 1989

A Chi - square test was used to evaluate whether or not frequencies which were empirically obtained differed significantly from those which would be expected under a certain set of assumptions:

Level of measurements: Ordinal and interval scales.

Hypothesis: The null Hypothesis can be stated as "there is no difference among occupation groups with respect to park visit."

Significance level: 0.05

Degrees of freedom: 15

Chi - square computed: 26.504

Chi - square table value: 24.996

Therefore, since a chi-square equal to 26.504 was obtained the null hypothesis can be rejected at the 0.05 level and the conclusion is that occupation has some influence on park visit. But the direction of the relationship cannot be predicted. From a multiple regression equation only unemployed and student respondents were significant independent variables. In unemployed respondents, the following was the equation.

$$Y = 6.19 + 2.135 X_1$$

Where, Significance level; $\alpha = 0.05$

Standard deviation: 0.37

Mean: 0.16

n : 300

'T' critical: 1.645

T calculated: 2.245

Therefore, T calculated is greater than T critical which means

that unemployed respondents are significant park users. This can be seen in the light of the unemployment problems in Kenya today which is more pronounced in the urban areas. Only about 20,000 new jobs are created every year far below the rate of increase in unemployment. Forecasts show that on current trends, there would still be 1.4 million in paid employment, and that 40 percent of the workforce would be unemployed by the year 2000. (CBS, 1987)

Students respondents were also significant in that most of them in their free time go to the park nearest to their schools, some to study others to relax. For example most of the students from Aga Khan High School in Parklands are frequent visitors to the city park. The arboretum has many University students who come for christian meetings, for walks or to study. Jeevanjee gardens has many students from the surrounding schools in the city centre.

When looking at the variables, some are not significant such as the housewives, self-employed and retired. For housewives most of them are occupied with household chores and it is probably only over weekends that they may have time to visit the parks. Again with self-employed persons most of them have responsibilities at their places of work with the sole motivation of increasing profits, thus are unlikely to be frequent park visitors unless on public holidays. Most of the self-employed respondents were those who earn their living from the park such as the hawkers and photographers.

People who are employed were not significant park visitors. During working hours, they have a responsibility towards their

employers and it is only over lunch time that the number of employed respondents rose in the various parks. This is because, at this free hour some come to have their lunch, mainly chips bought in takeaway places, while others come to listen to the multitude of preachers who are in the parks giving out spiritual feeding for many of the lunch time crowd that due to economic reasons cannot afford to buy a reasonable lunch. There are also other entertainments in the parks that attract the lunch time visitors such as acrobatic activities, and street comedians. As a result towards 2 p.m. most of the workers start streaming back to their offices and the parks are left empty except for a few people. In the retired category of residents, they were not significant as explained earlier.

It is well known that occupation reflects to some extent both education and income and is also a significant indicator of social class as far as recreation is concerned. However, there are still many uncertainties about the nature of this relationship and it is dangerous to use occupation directly as a surrogate for other variables.

One of the most interesting aspects of the information gained was the differences revealed between sites, which was entirely unexpected as it was contended that different 'sites' tend to attract different 'types' of respondents with different interest activity patterns. It would appear that different recreationists create different recreation environments for themselves at particular sites. For example Kamukunji park had the highest

number of people in the lowest socio-economic group. Arboretum had the highest number of people in the high socio-economic groups while Uhuru park had a mixture of all these people.

Leevanjee gardens had the highest number of job seekers. One can conclude that sites that attract high income social groups in large numbers generally attract low proportions of low income groups and vice versa. It can also be tentatively concluded that the striking difference between groups attracted to the sites is related to the type of site for example, if it is developed or not, its distance from the city centre and residential areas, frequency of visit and length of stay. This will be discussed further in later sections of this chapter.

4.5 INCOME

Respondents were reluctant to provide information about their actual incomes, though they were more easily persuaded to give an indication of this by placing themselves within specified income groups. This has been a particular problem in social research and the main task therefore was to devise income groups which would serve two somewhat conflicting functions, each group should encompass as small range of income as possible so as to provide groups which could be adequately tested for significance and at the same time, they were being asked to place themselves within a range and not give their actual incomes. Respondents were asked to place themselves in the following groups:-

Table 4.5 Distribution of Income Among Respondents:

<u>INCOME (monthly)</u>	<u>FREQUENCY</u>	<u>PERCENTAGE</u>
0 - 999	24	8
1000 - 1999	55	18.33
2000 - 2999	43	14.33
3000 - 3999	17	5.67
4000 - 4999	10	3.33
5000 and above	34	11.33
No income	117	39.00

Source: Sample Survey 1989.

From this table, the highest percentage is for those who had no income at the end of the month. Most of these were either students or people not employed. There is a link between a participation in park visit and social economic scale, with levels of participation declining with position on the socio-economic scale. From the study, the higher the income the less the number of park visits. While the lower the income the higher the number of visits. In the developed countries, income has been shown to be a crucial factor affecting all level of participation in recreation pursuits. In this study the significance of income influencing park visit was low. Its 'F' test was not significant while its correlation 'r' with the number of visits to the park was .325 its r^2 being .105 which means that income

contributed only about 10.5% to the total influence of one visiting a park. This information on park visit and income was drawn on a graph. (Fig.6). Income had a linear relationship but a negative slope. As the income rises number of mean visits to the park decreases. The relationship is explained by the equation.

$$Y=7.05 + - 0.94 X;$$

$$X:0.005$$

Mean 5.46

Standard deviation 3.12

Value of 'T' calculated - 0.827

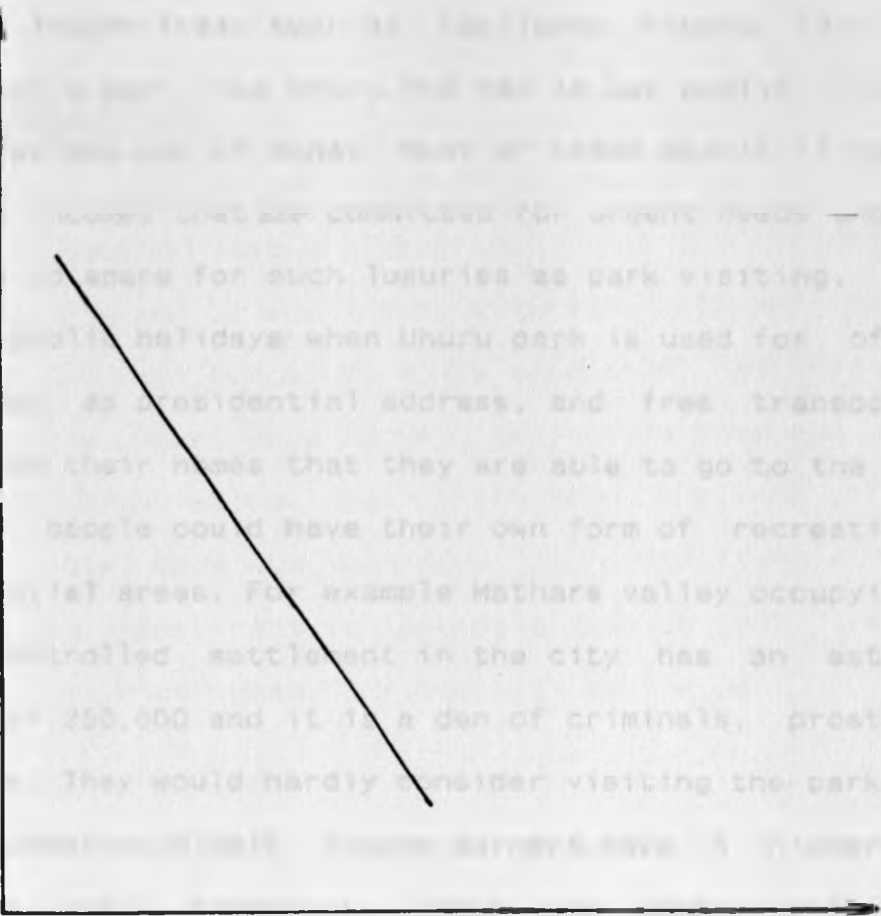
'T' (critical) =1.645

n=300

Income greatly affects recreational habits, for the need to purchase costly equipment, to travel long distances and to pay club membership fees can generally influence participation. For example here in Kenya golf is the game most characterised by those with high incomes. The characteristic activities of those with lower incomes include team games such as football, spectating or playing as in the open fields, none of which make heavy financial demands.

In a general discussion, one would have expected the low income earners to have a higher frequency of park visits, since there are no charges to the park. But these parks are located far

NUMBER OF PARTICIPANTS (PARK) VISITORS



INCOME OF PARTICIPANTS

Figure 6

Hypothetical relationships between income and park visits.

from the areas with high population densities which in most cases are the low income areas such as Eastlands, Kibera. This means that to reach a park like Uhuru one has to use public transport which involves the use of money. Most of these people if not all have meagre incomes that are committed for urgent needs and they have little to spare for such luxuries as park visiting. It is only during public holidays when Uhuru park is used for official purposes such as presidential address, and free transport is provided from their homes that they are able to go to the park. Again these people could have their own form of recreation in their residential areas. For example Mathare valley occupying 40% of all uncontrolled settlement in the city has an estimated population of 250,000 and it is a den of criminals, prostitutes and drunkards. They would hardly consider visiting the park as a form of recreation. Middle income earners have a higher mean monthly park visit frequency. These are people with more education and in Kenya, education and income are closely related variables. Such people appreciate the use of the parks for recreation purposes and they also have means to visit them, since they have the money, either by private car or public means or even by foot especially where the parks are close to their residential areas. The high income earners have the lowest frequency of park visit. It is usually advanced that high income earners are also most probably well educated and have good jobs.

Thus, these people can afford other forms of recreation that are more expensive such as private clubs or other places with entrance fees. It is also postulated that the high income earners

have no time for recreation as they are engaged in profit making all the time.

4.6 TRAVEL MODE

The actual location of the interview sites, have the inevitable consequence that public transport in their vicinity is at best inadequate and at worst non-existent. City park is about 1.5 km from the main bus stop, while arboretum has no public transport service. Uhuru park is well accessible from the public transport services which pass there. When analysis of the influence of travel mode has been done, the indications are that it is far more significant for journeys made on foot than for those made by motorised means particularly by the car.

