BLACK PEOPLE'S COGNITIONS OF NATURAL RECREATION RESOURCES IN THE NATAL NORTH-COASTAL REGION

BY

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Through his intelligence and perception, man is a tragic figure in the organic world; for in trials that beset the individual, he is the only triple sufferer. He imagines how it is going to be, he finds out how it is, and sometimes he lives to remember how it was.

DURWARD L. ALLEN
(1975: 32)

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ABSTRACT

BLACK PEOPLE'S COGNITIONS OF NATURAL RECREATION RESOURCES IN THE NATAL NORTH-COASTAL REGION

This study was designed to investigate how Black people in the Natal north-coastal region cognize natural recreation resources as they are defined at present. The basis of the research is modeled on the premise that because of existing spatial and socio-economic inequalities in South Africa, Black people may well have a negative attitude towards natural recreation resources. In essence the aims of the study are to:

(1) Identify value systems strongly associated with and involved in the formulation of the images and cognitions which Black people have towards natural recreation resources and facilities.

(2) Reveal the cognitions which Black people have with regard to the identification, management, utilization and conservation of natural recreation resources and facilities.

The procedure used two separate sample populations. The first survey (N=515) investigated the general population's cognitions of and behaviour towards natural recreation resources and facilities. The second survey (N=35) sought to establish the actual background material from organizations or agencies engaged in the administration and management of recreation resources. Data was computer-analyzed using frequencies, univariate procedures and cross tabulations which contained a chi-square test and measures of correlation. These procedures were used to analyze data acquired by means of cognitive statements, photographic images from 24 photographs depicting recreation resources and through use of semantic differential scales.

Some of the broad, basic hypotheses the study considers are: (1) That Black people have negative cognitions of natural recreation resources in general; (2) that Black people have a positive frame of mind relating to the aesthetics and conservation of natural recreation resources; (3) that Blacks have a negative cognition of the management of natural recreation resources; and (4) that the current cognitions of natural

recreation resources are related to the respondent's place of residence, standard of education, occupation, sex, age and religion.

The study is broadly structured around eight chapters. The first chapter gives an overall orientation to the study and is further methodologically ellucidated in Chapter 5. Chapters 2 and 3 discuss the conceptual sources and relationships which exist between geography, recreation, psychology and philosophy. Chapter 3 specifically treats the African philosophical perspectives of the natural recreation environment. On the other hand, chapters 4, 6 and 7 deal with empirical sources in the form of field survey materials of recreation authorities, the general population and their interpretation, respectively. Overall summaries of the study, and of its implications and conclusions are presented in Chapter 8.

The major conclusions of the study are: First, that Black people within the north-coastal region of Natal cognize the natural recreation resources positively. Secondly, that whereas there was a positive association of the cognized utilization of natural recreation resources with aesthetic constructs, there was a negative association of the management of these resources with functional constructs such as "inadequate" and "restricted". Thirdly, there were, in general, no significant differences by age, sex, education, occupation and place of residence which affected the cognition and use of resources and facilities either positively or negatively. However, on categorizing the cognitive constructs of recreation resources into "aesthetic" and "functional" attributes, these tended to vary by socio-economic variables. Fourthly, on the strength of the preponderence of cognitive constructs that were aesthetic and abstract, it was concluded that philosophical and cultural value systems are strongly associated with the natural recreation image formulation amongst Black people in the study area.

The study has important implications for the management, planning and research of the recreation system in the north-coastal region of Natal. The evaluation of Black cognitions of natural recreation resources is a necessary exercise if the general recreation system in South Africa is to be made equitable and remodelled to cater for every person within the population.

SAMEVATTING

SWARTMENSE SE WAARNEMING VAN DIE NATUURLIKE ONTSPANNINGSHULPBRONNE IN DIE NOORDELIKE KUSSTREEK VAN NATAL

Hierdie studie het beoog om ondersoek in te stel na die Swartmense van die Noordelike Kusstreek van Natal se kognitiewe waarneming van die natuurlike ontspanningshulpbronne. Die ondersoek is gebaseer op die veronderstelde uitgangspunt dat daar 'n ongelykheid bestaan ten opsigte van die bestaande ruimtelike en sosio-ekonomiese toestande in Suid-Afrika, sodat Swartmense 'n negatiewe gesindheid teenoor natuurlike ontspanningshulp= bronne sal openbaar.

Die doel van die studie is kortliks:

(1) om die waardesisteme van Swartmense wat sterk geassosieer word en betrokke is by die vorming van voorstellings en waarnemings ten opsigte van die natuurlike ontspanningshulpbronne en -fasiliteite, te identifiseer; en

(2) om die waarnemings van die Swartmense ten opsigte van die identifikasie, bestuur, benutting en bewaring van die natuurlike ontspanningshulpbronne en -fasiliteite te openbaar.

In die ondersoek is van twee afsonderlike steekproewe gebruik gemaak. Die eerste steekproef (N=515) het die algemene waarneming van en houding ten opsigte van natuurlike ontspanningshulpbronne en -fasiliteite ondersoek. Die tweede steekproef (N=35) het agtergrondmateriaal van organisasies en agente wat by die administrasie en bestuur van ontspanningshulpbronne betrokke is, ingesamel. Die data is rekenaarmatig geanaliseer deur gebruik te maak van frekwensies, enkelvariaatprosedures en kruistabulerings waarin 'n chi-kwadraattoets en korrelasiemetings vervat is. Data is verkry uit persoonlike onderhoude, interpretatiewe denkbeelde van 24 foto's wat ontspanningshulpbronne verbeeld het en deur die gebruik van semantiese onderskeidingskale.

Die basiese hipoteses is soos volg geformuleer:

(1) Swartmense het negatiewe kognitiewe waarnemings ten opsigte van natuurlike ontspanningshulpbronne. (2) Swartmense het 'n positiewe gesindheid ten opsigte van die estetiese aspekte en bewaring van natuurlike ontspanningshulpbronne. (3) Swartmense het 'n negatiewe kognitiewe waarneming ten opsigte van die bestuur van die natuurlike ontspannings= hulpbronne. (4) Die huidige kognitiewe waarneming van natuurlike ontspanningshulpbronne hou verband met die respondent se woonplek, opvoedkundige standaard, beroep, geslag, ouderdom, en godsdiens.

Hierdie studie is in agt hoofstukke verdeel. Die eerste hoofstuk omvat 'n algemene oriëntering, terwyl die studie self metodologies in hoofstuk 5 uiteengesit is. In hoofstukke 2 en 3 word die konseptuele bronne en verwantskappe tussen die sleutelbegrippe geografie, ontspanning, psigologie en filosofie bespreek. Hoofstuk 3 lê klem op die Afrika-filosofiese perspektief van die natuurlike ontspanningsomgewing. Hoofstukke 4, 6 en 7 behandel die inhoud en analise van die empiriese bronne. 'n Finale opsomming, insluitende implikasies van en gevolgtrekkings uit die studie, word in hoofstuk 8 aangebied.

Die belangrikste gevolgtrekkings van die navorsingsprojek is soos volg: (1) Die Swartmense van die Noordelike Kusstreek van Natal het 'n positiewe kognitiewe waarneming van natuurlike ontspanningshulpbronne. (2) Daar bestaan 'n positiewe kognitiewe assosiasie ten opsigte van die benutting van die natuurlike ontspanningshulpbronne op 'n estetiese wyse, maar daar is 'n negatiewe kognitiewe assosiasie oor die bestuur van hierdie hulpbronne en dit word as "ontoereikend" en "beperkend" beoordeel. (3) Daar was oor die algemeen geen betekenisvolle verskille op grond van ouderdom, geslag, opvoedingspeil, beroep en woonplek, wat die kognitiewe bewustheid en die gebruik van hulpbronne en fasiliteite òf positief òf negatief betref beïnvloed het nie; nietemin neig die kognitiewe kategorisering van ontspanningshulpbronne op grond van estetiese en funksionele attribute om sosio-ekonomies te varieer. (4) Op grond van die oorheersing van estetiese en abstrakte kognisies, is tot die gevolgtrekking gekom dat filosofiese en kulturele waardes baie sterk figureer by die natuurlike ontspanningsbeeld van die Swartmense in die studiegebied.

Die studie het belangrike implikasies vir die bestuur, beplanning en navorsing van die ontspanningstelsel in die Noordelike Kusstreek van

Natal. Evaluering van die kognitiewe waarneming van ontspannings= hulpbronne deur die Swart bevolking is dringend noodsaaklik ten einde die totale ontspanningstelsel in Suid-Afrika so te hervorm dat vir elke individuele smaak in die bevolking gelyke voorsiening gemaak kan word.

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Many social and natural scientists are increasingly subscribing to the notion that modern man of the late twentieth century is probably close to his zenith in quality of life attainable through existing social institutions (Tybout, 1975). To achieve this level of existence man has relied on technology, the process of which has enabled a fairly sizeable portion of the world's population to reach levels of consumption unimaginable in the past. It is ironic that this technological advancement has, particularly in the Western World, resulted in progressive losses of the natural heritage of virgin lands, clear air, clear water, wildlife and open spaces. Chief Seattle's message to President Franklin Pierce of the United States in 1855 is one of the most perceptive and visionary ecological statements ever made:

> When the buffalo are all slaughtered,
> the wild horses all tamed,
> the secrete corners of the forest
> heavy with the scent of many men,
> and the view of the ripe hills
> blotted by talking wires.
> Where is the thicket. Gone.
> Where is the eagle. Gone.
> And what is to say goodbye
> to the swift and the hunt,
> The end of living and
> The beginning of survival.
> (Chief Seattle-1855)

What is essential to read and understand in Chief Seattle's pronouncement

is that the space and the natural resources on earth are finite, yet they must serve us all. If, for example, one does not work in the field one is not entitled to share of its yield, at least in terms of Western values; yet one has the right to look at it and be gratified thereby (Abel and Stocking, 1981).

In the face of advancing technology and ensuing periods of survival accompanied by expanding populations and increasing competition for land, people who a few years ago were only vaguely concerned about the natural environment have now become greatly concerned (Heimstra and McFarling, 1978). It is through this concern that natural and outdoor recreation resources have come to be recognised and accepted as constituting a vital element in man's environmental resource that helps him achieve or satisfy one of his basic needs for recreation (Hogg, 1977; Torkildsen, 1983).

1.2 BACKGROUND TO THE PROBLEM

The demand for outdoor recreation in recent times has surged, spurred on by increases in the causal factors of population growth, higher disposable income, greater leisure time, higher mobility, improved education and overall standard of living (Iglesias, 1971; Ducsik, 1974; Mercer, 1977b). This situation is typical of many developed Western countries of which South Africa can be regarded as an aspirant member.

Studies of outdoor recreation have a very short history. Over the past two decades and notably during the 1960s there has been a proliferation of research on the broad topic of recreation with concepts coming from such disciplines as Sociology, Economics, Psychology and Geography.

The theme of outdoor recreation was extensively popularised by the Outdoor Recreation Resources Review Commission (ORRRC, 1962). The documents produced by the Commission have been regarded as the 'bible' of recreation studies. Other studies that have highlighted aspects of recreation appeared in Wolfe (1964); Clawson and Knetch (1966); Burton (1970); Bury and Stout (1970); Mercer (1970, 1977b); Craik (1973); Lavery (1975); Weiskopf (1975, 1982); McCall and McCall (1977); Jensen (1977); Kraus (1978); Carlson et al. (1979); Gold (1980b) and Torkildsen (1983). Despite the existence of a sizeable number of writers on outdoor recreation, some of them not mentioned here, there is a lack of focus on recreation behaviour studies or what in this study is called behavioural recreation geography. A great deal of scattered evidence has accumulated which begins to demonstrate the importance of this field in attempts to understand both the leisure activities and motivation for participation in and conservation of outdoor recreation resources such as game parks and reserves, nature reserves, forests, wilderness areas, coastal beaches, lakes, rivers and other water bodies.

It is reasonable to suggest that individual attitudes and cognitions are more important for understanding recreation and leisure behaviour than traditional measures such as hours of participation, expenditure on activities or social class variables (Crandall, 1979). This notion should provide a better analytical or measuring procedure, because we know that not all recreationists cognize and feel about the environment in the same way. What is a quality recreational experience to one (White) person, may be entirely undesirable to another (Black) person. Also, what the recreationist cognizes as acceptable or desirable may be quite different from what the authorities or recreation officials cognize.

This is predominantly so in South Africa because the central planning and management of recreation is not representative of all the different people in the country. These are some of the basic points that this study has to contend with when studying cognitions of recreation resources. In addition, philosophical stances and cultural values of both actual and potential recreationists have to be considered because it is these principles which shape an individual's cognitions of his or her environment.

There are few writers who have devoted their time to studies that adopt a psychological approach to looking at the use and cognition of outdoor recreation resources and facilities. Some of those who have, include: Mercer (1971); Neulinger and Breit (1971); Neulinger and Raps (1972); Tinsley, Barrett and Kass (1977); Tinsley and Kass (1978, 1979); Stokols (1978); Noe (1978); Crandall (1979) and Neulinger (1981). Another important contribution is that of Driver (1975a) which is a comprehensive report on recreationists' cognitions of the environment.

The history of natural or outdoor recreations resources utilization is both short and sporadic in South Africa. This is due in part, of course, to the relatively new phenomenon of recreation demand on a large scale. As the population grows and socio-economic changes take place a completely different recreation scene is bound to emerge. According to Butler-Adam 1984a) the problem in recreation in South Africa is peculiarly pressing for at least two reasons. The first being the nature of the socio-economy and cultural history which have not only served to create diversity, but also considerable complexity in recreation experience. The second is that because there is a need to create and provide recreation opportunities and facilities for all peoples, there is a considerable

need for relevant research into recreation experience and needs.

What has been observable in South Africa is that most of the outdoor or natural recreation facilities have been solely used and reserved for Whites. This has not been achieved or encouraged by discriminatory legislation alone, but also by socio-economic inequalities prevalent in South African society. These are manifest in such areas as education, employment, health, residence, social and recreation facilities. Contrary to this situation more recreation writers argue that recreation should be recognized as a common human need, the satisfaction of which must be equitable and not specific to limited individuals or groups (Dunn, 1975).

It is ironic that whereas Blacks in South Africa constitute the largest of the different population groups, recreation studies relating to their needs and cognitions of recreation resources are hard to come by. Such studies are long overdue (Butler-Adam, 1978). Recreation studies as a whole have been given modest research attention by geographers in South Africa. Exceptions to this rule include Hugo and Hattingh (1972); Hugo (1974); Steyn (1976, 1978); Butler-Adam (1978, 1981, 1984a); Ferrario (1978, 1981); Sutcliffe (1981); Steyn, et al. (1982) and Taylor (1984). Schlemmer (1977) in collaboration with the Town and Regional Planning Commission of Natal undertook a study of patterns and needs of recreationists in Pietermaritzburg. Schlemmer's study, however, concentrated on Whites, Indians and Coloureds and excluded the African population group. Nevertheless, his study suggested that the needs of the African population should not be overlooked in subsequent studies, and up till now no such study has been done particularly in Natal.

Another important concern which makes the study of this problem (how Black people cognize natural recreation resources) critical, springs from the fact that the Black population in South Africa has a high growth rate compared to the 'growth' of recreation resources and facilities. When socio-economic and political changes occur and more Black people are afforded means and opportunities to utilize recreation resources and facilities, a completely new recreation scene will emerge. Obviously, the nature of the demand which will be placed on the resources and facilities will depend on how Black people cognize them and what kind of values and beliefs are influencing those cognitions.

1.3 PRESENTATION OF THE PROBLEM

This research effort is approached primarily from the viewpoint of Behavioural and Recreation Geography or what has been earlier refered to as Behavioural and Recreation Geography.Since this is a relatively new field, there is need to identify and develop a body of concepts and theories which are peculiar to the field. It seems apparent from the literature search and research proposal undertaken that this field is a combination of disciplines such as Philosophy, Psychology, Geography and Recreation Studies. However, since recreation research lacks a unifying conceptual framework, many problems have appeared which tend to reduce its general acceptance by other researchers as a viable field of research. It is hoped that this inquiry will present a substantial contribution in that direction.

Besides the conceptual contributions presented in this research, its development of the behavioural perspective could be useful in helping

recreation agencies, managers, co-ordinators and planners understand what Black people feel or think about natural recreation resources and facilities particularly in this country.

1.3.1 Objectives

The main objectives of this research are threefold:

(1) To reveal the cognitions Black people have with regard to the identification, management, utilization and conservation of natural recreation resources and facilities as presently defined by the recreation authorities.

(2) To identify some value systems that are strongly associated with and involved in the formulation of images and cognitions Black people have towards the present recreation resources and facilities.

(3) To pinpoint variables that are fundamentally involved in influencing the cognition and use of natural recreation resources and facilities as presently defined by the recreation authorities.

The three objectives stated here can be synthesized into two central ideas: The first is the influence of philosophical and societal value systems on Black cognitions of natural recreation resources, and the second, the influence of the recreation system itself on Black cognitions of recreation resources. These Black value systems can be viewed in relation to White values which represent the situation as it exists and is experienced by Blacks in the South African, particularly Natal North-

coast, recreation delivery system.

In the process of investigating the three main objectives of this research the following questions must be attended to:

(1) How do Black people cognize conservation and preservation of natural recreation areas and facilities?

This question is posed to provide serious counterpoints to the historical notions or stereotypes which hold that Black people have no regard for the 'intelligent' use of natural recreation facilities and that they have no regard for the preservation and conservation of game and natural areas (Finlay, 1908; Kidd, 1908).

(2) Is the aesthetic value of the natural recreation environment an existing and functional concept in as far as the Black community is concerned?

(3) Would Black people prefer to subsitute wildlands and nature reserves for industrial and residential development schemes or not?

(4) Is the Black recreationist culturally and psychologically ready to fit into the recreation system presently in operation?

(5) To what extent do future needs of recreation facilities and their use depend on ethnic codes or values?

(6) What is the actual state of recreation resources and facilities

found within the study area?

1.3.2 Significance of the study

The primary significance of tackling the objectives set in the study revolves around learning more about Black cognitions, whether they need to be schooled or moulded or perhaps not. That is, for example, the recreationist knowing that leaving a natural area as wilderness is as much an act of cultural preference as to bulldose a hillside for a superhighway (Watson and O'Riordan, 1976). If in the near future there are significant socio-political changes that affect Black South Africans, the problem under study will become even more important because then recreation theorists and planners will be able to make appropriate conclusions from the findings of this investigation.

It is anticipated that this inquiry will contribute to the theoretical field of Behavioural Recreation Geography, as it attempts to unravel the nature, causes and consequences of human cognition and behaviour towards recreation use and management of natural recreation resources. It will also add to existing knowledge in the area of natural or outdoor recreation development on a regional basis and have considerable utility in the applied field of Recreation Geography.

We know that every society exhibits a complex and shifting structure of values. If this research study is to address people's future recreation needs, it is imperative for the researcher to establish how present values will in future affect the recreation landscape. This seems to be a viable proposition because, according to Lime and Stankey (1974), survey research

on public cognitions does give objective and unbiased feedback not otherwise available to the recreation planner on a variety of questions.

Another important aspect of this study is to draw the decision-maker's attention to the importance of knowing Black people's values and cognitions in relation to the planning of natural recreation resources and facilities for the future (O'Riordan, 1970; Mercer, 1971; Cole, 1977). Also, this knowledge of Black people's values and preferences is needed as a comparative basis for planning and managing for different types of recreation opportunities and also for making resource allocation decisions involving alternate resource uses (beaches, forests, lakes, rivers,wildlife, wilderness areas and other water bodies). For example, physical planning and resource allocation in South Africa are made on the basis of national policy as laid down by the government, "...reserving separate amenities for the different population groups" (NTRPC, 1970: 74).

1.3.3 Delimitation

This study is delimited on the basis of spatial and conceptual perspectives. The study is limited spatially to the Natal north-coastal region, irrespective of political sub-division of this region into Natal and KwaZulu. This area stretches from Mkuzi in the north to Durban-Umlazi in the south, a distance of approximately 400 kilometres, and from the coastline to the interior by an average width of 100 kilometres (see Figures 1.1 and 1.2). The established recreation reserves and agencies found in this area of delimitation, and connected with the recreation delivery process and administration, are identified in Appendix G. The types of natural recreation resources considered include game parks and

FIGURE 1.1 LOCATIONAL MAP OF STUDY AREA

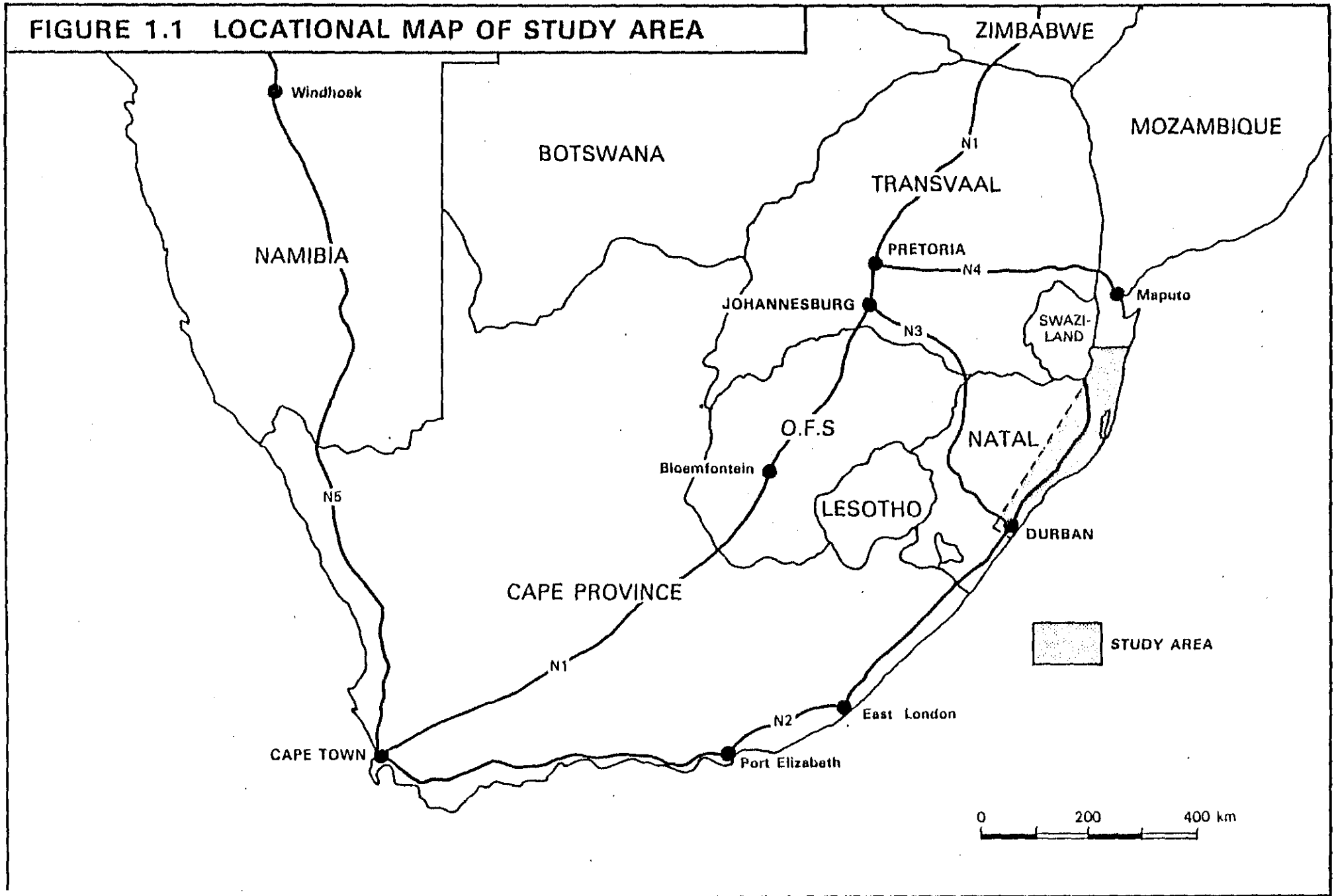
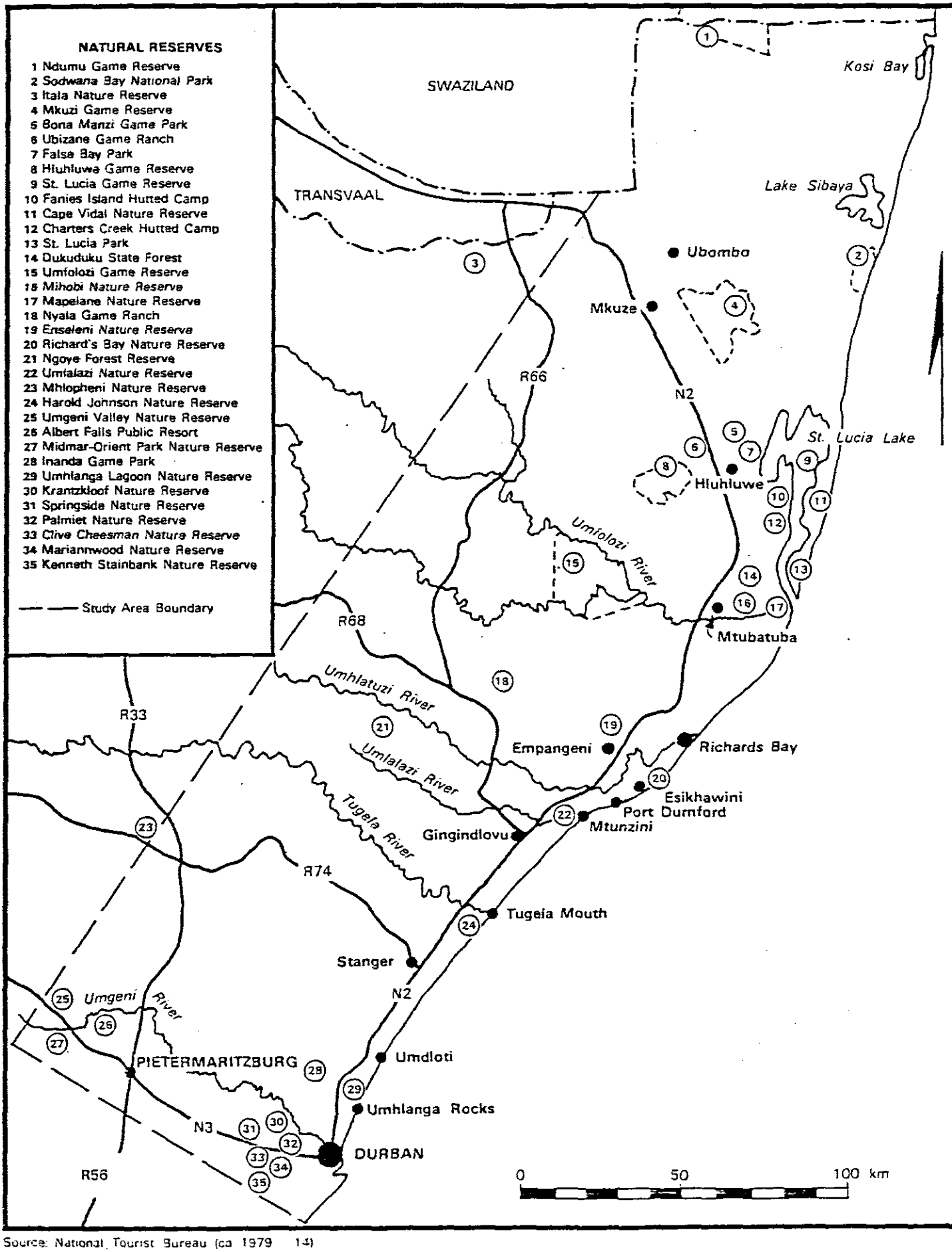


FIGURE 1.2 NATURAL RECREATIONAL RESOURCES WITHIN THE STUDY AREA



Source: National Tourist Bureau (ca 1979 14)

reserves, nature reserves, forests, wilderness areas, coastal beaches, lakes, rivers, and other large water bodies. The latter includes beaches, lagoons or estuaries in Durban, Umhlanga Rocks, Umdloti, Tugela Mouth, Mtunzini, Port Durnford, Esikhawini, Richards Bay and St Lucia. The area characteristics or physical state and management of the recreation resources and facilities are briefly described without undue reference to the current frenquency of use by non-Black recreationists.