Table 4.6 Means of Transport to the Park

<u>Means of transport</u>	<u>Number of user</u>	<u>Percentage</u>
Car	40	13.33
bus	124	41.33
bicycle	1	.33
foot	135	45.00

Source: Sample Survey (1989)

in testing the following hypothesis, multiple regression was used.

$$Y = 6.61 + 0.853X_1 + 1.19X_2 + - 4.11X_3$$

where:- X_1 = bus travel

X_2 = Foot

X_3 = Car

X_4 = Bicycle

It is only variables X_1 and X_2 that were found to be significant in the whole equation. To test the hypothesis:-

H_0 : Public transport has no influence on park visit.

H_1 : It greatly influences park visits

Rejection level : 0.05

$n = 300$

mean = 0.41

standard deviation = 0.49

'T' calculated = 1.687

'T* Critical = 1.645

Degree of freedom = 1,299

The null hypothesis was rejected and the alternative hypothesis

accepted. This is because the park being situated far from the high density residential areas one has to use means of transport to reach them. Since it was found out that most of the visitors to the park are in the middle social and economic class, then most of them without their own means use the public buses. This is especially true over weekends when most people travel to the parks solely for recreation, unlike weekdays when some go to have lunch, pass time.

Respondents who travelled by foot to the park were also significant. This was found to be true especially for those living near the parks and just walk there. For example, city park, Jevanjee arboretum, Kamukunji are within walking distances. Another explanation can be that over weekdays one finds the highest number of people without jobs in the parks. Some of these people can spend the whole day in the park. In such cases since these people have no income and cannot afford to use a bus to reach the parks, most of them walk to the parks from such estates as Biafra, Shauri Moyo, Majengo etc.

Journeys on foot tend to take least time than journeys by bus especially for parks within the CBD mainly during the peak hours. The convenience of walking is confirmed by the greater frequency of visits by people who can reach places of recreation on foot compared with those who travel by car or bus or even bicycles in spite of the more limited opportunity that the former slow mode has compared with the motorised mode.

The implications of this dominance mode of travel by foot

and by bus has far reaching effects. Most people who travel to the parks are the middle and low income groups and cannot afford their own private means of travel. Of particular importance perhaps are the implications for planning policy with regard to the recreationally underprivileged, the carless population of the city. Future planning could redirect recreational provision towards public transport routes and the urban fringe, but there will still be a need to investigate the non- users of facilities to discover the role of transport difficulties in determining such non - use.

4.7 CAR OWNERSHIP:

One of the most important technological innovations which has influenced patterns of recreation activity all over the world in recent years has been the growth of car ownership. All the empirical evidence suggest that frequency of participation increases significantly with car ownership. The utility of recreation facilities, particularly the District and urban parks like the Arboretum and City park is a function of the ease of transportation, both public and private. 86% of the respondents interviewed did not own a car while only 14% owned or had regular access to a car. Car owners are privileged people. They possess a personal independent means of travel which frees them from the confines and vagaries of public transportation. The influence of the motor car is now so much part of daily life that it is easy to forget how recent the rapid rise in car ownership has been. Table 4.7 below shows real and Estimated number of cars registered in Nairobi 1960 - 1985.

(Car figures rounded upto the nearest 1,000)

Year	Number of cars	population
1960	45,000	307,000
1965	55,000	407,000
1970	80,000	541,000
1975	95,000	733,500
1980	110,000	1,064,240
1985	126,188	1.2 million.

Source: Central Bureau of Statistics.

Car ownership and the ability to drive are both stimuli to participation in active recreation. In general with the exception of such sports such as rallying the motor vehicle is generally a means of transport rather than an essential part of recreation. Nevertheless because many activities are pursued at some distance from home in areas that are often difficult to reach by public transport, ownership or access to a car can have a marked influence on the levels of participation. This is mainly in active recreation for example the need to convey the necessary equipment makes access to a motor vehicle a necessity in such activities as golf, although vehicle ownership is not a

prerequisite of involvement. People who often visit the parks, mainly those in low income groups have the lowest number of car ownership.

Thus it is a fact that the number of cars operating within the city of Nairobi has grown tremendously. Nairobi has 115 cars per 1000 population while the national figure is 15 cars per 1000 . Futhermore with better management in public transit system, public transport will gain even greater importance and efficiency. This will hopefully enable the non - car owning urban population to enjoy the far sited recreational facilities presently utilised by the car owning Nairobians.

4.8 DISTANCE:

Possibly the most significant influence upon attendance at a recreation facility is distance to that facility and models of recreation demand recognised this point. (Clawson M. and Knetsch. J. 1966). A more accurate reflection of this distance decay function might, however, be a measure of time - distance: effectively a measure of distance as perceived by the recreationist rather than objective distance. But in this study not all the people had travelled to the park directly but had passed through various other places. From the study 29% of the respondents had come to the park from work, 62% had come from home while 9% had come from school. One can then assume that most people left their homes with the sole purpose of coming to the parks. This then assumes that they would most probably take the most direct route to the park in terms of the actual kilometres

travelled. Table 4.8 indicates the mean distances and percentage of people who travelled that distance.

Table 4.8 Distance Travelled To The Parks.

Distance km.	Total	Percentage %
0 - 4	105	35
4 - 8	93	31
8 - 12	60	20
12 - 14	9	3
over 14	33	11
	300	100

Source: Sample survey (1989)

The general findings are that approximately 35% of all visitors to urban parks come from less than 4 - 8 km. While 20% of the visitors travel between 8 - 12 km, only 3% of the visitors travel between 12 - 14 km to reach the parks and finally only 11% travel over 14 km.

Studies by the University of Liverpool for the city's planning department (1966) suggest that size in itself is an inadequate criterion of attractiveness and range of influence of

a park. Most people are willing to visit a park because it is nearer to their homes or places of work. A park like Jevanjee is crowded at lunch time despite its small size, but only because it is easily accessible and centrally located among the surrounding offices. 55% of the people interviewed in this park claimed it was nearer and therefore only a short distance to their places of work. In all the parks there was little variation with the size of the park or the type of facility concerned apart from Uhuru park which had the highest number of visitors due to its large size, boating facilities and its central location. This park has a large influx of up country visitors especially during weekdays who come for official business in the city and then decide to visit the park. Some of these visitors interviewed said they wanted to see the Nyayo monuments which are an added attraction to the parks. The park also has a large number of local visitors over the weekends. City park and the Arboretum have a large influx of foreign visitors due to the fact that they have some inviting amenity not necessary related to the size but to their short distances from the CBD. Again these parks are attractions due to their botanic garden and the exotic forest respectively, to be found in the park. These parks are also to be found within the official Nairobi guide book thus most tourist are likely to travel to them.

But in general, in relation to park visits, the predominance of short journeys is evidenced. Forty percent of the visitors to the City Park come from the surrounding areas of Pangani. Same with Kamukunji grounds where over 60% of the visitors are from

the surrounding estates. This suggests the importance that the character of the site itself exerts influence over the proportion of people travelling long distance that is over 14km, for example, to Uhuru park. Least attractive to longer distance travellers is Kamukunji, a park on the banks of Nairobi River in the Eastlands. It is basically an open space but even without such amenities as toilets. This evidence strongly indicates a direct correlation between the attractions of an area and the distance people are prepared to travel to reach it.

In a regression analysis where distance was regressed against number of visits to the park, the result was not significant but it indicated a negative relationship as shown by the graph, (fig. 7)

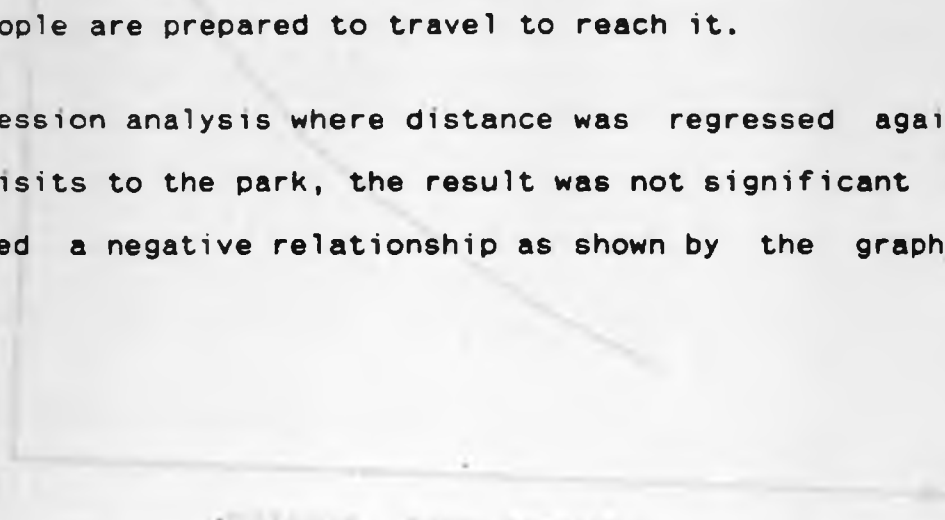


Figure 7: Hypothetical distance - use relationships.

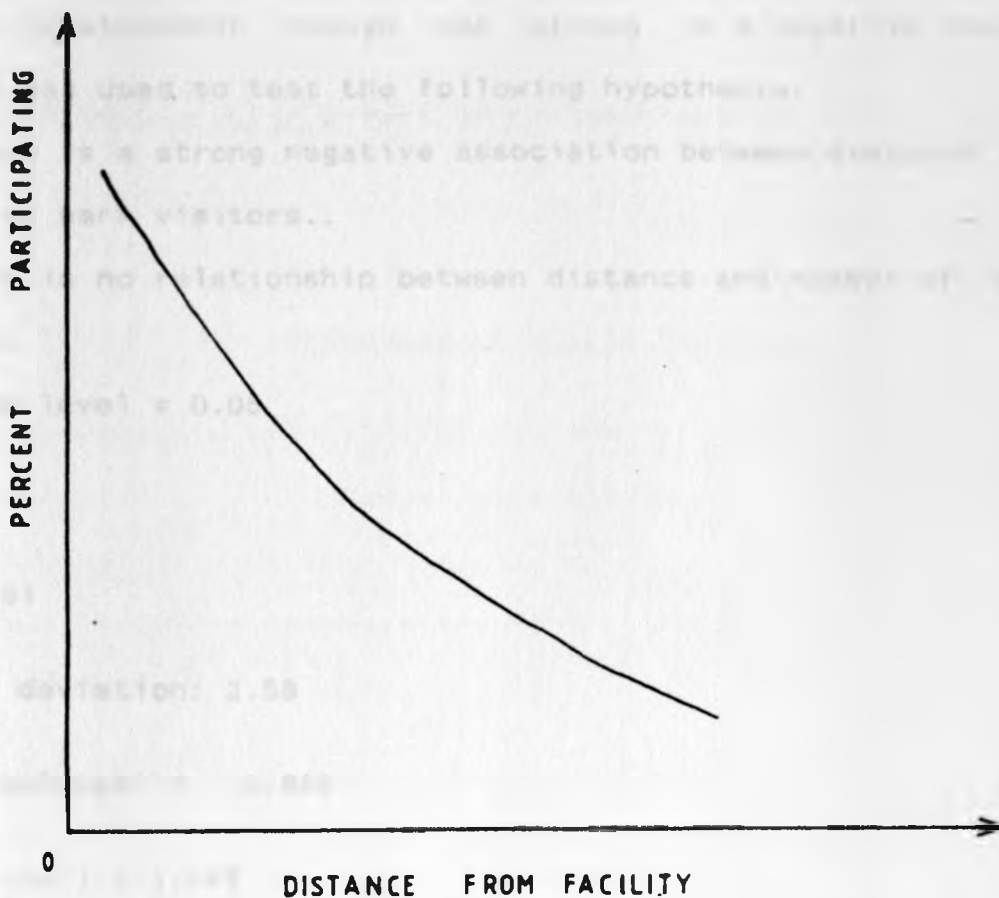


Figure 7. Hypothetical distance — use relationships.

Source: Sample Survey (1989)

The first formulation was frequency of visit against distance. The resulting correlation coefficient was -0.06 showing that the relationship though not strong is a negative one. The data was used to test the following hypothesis.

H₀: There is a strong negative association between distance and density of park visitors..

H₁: there is no relationship between distance and number of park visitors.

Rejection level = 0.05

n=300

Mean: 4.81

Standard deviation: 3.58

"T" (calculated) = - 0.683

T* (critical) = 1.645

Y = 6.87 - 0.068 X₁.

Since the 'F' value is 0.466 and the F critical is 6.76 at 1,298 degrees of freedom, the hypothesis is accepted that distance does influence park visit. Thus the farther away a park is from residential areas the fewer visitors it has. One reason for this is that the farther a park is the need to use some means of transport such as a bus to reach the park. This will mean the use of money to pay the fare, and when the money is scarce then one would rather use it for a more needy item. Again travelling to a

park that is located farther away will also need the time to be allocated for such as a trip.

Distance travelled to a park is expected to be closely associated with the frequency of visits to that site, a farther reference to the friction effect of distance upon participation.

Table 4.9 Frequency of Visits Per Month

No. of times per month	Number of visitors	Percentage
Once	42	14.0
2 - 5	166	55.33
6 - 10	45	15.00
11 - 20	47	15.67
	300	100.00

Source: Sample Survey (1989)

Indications from the present survey are that users living at the farthest distance from the parks make the least number of visits. Hence the greater the journey distance, the less frequent

the visits to the extent that for all respondents with distances of over 14km, more than half had made no more than one visit to Uhuru park in a month. Where the distance were short less than 10 km. however, the largest number of respondents were those making between 2 - 5 visits per month. For those making upto 20 trips per month, most of them are those who go to the parks for lunch, to rest or to be entertained by listening to the preacher, watching street actors etc. Their greatest asset was that the parks were within a very short distance from their places of work or residences.

Thus, the centrally located parks such as Jevanjee and Uhuru parks had the highest visit rates. As a result the accessibility of a site and its attractiveness strongly influence the number of people who will visit it. Its capacity to accommodate those visitors at peak periods is related not only to its size and the degree of crowding visitors will tolerate but to the time they arrive and the duration of their stay.

Differences between the parks in respect to distance travelled is explainable in terms of two main factors, distance from centres of population and intrinsic attractiveness of the sites themselves. Thus the highest proportion of short journeys occurs at the Jevanjee gardens close to the centres of population and at the Arboretum, City park. But this pattern is complicated by a number of factors including that of greater inherent attractiveness of the facilities which lie farthest from the city centre and the question of accessibility of recreation opportunities in the area to potential recreationists in Nairobi.

The lack of intervening opportunities in the Eastlands, except for the undeveloped Kamukunji grounds itself make inevitable longer recreation trips to the parks in other parts of Nairobi.

These findings are important in forecasting demand, since it means that facilities with specially large catchment areas for example Uhuru park, tend to have lower average visiting rates. It was originally postulated that the probability that an individual would use a facility was a function of the distance he lived from that facility. But it was realised later that the individual may have personal characteristics which will also affect this probability. Hence the importance of including social and economic characteristics of the respondents. Not only are the characteristics of the population important but also those of the available facilities (parks) which have been discussed in this thesis.

4.8 Origin of Respondents:

The origin of respondents, that is the points at which their trips were generated were divided into three residential areas. Low income areas, middle income areas and high income areas. One reason for this is that their current residence would have involved very many residential estates that would not have become significant in any analysis. According to the Kenya statistical Abstract 1987, a low income household is now defined to be one with an income of upto Ksh. 699 per month. A middle income household is one with an income of between Ksh. 700 - 2,499 per month while an upper income household is now defined to be one

with an income of Ksh. 2500 and above per month.

The result of the study of current residences of respondents are summarised in the table.

Table 4.10 Residential Origins of Respondents.

Origin	No. of respondents	percentage %
Low income areas	151	50.33
Middle income areas	124	41.33
High income areas	25	8
Total	300	100.00

The concentration of origin is significant where 50.33% of the respondents were from low class residential areas from such estates as Kibera, Mathare, Umoja, Eastlands etc. Significant proportions of respondents came from middle class residential areas such as Pangani, Buruburu etc. A Smaller representation is found from the high income areas which is only 8.33% of the total number of respondents.

Factors influencing such an outcome of park visits from different residential areas are probably transportation routes because in Nairobi most of these highly populated areas have good public transport and are accessible therefore it is easy to travel

to the parks. Most of the high income areas are in the suburbs of the city with poor public access routes. Again most of these household have their own private means of travel and choose where to go for recreation.

Another factor can be relative attractiveness. One person may find Uhuru park attractive for a visit during a weekend while another person may prefer to visit a private club for entertainment, but all these again depend on ones income and social class among others.

The frequency of visits to recreation sites has already been seen to be correlated with a measure of distance namely how far a park is sited in terms of actual distance travelled. It is also possible to discern a relationship between frequency of visit and area of origin.

Table 4.11 Cross Tabulation:

<u>VARIABLE</u>	<u>RESIDENCE (area)</u>			
	<u>CURRENT</u>	<u>LOW</u>	<u>MIDDLE</u>	<u>HIGH</u>
<u>NO. OF VISITS</u>	<u>INCOME</u>	<u>INCOME</u>	<u>INCOME</u>	<u>TOTAL</u>
<u>TO THE PARK</u>	<u>INCOME</u>	<u>INCOME</u>	<u>INCOME</u>	<u>STATISTICS</u>
Once	18	15	9	42
2 - 5	87	67	12	166
times				55.55
6 - 10	25	20	-	45

Times				15.00
11 - 20	21	22	4	47

Total	151	124	25	300
=====				

Chi - square = 14.593 with 6 Degrees of freedom.

The Chi - square table at 0.05 level of significance with 6 degrees of freedom is 12.592. The calculated chi - square is larger than would be expected by chance. Since the assumption was that the proportions of the sample in the three residential areas is the same in each of the groups, then since it is not true, the assumption is removed. The conclusion is that the 3 groups have different proportions of the population that visit the parks. Low income and middle income groups have a large proportion than the high income group.

4.10 Length of Stay at Recreation Sites:

The length of time people stay at sites is far more variable, for it depends upon the purpose of their visits and the nature of the site. A surprisingly high proportion was highest at Jevanjee gardens characterised by a large number of respondents who visited the site very frequently and perhaps as a consequence stayed for a shorter period (this can also be biased by lunch time visitors). At the farther placed parks from the city centre such as arboretum few short stays were recorded. Most of the

visitors stayed for over 2 hours.