The study has two broad conceptual foundations. First, is the human foundation, the feelings, cognitions and value systems, including philosophical thoughts, of Black recreationists studied without emphasising the economic and locational problems of recreation studies. Since psychological and social needs are of equal importance in this investigation, emphasis is placed on cognitions, need-satisfaction and feelings of both the Black recreation seeker or user and the potential Black recreationist. Secondly, the ethnic/political foundation, incorporates the fact that the problem as framed here is restricted to Black recreationists and excludes those from the White, Coloured and Indian population groups. However, research findings relating to the White population group (Schlemmer, 1977; Ferrario, 1978; Steyn, 1978; Butler-Adam, 1981; Sutcliffe, 1981; Taylor, 1984) are used as a basis for comparison in this study. This separate analysis is adopted because it is the nature of our socio-political reality and is reinforced by the Group Areas Act and the Separate Amenities Act which have created separate experiential realities for South Africa's people. Thirdly, the definitional foundation relates to the way different concepts are interpreted in this study. The definition of terms is discussed in greater detail in subsequent subsections of the thesis.

1.4 ASSUMPTIONS

Researchers in Geography have used wide ranging assumptions to simplify the complexity of the real world (Amedeo and Golledge, 1975; Haggett, 1979). The benefits of keeping a research problem simple and manageable carry the cost, however, of sacrificing detail and realism. The assumptions in this study are structured on the basis of recreational, philosophical, psychological, geographical and research aspects of the inquiry. The following conditions are assumed:

(1) Leisure time and recreation activity are important parts of an individual's make-up and experiential world.

(2) The proper planning and management of recreation resources can provide a national basis of improving the quality of life of Blacks in South Africa.

(3) Philosophical thought processes and value systems, past and present, are inextricably interlinked with the way natural recreation resources and facilities are cognized (Moore and Golledge, 1976; Duncan and Duncan, 1976).

(4) Understanding mental images or cognitions which Black people form of the environment is a worthwile research goal and essential contribution to the field of Behavioural Recreation Geography (Harrison and Sarre, 1975).

(5) An individual's cognition of recreation resources is governed

by a set of binary oppositions (Kelly, 1955; Gold, 1974; Bechtel, 1975; Harrison and Sarre, 1975). There is, also, a measurable difference in the belief and disbelief systems of respondents of either favourable or unfavourable cognitions of the environment.

(6) The subjects are sufficiently motivated to respond to the research instrument sincerely and to the best of their ability.

(7) The terms as defined and statements translated are interpreted in a similar manner by all subjects.

There is no need to elaborate on these assumptions because they are self-explanatory. These assumptions are constructed on the basis of existing recreation patterns, trends and experiences in the Natal coastal region and are intended to give a clearer philosophical and pragmatic orientation to the research project.

1.5 DEFINITION OF TERMS

The important key terms associated with the present work should be clear and set in their proper context. Unless there is an obvious contradiction in terms, the following operational definitions are used.

1.5.1 Recreation

The concept recreation in recent times has taken on a three-fold interpretation including behavioural, institutional, and psychological meanings. Recreation has been defined or understood, in terms of overt

behaviour, to be an activity carried on under certain conditions (Weiskopf, 1975) or pursued individually or collectively during leisure time (Neumeyer and Neumeyer, 1958). Psychologically, "recreation, refers to the human emotional and inspirational experience arising out of the recreation act " (Clawson and Knetch, 1966: 6). It is also an attitude of mind regarding leisure behaviour and has a direct influence on personality creation (Torkildsen, 1983). Experientially, it is an emotional condition that flows from feelings of well-being, satisfaction, mastery, achievement, exhilaration, acceptance, success, personal worth and pleasure. It is a response to aesthetic experience achievement of a person's goals, or positive feedback from others (Gray and Pelegrino, 1973). Relating to the institutional perspective, recreation is understood to mean the network of public agencies which provide such facilities as parks, playgrounds, beaches, community centres to serve people young and old; the facilities provided; and the activities they support (Kraus, 1978). This definition is important because ordinarily an area designated as a 'recreation' area does not in reality determine the activities carried on in the area. In this context Meyer and Brightbill (1964) see recreation in relation to a community, that is as a means of improving and maintaining societal cohesion and the quality of life.

One definition which attempts to integrate the three interpretations put forward in this research effort and is adopted as the operational definition, is that of Kraus (1978: 37):

> Recreation consists of activities or experiences carried on within leisure, usually chosen voluntarily by the participant - either because of satisfaction, pleasure or creative achievement derived, or because he perceives certain personal or social values to be gained from them.

> It may also be perceived as the process of participation, or as the emotional state derived from involvement ...
>
> Finally, recreation must be recognized as a social institution with its own values and traditions, structures and organizations, and professional groups and skilled practioners.

The concept recreation may also be viewed, as Sessoms et al. (1975) have suggested, as a noun only when describing the recreational experience. At all other times it is used as a modifier (adjective or adverb) such as in recreation activities, recreation facilities, etc. They also believe that no activity is inherently recreational.

1.5.2 Recreationist

The concept recreationist refers to what McCall and McCall (1977) call a recreation seeker, what this study refers to as the person seeking a recreation experience and not to the recreation planner, developer or administrator as the word is sometimes used to mean (Driver and Tocher, 1974). This specific use of the term is also preferred by Bury and Stout's (1970) Thesaurus of Outdoor Recreation Terms. Other recreation writers supporting this view of recreationists as recreation-seekers include Driver (1975a); Peterson (1976); McKenry (1977); Haas (1979); Mitchell (1979) and Pigram (1983).

1.5.3 Natural recreation

The concepts natural recreation and outdoor recreation are used synonymously to denote recreation activities which take place out of doors in a natural setting (McCall and McCall, 1977); and this assumes in most cases a

non-urban environment (ORRRC, 1962).

1.5.4 Leisure

The concept leisure is very much related to the concept recreation. Both concepts have assumed varied approaches, that is, whether they can be distinguished from other spheres in terms of time, activity and state of mind (Weiskopf, 1975). In recent times a holistic approach in defining leisure has been adopted including these three elements. What emerges is an integrative definition by Carlson et al. (1979: 8):

> Leisure is that portion of time not obligated by subsistence or existence demands. It represents discretionary or free time, time in which one may make voluntary choices of experience.

However, this study aligns itself more with the way Neulinger (1981) sees leisure and recreation, that is, the cognition and attitude towards unobligated time, activities and experiences. What is important is what leisure and recreation actually mean to people, more than what free time and activities people (Black people in this case) have at their disposal.

1.5.5 Resource

A further concept that needs to be defined is that of a resource. Basically the concept refers to real objects in nature which are considered useful to man or satisfy his needs. Another interpretation is to see a resource as a function which the objects referred to are able to perform or generate. A resource is a subjective concept, then, and is an expression of appraisal (Mitchell, 1979). The concept natural

resource refers to a resource that has escaped or held out against technological and institutional modifications. It is further defined by mankind's cognitions and attitudes, wants, needs and cultural values.

A recreation resource is any resource that people use or cognize to fulfil recreational needs. In this study the concept is also used to refer to any recreation facilities primarily recreational in character or used for recreation purposes. Hence, 'resources' and 'facilities' used here, specifically refer to natural physical recreation features and not man-made structures such as swimming pools, sport facilities and support facilities such as service buildings, access roads, parking areas, water systems and toilet facilities, which are not themselves used for recreation but are required for public recreation use or management.

These recreation resources become natural when they include environmental phenomena such as tracts of land, water bodies, forests, game and nature reserves, coastal beaches, rivers, lakes and wilderness areas, hence, natural recreation resources.

1.5.6 Cognition and perception

The concepts cognition and perception have presented behavioural geographers with semantic difficulty. To avoid confusion the usage of Downs and Stea (1973) is adopted; cognition is recognized as a general term that includes perception. Perception, on the other hand, is both the sensation of seeing, feeling, hearing, touching and smelling, and the interpretation of these in the light of previous experience (Hall, 1976). In a more general sense the concept cognition refers to the various means and

processes of awareness or knowing that intervene between external sensations or experiences in the present and the past and the entire scale of human behaviour (Moore and Golledge, 1976). For this study cognition means the process whereby an individual receives information from the social and physical environment in which he operates, interprets it in the light of his experience and attitudes, and then reacts (Lime and Stankey, 1974; Downs and Stea, 1973). It also refers to the way in which individuals or a community cognize or 'know' their existential situation. This may not be concerned with what happens in some objective sense, but with what the observers feel they are experiencing. This sense of the concept is particularly relevant to Black recreationists in South Africa.

1.5.7 Values

The concept values commonly refers to the relative worth attributed to objects, symbols, acts and combinations of these things (Pierce, 1976). On the other hand McElwain and Kearney (1976) see values as desirable states of the world, events or concepts such as truth, beauty, justice, freedom, etc. In this study the concept is used to refer to generalized principles of behaviour and experience to which members of a group feel a strong emotionally toned positive commitment and which provides a standard for judging specific acts and goals (Theodorson and Theodorson, 1969). Values generally help us guide choices of behaviour, activities and objects, especially natural recreation resources. This study cannot afford to ignore values because, among other things, they transcend attitudes towards and cognitions of recreation resources and facilities (Porteous, 1977).

1.5.8 Philosophical thought

A concept related to values which is of special importance and use in this study, is the concept, philosophical thought or in the context of this study, African philosophical thought (APT). The concept philosophical thought refers to mind-processes, concerned with notions and ideas, speculations, beliefs, judgements and conclusions about the nature of life, the nature of man, his value-systems and his relationships to the total environment. According to Hountondji's (1983) view, this term relates to the thinking process about any set of principles presenting some degree of coherence and intended to govern the daily practise of man or a people. Interest in this thesis is in using the concept African philosophical thought in preference to the concept African philosophy. This is because 'APT' is less controversial, less overridden with dogmatism, and is less overused to mean many things to many individuals. A more detailed explanation of both concepts is given in Chapter 3.

A philosophical thought becomes African, as in this study, when:
(1) a system of values, beliefs and experiences can be tied down spatially to Africa or a region in Africa, and (2) a system of beliefs, customs and experiences can be deductively related from one cultural group to another (Apostel, 1981; Hountondji, 1983; Ruch and Anyanwu, 1984). Thus the concept African philosophical thought is defined in this research on spatial and cultural bases.

1.5.9 Black and African

The terms Black and African are used interchangeably or synonymously

in this study to refer to the Black or negroid people in South Africa distinguishable from Whites, Coloureds and Indians. The word negroid is used here to convey linguistic connotations, only.

1.6 STRUCTURE OF THE THESIS

The broad structure of this thesis is modelled in such a way that it considers two types of data sources. The first are the conceptual sources which are treated in Chapters 2 and 3, where the existence of conceptual relationships between the disciplines of Geography, Recreation, Psychology and Philosophy are considered (see Figure 2.3). The second are the empirical sources which are found in Chapters 4, 6 and 7, and present field survey materials and their interpretation.

More specifically Chapter 2 gives a review of related literature pertaining to various aspects of Behavioural Recreation Geography. In this chapter greater emphasis is put on the theoretical and research growth of Human Geography, Recreation Studies and environmental cognitive studies.

Chapter 3 is an extension of the conceptual work initiated in Chapter 2. It addresses the nature and workings of values, philosophy and cognition of the natural environment. Essentially, African philosophical thought processes and the natural environment are discussed with selections in periods ranging from the pre-colonial to the post-colonial traditions. In this chapter it is argued that an African philosophical perspective of the natural environment cannot be discounted.

Chapter 4 introduces the reader to the actual physical setting of the

natural recreation resources within the study area. These resources are characterized by a variety of animals, plants, water-bodies and related cultural facilities. The chapter discusses 35 natural recreation parks and reserves in general terms and 5 in more specific terms. The latter include Umfolozi, Kenneth Stainbank, St Lucia, Nyala and Ngoye Forest Reserve (see Figures 1.1 and 1.2).

In Chapter 5 the field research methodology is described stating in detail the methods used in identifying the study area, collecting data and analyzing it. Reference and rationale is given about the usage of techniques such as the semantic differential and the photographic image analysis.

Chapter 6 presents an analysis of collected data relating to how respondents cognize the natural recreation resources. The required data are mainly presented in tables and graphs, and although the methods of analysis are varied a high degree of interesting similarities are noted and discussed.

Chapter 7 presents an interpretational discussion of the main interplaying aspects of conceptual and empirical data. The real-life situation as reflected in the physical setting of the natural recreation areas, the philosophical and value systems that influence all cognitions and what has emerged in major findings of field work, are combined and compared to give new meaning and cognition of the natural recreation resources.

Chapter 8 gives the summary, conclusion and implications of the research study. This is important for researchers, planners and recreation

authorities as it gives a statement about the state of natural recreation resources in Natal as cognized by Blacks.

1.7 CONCLUSION

In establishing a research orientation and plan, it is usually desirable to have the problem well defined and structured and to have specific questions to which answers are being sought. The following pages in this report hope to do just that.

Another important question in this research endeavour is for the researcher to be cognizant of the magnitude of the problem of clearly differentiating between cognitions, attitudes and values; leisure and recreation; and value-systems, philosophy and philosophical thought, all these concepts being seen in the context of an interplay between Recreation, Psychology, Geography and Philosophy. This problem is in no way made easier by the variety of definitions and interpretations presented in these disciplines or as they occur as sub-disciplines of Geography. The next chapter devotes itself to these very questions.

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

Behavioural and Recreation Geography are relatively new subdisciplines of Human Geography that do not only draw some of their theories and methodologies from geography, but also from sister-disciplines such as Psychology and Recreation Studies. The combination of these two subdisciplines implies that more than one disciplinary viewpoint is encountered when research in this field is undertaken. This also means that investigations in this field should call for more transdisciplinary research approaches in which the problem rather than disciplinary orientation is the overriding concern. However, both Behavioural and Recreation Geography subdisciplines or the newly born Behavioural-Recreation Geography lack not only an agreed-upon name, but also a clear body of theory and well-developed methodology (Saarinen, 1969; Mercer, 1971; Sewell and Burton, 1971; Coppock, 1982). This view is also shared by Lowenthal (1972: 333) who comments that:

> Work in environmental perception and behaviour falls short of realizing its full potential because it lacks commonly accepted definitions, objectives, and mechanisms for applying research results to the needs of environmental planning and decision making. Above all, studies in this field now require a more systematically organized theoretical base.