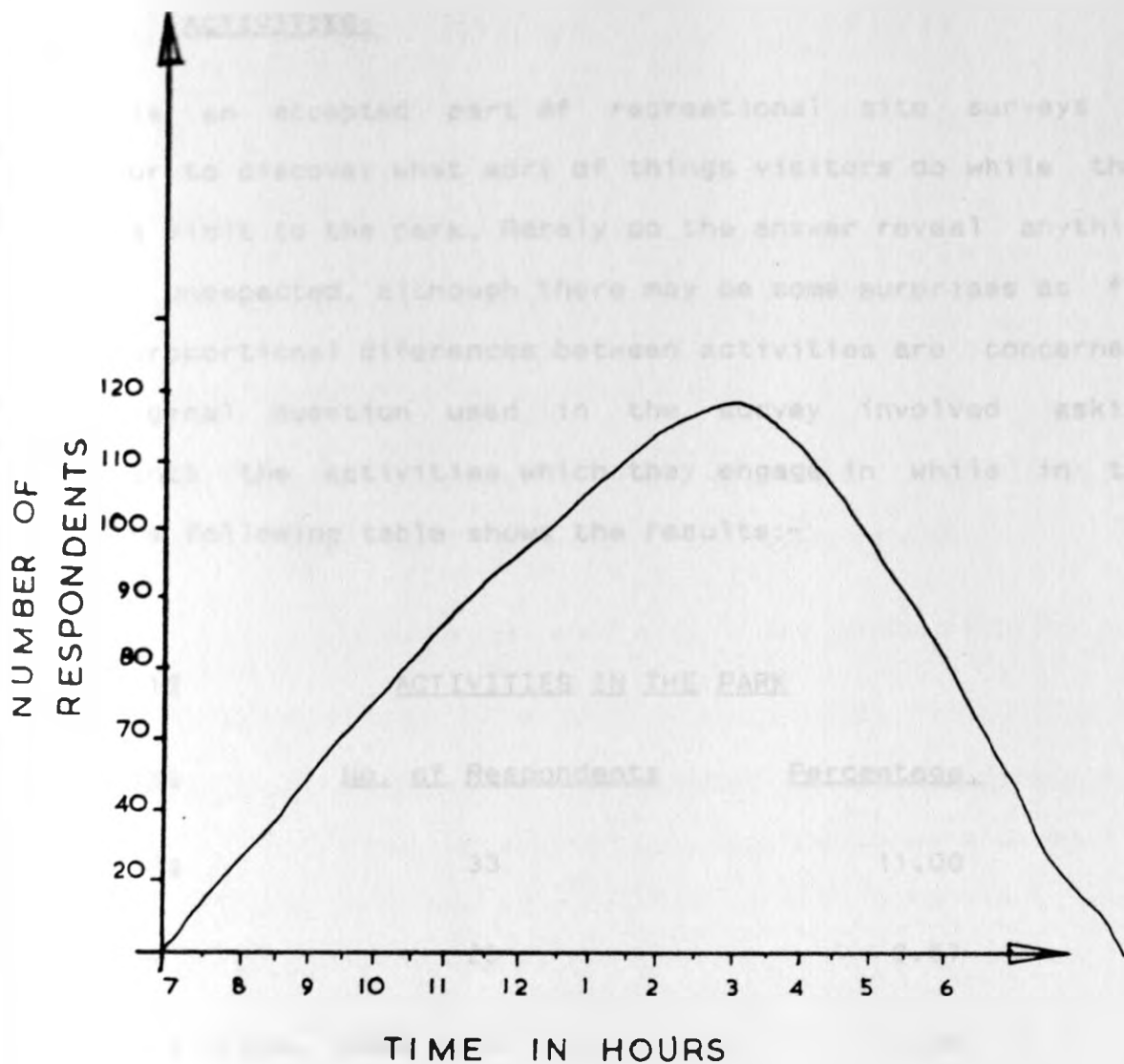
The major problem in interpretation of the result is the constant need for reference to explanation factors which are peculiar to one of the parks. For example, the preachers, street actors, its central location, nearness to office attract visitors at lunchtime to Jevanjee gardens. As a result this park had a higher percentage of visitors who stayed for an hour only.

Mamukunji grounds had a higher proportion of people who spend the whole day there. One reason for this is that due to its location many unemployed people have access to it, who can spend the whole day there. Again the park has a high number of watchmen mainly of Masai origin who work at night then spend the whole daytime there sleeping.

Where entrance and exits were reasonably well covered, and interviewing takes place at and around the peak periods, some indications of the temporal distribution of park visitors at the sites surveyed can be extracted.(Figure 8). One can attempt to give this indication to reflect accurately the shape of the distribution, though not the number on site in absolute terms.

As would be expected the peak during weekdays occurs at 1.00 p.m. which is also approximately the peak for arrivals. At this point 53.6% of the respondents were on site and from this point the number diminished very rapidly from 2p.m. During weekends the peak occurs at around 4p.m. and people start leaving by around 6p.m. During this study, arrivals after 6p.m. were not available. This extremely high proportion of respondents present at

FIG 8 : EXCESS OF ARRIVALS OVER DEPARTURES
IN THE PARK



Source: Sample Survey (1989)

recreation sites at one time inevitably poses management problems, in the overcrowding, in the mis-use of the park and in the administration of the people.

4.11 ACTIVITIES:

It is an accepted part of recreational site surveys to endeavour to discover what sort of things visitors do while they are on a visit to the park. Rarely do the answer reveal anything totally unexpected, although there may be some surprises as far as the proportional differences between activities are concerned. The original question used in the survey involved asking respondents the activities which they engage in while in the park. The following table shows the results:-

Table 4.12 ACTIVITIES IN THE PARK

<u>Activities</u>	<u>No. of Respondents</u>	<u>Percentage.</u>
Picnicking	33	11.00
Strolling	29	9.67
Looking at trees, lakes	3	1.00
Sitting inside car	39	13.00
Playing games	5	1.67
walking through elsewhere	18	6.00

Resting	37	12.33
Listening to preachers	66	20.00
Reading	17	5.67
Having lunch	37	12.33
No response	15	5.00

Source: Sample Survey (1989).

The survey concluded that there were 3 specific groups:-

- i). Those who intended to walk, stroll etc.
- ii). Those who were involved in active activities like playing games, boating rides, walking through to elsewhere etc.
- iii). Those whose presence was entirely in the shade, sitting in the car etc.

Passive recreation pursuits predominated in all the parks, but on the whole, activities undertaken by respondents were generally those associated with the type of site where interviews were held, and were generally unexciting and unadventurous. Activities like walking were more common in the spacious parks like Uhuru park, city park and arboretum. This can be attributed to the presence of other exciting views and to a relatively good walking weather (warm but not too hot, with cloudy periods) during the interview period. A park like Jevanje had few or no people taking walks during anyone day. This may be the result of the higher frequency of visit and density of use, and generally a

shorter length of stay (mainly 1 hour) of the sample interviewed.

Young and Willmot (1973) correlated activities with socio-economic characteristics and their findings confirmed the evidence of the Pilot National Recreation Survey, that participation in away from home activities by those in the higher social groups is greater than that by manual workers. From this study, people in the higher social group participated in such activities as picnicking, sitting inside car as such as compared to the people in lower social group who are mainly engaged in such activities as resting, sleeping, listening to preachers, among others. In all, most leisure studies have consistently indicated an overwhelming preference for passive recreational pursuits which suggests that it is the policy rather than the supply which favours provision of passive facilities in recreational space such as parks and gardens as compared to provision of active recreational space.

4.12 REASONS FOR INFREQUENT PARK VISIT:

Choice in passive recreation is limited by two types of constraints. Personal constraints include time available, income, age, sex, educational background as such. Environmental constraints are divided into facility constraints and linkage constraint the former being a function of the availability of facilities and the latter access and awareness. The following table shows the response to the question on the reasons for infrequent park visit.

Table 4.13 REASON FOR INFREQUENT PARK VISIT

	<u>Frequency</u>	<u>Percentage %</u>
i). Weather	26	8.67
ii). Time	71	23.67
iii). Personal commitment	56	18.67
iv). Lack of bus fare	19	6.33
v). Household duties	4	1.33
vi). Studies	13	4.33
vii). Distance	18	6.00
viii). Not Applicable	93	31.00

	300	100.00
=====		

Source: Sample Survey (1989).

Apart from those who had no answer for the question, the next highest response about 24% give time as the reason for infrequent park visit. The time factor is of increasing importance in influencing recreation. Many activities need a relatively long uninterrupted period of time if they are to be enjoyed to the full. The choice of recreation and range of variety considered is

greatly influenced by the amount of time available for leisure and the personal factors.

More leisure time will be available in the future to the average person and some of this time will inevitably be devoted to outdoor recreation. This extension of leisure time will stem from reductions in working hours and longer holidays periods. In addition medical advances will extend life spans, thereby increasing the number of elderly people in retirement who will require increased leisure time facilities. This is due to improved health and medical care coupled with a probable fall in the birth rate. The research was more on the use of leisure time that is devoted to outdoor recreation beyond the confines of the home. Research has shown that passive activity in and around the home occupy the bulk of time such as watching television, listening to the radio, hobbies such as knitting, gardening etc. Most people relegate outdoor recreation to a minor position when ranked among other duties such as household work and personal duties, socializing with friends, among others. Especially over weekdays, most people do not travel to the park directly but make other stops on the way to the park. But over the weekends most visitors had actually travelled directly to the park. From the survey the following table shows from where the respondents had travelled to the park.

Table 4.14 Origin of Respondents who travelled to the Park

<u>To the park from:</u>	<u>Frequency</u>	<u>Percentage</u>
work	87	29.00
home	188	62.67
School	25	8.33

Total	300	100.00
=====		

Source: Sample Survey (1989).

The most important point to be made about location and available recreation time is that they are interdependent variables in determining opportunity. The longer is the period of available recreation time, the more flexibility is possible in the location of facilities. This of course assumes that the length of each period of recreation time is the primary constraint and that the location of facilities can be adjusted in line with this, but there are also situations in which the location of facilities is fixed.

The weather was given as another reason for infrequent park visit by 9% of the respondents. It is a well known fact in recreation research that the weather is a key variable in recreation use although little has been done to quantify the effect of weather on park visit. Paull (1973) identified four weather circumstances which park users might consider before setting out, on site weather conditions, weather conditions at home, weather forecast and anticipated conditions, thus showing a

relative importance of sunshine duration and temperature on local demand. Nairobi has a favourable climate, plenty of sunshine every day except during the short and long rains. This makes it possible for people to visit the parks anytime of the day. The weather conditions are therefore sunny, cloudy or rainy but the temperature conditions are not so important as the variation range is never too large. During the research period, the number of occasions when interviews were actually conducted during rain were few. Most of the parks have no rain shelters and the ones existing were constructed more for sun protection than rain protection. For example most of the few sitting places are under the trees. So in the rainy seasons there are no park visitors.

4.13 Problems in the Parks.

Table 4.15 Problems experienced in the park.

Problems	Frequency	Percentage %
1. Lack of maintenance (dirty toilets, lack of clean water, untidiness)	56	18.67
2. Excess photographers (uhuru park)	5	1.67
3. Too many preachers Jevanjee	13	4.33
4. Parking boys	10	3.33

5. Mad people	10	3.33
6. Pick pockets (central park)	3	1.00
7. Noise from vehicles (centrally located parks)	14	4.67
8. People misusing the park (carelessly throwing litter)	31	10.33
9. No response	151	50.33

Total	300	100.00
=====		

Source: Sample Survey (1989).

The highest percentage of the park visitors 18.67% were those dissatisfied with the maintenance of the parks. Most of the toilets in the parks are dirty and do not work. Uhuru park has even new toilets recently constructed but they have not been opened to the public. Again taps of clean water for drinking are not available in the parks. Even looking at the artificial lake in Uhuru park one can see that it is not regularly cleaned. Again there is poor maintenance of the monuments that have been put up in the park, the water foundations have broken down while the illuminating lights are not working.

In Uhuru park, there is a need to adopt a consistent policy on the photographers. They are far too many and haphazardly located

in the park. This problem is rather a 'chicken and egg' situation in that the photographers are attracted by the people and vice versa. It may be more realistic to accept the situation as far as possible by either licencing a limited number of these photographers or providing a purpose built kiosk or service area which should be less aesthetically offensive.

Most of the centrally located parks have to contend with noise from passing vehicles thus one cannot get complete relaxation from this noise pollution in some of the parks like Central park. And in Kamukunji there are many pickpockets who are reputed to even steal shoes from a sleeping victim in the park. This creates a lot of insecurity where one cannot rest completely but has to be on ones guard. In Jeevanje gardens many people expressed the fear of mad people and the parking boys who can even snatch ones lunch and run off to the streets. There is therefore a need to improve on the security of the parks so that people can comfortably relax.

The Arboretum problems are somewhat different in that the internal site management is fairly satisfactory in terms of coping with the present volume of visitors, but as this is lower than in any other site it is difficult to compare. It seems that it has a potential for absorbing a much higher density than at present and could act as an alternative for other surrounding sites, if people are more aware of its existence. Some of the respondents interviewed in Jeevanjee gardens complained of the large number of street preachers. There were as many as six different preachers in all corners of the park at any lunch time.

One observation noted is that these preachers are few or absent all together during the end of month when even the number of visitors is small. But one week after the month end then the preachers and the visitors increase in large numbers. One of the reason for this is economic since when people have money, they can afford to eat lunch but when the money is not enough they resort to spiritual feeding during the lunch break. There is a need to control these preachers as some of them just engage in mud slinging with the others and are more of a nuisance.

CHAPTER FIVE

TOWARDS A PLANNING STRATEGY FOR OUTDOOR RECREATION

5.1. THE DEMAND FOR RECREATION

The structure of the study area's population implies that demand for recreation and open space is high. But the demand for recreation in Nairobi cannot be statistically quantified since no researcher has seriously ventured into this field. On site surveys alone cannot measure either current or future demand levels because the participation levels are observed under prevailing recreation opportunities conditions which are a function of the available supply of recreation resources. This can lead one to assume that people will demand only increasing quantities of what they have, thus perpetuating imbalances in the supply of recreation opportunities.

Moreover, for many informal recreation activities no direct charge is made and as a result their demand for use as recreation resources is a function of first, their attractiveness as facilities and secondly, the relative cost of reaching these places. Thus, the total number of people who visit an urban park provides the only measure of demand for that park as there are no fees charged, and changes in these numbers will usually reflect changes in one or more elements of supply, for example, improved access to the park or improved weather conditions. Figures of use or attendance are the direct effect of existing demand and existing supply.

The demand for recreation can be considered in four dimensions:

5.1.1. Present effective demand.

This represents the number of people who actually take part in park visiting, of which the current state of knowledge of the distribution of available facilities and their use at the local level is still relatively limited. Even so it is clear that demand varies by time of day, week, season, at different stages in the life cycle and is influenced by some socio-economic background.

One effective demand measure is in terms of the frequency with which they use them. In Nairobi, the frequency of use is relatively high especially over lunch hour and during the weekends, with the highest frequency of visit being recorded at Uhuru park. This reveals a high demand that currently exists amongst the population of Nairobi for outdoor recreation. One conclusion is that most of the outdoor recreational activities with greater demand are those having no direct charges. Thus, for these recreational resources the demand for their use is a function of first their attractiveness and facilities provided and secondly the relative cost of reaching these places.

Therefore, the traditional existence of recreational places in an urban place and the number of users for an urban park certainly reflect an active demand for it.

5.1.2.

DEFERRED DEMAND

This represents demand at present frustrated either by scarcity of facilities or lack of knowledge of the existence of such facilities. The provision of more recreation opportunities and or better publicity for existing facilities will increase current effective demand. For example 23% of the respondents suggested that the concerned authorities should make people aware of the parks and what they offer either through the mass-media or in well advertised signs pointing out the park. This is because during the research some of the respondents had never heard of the arboretum or city park and only knew Uhuru park.

A survey of the location of open spaces in Nairobi shows that some areas have a deficiency especially the Eastlands, Dagoretti areas. This deficiency represents two aspects of deferred demand. One is for people with limited time and mobility and the second is for facilities at district or urban parks catering for families, individuals and where the demand is heaviest over the weekend.

This research looked at this aspect of demand and found that the size of a parks catchment area is related to its acreage and to some extent its facilities. Therefore Uhuru park has a large catchment due to its large size and attractive facilities available such as boating, while Jevanje gardens has a small catchment due to its small size and the presence of few

facilities available.

Deferred demand is prevalent in areas that lack any recreational activity or have a scarcity of facilities. Such areas can be said to have a latent demand, which for some reason is not effective, but which would be so in other circumstances. It is a demand which is frustrated by such factors as non-existence of facilities.

This deferred demand could be transferred into current effective demand by greater provision of parks mainly neighbourhood or district parks, which require expenditure and large areas of land. In Nairobi, though park facilities are not adequate, part of the present problem stems from maldistribution rather than the absolute shortage of existing open spaces. Thus areas with inadequate provision should have new facilities located there to ease the deferred demand.

5.1.3. Potential Demand:

This concept relates to that section of the population who require an improvement in their social and economic circumstances before they can be brought into the effective demand market. This idea is closely tied up with predicting future levels of demand given changes in population, income, education, freetime and other key variables that influence growth in demand. This is important so as to match predicted levels of demand with the

supply of recreation opportunities. Research in Britain suggests that four basic changes may appear as a result of current trends.

These are:-

i) Changes in the cycle of individuals with more and younger marriages.

ii) Changes in mobility through diffusion of new transport modes, and a wider diffusion of existing ones.

iii) The continuing process of urbanisation which may increase participation rates in urban located activities and decrease non-urban activities.

iv) Changes in the form and length of available leisure time.

Thus a change in life style is required to transform potential demand into future effective demand. Changes in life styles are occurring in todays society but the inequality in distribution of wealth among the nations people is not likely to change fundamentally. In other words although changes in life cycle, mobility and leisure time will occur, the social structure of our society is not expected to be radically altered. There is already a situation where the poorer sections of society are so locked in a vicious circle of economic and social deprivation that majority of them cannot afford most leisure pursuits because of their low income levels.

5.1.4. Induced Demand

This is the demand which is created as a direct result of the provision of a supply of facilities. For example, if the Nairobi river is developed as a river-rine park, then an entirely new demand may be generated for it in addition to any latent demand which was previously unsatisfied. Thus the proposed potential recreation reserves like the district park proposed for Eastlands in Nairobi reflects a demand for outdoor recreation facilities. Most of the residential areas in Nairobi like Dagoretti have potential for development of recreational parks. The existence of such places in the urban catchment will help contain urban sprawl.

In conclusion, a knowledge of the nature and scope of the different kinds of recreation demands is a first prerequisite of planning. To those planning the development of recreation facilities it is essential to know the pattern of participation in the future. Establishing statistical links between the nature of participants and their propensity to participate in outdoor recreation provides a means of forecasting future trends, and these links have been exploited in most of the regional studies in Britain and U.S.A.

Yet the principal difficulty in forecasting is the lack of knowledge of the forces that govern recreational behaviour. While there is overwhelming evidence that social and economic factors do influence participation in park visits, use of these factors for forecasting is less a reflection of their proven validity

than of the present lack of knowledge. It must be recognised that other factors both psychological and environmental, also have a profound influence on recreational habits. It would be much easier to estimate future trends in participation if reliable data existed for past years, since their absence transforms simple arithmetic into a complex statistical task. Because statistical relationships between recreational behaviour and certain socio-economic variables can be demonstrated, it has seemed reasonable to use this relationship for forecasting, but such a procedure requires the assumption that existing relationships will continue in the future.

The leisure revolution has been accompanied by and to some extent has fostered, greater social changes and it seems inevitable that the relationship between social variables and leisure habits will continue to be transformed. Changes in the pattern of marriage and in the nature of the family, the new social roles of the young and of women and new technological and educational advantages are all contributing to a fundamental restructuring of society. In these circumstances, it has been suggested, (Rodgers 1969), that socio - economic parameters are a feeble tool for predicting the changing demand. The total demand for recreation is never fully realised and at any time there is a latent demand untapped because of a scarcity of resources. Therefore that future effective demand will be conditioned more by the available supply and capacity of resources for recreation than by the demand generated by changes in social and economic factors.

The number of users of a park not only reflects a demand for it, but also reflects the supply of the recreation facilities. Supply like demand has two dimensions: present or existing supply and future or potential supply. Present supply is the resources, land and facilities available for recreation. Given the conceptual framework of the existing recreation supply, the capacity of these facilities becomes an important element in determining their supply. There are three kinds of capacity: physical, environmental and ecological.

5.2.1. Physical capacity

This is the easiest to assess because for many recreational activities, a site has physical limits although other constraints may be present. For example in Nairobi, during peak visiting hours to the park a problem of parking space arises especially for the car owning population visiting the park. Even in the private recreational facilities, car parking space is one limitation for the visitors to these facilities.

But on the whole most of the parks have adequate parking space especially during off peak hours. Unlike Jevanjee gardens which have no parking space for cars as the parking space surrounding the park has stiff competition from non - park visitors.

Although these recreation places can accommodate a large number of visitors, the supply of attractive facilities has not been in keeping up with the large physical capacity as indicated by 39% of the respondents who expressed inadequacy in supply of attractive facilities such as refreshments, children's play equipment such as swings etcetera.

5.2.2. Environmental capacity

This is the maximum level of recreation use in terms of number and activities that can be accommodated in an area before participants perceive a decline in their attractions to that locality. This is the most abstract and least tangible of the capacity concepts and will vary from one person to another and be influenced by mood, season and weather.

In Nairobi, most of the parks located outside the city centre are under utilised because of the inadequate supply of the basic facilities and also due to their inaccessible location relative to the residences of the majority of the city's population in the low density zones. It was not possible in this research to estimate the maximum use and accommodation capacity before a decline in their attraction sets in as most of the parks lacked the minimum recreation facilities.

At the moment it can be generalised from the observations and factors that the parks utilization level is under capacity in terms of number and activities that can be accommodated for

example, in Kamukunji and City park.

5.2.3 Ecological capacity:

This is concerned with the maximum level of recreation use that an area can accommodate before ecological damage or decline occurs. The changes that can take place are influenced by the geology, relief, soil, vegetation cover of the area and the daily changes in intensity of its recreational use. Thus, it is not allowed for a car to drive on the grass lawns of the parks, as it has a more noticeable effect on the soil and vegetation and can cause more damage than the visitors on foot. In Nairobi, the open public parks have the ecological capacity to meet the demands of the population. These parks are well treed and provide sufficient vegetation cover for the protection of direct climatic influence on the park land.