This therefore implies that it is critical that a unified approach, with a well-articulated theoretical and methodological basis should

be clarified. The review in this chapter is intended to provide such a coherent viewpoint. The literature reported in this chapter is separated into five sections. The sections are related to the problem under investigation: the cognition of recreation space and the recreation system in the Natal north-coastal region and the methodology used in the study.

The first section considers the basic recreation literature which includes recreation research, values and cognitions. In the second section, a survey of environmental cognition literature, including research in the Personal Construct Theory, measurement of behaviour, the semantic differential technique and photographic behaviour assessment is presented. The third section reviews some geographical perspectives relating to the philosophical, recreational and behavioural components of the research. The fourth section reviews landscape literature as an important contribution towards the understanding of recreation and the natural environment. Finally section five is a concluding and integrative statement.

2.2 RECREATION ORIENTATION

In the previous chapter the terms leisure and recreation were operationally defined. Since the terms are closely related, are used interchangeably though not synonymously, mean different things to different people, and could generate some confusion if used indiscriminately, it is necessary to give a clarifying view of their relationship. According to Pigram (1983) the simplest distinction is to identify leisure with time, (specifically with unobligated time) and recreation with activities undertaken voluntarily for pleasure and satisfaction. It should however be emphasized that Pigram's argument is not always true, some exceptions

to it exist. Some recreation activities are work-related and therefore inherently obligated, whereas the definition requires that no compulsion be attached to recreation activities. This implies that in actuality recreation activities can occur during obligated time and unobligated time. Recreation can further be seen to have two variations: (1) whether one considers recreation to be an objective reality of activities (Kraus, 1978; Weiskopf, 1982), or (2) whether it is a subjective response of feelings of pleasure, well-being, satisfaction and personal worth (Clawson and Knetch, 1966; Gray and Pelegrino, 1973; Driver, 1975b; Neulinger, 1981; Torkildsen, 1983). Emphasis in this study is laid on the subjective approach, in which recreation is seen as not consisting of facilities and activities but as including, most importantly the motives, attitudes, cognitions and value of the engagement to the individual that gives an activity some recreation significance. Put differently, this approach believes that recreation is not simply a matter of motions but rather of complex emotions.

Elaborating on this perspective Driver and Tocher (1974) describe recreation as an experience obtained from a recreation engagement that is self-rewarding or gives personal worth. The recreational engagement requires a commitment by the recreationist and also a personal and free choice that occurs during non-obligated time. At the behavioural level recreation is identified with experience. The term experience or recreation experience (Torkildsen, 1983; Carlson et al., 1979) denotes "the totality of a person's physiological, psychological, spiritual or other response to a situation" (Driver, 1975a: 66). It may be satisfying as well as dissatisfying or pleasing or 'good' as well as displeasing or 'bad'. At a broad level an experience is described in terms of the activity

engagement. For example, an individual may have a camping experience, swimming experience or hunting experience, although it is clear that the experience is a good deal more, and more complex, than that.

2.2.1 Behavioural Recreation Research

Recreational research has gone beyond the stage of listing recreation activities and the 'what' of them. There is now both a need and a willingness to apply the theories and concepts of other disciplines to topics of recreation research with the intention of revealing the 'how' and 'why' of recreation activities and experiences. If recreation research can relate pure description to processes, theories and concepts which explain human behaviour in general, this will help explain specific situations in recreation behaviour.

The most common approach to the study of recreation and leisure has been to investigate recreation activities (see above). This is the 'easy way out' because activities are concrete acts. They have a specifiable duration, they can be observed and they represent so-called objective behaviour. Meyersohn (1969) lists three ways in which activities have been studied: (a) the amount of time used in them, (b) the amount of money spent on them, and (c) the amount of interest in them. These three approaches readily offer insights into the use of and demand for recreation activities but usually fail to reveal the experience, behaviour, cognitions and personal satisfaction achieved by the recreationist. Nor can they reveal the cultural values and beliefs associated with interest in the recreation activity and experience. In short they deal with the outer manifestations of recreation rather than with its causes,

meanings and implications.

Some studies which seek to establish reasons why people participate in recreation activities include those by Neulinger and Breit (1971). Neulinger and Raps (1972), Stankey (1972), Tinsley et al. (1977), Crandall (1979) and Tinsley and Kass (1978). In a study by Neulinger and Raps (1972) a diverse group of 335 respondents were asked to rank their preferences for nine types of free time activities. The results of the study indicated that the most preferred type of activity was one which emphasized affiliation to some recreation body in contrast to respondents who preferred activities involving understanding and reflection as the basis of recreation experience. This investigation supports the notion that recreation activities differ in their need satisfying qualities.

A few years later Tinsley and Kass (1978) replicated and extended a study by Tinsley et al. (1977) in which the need-satisfying characteristics of five commonly selected recreation activities were investigated. The results show that the most potent need-satisfiers dimensions related to activities are sex catharsis, independence, understanding, affiliation and getting-along-with-others. However, Tinsley et al. (1977) found that their results could not be generalized upon. For example, the five recreation activities did not differ significantly for some dimensions such as harm avoidance and tolerance. This may mean that the sample of five activities was not representative of the domains in this respect. A study by Crandall (1979) investigated 222 respondents to show that social interaction is an important component of leisure activities and that individual cognitions are more important in understanding recreation

behaviour than are traditional measures such as hours of participation, expenditure on activities or social class variables. The results indicate that social interaction is an important component of recreation and a useful behaviour index for understanding recreation.

It is important to recognize that an improved understanding of, and a capacity to predict human behaviour in recreational situations depends in part on devoting more research effort to exploring the preconceived ideas and feelings held by individuals concerning recreation and potential recreation.

This view is supported by Pigram (1983: 24) who states that cognition or personal mental constructs "are a function of the perceiver's past experience, present values, motivation and need." The works cited above and those of Mercer (1971,1977b) and Neulinger (1981) are conceptually valid and relevant in emphasizing the use of behavioural perspectives in recreation. In Mercer (1971) emphasis is placed on the role of perception in recreation, that is, the images presented by natural recreation sites, the logic used by recreationists in choosing a site and the factors influencing the distance travelled for recreation. These are some of the diverse approaches used to conceptualize a field that has been called behavioural recreation or recreation cognition studies.

On a different note Noe (1978) asserts that although research reports employ various languages to describe an individual's experience in natural areas, similarities in behavioural response have been found. There are also similarities in the reported reasons and motives individuals give for engaging in varied recreation activities. Although writers

such as Driver (1975b), Mercer (1977a) and Neulinger (1981) make no claims for producing comprehensive reports on recreationists' perceptions or cognitions, their work in the area of recreational aspirations, attitudes and expectations have drawn together a rather sizeable list of relevant references, despite the fact that the field is still very young.

2.2.2 Natural Recreation Emphasis

Only a few years ago papers on the behavioural aspects of natural recreation, commonly known as outdoor recreation, were relatively rare. Of late there has been an increase of interest in looking at the aspirations and motivations for participating in outdoor recreation and the satisfaction associated with it. The documentation of natural recreation research reflected here, particularly emphasizing behaviour, is a move away from the more traditional work of established authorities such as the Outdoor Recreation Resources Review Commission (ORRRC, 1962) which have emphasized demographic characteristics, such as age, occupation, education and residence, in looking at recreation activities.

Modern emphasis in studying natural recreation resources adopts a viewpoint that good decisions should not only be made on the basis of information about the characteristic of the recreationists, but their motivations for coming to an area, their cognized expectations of an area, and the types of interactions, attitudes and values associated with a particular resource area (Craik, 1973; Noe, 1978).

Natural recreation is, by definition, resource-related and increasing attention is being given to the 'setting' in which action takes place

as a major influence on cognition and on the pleasure experienced from the recreation act. According to Ittelson, et al. (1976), and also Levy (1979), all human behaviour should be interpreted with reference to the ecological environment or behavioural setting in which most of the action occurs. In agreement with this research approach many surveys (Stankey, 1972; Driver, 1975b; Groves and Kahalas, 1976; McKenry, 1977; Price, 1979) have been undertaken to elicit the attitudes or feelings of respondents about the recreation experience in natural areas.

Stankey (1972) carried out a comprehensive investigation by examining the attitudes of wilderness users towards features of areas they considered important. A sample of 600 visitors to four wilderness areas, was selected, the areas being, the Marshall Wilderness, the High Unitas Primitive Area, the Bridger Wilderness and the Boundary Waters Canoe Area all in the Mid-West of the United States. From the 14 items or statements, in the context of wilderness, worked on a five-point scale ranging from "very desirable" to "very undesirable", the responses were scored so that an individual with very strong purist attitudes towards the wilderness would score high and with less strong attitudes would score lower. Stankey (1972) found that a large percentage of the sample scored most of the wilderness attributes positively. For example, on the importance of 'solitude' as a feature of the wilderness, 82 percent of the overall sample responded in a positive fashion, while 96 percent of the purists thought it a highly desirable feature. However, 25 percent of the respondents indicated that they enjoyed encountering others on a wilderness trail, and only 10 percent of the purists felt this way. This suggests that crowding in a wilderness area is a negative stimulus in many natural recreation situations.

Besides this five-point scale statement analysis, other techniques have been used with some degree of success. For example, Craik (1972) developed a landscape adjective check list that was used by subjects to describe a number of different landscape scenes. This research project also uses bipolar adjectives to assess the cognitions of natural recreation resources. A review of measurement strategies is discussed later in this chapter.

2.2.3 Values and Cognitions in Recreation

Cognitions -- the ways in which we see the world -- are conditioned by values which the community hold to be important. Further still, values are at the core of human behaviour, including recreation behaviour. Brightbill and Mobley (1977: 71) concur that "everything we do is reflected in our scale of values". These values are expressed in the market-place, voting booth, public meeting, and by citizens participating in the planning or decision-making process (Gold, 1980b). That is, our decisions and behaviour on recreation issues depend on our values.

It is also very obvious, without entering into much debate, that the beliefs and values of a dominant culture group or decision-making group in a multi-ethnic society very often become the most important factors influencing what is to obtain in the recreation environment. When a culture group exhibits thoughts, attitudes, beliefs, values and behaviour patterns which are structured in such a way as to be inconsistent with one another, then these assertions constitute a problem dealt with in what is called the cognitive dissonance theory (Theodorson and Theodorson, 1969; Pierce, 1976). The theory implies that members of a group will

tend to accept that group's value system rather than undergo the stress of disagreeing with their own group (Weisberg and Bowen, 1977). When these beliefs and values held about a recreation resource or experience, for example, are not consistent within groups then they are associated with dissonance. Cognitions can also either be dissonant or consonant, hence the term cognitive consonance. In this research, cognitions are seen in terms of perceptual values associated with semantic meaning, preferences and photographic images of natural recreation resources.

There is an interesting philosophical perspective on recreation asserted by Carlson, et al. (1979) that associates or relates recreation with the cognitive consonance hypothesis. They write:

> Recreation is any leisure experience voluntarily chosen by the participant with the expectation of positive, enjoyable satisfaction from that participation (1979:11).

What is implied here is the existence of a consistency in recreation values and experiences which stands as a harmonious whole, in order to result in giving positive and enjoyable satisfaction. Such expectations can indeed occur in a situation of cognitive consonance.

The cognitive dissonance theory can be applied or related to the 'recreation conflict' argument arising from inconsistencies and incompatibilities between opposing recreationists and other forms of resource use. In this context four causal factors are highlighted by Jacob and Schreyer (1980) as conducive to conflict in natural or outdoor recreation: (1) activity style, (2) resource specificity, (3) mode of experience, and (4) tolerance for lifestyle diversity.

Activity style relates to the differentiated personal meanings and interpretation of the recreation environment. For some people this style of activity may be of such a high standard that ordinary people are likely to conflict with it. Resources specificity carries the meaning that tension or conflict may emerge between specialist recreationists and lower status recreationists, for example, skilled fishermen versus ordinary fishermen. This is so because some people attribute special values and importance to specific recreation resources; and may be over-possessive and over-protective about them.

The mode of experience factor simply means that recreation experiences approached, understood and valued by individuals can be a source of conflict. The mode of experience for Blacks in South Africa is different to that of other population groups, and the greater the divergence in socio-economic experiences the greater the potential for conflict. Brightbill and Mobley (1977: 21) concur with this view when they write that values are not central to recreation experience alone. "They are also the roots of the spiritual, the educational, and the economic aspects of life".

Lastly, the factor tolerance of lifestyle diversity carries the notion that different cultural groups deliberately choose recreation experience or programmes that reflect their societal beliefs and values, and are usually unwilling to share resources with other lifestyle groups. In this connection ethnic, racial and social class distinctions such as are found in South Africa can also be the basis for lifestyle related conflicts. According to Jacob and Schreyer (1980) such deviant groups are often labelled out-of-hand as 'inferior', so that even when persuing

the same activity under the same rules, conflict still ensues, especially as the number and variety of people desiring access to recreation resources increases.

In the same way that the cognitive dissonance theory implies, these four factors of recreation conflict, considered singly or in combination, also imply that they are a construct of the mind and part of the mental state and images, cognitions and attitudes of the participants. These constructs and resultant behaviour, if well understood, could serve as a suitable barometer of what is and will be in the recreation field. It is important also to note that when looking at the recreation conflict situation between groups, recreation planners and designers should be considered as a significant component because they

> ...also emphasize the expressive quality of their actions, not as personal expressions but as expressions of their ideas or societal values as democracy, freedom, choice, justice, honesty and integrity, whether it be structural or ecological.
>
> (Appleyard, 1979: 146)

Although a paucity of recreation research exists concerning the values and cognitions in recreation, the issue has not been as neglected as the literature cited might suggest. More review materials on values and cognition emphasizing a geographic perspective, rather than the recreation or sociological perspectives, are treated later in this chapter.

2.2.4 Recreation Research in South Africa

Research related to the problem of identifying Black people's cognition of natural recreation resources in South Africa is rare. The meagre

materials reviewed here are those by geographers working in the general fields of Geography Recreation or Recreation Geography. As Recreation Geography is a relatively new field which has not yet gained general acceptance by and amongst geographers as a viable subfield of Geography, there are even fewer research materials available in the behavioural aspects of Recreation Geography (Steyn, 1976; Butler-Adam, 1978). Many of the studies undertaken so far assume a general approach with little depth in any one aspect of the field. Exceptions are, however, in the following areas: terrain evaluation, recreation features analysis, supply of recreation facilities and demand for recreation facilities. Some of the aspects still needing greater research attention include: philosophical bases of recreation, recreation tastes, cognitions and attitudes, and recreation planning involving all population groups in South Africa (Van der Wal and Steyn, 1981; Sutcliffe, 1981; Butler-Adam,1984a and Taylor, 1984).

The review-work by Steyn (1976) is the main ground-breaking attempt in this field. His review clearly indicates in its text and bibliography that recreation research in South Africa is in its infant stage. Also, a recent bibliographic computer print-out of work done in the recreation field in South Africa, issued by the Human Sciences Research Council (HSRC) (1984) indicates that work in this field is not very substantial. The HSRC print-out does not restrict itself to work done by geographers, but also includes studies registered by planners, state and semi-state agencies, social scientists and university research institutes. The organizations listed include: the Department of Environmental Planning and Energy, Department of Sports and Recreation, Department of Nature and Environmental Conservation, Natal Town and Regional Planning Commission,

Natal Parks Board, and the Wildlife Society of South Africa. Some geographers who have worked in this field directly or indirectly under the auspices of some of these organizations include: Steyn (1972, 1978, 1983); Hugo and Hattingh (1972); Hugo (1974); Butler-Adam (1977, 1981, 1984b); Butler-Adam and Sutcliffe (1977); Ferrario (1978, 1981); Gibbon (1976); Sutcliffe (1981); Van der Wal and Steyn (1981); Preston (1983); Taylor (1984) and Steyn et al. (1985). Their contributions remain, however, small in the face of the recreation research which needs to be undertaken.

An overview of recreation research undertaken by geographers in South Africa highlights the following characteristic features:

(1) Research to date has emphasized the physical or resource aspects of the recreation system. Researchers select a natural resource and look at its potential and actual usage. Examples of such studies include those by Gibbon (1976); Ferrario (1981); Steyn, et al. (1982); Preston (1983) and Taylor (1984).

(2) Greater attention is paid to the recreation behaviour patterns of Whites while other population groups are largely ignored. Examples are studies by Hugo and Hattingh (1972); Gibbon (1976); Sutcliffe (1981); Preston (1983) and Taylor (1984). Exceptions to this trend include work by Hugo (1974); Steyn (1978); Van der Wal and Steyn (1981) and Butler-Adam (1981). Only in work done by Hugo (1974), Kies (1982), Steyn and Swart (1983), Steyn (1983), Lamont (1983), Steyn et al. (1985) are urban Blacks given special attention. This state of affairs abundantly confirms the scarcity of studies that devote attention to Blacks alone

as a subject of research.

(3) Some (though very little) of the research conceptualizes the theoretical and practical problems of recreation discourse (Sutcliffe, 1981 and Butler-Adam, 1984a,1984b).

(4) Most of the research has been done on a regional and local scale, for example, Steyn (1972), Taylor (1984), in the Southern Cape area; Gibbon (1976) in the Eastern Cape; Hugo and Hattingh (1972) in the Pietersburg area; Steyn (1978) in the Pretoria-Witwatersrand-Vereeniging (PWV) area; and Butler-Adam and Sutcliffe (1977), Butler-Adam (1981), Sutcliffe (1981), Ferrario (1981) and Preston (1983) in Natal.

(5) A more recent feature in recreation research is that of looking at the behavioural patterns of the recreationists. Examples here include: Hugo (1974), Butler-Adam and Sutcliffe (1977), Steyn (1978), Butler-Adam (1981), Sutcliffe (1981) and Van der Wal and Steyn (1981).

In order to place behavioural recreation research in the context of this study, some of the studies mentioned deserve brief attention. The work of Hugo (1974) investigates the demand for outdoor recreation by urban Blacks. The study hypothesizes that urban Blacks have undergone a strong process of acculturation, to the extent that very little traditional characteristics are left in them. The sample was drawn from four major Black townships in South Africa, that is, New Brighton, GaRankuwa, Soweto and KwaMashu. The following direct and inferrential conclusions are made on the basis of Hugo's research findings:

(1) The existing pattern of recreation demand are emerging on the

basis of facilities available for Blacks. For example, the types of recreation ranked include: (a) visiting friends/relatives, (b) seaside, (c) picnics, (d) swimming, etc. Activities such as horse riding, boating, angling, cultural places received low ranking.

(2) Financial considerations play a very important part in the choice of recreation facilities and activities. Less important were found to be water surfaces, social activities, climate and popularity of resort.

(3) The considerable projected increases of population, urbanization, disposable income, car ownership and educational levels among Blacks by the year 2000 will necessitate a doubling of facilities within the next three decades.

(4) The leisure activities of a select few today may be the activities of tomorrow's masses, therefore the large numbers of recreationists will necessitate that the development of facilities should receive immediate attention.

A recreation study of Albert Falls Public Resort by Butler-Adam (1981) is an important document particularly because besides giving a physical analysis of the resort it also seeks to establish behavioural aspects relating to who uses the facilities, what recreationists feel about those facilities and how they would like to see them developed in the future.

The research project was designed to have two major samples, namely 6761 recreationists on site and 3970 respondents in the service area around the resort. After a rigorous computer analysis the following findings were arrived at:

(1) The resort is open to all population groups and predominantly used by Whites (48,6%) and Indians (41,1%), and less so by Coloureds (8,1%) and Blacks (0,8%) with 1,4 percent responses unrecorded.

(2) The image which the resort has earned is that it was predominantly visited by groups and families characteristically young and middle class.

(3) To most Whites, Albert Falls is part of a wide region of recreational options and choices at their disposal, whereas to Coloureds, Indians and Blacks it is one of the very few places they can go to near at hand.

(4) All groups are attracted by the relaxation and water-based qualities of the resort. For Coloureds, Indians and Blacks the choice and socio-economic conditions contribute in reducing the value of the water surface beyond its fishing potential.

(5) On the question of sharing, the general feeling undoubtedly favoured the integration of facilities and activities. However, negative separatist notions were expressed by Whites and also by some Indian respondents.

Butler-Adam (1981: 22) ends the study by giving a positive concluding remark in the report summary that:

> Yesterday's practice of the segregation of people on the basis of colour has been, and continues to be, replaced by a need for the segregation of activities on the basis of simple human experience.

What can be inferred from this kind of conclusion is that the need for more research studies that seek to reveal the preferences (cognitions) of all population groups, perhaps Blacks in particular, is long overdue.

The importance of the behavioural approach does indeed need highlighting, because it helps us know what kind of people participate in natural recreation resources, how they participate and why they participate or why not.

To conclude this review, mention should be made of the comprehensive work done by the Subsidiary Committee for Outdoor Recreation (SCOR, 1978), working within the Department of Environmental Planning and Energy. The magnitude and comprehensiveness of this committee's work is similar in principle to that of the Outdoor Recreation ~~Resources~~ Review Commission (ORRRC, 1962a) authorized by the Congress of the United States in 1958. In compliance with the primary concern of establishing "a research programme which will enventually lead to the provision of a recreation infrastructure designed to meet the needs of all the inhabitants of South Africa" (SCOR, 1978: 1), publications in three volumes have come forth.

The first volume (SCOR, 1978) gives a research strategy as outlined in Figure 2.1 which illustrates the three major short-term objectives or directions of research:

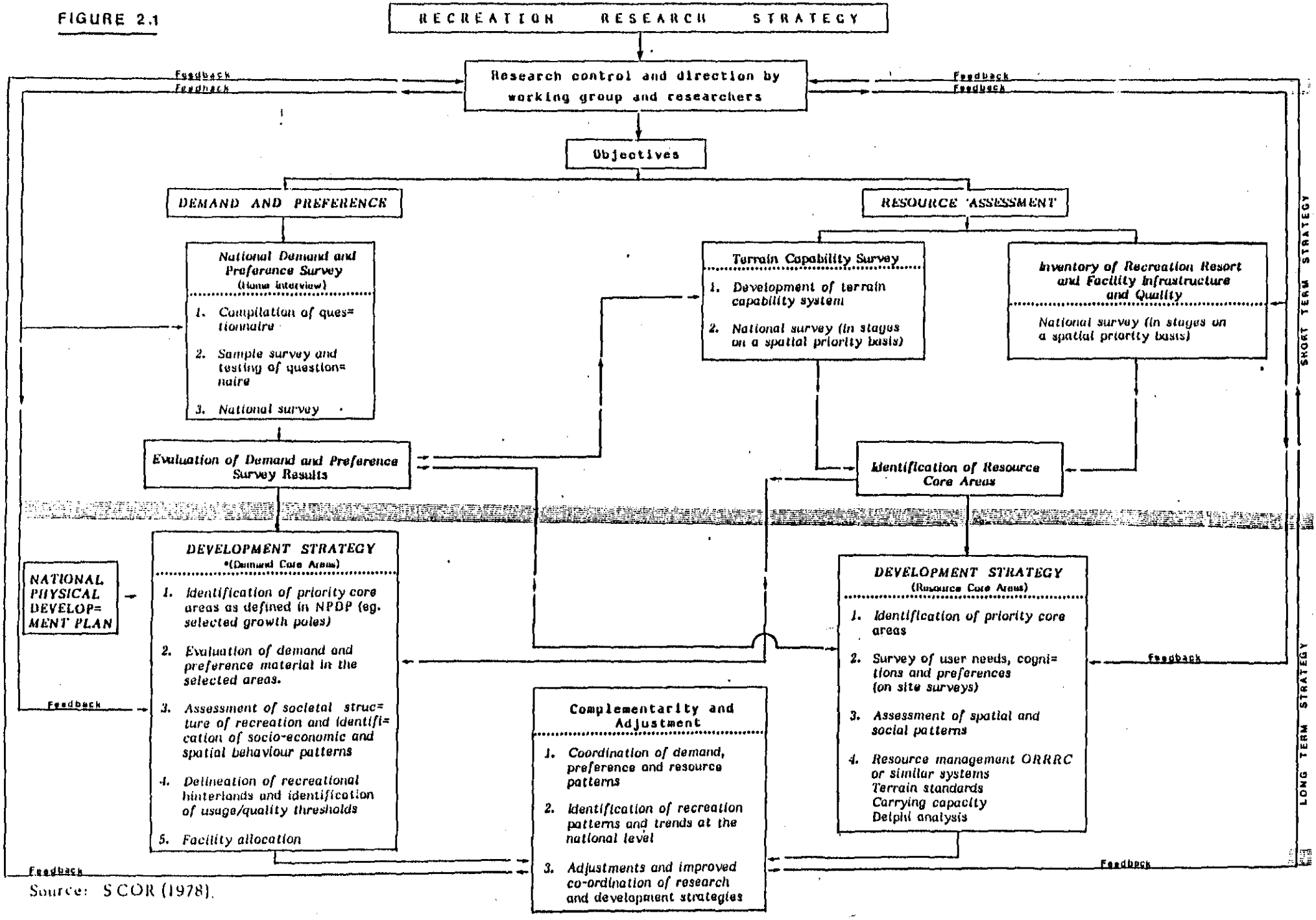
(a) National demand and preference survey

(b) Terrain capability survey, and

(c) An inventory of research resorts and facilities.

The second volume (SCOR, 1979) gives a comprehensive glossary of terms with definitions and explanations used in the field of outdoor recreation. The third volume (SCOR, 1980) gives a brief identification, evaluation and mapping of natural recreation resources on a national level.

FIGURE 2.1



Source: SCOR (1978).

Some follow-up research studies designed to meet some aspects of the three major short-term objectives include demand and preference surveys done in the Pretoria-Witwatersrand-Vereeniging area for the major racial groups by Steyn (1979), and for the Bloemfontein area by Van der Wal and Steyn (1981). Unlike the other provinces, Natal seems to have made considerable progress in dealing with recreational and other natural landscape or environmental problems. This effort, which has emphasized the practical and conceptual planning and research strategies, has been achieved through the work of geographers in collaboration with the Natal Town and Regional Planning Commission and on a lesser extent the Natal Parks Board and the Wildlife Society of South Africa. Examples here include the work of Little and Phelan (1978), A'Bear and Little (1977), NTRPC (1970), Schlemmer (1976), NTRPC - Vol 41 (1979), Butler-Adam (1981), Sutcliffe (1981), NTRPC - WLS (1984), Butler-Adam and Sutcliffe (1977), Cawood (1980) and Van Zyl (1973).

The increased participation of academic researchers in studies conducted in collaboration with government and semi-government bodies has beneficial outcomes for the general field of outdoor recreation research. These benefits include achieving, amongst other things, a balanced approach towards solving environmental problems without placing undue emphasis on the negative aspects of government policy. In addition they go some way towards striking a balance between a good conceptual framework of theory and practice in solving problems.

2.3 ENVIRONMENTAL COGNITION RESEARCH

The term environmental cognition, and its brother environmental perception,

can be viewed in two ways. As a field of study labelled in a variety of ways (Saarinen, 1969), it is that section of Human Geography that concentrates particularly on the question of how different cultural, social and economic groups reveal images about elements of their spatial environment (Johnston, 1981). As a term it refers to the subjective information, image, impressions, experiences that people have about or give to various parts of their environment (Moore and Golledge, 1976; Downs, 1981).

The problem of revealing the conceptual elements that would help explain the individual's cognition of the environment is found in many disciplines related to recreation. Although the problem here is oriented towards recreation space, the design, analysis and conclusions of the argument are actually drawn from references in Geography, Psychology and other social sciences. Researchers in these fields have evolved approaches such as the Personal Construct Theory, measurement of cognitions, photographic behaviour assessment, etc. These approaches are discussed in greater detail later in this section.