Since the current use is under capacity there is an unlikelihood of a marked change in their use. But in city park damage to trees can be noticed due to the presence of the monkeys that cause considerable damage to the forest. On the whole, changes in recreational capacity exists in the unplanned recreational places used for dumping purposes and other abusive uses, than in the planned and restricted parks. As for the existing developed recreational places, the ecological capacity is likely to increase with an improved level of maintenance and

management.

5.3. PLANNING AND MANAGEMENT STANDARDS

Within the town, open spaces fulfill two main functions: Firstly they provide opportunity for recreation of both active and passive, secondly, and less tangibly they play a visual and psychological role in enhancing the whole quality of the urban environment. A well planned urban centre has many types of recreation areas the total of which forms an elaborate urban park system. Each of these serves a given catchment area. If these catchment areas are more or less adhered to, a hierarchy of recreation facilities emerges. Burton (1971) feels that hierarchies should not be a planners major preoccupation in the recreation planning process since,

"The probability that a user will go to one particular facility is equal to the attraction of the facility relative to all available facilities"(Page 325.)

But it is important for a city to have a variety of open spaces of varying dimensions to satisfy the various needs of the potential users who form a heterogeneous urban population.

For instance there are children, the old, poor and rich, car owners and non- car owners who have different resources to enable them appreciate the parks. It is important for the recreation

system in Nairobi to cater for all the potential users.

Various planning and management requirements have been set to guide the provision of the different urban recreational areas. Table 5.1 shows the requirements for some of the urban recreational areas. These requirements differ from country to country, city to city and are dependent on various factors such as the size of the town.

5.3.1 Planning standards:

These are formulated to act as general yardsticks for quality and adequacy of given recreation areas and facilities. Once a standard of provision has been established, the size of any recreation area is a function of density. For instance assuming a standard of neighbourhood park of 1.2 hectares per population, a neighbourhood park of 4000 people would require 4.8 hectares of park space. On the other hand a catchment area is a function of the maximum walkable distance. For Nairobi, it has been proposed to be 0.4 km and this is supposed to closely correlate with the population density.

Table 5.1

PROPOSED PLANNING REQUIREMENTS FOR VARIOUS URBAN RECREATION AREAS IN NAIROBI

TYPES OF	APPROX SIZE	STANDARD APPROX	LOCATION:MAX
OPEN SPACE	ACRES HALT	PER 1000 POPn	TRAVEL TIME
1. Urban parks	2 0.8	1000 population	
2. District Park	1 0.4	1000 population	
3. Neighbour- Parks	3 1.2	1000 population in high density estates	30 minutes walking distance for the majority
"	2.5 1	1000 pop in low density estates	
"	2 0.8	1000 pop when the park is adjusted to secondary school	
"	2.5 1	1000 pop when the park is adjacent to a primary school	

Source: Report on recreation and open space provision and standards for the city of Nairobi, 1981.

These standards are important in recreation planning though they differ in each urban area according to its unique context.

What is finally important is the availability of urban land, and if in private ownership, the money to purchase such land at the appropriate locations especially outside the city centre for public uses before the land pressure becomes a serious problem. It would be an advantage if such standards were adopted for the city and they can be used in developing at least the three levels of open spaces as discussed below.

5.3.2. NEIGHBOURHOOD PARKS

These could also be called estate parks in as far as they serve the residents of one particular estate. Within the residential neighbourhoods of the city, there are small and big or local recreation areas which add to the hierarchy of open spaces in the city.

It is noteworthy that even in terms of local open spaces the low income residential areas in Nairobi which record the highest population densities are the least provided and continue to be so. The colonial trend of systematic open space deprivation in the Nairobi Eastlands is being perpetuated even to this day. Kileleshwa, Pumwani, Bahati, Makongeni, Shauri Moyo estates planned and constructed during the colonial era and Umoja, Dandora, Huruma, Kariobangi all of which are recent developments are good cases for comparison with Lavinton and Loresho both of which are high income pre and post colonial developments respectively.

Most local neighbourhoods are grossly neglected whether in

high or low density residential areas and are neither developed nor maintained. As far as recreation goes, neighbourhood parks are indispensable components of any comprehensive estate development. No estate therefore, should be constructed within Nairobi without the provision for a neighbourhood park. Neighbourhood parks include such features as an open space enclosed by a low fence, which has facilities such as shade, benches for sitting, swings, slides, balance beams, space for informal play, for formal games etc. They should be large enough not smaller than 0.1 hectares and sufficiently well defined for clear identification to avoid encroachment by other users.

In some estates there are incidental open spaces usually layout leftovers which should be avoided as they present maintenance problems. This is because they are small spaces in large numbers scattered all over the estates. Their size and locations makes maintenance an almost impossible task. Such spaces as a result tend to be used for refuse dumping, parking for discarded cars and other abusive uses. Therefore, instead of enhancing environmental beauty, incidental open spaces often encourage environmental pollution and the resultant health hazards.

For optimum use of land and recreation facilities neighbourhood parks are better planned with other facilities like community centres, local shopping centres and primary and secondary schools. This gives a neighbourhood a definite focus and a sense of identity. In terms of urban planning, neighbourhood parks are indispensable components of any

comprehensive estate development. No estate should therefore be constructed without a neighbourhood park.

5.3.3. District Parks:

These are the chief recreation centres for groups of neighbourhoods. They should be large enough to provide opportunities on a bigger scale for a wide range of activities. For example, such parks should be found in each zone of Dagoretti, Eastlands, Westlands and others.

While urban parks are designed to meet the demands of a city's population, they are designed as landscaped areas to take advantage of some scenic feature like a forest or a valley. These provide urban dwellers an opportunity to get away from the noise and rush of the city traffic to enjoy contact with nature. Such parks in Nairobi include city park, Uhuru park and Arboretum which are commonly utilised. The parks have woodlands and open lawns, water areas, picnic areas, botanical gardens, boating centres, shelters etcetera.

Recent user surveys in Britain indicated that demand was moving into a pattern of neighbourhood response. Therefore it is clear that any identifiable local community should have access to a wide range of recreation and leisure situations. As a result recreation resources in Nairobi cannot be invested in the provision and management of one major prestige facility of a single activity nature.

Result of such an investment policy over the city as a whole could be host of severely under privileged neighbourhoods overlooked in terms of recreation needs. But district parks provide generous space for active and passive recreation in an urban environment and should therefore be located in areas enjoying maximum accessibility. The catchment population for a district park is 50,000. The proposed provision standards for Nairobi is 0.4 ha per 1000 population.

5.4 OPTIMUM LOCATION OF RECREATION FACILITIES

Provision of recreational facilities is concerned with the question of location, not only referring to centrality for catchment purposes but also physical accessibility. One of the broad aims of recreation policy is to increase opportunities for recreation and ensure the availability of recreational facilities to the general public. To make use of recreational opportunities they need to be geographically or spatially accessible to potential users, who have varying capacities for using different travel methods. To the user, the location of the recreation facility is equal to the distance plus the time and the money necessary to reach the facility from his home, together with the actual period of time available for recreation. (Burton 1971). The nearer a recreation area is to the user in terms of time and travel distance, the more time he will have on the recreation site.

In addition, the distribution and location of recreation facilities in terms of distance and travel cost is important. For example, when low income is coupled with substantial distance to given recreation facility, the probability of a potential user having an effective demand on that facility drops considerably. From this research, it is clear that the probability that a person will take part in a given activity is a function of many interrelated factors. For instance it was found out that few low income residents make use of the parks or the other recreation amenities.

Distance, inefficient transportation and the costs involved are the major reasons. The distance between low income residential areas and recreation facilities should be minimized by creating serviced open spaces in areas like the Eastlands. This is because, although the Eastern residential area comprises of only 40% of the total Nairobi residential areas, it houses 60.3% of the total Nairobi population, and has only a mere 17% of the total Nairobi neighbourhood park land. Such an area lacks proper parks and this shortage is increased by the distance to centres of recreation like Uhuru park, City park, Arboretum more so now that the public transportation costs have risen to unprecedented heights. These low income residents have little or no money for recreation purposes as their savings primarily go to the satisfaction of the basic needs.

Therefore it is important to establish a district or urban park in such areas to offer both active and passive recreation

especially in areas being opened up for development. Otherwise a big proportion of the Nairobians will not only continue to subsidize the well to do in the maintenance costs of the public facilities, but will also continue to be deprived of recreational services.

Bearing these in mind, the location of parks should be determined by the location of the users. These should be located within a walkable distance of not more than 0.4 km of each home. Even urban parks should be located with minimum imbalances within the city to include areas less gifted with scenic sites

The size of such parks is determined by the population in any given area in conjunction with the recreation standards of a city. For example, the city of Nairobi had a required park space of 2.6 acres per 1000 population as calculated using the 1969 population data. (City Engineers). Other international recreation standards are Britain (London) 10 acres per 1000 population, Japan (Manila) has 3 acres per 1000 population, United states (California) is 6 acres per 1000 population, New York is 7.2 - 7.8 acres per 1000 population. One cannot fail to notice the lack of uniformity and consistency of the recreational standards even in cities within the same country.

Nairobi is lucky to have with proper planning. ample land for all competing land uses. The aim of the relevant city authorities should be to use a portion of the limited resources to purchase large plots of land located outside the city centre for public uses before the land pressure becomes a serious problem. At this point in time, it would be an added advantage if generous

recreation standards were adopted for the city. This is true especially at the neighbourhood level where there is overcrowding in the few incidental open spaces and where children play on the roadsides. A higher neighbourhood park standard would be recommended.

Districts parks provide generous space for active recreation in an urban environment especially in scenic areas such as forests. The parks should be adjacent to major urban roadways for maximum accessibility. Ideal size is 50 acres and over, though as in neighbourhood parks the standard of provision varies. For Nairobi, 0.4 hectares (1 acre) per 1000 population is adequate.

For urban parks, the distinguishing mark are their unique quality. The location and size are therefore of less importance. Consequently, areas that meet strict quality standards should be reserved for public use, though the standard of provision is difficult to establish. But for the city of Nairobi, a minimum standard of 0.8 Ha/ 1000 population would be feasible.