The field of environmental cognition, Moore and Golledge (1976) contend, developed out of the desire to understand the relationships at work between human experience, behaviour and the environment as well as from a desire to improve man's quality of life by altering or modifying the environment. It is quite clear from the work of many researchers and academics that the combination of 'environment' and 'cognition' indicates that the foundations of this subject lie in both Geography and Psychology. More recently the fusion of these terms has generated a new and unique meaning which has become acceptable among geographers such as Saarinen

(1969), Downs and Stea (1973), Rapoport (1976), Moore and Golledge (1976), and Downs (1981).

A formal definition of environmental cognition that attempts an holistic approach is presented by Moore and Golledge (1976: 5). Environmental cognition is, to them,

> the awareness, images, information, impressions, and beliefs that individuals and groups have about the elemental, structural, functional, and symbolic aspects of real and imagined physical, social, cultural, economic, and political environments.

In short, the defined concept in this instance, simply means that we are concerned with man's interpretations of his total environment. And, explained further by Burgess (1979) the concept expresses a premise that the individual's understanding of the world is built up through direct cognitive experiences, which are influenced by social, political, economic and cultural values.

A well-sustained research programme often regarded as the single most important influence of environmental cognition is that of Lynch (1960) whose The Image of the City is considered a classic in this field. Lynch sought techniques for examining the relationships that exist between the physical form of the urban environment and the inhabitants' images (awareness, impressions and beliefs) of them. He was interested in the 'imageability' or 'legibility' of different urban environments. To achieve his objective he interviewed residents in three U.S. cities - Boston, Jersey City and Los Angeles - and integrated their responses into composite maps of public images (Tuan, 1974a; Moore and Golledge,

1976). Lynch (1960) then suggested that the composite images actually comprise five types of elements: paths, nodes, landmarks, edges and districts. Keven Lynch's stimulating work has spawned many subsequent studies in Human Geography and other disciplines emphasizing spatial relations such as architecture, planning and environmental psychology.

Work similar to Lynch's could well prove to be most valuable if used in the analysis of non-urban environments. Yet little has been done to extend his ideas into a rural context. Equally, a cross-cultural context of seeing Lynch's five elements can introduce interesting and significant orientational variations in research. After all, the effect of cultural influences upon environmental cognition has in itself received considerable attention in recent geographical writings (Saarinen, 1969). For example, among the Australian Aborigines, resources, culture and myth lead to specific movement patterns, home ranges, and knowledge of the environment, just as a region or district to many is an instance of the subjective definition of areas (Rapoport, 1976). This also relates to what is called 'cultural appraisal' (Saarinen, 1969), a term propounded by cultural geographers in an attempt to indicate an awareness of the importance of differing cognitions of the environment.

It was indicated earlier that environmental cognition studies tend to adopt a spatial and/or psychological emphasis. Both these approaches, Downs (1976) argues, lack a coherent theory. As a result geographers and architects are currently confronted with a confused mass of studies and theories that do not make the understanding of this field of study any easier. Let us consider some of these spatially orientated studies.

Lowenthal (1961, 1972) is not only one of the earliest writers in this field, but a researcher who has shown concern about its conceptual development. In his later writings he has asserted that the field "requires a more systematically organized theoretical base" (Lowenthal, 1972: 333). In his earlier work Lowenthal (1961) established a philosophical platform for the development of environmental cognition by advocating the rejection of positivist methods and philosophy on the grounds that they are inappropriate for dealing with many human problems. As an alternative he proposed a humanist perspective which assumes that it is the quality of human life and experience that matters most in environmental cognition. A strong reliance on the humanities would, he argued, afford the best insights into this realm of knowledge. Lowenthal's (1961) line of research also has to do with the changing conceptions of the environment as seen over historical time, and with studies of cognition of the environment seen from a cultural perspective. Lowenthal's basic conceptual ideas are fundamental to the development of recreation research that seeks to explain the use and modification of the natural recreation environment in terms of cultural and humanistic principles and historical time.

Intuitively, we know that personal cognitions are important to people's selection of recreation space, but factors other than preference may enter into the final selection, which in turn are functions of cultural value. For example, a person may have a strong desire (preference) to go fishing or swimming in the sea, yet if such a resource is unavailable, the person either selects another recreation activity or engages in no recreation at all. Gould (1969a) stimulated this direction of research by focusing on people's place preferences. Working in a variety of world

regions such as Britain, the United States and Nigeria, he has attempted to involve a variety of cultural perspectives of place preferences in his research (Gould and White, 1974). In a space perception study in Tanzania, Gould (1969) used a small sample of students to reveal their personal preferences for districts on the basis of five main components: salary, travel, surroundings, facilities and local people. Evaluation was of the semantic differential type. His main findings showed that the coastal area of Tanzania is perceived as the most undesirable place by this highly educated sample, and that a surface of modernization is cognized as the most desirable. These kinds of findings are of particular interest to this study undertaken in the north-coastal region of Natal.

Preference studies, per se, are not completely adequate to make conclusions on. A broad or multiple approach should be used to study recreation activity patterns, for example. The cognized level of satisfaction derived from participation in a recreation activity should be considered in relation to preferences, opportunities, and actual use or participation; of course, this should happen within the background of cultural values. These notions are a subject of our study, though perhaps the emphasis is on different aspects of cognitive recreation, such as for example preferences using cognitive concepts, domains and constructs.

The cultural perspective in environmental cognition has received attention from writers such as Lowenthal (1961), Spradley (1972), Tuan (1974a) and Rapoport (1976, 1980), who have their interpretation of environmental cognition geared mostly to give meaning to the world rather than knowing about it (Rapoport, 1976). Most of these writers agree that man is

ethnocentric, that is, the world he organizes, be it recreational or otherwise, is central not only on himself (egocentric), but also on the community he finds himself in. The community is the source of cultural values that guide man in his quest to fashion or mould an environment that will serve him best. But, amidst achieving this goal there are environmental disruptions which, depending on societal values, beliefs, and cognitions, may never be acknowledged. In agreement to this notion O'Riordan (1981: 21) comments that:

> Environmental construing is the endless search for the unattainable ideal; for in our struggle to achieve order and control we threaten the very basis of our existence, the other half of our model environment that we arrogantly assume will always be there.

The natural recreation environment is such an ecologically threatened environment and the proportion of this threat coupled with socio-cultural pressures is very much present in the study area.

In New South Wales, Australia, Pigram (1972) has shown how two groups of people with different cultures have used the same environment in differing ways. On the basis of such a study he makes the following conclusions:

> Contrasting mental images or cultural interpretations of the resource base explain in great part the anomalous juxtaposition of two different patterns of land use which persist in what is essentially a homogeneous setting in terms of water availability and irrigable soil.
> (Pigram, 1972: 134)

These contrasting cultural interpretations are in many ways similar to those found in South Africa and are relevant to the behavioural

recreation scene under consideration and exemplified in the north-coastal region of Natal. In a situation where there is a conflict in the cognition and use of the environment, no generalization can be made on the basis of culture at a single moment in time, either about the range of ways of making the world meaningful or about any constant processes underlying a particular way (Rapoport, 1976). The cognitive images and orientational systems used by the Australian Aborigines are as valid and potentially useful as those of the Western culture (Hart and Moore, 1973). The Aborigines' way of defining place through purely symbolic and conceptual means, may even be more useful, and this practice seems to be similar to that used by traditional Africans in South Africa in construing the natural recreation environment.

A psychological emphasis in the study of environmental cognitions has appeared under the label of Environmental Psychology, Psychogeography or Ecological Psychology (Saarinen, 1969; Craik, 1973; Stokols, 1978). The basic objective of this approach is very similar to that of the spatial emphasis approach described earlier, that is, the study of man-environment relations from a psychological perspective. The prominent psychologists that set the foundation for later studies in this brand of environmental cognition include Werner, Piaget, Kelly and Kaplan (Downs, 1976; Moore & Golledge, 1976; and Moore, 1976). These psychologists argue that knowledge of reality in general, and the environment in particular, should not be seen as the grasp, but the active construction of objects or features of reality. Thus, in this view, the subject or individual who has leisure time or recreation at his disposal enters into creative interaction with the natural environment (Neulinger, 1981), the result being a construction or construal of the

object by the subject (Moore & Golledge, 1976).

Jean Piaget (Hart and Moore, 1973) is well known for his theory of intellectual growth in which he sees the interaction between the individual child and the environment as giving rise to successive structures that regulate thinking processes. In this study, however, we are not so much interested in developmental cognition as it relates to the environment, though that in itself is an interesting subject, but in the cognition of the natural recreation environment in particular socio-cultural circumstances. On a more contextually relevant note Piaget sees environmental cognition as reflecting on how people's knowledge of space and of objects is organized. He also sees culture in the environmental context as having a retarding or accelerating role in developmental processes throughout the different ages of human growth.

The most significant role that has been played by psychologists in Environmental Cognition and Behavioural Recreation Geography in particular, is the conceptualization of this field to include visual, linguistic, semantic and behavioural processes, which can then be encoded, reduced and elaborated, sorted, retrieved, decoded and used (Moore & Golledge, 1976). Subsequently, psychologists have developed the Personal Construct Theory (Kelly, 1955a) which has recently become very useful to Human Geographers. They have also advanced the possibilities of measuring the cognitive constructs by using the semantic differential technique (Osgood and Suci, 1969), the repertory test (Kelly, 1955b), multi-dimensional scaling and other techniques. What is also pertinent to this study is the contribution psychologists have made by refining the theory and method of using photographs and pictures as cognitive stimuli in the

analysis of representative physical environments (Deregowski, et al. 1973). In order to place these techniques in the context of this study they are now discussed in greater detail.

2.3.1 The Personal Construct Theory

The Personal Construct Theory was propounded in a complete, elaborate and formal statement by the prominent psychologist, Kelly in 1955 (Bannister and Fransella, 1971). His theory assumes that behaviour is directed by the constructs a person sets up to interpret events and the world, and thereby to predict their future replication. Since individuals differ from each other in these constructions, behaviour also differs (Kelly, 1055a; Downs, 1976). The world around us, Downs (1976) argues, is open to as many varied constructions or interpretations as we are able to generate, and there is no one right interpretation to be sought out.

The philosophical foundations of the Personal Construct Theory as set up by Kelly (1955a) and interpreted by other important contributions (Bannister and Fransella, 1971; Harrison and Sarre, 1971, 1975, 1976; Downs, 1976; Honikman, 1976; Bannister, 1981) are that man might be better understood if viewed from the long historical perspective of centuries rather than from the flicker of the passing moment. Thus the meaning of environment and related features depends very much upon the previous experience and the anticipations of the person experiencing it (Honikman, 1976). It also depends upon the observation that man has the supreme capability to construe the events and the world in as far as his intellect will enable him, implying that man's cognitions

are constantly open to question and reconsideration, and may frequently be reconstructed (Kelly, 1955a). Personal Construct Theory does not advocate the extremes of the determinist argument which holds that man is determined by his infancy (as in some version of Freudianism) or that man is determined by his reinforcement schedules (as is true in Behaviourism). It proposes instead that a person is with respect to construing his behavioural situation or environment, just as much as he is free to be influenced by that existing situation. Construct theory therefore is an attempt to understand people in terms of the way each experiences the world and to understand the behaviour in terms of what it is designed to signify for the person (Bannister and Fransella, 1971).

The basic building unit of Personal Construct Theory is the 'construct' itself. Constructs are attributes of, say, the environment which the individual arranges as features of his cognitive environment. They are "defined and revealed through the pattern of choices and discriminations that a person makes among elements in his or her environment" (Downs, 1976: 82). These attributes can be arranged by each person into bipolar adjectives or scales which express meaningful contrasts (Harrison and Sarre, 1971). These adjectives constructed to identify the pattern of ideas, qualities and evaluation he forms about the environment are actually labels for the constructs (Honikman; 1976). The bipolar constructs have been used in the semantic differential technique and other tests as a procedure in measuring the cognitions of the environment. The construing of specific spatial environments using bipolar constructs has some uncertainties which are often referred to in semantic differential studies (Downs, 1976).

The review of work by Harrison and Sarre (1975) is a good example of exploratory work that seeks to clarify and enlarge on Kelly's Personal Construct Theory using the repertory grid test as an analytical tool. The repertory grid has been described by Harrison and Sarre (1976) as a very sensitive method of measuring people's mental constructs or images of their environment. It is a technique devised to measure how people categorize phenomena, that is, what things are classified in similar or different fashion in people's minds (Taylor, 1983). The repertory grid test is useful in that the data derived from it are not only suited to person-environment comparisons but also to environment-environment comparison.

The repertory grid test works on the basis of concepts (elements) and constructs. It elicits constructs by asking the informant or respondent to give words, phrases or ideas that match a specific concept or element he forms about an environmental event. The elements to which construing is done may be initiated and given to the respondent by the researcher. The respondent's pattern of ideas, qualities or evaluations of the environment have been called a 'construct' by Kelly in order to emphasize the fact that ideas are put together by the respondent himself rather than existing independent of his mental images (Downs, 1976; Harrison and Sarre, 1976).

The repertory grid test is an analytical tool of the Personal Construct Theory and is supported by assumptions associated with the workings of the theory of constructs. In its formulation the grid assumes that the construing of information or ideas from a person specifically functions at the individual or personal level (Harrison and Sarre, 1971). This

method is thought by Bannister and Fransella (1971) to be the best method of checking the intervention of the researcher's will upon a subject's individual response or cognition (Bannister, 1981). By the very nature of being personal, it is thought that the repertory grid will elicit many constructs or responses that are idiosyncratically defined (Harrison and Sarre, 1976). These writers further argue that when the responses to the repertory grid test are aggregated over a group of people they tend to retain their individual content and character. In short, it is assumed that the repertory grid will continue to elicit some communality of constructs irrespective of the personal character of each set of constructs.

According to Downs (1976) the repertory grid test is regarded among geographers as one of the most balanced techniques of analysis which allows geographers to be both quantitative or objective and relevant or humanistic. An example of the application of the grid method is seen in the work of Harrison and Sarre (1975).