But in general it is not possible to fix strict standards for open spaces for recreation purposes at the city as these must essentially develop from the opportunities in the environment.

Some Policy Issue

The provision of urban public space in Nairobi is ambiguous and confusing. The law concerning provision is differently interpreted and there is a need to clarify the legality of the Planning Act and ordinance. For example, the rule that a developer has to surrender 10 percent of the total land to be developed free of cost for public purposes, recreation included is not adhered to all and even if it did then it seriously under provides for the high density areas.

There is a lack of guiding policies on planning and management of urban recreation areas. Majority of the recreational areas are neglected while in some parks there is no proper landscaping and maintenance. At the neighborhood level some open spaces are overgrown with bush and have been turned into dumping grounds. Also there are no clearly stated objectives of the recreation facilities as some of them are used for other purposes as opposed to the main purpose of recreation. There are no clear pricing policies and rates to be charged for entrance into some of the recreation areas and facilities. For example, the botanical garden in city park is supposed to have an entrance charge in some days and not others. Cost sharing would be a good idea if properly introduced into the parks so that they can generate an income and be able to maintain themselves.

There are poor environmental conditions in most of the

recreation areas. While most lack clean drinking water, the number of available toilets does not meet the demand of the visitors. Rubbish is poorly collected while Uhuru park has its artificial lake polluted through floating rubbish. A park like Kamukunji is poorly developed. Maintenance of a good environment in a park is essential to its appearance such as well planted trees, grasses, flowers, bushes, provision of shade, sitting places etcetera. Wind, dust, mud can be very detrimental to the comfort of the users. In addition, trees add to the quietness and repose of the environment and the nature-like feeling of the place.

Increased requirements for the rapid growth of Nairobi city has caused an impact on the recreation areas. Planning of the town implies that the distribution of highly competitive land uses should not subjugate some uses to the others. But this has been lacking in the planning and development of human habitat all over Kenya. Open space provision has suffered enormous deficiencies and most of all, what space has been provided has been faced with serious threat of encroachment by other supposedly more lucrative uses.

This happens both officially and unofficially. Officially policy makers have necessitated subdivisions of original recreational areas for other urban uses, while unofficially the recreational land has been used for other purposes other than what it was meant for.

As a result, 39 percent of the original recreational land in

Nairobi has been turned into other uses in the recent past years. (City Engineers 1981). It is imperative that the little recreation land the city already possesses, should not be encroached on. New urban structures coming up should go hand in hand with provision of open spaces. This can ensure that Nairobi remains the 'Green City in the Sun.'

CHAPTER SIX

Conclusion, recommendations and areas of further research

6.1 CONCLUSION

Passive recreation is predominant in the parks with activities such as walking, picnicking, sitting inside car, looking at trees and flowers, among others. Most visits last for a few hours and peak attendance is normally over weekends but on weekdays it is between the lunch hour. The research examined those factors that appeared to underlie the demand for this particular form of passive recreation.

Although, it has been noted that the effect of age on participation in passive recreation is much less than in active recreation, there is nevertheless a general tendency for participation to decline with age. It is low below the 15 year group and for those above 60 years of age, who despite having more leisure time, the constraints of age, immobility and low income are most important.

The study also demonstrated little differences between the sexes in park visiting though the number of males was on the higher side as compared to the number of female visitors. Statistics on marital status indicate that single people were more likely to visit the parks especially during weekdays, than married people who had a higher frequency of park visits during

the weekends.

The impact of education status on outdoor recreation reflects not only greater interest in what is seen as the role of recreation (either for pleasure, to pass time or lack of anywhere else to go) in such park visits. This variable is also seen in the relationship between it, occupation and income, which they themselves influence participation in recreational visits to the parks. Those with primary level or no education at all had participation levels well below average, while those with secondary level had above average visits. Higher education including university level had also below average participation.

It is clear that occupation was significant in influencing park visit with a higher participation level among the unemployed and students, while participation was lower among the self employed, housewives, retired and professional and managerial groups. Socio - economic groupings provided a more reliable indicator of the influence of economic factors. It is clear that there is a general link between participation in park visits and the income level of a visitor, with levels of participation decreasing with position on the socio - economic scale. Low income earners had the highest percentage of park visit and the high income earners had the lowest frequency, which is opposite of what is expected in most recreational pursuits where particular participation increases with income.

The importance of car ownership was significant in that majority of participants had no access to a car but relied mainly

on public transport or footing where parks were located within walking distance from their residential areas.

Again it can be concluded that passive recreation demonstrates a broad appeal among the city's inhabitants for while there are variations between different social groups in rates of participation, at least all groups are represented in the 'market' for this kind of recreation.

This study has assessed recreational facilities and open spaces in Nairobi city from a user oriented point of view. Nairobi is well endowed with parks but has them unfairly distributed within the city. It is established that although recreation is important in the lives of urban inhabitants, it is given low priority in most cities of the developing countries and Nairobi is no exception. This secondary consideration is demonstrated not only by the inadequacy of recreational facilities within the neighbourhoods but also the fact that open spaces available experience overcrowding, are poorly managed and face problems of misuse and competition from other land uses. Again most of the Nairobi residents lack exposure to the different recreational opportunities available within the city, such that most of the respondents did not know of other parks for example, the Arboretum.

Consequently, recreation is treated as a secondary land use activity as it provides no direct returns. The provision of recreational facilities is worsened by the failure of urban resources to meet the other requirements such as housing, health,

education, and other social services of the increasing urban population.

It has been illustrated that the demand for recreation in Nairobi is enormous. Demand is influenced by the size of the population, the income, education, amount of leisure time, relative position in the life cycle, accessibility to facility and the effect of location.

Location may affect the use of a recreational facility as it plays an important psychological role in determining individual demand for outdoor recreation. Parks located far from the centre of population such as the high density residential areas are underutilised. These parks are unfavourably distributed especially in the low income areas where costs of travel and the distance to the parks greatly reduces the number of visitors.. Most people in Nairobi are low income earners and constitute a bigger percentage of the potential demand for recreation. Their financial constraints limits their visits to the parks since this would be a luxury compared to the other necessities of life.

The supply of recreation facilities at the parks was inadequate. There were few public utilities such as sitting places, shelters, swings, general sanitation with poor refuse collection, inadequate toilets, lack of water taps and a general situation of inadequacy in maintenance and management of the parks. This was prevalent in almost all the parks and there were suggestions for more attractive facilities such as restaurants, children play equipments, more sitting places, improved security,

shelters, among others..

As the population of Nairobi increases and the city continues to spread, the greater will be the need for adequate provision of spaces of all kinds. Nairobi is growing faster than the local government authorities and land developers can provide recreational and other social amenities. Problems of recreation in the city are being compounded by the increasing population and fast growth of the city with only the original parks catering for outdoor recreation. It is therefore imperative that to maintain this open spaces the city already possesses, no encroachment should be allowed into these areas.

6.2

RECOMMENDATIONS

Local authorities play an important role in the provision of many classes of recreational facilities. They provide parks, children's playgrounds, playing fields for games among others. But also a large proportion of open spaces is provided by employers and private clubs. In practice, problems often arise in the provision of recreation facilities and they may be so demanding as to prevent an adequate level of supply from being established. Golf courses for instance require such large areas of land (40 - 60 hectares for an 18 hole course) that it is often impossible to locate them close to urban residential districts. Children's playgrounds need to be sited in the midst of residential areas and yet the noise of children playing for long

periods of time can cause considerable annoyance to neighbouring residents. Parks are frequently sited in rather out of the way locations because land with suitable physical characteristics but in rather remote locations has come on to the land market and there is an absence of suitable land close to heavily populated areas where parks are more required.

As the urban population increases and towns and cities continue to spread, the greater will be the need for adequate provision of open spaces of all kinds. Furthermore, expansion of the open space should proceed concurrently with the spread of cities and the sites should be acquired or at least be earmarked well ahead of urban expansion while the land is still available and comparatively low priced. In addition the recreation potential of green belts needs to be thoroughly explored and more fully utilised so that in addition to restraining urban sprawl, these protected areas may make positive contributions to the enjoyment of city dwellers.

The changing pattern of land use in the central areas of Nairobi may create different open space needs. Inner urban areas formerly serving the needs of the residents of former town houses may no longer be entirely relevant, but in their place smaller open spaces as settings to buildings or groups of buildings connected by landscaped walkways might be better suited to today's needs.

Some have argued that with the increasing prosperity, mobility and leisure time of urban populations, the need for additional

open space in towns and cities declines as people are able to visit more frequently more distant recreational resources. Yet - of Nairobi's residents in common with many more of other cities, most do not have access to cars. For them a journey to a distant resource could often be both difficult and costly and this adds weight to the need for an adequate urban open space network that is easily accessible.

It seems essential to show the scale of demand if a convincing case is to be put forward for diverting resources to recreation be they land, funds, personnel from other socially important services such as education, health or housing, all of which face a shortage of resources. Periodic surveys are needed say at either 10 year intervals to show how people are spending their leisure time and what changes are occurring in their use of leisure.

Urban dwellers need open spaces even if it cannot be justified on purely economic grounds. Trees, shrubs, grass and flowers all serve to soften the harshness of the urban scene and to make the lives of urban dwellers more tolerable. A city without its public parks, gardens is unthinkable.

Admittedly, there are strong physical and practical difficulties inherent in a policy which aims at securing the maximum open space provision in the central area of a large capital city like Nairobi. One major obstacle is the high price of land in these locations and the absence of direct monetary returns from the open space provision. The introduction of even

relatively small areas of grass and trees into new shopping developments, between new office blocks and around new civic, educational and other public buildings would have the most beneficial effect in humanising the urban scene and providing a pleasant contrast to the hard and artificial surfaces of building and paved areas.

Many urban parks are no longer conveniently sited in relation to the dwellings of the population which they are supposed to serve. Much thought needs to be given to the problem of integrating parks with the urban structure. There is a need to modernise the parks such as installing flood lights, providing a whole host of interesting facilities such as restaurants, libraries to help liven up our parks and provide many more facilities with some revenue producing for old and young alike. In order to incorporate all these desirable features some zoning of large existing parks and laying out of new parks will be necessary.