The repertory grid -- tool -- study by Harrison and Sarre (1975) had two aims: first, to measure the general image of the city of a group of urban residents of Bath and secondly, to measure shopkeepers' images of their business environment in Bristol and Yate, England. The total size of the subjects' grid for Bath averaged 37 elements by 17 constructs, whereas for Bristol and Yate the grid averaged 27 elements by 13 constructs. The same methodology for measuring images was used in each of the studies, namely the repertory grid test. Harrison and Sarre (1975) found that the major advantage of the grid method is that it allows the respondent to specify both his own image elements and his

own personal construct scales. The combined grid scores for both studies yielded the conclusion that measurement of environmental images does indeed work and encompasses other processes such as motivation, learning and decision. It also showed that the image of the business environment does exist amongst shopkeepers and varies from one individual shopkeeper to the next, depending on location, experience, type of shop and size of shop. Finally, the Personal Construct Theory and its associated grid test is a viable technique for studying the images of the environment held by two widely differing groups of respondents.

Another significant study which introduces time as a component of image construction in the Personal Construct Theory and repertory grid procedures is that of Tranter and Parkes (1979). Their study uses a list of 25 standard elements and 10 bipolar constructs to come to conclusions that "people do hold images of spatial elements that are time dependent" (Tranter and Parks, 1979: 119), and also that the images of each timed space are consistently particular to that time.

Several criticisms have been levelled at Kelly's Personal Construct Theory. The first criticism, from a psychological perspective, is that the theory ignores the conventional concepts such as learning, maturation, development and motivation. Therefore, the theory becomes difficult to read and comprehend because it does not fit into the existing theoretical framework (Harrison and Sarre, 1976; Downs, 1976). Secondly, Kelly (Bannister and Fransella, 1971; Moore, 1976; Bannister, 1981) emphasizes personal differences in people in their construction of events and the world. This approach therefore seems to be too idiosyncratic and lacking a scientific approach which Hudson (1980) describes as 'proto-applied'

scientific approach. In other words Kelly (1955a) neglects the praxis aspect of people (Taylor, 1983). Thirdly, Bannister and Fransella (1971) have criticized the construct theory for divorcing behaviour from related terms such as cognition and learning in most instances, except during the process of acquiring knowledge. Forthly, Downs (1976) argues that some of the corollaries and constructs used by Kelly "appear trivial, redundant and an overstatement of the obvious" (Downs, 1976: 87). In addition, he sees some of the corollaries, for example the choice corollary, suitably working in psychotherapy to be inapplicable in the area of environmental cognition. Fifthly, the origin and development of a construct is not clear; Kelly writes as though these constructs have an existence divorced from the experience they attempt to explain and it is as though they are imposed on events (Downs, 1976). Sixthly, the repertory grid test as the methodological vehicle of the Personal Construct Theory, according to Downs (1976), lacks a converging operational procedure that can be used as a check on the results acquired after analysis. Finally, Kelly is criticized for not recognizing the influences of history, culture, and nature in its varied forms (Taylor, 1983). This implies that the bases for all philosophical outlooks and value systems are not being considered in Kelly's construing mechanisms.

Despite these criticisms the originality, quality and functionality or 'potential usefulness' (Downs 1976: 87) of the Personal Construct Theory are highly regarded by many users of this technique (Harrison and Sarre, 1971, 1976; Bannister and Fransella, 1971; Downs, 1976; Bannister, 1981).

The Personal Construct Theory provides us with a theoretical cornerstone

that behaviour is directed by constructs a person sets up to interpret environmental events (Downs, 1976). This study, on the other hand, seeks to establish the cognitive recreation behaviour patterns of Black people in the natural recreation environment of Natal. Therefore, the relevance of the Personal Construct Theory to this is considerable in that the theory provides a conceptual base upon which the subject of research can be examined. The natural recreation system in the Natal north-coastal region is structured and becomes meaningful to the subject and researcher according to a subjectively derived set of criteria. These criteria can be construed and measured on the basis of the Personal Construct Theory and its associate analytical tool. In the case of this study the semantic differential technique has been used in preference to the repertory grid test. The former will be discussed in greater detail in the next section and also in chapter five and Appendix F.

The Personal Construct Theory and semantic differential technique, although reviewed and analysed separately in this study, they combine to form the necessary ways of thinking underlying the measurement of behavioural recreation phenomena. It therefore seems evident that our concern about Behavioural Recreation Geography and all its facets in the Natal coastal region cannot successfully proceed without both procedural and substantive theory as its foundation.

The analysis of the relationships between behavioural recreation and the theory of constructs as mentioned earlier so often, reveals that these two bodies of knowledge are closely related since they are produced at a typical socio-cultural and recreation environment. In other words, the individually construed cognitions in this environment

are most likely to be influenced by socio-cultural, political and philosophical values. Hence, it follows that, in general, the style of approach to this recreation study in the Natal north-coastal region is one which seeks to establish a balance between analytical objectivity and methodological relevance or humanism. This is indicated and broadly treated in the subsequent chapters of this study. In addition, it would be logical to devote the rest of this chapter reviewing the measurement of environmental cognition and philosophical, recreational and behavioural perspectives in Geography.

2.3.2 Measurement of Environmental Cognition

In many ways the most crucial issue in the study of environmental cognition or even Behavioural Recreation Geography is that of measurement. It seems that even though the measurement of the cognized environment has experienced rapid growth during the last three decades and has been applied in disciplines such as Psychology, Architecture, Anthropology, and Geography, still very little has been stated in these studies that has to do with measurement. Also, the fact that many initiatives in the study of environmental cognitions have come from a variety of disciplinary sources adds to the confusion over problems of measurement (Pocock and Hudson, 1978; Mitchell, 1979).

Geographers have contributed to the analysis and measurement of the physical environment in many ways (Gould, 1969a; Abler, et al., 1971; Gregory, 1974), whereas environmental cognition, which by definition exists inside our heads (Downs and Stea, 1973; Moore and Golledge, 1976), is dominantly a subject of Psychology and lacks a physical existence

that is usually easy to measure, has put geographers in a difficult situation. This psychological intangibility of cognitions is the main issue that lies at the core of the measurement problem. In order to achieve successful measurement of the cognized environment some writers (Stea, 1969; Harrison and Sarre, 1971 and Brush, 1976) maintain that researchers, in particular geographers, should not measure the descriptions of the physical environment but the cognized quality or attributes of it. Brush (1976) further asserts that it is still very difficult to study subjective cognitions or images of the environment in an objective way. However, some researchers have emphasized the importance of subjective cognitions and satisfaction in leisure and recreation, for example, Mercer (1971) and Neulinger (1981). This is possible through having a person's evaluations or assessment of the environment scaled and compared across environmental factors for individuals and groups.

Following Harrison and Sarre (1971) the measurement process can be thought of as made up of three steps: specification, scaling and generalization and inference. Specification implies the conceptualization of cognitions or images in two ways. First, the image being linked conceptually with the kind of behaviour to be explained; Secondly, some aspects of the image related to indicators that are measureable using a selected measurement method. According to Pocock and Hudson (1978) geographers, in trying to satisfy the conceptualization problem, have systematically taken up existing methodologies such as questionnaire approaches, semantic differentials, repertory grids, multi-dimensional scales and participation observation techniques.

The second step, scaling, refers to the process of assigning numbers

to objects or features to represent attributes of these objects or features. Thus measurement of the attributes, as some form of image, involves the allocation of numbers to represent the amount of each attribute in each object or feature. The main problem concerned with measuring images is selecting the appropriate methodology that really measures theoretical constructs. However, a large number of procedures are available for measuring environmental images. These include qualitative terms, bipolar adjectives, recall, photographs and on-site analysis all of which have been commonly used (Peterson, 1967; Priddle, 1972; Deregowski, 1980b; Deregowski et al., 1973). In these procedures the subject is asked to respond either qualitatively or with numerical values as though he had a mental yardstick for each attribute.

The problems of generalization and influence are closely related to those of the two preceding steps of specification and scaling. The confidence in inference depends on confidence on the quality of procedures for collecting data and the nature of the data collected. The importance of good sampling procedures under these circumstances cannot be underestimated.

The literature review now presented seeks to outline Osgood's semantic differential technique as a measurement tool of particular relevance to this context. The technique was developed not for purposes of assessing attitudes but rather as an instrument for the measurement of meaning (Osgood and Suci, 1969). Subjects are asked to rate the cognized objects on a series of seven-point bipolar scales. The scores are derived by assigning an integral weight to each position on the rating scale (see Appendix F). According to Osgood et al. (1957), since the basic

function of ordinary language is assumed to be the communication of meaning, ordinary language could be used to differentiate between concepts and measurement of their meaning. The usual form of the semantic differential requires the subject to judge verbal concepts, for example recreation, leisure, against verbally defined scales such as good-bad, beautiful-ugly, and like-dislike. Cognitive scores are then computed as the sum or average of the ratings on all bipolar scales used.

The use of the semantic differential as a measure of environmental cognition has become widespread since Osgood et al. (1957) wrote the original text in 1957. In fact, according to Bechtel (1976) the semantic differential technique has become to many, throughout the world, a kind of universal measure of environmental quality. A later study by Osgood (1969) sought to find out whether the structure of a language or of a culture, or both influences cognitive behaviour. Four groups of subjects of different language-culture base were selected: 40 Navajos and 10 Mexican-Spanish compared with 27 Anglo and 20 Japanese subjects. The study concluded that the cross-language and cross-cultural relationships for these groups are significantly impressive. The study also showed that people who use different language and have grown up in different cultural settings utilize meaningful opposition as a pillar of their logical construction. Lastly, the study indicated that the connotations of coloured paper, using verbal scales, revealed considerable agreement in connotation. Osgood's (1969) general conclusion is that perhaps there exists a 'world view' that is relatively stable despite differences in both language and culture (Osgood, 1969: 561).

Another study by Kumata and Schramm (1969) similar to that of Osgood

(1969) intended to show that a common semantic structure in connotative meaning does exist for persons on cross-cultural and bilingual bases. These researchers conclude that "there is a pervasive semantic frame of reference used by humans" (Kumata and Schramm, 1969: 282). A study relating to parks and wilderness areas is recorded by Stankey (1972), who examined the attitudes of wilderness users towards those features of the area they consider important. More than 600 visitors to four wilderness areas in Montana, Wyoming, Utah and Minnesota were interviewed. Each respondent rated 14 items on a five-point scale showing desirable-undesirable attributes. The findings were that 82 percent of the overall sample regarded solitude as an important feature of the wilderness area. Features such as large groups, littered campsites, and wear and tear of campsites were viewed negatively.

To conclude, both the semantic differential approach and the repertory grid approach have a place in the study of environmental cognitions and of individuals. Both, according to Wohlwill (1976), have a bright future that will integrate the two sides of the environment-behaviour equation into a fruitful approach. On the other hand Pocock and Hudson (1978) contend that the repertory grid method has a slight advantage over the semantic differential technique in that in its construction there is no pre-selection of either concepts (elements) or descriptors (constructs) required. Because of the uniqueness of the methodological procedures used in this research project -- the simultaneous use of open-ended/close-ended research items and photographic, semantic and bipolar scale combinations, and for several other reasons enumerated in the next subheading and in Chapter 5 -- the option of using the semantic differential technique has been adopted instead of the repertory grid

test.

2.3.3 Photographic Cognition Studies

This research project, as mentioned so often, uses the semantic differential method and photographs of natural recreation resources as cognitive stimuli. The photographic technique is selected because of its high representational attribute and a growing body of theory referred to as semiotics (the theory of signs) by Cox and Golledge (1981: 31). Research in photographic cognition or what Deregowski 1980a: 70) calls 'pictorial perception' is a young field. For purposes of clarity this field can be conceived of as having two types of researchers: (a) those who have a strong psychological emphasis such as Deregowski et al., (1973); Shepherd et al., (1974); Ellis et al., (1975); and Deregowski (1980a,1980b) (b) those who display a strong spatial emphasis, that is, including geographers and architects such as Peterson (1967); Sonnenfeld (cited in Saarinen, 1969); Shafer et al., (1969); Peterson and Neumann (1969); Calvin et al., (1972); Shafer and Tooby (1973); and Dunn (1976). Notwithstanding their differences, both approaches provide a useful conceptual framework for the study of cognitions in geography.

Cross-cultural and psychological literature has put forward suggestions that consider three types of stimuli: words, photographs and objects or reality, as differing in levels of cognition. The extent of their abstractness increases from objects through photographs to words. The level of response distortion is higher when words are used than when photographs are used;in addition, effective word usage, on cross-cultural

basis, increases with educational achievement. Despite the better cognitive position which photographs have over words researchers, according to Deregowski (1980a), still differ in perceiving photographs as a tool for research. Their comments range from: 'pictures are arbitrary conventions' to 'pictures are perfect surrogates for depicted objects' (Deregowski, 1980a: 74). The latter comment is supported by Page's (Deregowski, 1980b: 27) comparison of Zulu children on two types of an African analogue. The subjects found it easier to respond to photographs from life than to drawings.

In this regard, a series of three research projects conducted by Deregowski et al. (1973), Shepherd et al. (1974) and Ellis et al. (1975) on British subjects and Zimbabwian adults provide interesting results. Study 1 and 2, undertaken by Deregowski et al. (1973) and Shepherd et al. (1974) respectively, sought to reveal the perception and recognition memory for colour photographs of faces of Black and White people. Study 3, undertaken by Ellis et al. (1975), sought to establish verbal descriptions of photographs given to the subjects. The findings of the three studies were as follows:

Study 1, found that Blacks scored lower than the British subjects on perception of faces. There was, however, an educational bias in favour of the British group.

Study 2, after removing the bias, it was found that Blacks had superior recognition memory for Black faces, and British subjects had a superior recognition memory for British faces.

Study 3, found that verbal descriptions of photographs differed from one group to another and that past experience may influence the interpretation of aspects of photographic content.

A general conclusion from these studies and the entire line of recent research suggests that fully coloured and detailed photographs pose no particular problem of cognition of any for the Black groups which have been tested. It should be borne in mind that literature in this field or subject is thin and needs considerably more research attention.

To the spatial researcher the medium of photography as a stimulus or indicator of environmental attributes has many useful, practical and methodological benefits. Through photographs a researcher is able to transfer far away natural landscapes and features at the wink of an eye to the home of a respondent at greatly reduced costs. The only problem here, of course, is that the respondent is being asked to react to a simulation of the environment which only requires use of a section of the cognitive process, such as sight, semantics, language, encoding, retrieving and decoding. Also, it has not yet been firmly established whether photographs validly simulate the real environment.