The Greater London Council (1968) sees the need for a hierarchial structure of park provision based on small parks of at least 2 hectares close to residential areas, intermediate parks of not less than 20 hectares situated within about 1.5 km of every home and larger parks of at least 60 hectares for people travelling distance up to 8 km. This hierarchial distribution may prove far too much in practise but it serves a useful purpose by drawing attention to the need for rationalised provision and the need for incorporating suitable landscaping through redeveloped sectors in the form of sheltered sitting places, children play

areas, pleasant view, among others.

With an increasing population and a rising competition for land for a number different uses, it is important that resources allocated to recreation should be utilised as effectively as possible. It seems again the structure of Nairobi City Commission is poorly suited to serve the needs of park users. The division of parks responsibility between the central government and the local government has led to various levels of maintainance of parks and to the lack of an overall co-ordinated policy. Nairobi city boundary is irrelevant to present day needs as more and more people live outside the city and problems of planning roads, recreation, housing and education all need to be considered in a wider context - possibly in the context of a city region.

Another problem is that co-ordination of public and private investment in recreation industry can no longer be expected to provide in full all the diverse and expanding recreational needs of its working population. Conversely many industrial based recreational facilities are under utilised and ought, through agreements with local authorities to be more readily available to the community at large. It seems likely that public authorities will take an increasing part in recreation provision but commercial interests and voluntary organisations should be encouraged to participate with a considerable interest. The local authority in addition to being a major provider of facilities also has an important role as a co-ordinator preferably administering large and more viable areas than at present with

support from the central government. Recreational resources must be suitably located and properly managed if their full potential is to be realised. Recreation management includes such aspects as the design and maintenance of facilities like litter receptacles, park benches, footpaths, fences and surfaces of various kinds. The most successful and most acceptable techniques of visitor management are invariably the most subtle, persuasive and informative. For example, things like signs that explain the reasons for restrictions can be successful in guiding people from misuse of parks.

In recreation management, there is need to know what is wanted, where it can be provided and how it can be provided. Management of recreation areas should aim to secure optimum use, protect recreational facilities from misuse and provide an effective information service.

There are two financial aspects in the provision of recreational facilities. The expenditure incurred in supplying the facility and subsequently maintaining and operating it and the charge if any to be made for its use. The role of local authorities and the central government in the financing of recreational facilities is a complicated one.

In the past there has been a general reluctance on the part of local authorities to charge for access to public parks and other recreational facilities mainly using the argument that this could preclude the very people who would stand to benefit most from them. Difficulties of matching supply and demand through lack of

finance, coupled with the increasing prosperity and mobility of the population, calls for review on the pricing policy. If entry charges produced a reasonable rate of return on capital, the local authority might then be able to provide more and better facilities and to ease the congestion problem. Charges could also operate as regulators of demand and their introduction would assist in staggering the demand and in reducing weekend pressures. Making parks pay for themselves would give greater incentives to develop new ventures and by making one or two parks in a town economically viable, it would allow more money to be spent on parks for passive recreation. With large parks it should be possible to separate the park into two distinct sections, one containing a variety of facilities and attracting charges such as boating and the other catering for people who wish merely to sit and walk and whom no charge should be levied.

There should be plans for improved provision of recreation in the urban life particularly for those in the lower socio-economic groups whose income is unlikely to rise substantially and who do not own cars. Immense value would be derived from an interlinked hierarchy of open spaces from small neighbourhood parks and playgrounds, through town parks to regional open spaces on the urban fringe. Waterfront recreation resorts should be encouraged in Nairobi. This should be in areas around the Nairobi dam, and along the river valleys like the Nairobi river where a co-ordinated system of pedestrian paths and hiking trails should be planned and provided along the riverine. Trees should be planted to provide a more natural environment.

Nairobi is a tourist attraction in itself. This value will be considerably reduced if the facilities provided are of poor quality, out of character, inconveniently situated or patronised by incompatible clients. Recreation facilities are important features and policies should be worked out to ensure that developments are of aesthetic value. The establishment of the national monuments are attempts towards this requirement and they should be encouraged. The NCC should develop policy guidelines and acceptable standards for recreation areas and facilities, and strictly enforce the recommended standards.

6.3 AREAS FOR FURTHER RESEARCH

The major purpose in undertaking this research project and in particular the analysis of the relative significance of different profile variables that influence park visit or outdoor recreation behaviour was to provide guidelines for wider studies at the national and more particularly, the regional and sub regional levels. It is certain that the relative importance of the different profile characteristics in influencing recreation behaviour will change over the long run. As more and more children go on to further education after school, for example, the strength of this variable in formulating behaviour is likely to change significantly in relation to other variables.

Therefore it is important to set ground rules which will facilitate comparability between future studies and which will provide some systematic data for use in forecasting models of one kind or another. Thus since ground rules cannot be established for posterity and are by nature rules of behaviour that change as society changes, then future studies should include this aspect of the relative significance of different profile variables in affecting recreation behaviours which should be repeated at intervals of not more than about ten years.

Further work can also be undertaken with the profile data from the present study. The validity of the profile characteristics themselves could be further ascertained through the use of other tests besides chi - square and 'F' test, for instance, Spearman, Kendall or Kruskal - Wallis test where appropriate.

Future studies should also look into the household survey using questionnaires to interview household heads. Such an interview using a sample would gather information about the household, its composition, type of housing, ownership of household goods and so on and then the interview would gather data about the recreation activities of that household. One of the objectives of such a survey would be to investigate the impact of recreation supplies upon demands. If the survey is carried out in two contracted areas (in terms of available facilities) it can show the significance of supply in creating or stimulating demands.

Further areas of research can be into an assessment of pricing

policy, management and planning standards, and the possibility of public participation in the provision of recreation facilities. There is also a need to look into designs and development plans of recreation areas.

Further research can also be undertaken by the use of before and after surveys of activity - opportunity relationships rather than to compare socially homogeneous areas which have different recreation opportunity structures. The approach would be first to select an area in which a major new recreation opportunity was in the process of development. For example in Eastlands area of Nairobi which lacks recreational facilities there are proposals to serve the residents of this areas. A survey could be carried out before the development was complete and again after it was in full operation. This would make it possible to identify changes in recreation patterns stemming directly from the provision of the new opportunity.

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APPENDIX 1

NUMBER

QUESTIONNAIRE FOR PARK USERS

1. DATE OF INTERVIEW ----- TIME -----

2. PLACE OF INTERVIEW -----

PERSONAL AND SOCIAL PROFILE OF RESPONDENT

3. LOCAL AREA (HOME AREA) OF RESPONDENT

DISTRICT (TOWN) -----

LOCATION -----

4. CURRENT RESIDENT OF RESPONDENT -----

5. AGE

UNDER 15 YRS -----

15-19 YRS -----

20-34 YRS -----

35-44 YRS -----

45-64 YRS -----

65 YRS AND OVER -----

6. MARITAL STATUS: SINGLE -----

MARRIED -----

7. LEVEL OF EDUCATION: NONE -----

PRIMARY -----

SECONDARY -----

HIGH SCHOOL -----

UNIVERSITY -----

OTHER (SPECIFY) -----

8. WHAT IS YOUR OCCUPATION:

EMPLOYER -----

EMPLOYMENT STATUS:

SELF-EMPLOYED -----

HOUSEWIFE -----

STUDENT -----

UNEMPLOYED -----

RETIRED -----

STILL AT SCHOOL

OR COLLEGE -----

OTHER (SPECIFY) -----

9. WHAT IS YOUR INCOME?:

NONE -----

0 - 999 -----

1000 - 1999 -----

2000 - 2999 -----

3000 - 3999 -----

4000 - 4999 -----

5000 - and above -----
PER MONTH.

10. HOW DID YOU TRAVEL TO THE PARK TODAY?

CAR -----

MOTOR CYCLE -----

BUS -----

BICYCLE -----

FOOT -----

OTHER MEANS -----

11. IF YOU CAME BY CAR WERE YOU

+ PASSENGER -----

DRIVER -----

12. HAVE YOU A CAR: YES -----

NO -----

13. HAVE YOU COME TO THE PARK STRAIGHT

FROM WORK -----

FROM HOME -----

14. GIVE APPROXIMATE DISTANCE TRAVELLED

0.2 KM -----

2-4 -----

4-6 -----

6-8 -----

8-10 -----

OVER 10 KM -----

15. GIVE APPROXIMATE NUMBER OF VISITS TO THIS PARK PER MONTH

0-1 -----

2-5 -----

6-10 -----

11-20 -----

OVER 20 -----

16. WHEN DO YOU VISIT MOSTLY?:

ON WEEKDAYS -----

ON WEEKENDS -----

17. WHAT ACTIVITIES DO YOU TAKE PART IN

STROLLING -----

LOOKING AT TREES, FLOWERS, LAKE -----

WALKING THROUGH TO ELSEWHERE -----

PICNICKING -----

PLAYING GAMES -----

SITTING INSIDE CAR -----

SITTING OUTSIDE CAR -----

EXERCISING DOG -----

OTHERS -----

18. GIVE PROBABLE LENGTH OF STAY

LESS THAN 1 HOUR -----

1-2 HOURS -----

HALF A DAY -----

ALL DAY -----

19. IS THERE ANYTHING WHICH PREVENTS YOU MAKING AS MANY VISITS TO THE PARK AS YOU WOULD LIKE

STATE -----

20. WHAT THINGS WOULD YOU LIKE TO SEE IN THE PARKS IN FUTURE

MORE FACILITIES -----

FOR CHILDRENS PLAY (SWINGS, etc _____)

FORMAL GAMES

CAFES

SHELTERS

MORE PLACES FOR SITTING _____

MORE GRASS FOR PLAYING _____

ANY OTHER FACILITIES _____

OTHERS -----

18. GIVE PROBABLE LENGTH OF STAY

LESS THAN 1 HOUR -----

1-2 HOURS -----

HALF A DAY -----

ALL DAY -----

19. IS THERE ANYTHING WHICH PREVENTS YOU MAKING AS MANY VISITS TO THE PARK AS YOU WOULD LIKE

STATE -----

20. WHAT THINGS WOULD YOU LIKE TO SEE IN THE PARKS IN FUTURE

MORE FACILITIES -----

FOR CHILDRENS PLAY (SWINGS, etc _____

FORMAL GAMES

CAFES

SHELTERS

MORE PLACES FOR SITTING _____

MORE GRASS FOR PLAYING _____

ANY OTHER FACILITIES _____