Photographs have been used by Peterson (1967) in his study of residential preferences in which variables such as broad preferences, scenery, open space, cost, age, safety, privacy, beauty, nature and quality of photography were employed. Another similar study by Sonnenfeld (cited in Saarinen, 1969) using elements such as topography, water, vegetation and temperature has been undertaken. Preference was indicated by subjects on the basis of bipolar constructs: rich-poor vegetation, greater-lesser relief, more-less water or warm-cool temperatures. Since the study used slides it was found to have cross-cultural advantages. The culture, personality and sex variables operating on landscape preferences were found to differ markedly among the groups tested.

Most of the studies using photographs have been in the preference field. Some of these are by Shafer et al. (1969) in the United States, where one hundred black and white photographs of wildlands were used to rank environmental preferences of campers using multiple regression analysis. Subsequently Shafer and Tooby (1973), in a similar study in Scotland, concluded that preference studies for landscapes have potential for widespread application. Other researchers (Calvin et al., 1972; Dunn, 1976) using photographs to identify users' satisfaction with beaches have been piloted by Peterson and Neumann (1969). These researchers found that beach-user satisfaction patterned itself in terms of size, sand texture and cleanliness, degree of crowding, and foliage of the beach. The frequently used bipolar words were big-small, soft-hard, crowded-empty, clean-dirty, etc. The results also showed that a distinct set of respondents preferred natural beaches while another set preferred city beaches.

To draw this section to a close, it may be proposed that photographs, as representational methods, offer a good alternative to the other methods used in this field. They are particularly attractive because, besides being methodologically effective, they reduce cost, have greater convenience and a capability to have a greater degree of standardization as confirmed by Shafer and others (Shafer and Tooby, 1973).

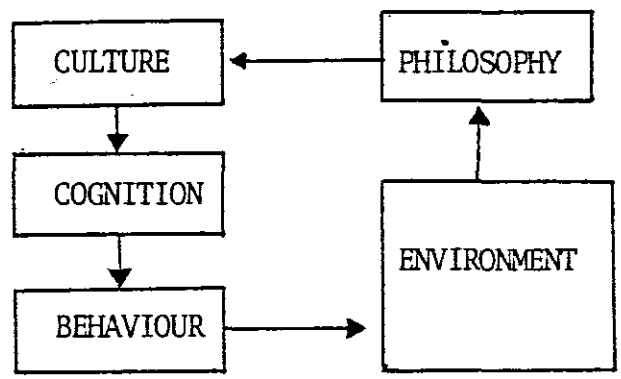
2.4 GEOGRAPHICAL ORIENTATION

Our interest in this section is to put together an integrated behavioural-recreation-geography argument that derives its philosophical source from Geography and the related disciplines so often referred to earlier.

The three perspectives that constitute the core of this section and that are looked at from predominantly geographic literary sources include the philosophical, recreational and behavioural aspects of Geography.

In recent times the goal of some human geographic research has been to identify possible philosophical and cultural bases for variations in general environmental cognition and behaviour. Though this field has stimulated an enormous amount of research, no-one is really clear about the relationships between culture, philosophy, cognition and behaviour (Down and Stea, 1973; Tuan, 1974a; Ley and Samuels, 1978). From a philosophical and cultural basis man has reality before him that needs

FIGURE 2.2: HUMAN COGNITIVE BEHAVIOUR MODEL



to be interpreted. This he cognizes through inputs of a sensory (primarily visual and tactile), semantic and intellectual nature. All these components help man to make sense of his environment and eventually influence his behaviour patterns. This whole process of cognitive behaviour on the environment is better understood if looked at from a specific discipline or combination of disciplines.

2.4.1 Philosophical Perspectives

Whilst this research endeavour attempts to review the theoretical underpinnings of Behavioural Recreation Geography, the foundations of Behavioural Geography lie rooted in Philosophy, the subject traditionally concerned with speculating about the ultimate nature of meaning of things. In this section, geographical invocation of philosophy as an explanatory body of knowledge concerning the higher meaning of the environment to geographers is briefly considered.

In terms of what has recently been appearing in geographic methodological literature, probably the two most persistent paradigms in Human Geography are the 'scientific' and the 'relevance' paradigms (Harvey, 1973, 1981; Haggett, 1979; Mitchell, 1979; Cox, 1981; Johnston, 1983). Philosophically speaking the former is associated with the concept of positivism and the latter, broadly, with phenomenology. Positivism is a philosophical approach which holds that our sensory experiences are the exclusive source of valid information about the world (Haggett, 1979). This term is interchangeably used with 'scientistic' method by Relph (1981), whilst Harvey (1969), and Amedeo and Golledge (1975) describe it as a scientific method. One of the major criticisms of this approach focuses on the difficulties of the measurement experience by geographers. Others include its overemphasis and overuse of quantitative methods, on over-reliance on neo-classical and status-quo theories, a lack of concern for people and social issues of the day, and the claim by positivists that their work is objective and value free (Yeates and Garner, 1980). It has been argued by the critics of positivism that it is inadequate as a method and philosophy because it fails to

deal with human problems.

In contra-distinction to positivism the last two decades have seen the emergence and growth of the humanistic or subjective approaches (Johnston, 1983), or what Haggett (1979) calls phenomenology: an existential philosophical approach which admits that geographic knowledge can also be acquired through intuitive and introspective procedures. This approach, according to Johnston (1983), holds that geographic knowledge can be obtained subjectively in a world of meanings created by individuals within their existential situation. It also studies, according to Relph (1970), man-land relationships by focusing on human experiences, including actions, memories, fantasies, and perceptions. Other proponents of phenomenology such as Tuan (1974b), Pocock and Hudson (1978), and Johnston (1983) find its appeal in its rejection of the overuse of quantitative, neo-classical theories and hypothesis testing procedures.

Johnston (1983) refers to what has been called phenomenology here as Humanistic Geography and sees it as being constituted by a combination of three traditional Philosophies: idealism, phenomenology and existentialism. The most common and more viable of these three is phenomenology, some of its goals being "to reconstruct the worlds of individuals, the phenomena in those worlds which are there as repositories of meaning" (Johnston, 1983: 57). He also includes structuralism as an aspect of Humanistic Geography, which he sees as the study of spatial forms and structures produced historically by human social organization. The creation and structuring of all these processes can fall under the study of Marxist Geography. On the other hand Yeates and Garner (1980) see the phenomenological perspective as including

four types of geographic subdisciplines: (a) Behavioural Geography, (b) Humanistic Geography, (c) Welfare Geography and (d) Radical or Marxist Geography. What is intended in this section is not to give a review of all the sub-fields mentioned above, but perhaps, a general review of ideas currently emerging and becoming increasingly accepted in the humanistic-behavioural field of Geography.

One of the main reasons for the emergence of the phenomenological approach in Geography was dissatisfaction with the assumptions about human behaviour included in many of the positivistic theories which Geography had adopted in its search for scientific respectability during the quantitative revolution period. The phenomenologist in addition seeks to understand the intrinsic features of the cognitive realm associated with the environment or given phenomena. As its point of departure this study emphasizes a human geographic viewpoint or approach that is in essence phenomenological or humanistic rather than positivistic.

In Human Geography, the phenomenological approach has come to be associated with the inductive approach, the process during which a person reasons from particular facts to a general rule or principle. This approach agrees well with analyses in *Behavioural Recreation Geography* where facts about individual actors in the environment and their cognitions, are aggregated to establish or explain some general principles. The inductive approach is also seen as lending itself to subjective types of analysis. However, an interesting generality is that unlike the entirely objective positivists and entirely subjective idealists, phenomenologists tend to reject the subjective-objective distinction and emphasize the importance of the world as lived in, the word of personal experience,

emotion and values. According to them place is an emotional surface of values, of beliefs, of likes and dislikes, and at times intuitively revealed and cognized.

One of the earliest contributors in the field of humanistic-behavioural Geography that has a strong philosophical bias was Lowenthal (1961: 257) who argued for the study of what he calls 'personal geographies'; the unique milieu containing information which is inspired, edited, and construed by feelings. Later, still adapting this philosophical perspective on place and the environment, Tuan (1974b, 1976b) equated humanistic approaches with the study of cognition. He argues that humanistic geography aims to achieve:

> an understanding of the human world by studying people's relations with nature, their geographic behaviour as well as their feelings and ideas in regard to space and place.
>
> (Tuan, 1976a: 266)

And, "the study of a people's spatial feelings and ideas in the stream of experience" (Tuan, 1974b: 213). Tuan (1974a, 1974b, 1976a, 1976b) has made numerous contributions to this area of inquiry which has special relevance for the philosophical underpinings of humanistic-behavioural Geography.

A kind of scepticism that pervades the thinking and adoption of a phenomenological stance by human geographers is that environmental experience is not readily quantifiable. However, some researchers (Lynch, 1960; Priddle, 1972; Craik and Zube, 1976) have actually attempted to quantify some aspects of the environment using human experience.

The phenomenological perspective relating to contemporary Social and Behavioural Geography has also been criticized by Ley (1981) for its heavy reliance on what he calls positivistic psychologism. According to this view the adoption of psychological empirical and quantitative strategies in analysing behavioural processes and the environment has more positivistic than phenomenological attributes.

For the last three decades phenomenology has contributed attributes and philosophies of meaning to Human Geography which seem to have been empirically and theoretically fruitful. Regardless of these benefits some shortcomings have been associated with the phenomenological perspective. The most common of which is that this approach has too much theoretical freedom and is associated with trivial empirical procedures, which Ley (1981: 223) refers to as 'bourgeois sentimentality'. Another criticism is that the approach lack scientific objectivity, classification and development of theory. A third criticism is that humanistic research is preoccupied with process rather than with effects, this being the result of being over-associated with idealistic forms of thought. It is most likely that with the maturation of this field and increase in theoretical and philosophical understanding of the workings of the humanistic perspective and the affiliate subjectivism, most of the criticisms could be resolved.

2.4.2 Recreation Perspective

Considerable attention has been given to recreation and related concepts in this thesis under the subheading: 'Recreation Orientation'. Since, however, a geographically oriented recreation literature review has

not been provided, this section offers a review of recreation literature as it relates directly to geography.

One of the earliest writings in the field now called recreation geography was by McMurry in 1930 (James and Jones, 1954; Wolfe, 1964). Recreation studies actually operated under the then well-established field of economic geography and maintained a status within the field throughout the 1950s and a large part of the sixties. Nearly all the research undertaken was economically oriented and emphasized themes such as tourism, land use, population growth, recreation complexes, and resources. The ultimate work in economically-based Recreation Geography is probably Clawson and Knetch's (1966) book on the Economics of Outdoor Recreation.

Several geographers have made philosophical statements about Recreation Geography in the hope of giving it wider acceptance amongst geographers (Cosgrove and Jackson, 1972; Lavery, 1975; Kraus, 1978). Despite this attempt at providing a philosophical perspective for Recreation Geography, there is still little depth in the field and a dearth of theory and research in most aspects of the field. For example, Mercer (1970) argues that to widen their scope in Recreation Studies geographers should deal with the spatial distribution of opportunities, the distance of populations from their recreation areas and consider the mobility patterns of populations in regard to recreation.

The late seventies and eighties have seen some new aspects of research which include tastes, preferences, perceptions or cognitions in recreation and leisure time, activities, accessibility and resources. In so far as recreation opportunities are resources, the recreation geographer

as a resource analyst seeks to understand the fundamental characteristics of natural resources and the processes through which they are cognized, allocated and utilized (Mitchell, 1979). The relevance of cognized natural recreation resources is an important aspect of Behavioural Recreation Geography. As a result, the brief discussion that follows attempts to place some behavioural geographic writings in the broader context of Geography and this study.

2.4.3 Behavioural Perspectives

Coincidental with the maturation of the environmental perspective in Geography has been the development of the behavioural perspective. This approach, referred to often as 'Behavioural Geography' by several writers (Cox and Golledge, 1969, 1981; Saarinen, 1969; Mercer, 1972; Gold, 1980a; Mitchell and Draper, 1982), is basically people oriented. When geographers use the term 'environment' today, they do not think simply of the physical environment, for they have greatly enlarged their definition to encompass the man-made, social and behavioural environments that are usually of at least equal if not -- at times -- greater importance in human affairs. The ways in which people cognize their physical and behavioural environment are a crucial question for the contemporary Human Geographer. Attempts to define and answer these questions have led to the emergence of Behavioural Geogrpahy as a clear field in the broader discipline (Cox, 1981).

Among the earliest geographers (1908-1968) to have expressed the notion that people do not only respond to the physical attributes of the environment but also to psychological, social and cultural variables

were Carl Sauer, John Wright, and William Kirk (Gold, 1980a). As early as 1947 Wright made an appeal to geographers to devote more attention to the individual's subjective geographical concept of the world because according to him the most fascinating terrae incognitae of all are those that lie within the minds and hearts of men (Wright 1947). These views were frequently restated by such pioneers as Lowenthal (1961) and Tuan (1974a), and their efforts eventually led to the behavioural approach being widely adopted as a research approach in and sub-field of Human Geography by the nineteen seventies.

In recent times behavioural geographers have extended the meaning and usage of behavioural perspectives. Unlike psychologists and other behavioural scientists who have generally paid little more than lip-service to the role of the environment in shaping behaviour, behavioural geographers have set as their research tasks the study of the mutual impact of human behaviour and environment on one another. Also included in this equation is a concern for the ways in which individuals and groups are influenced by other people or groups. Thus, although the behavioural geographer may at times spend a great deal of time and effort describing the characteristics of human behaviour on the landscape, his ultimate objective is relating these characteristics to the cause/effect nature of the physical environment or natural recreation resources. These are not only basic behavioural geographic notions, but also often strategies which may be conceptually related to research methodology. In the words of English and Mayfield (1972: 214):

> The primary thrust of research in spatial behaviour has this objective - to discover those shared characteristics which might provide clues in developing methodological and theoretical insights through analysis of perception, evaluation, learning and response of individuals to their environment.

Research interests in Behavioural Geography do not respect conventional academic boundaries and whilst this wide-ranging multi-disciplinary character of the field has conceptual and theoretical advantages, it has also given rise to considerable definitional uncertainty (Saarinen, 1969; Cox and Golledge, 1981). Some of the research topics within Behavioural Geography include, for instance, human territoriality (Saarinen, 1976); environmental hazards (Gold, 1980a); urban operational environments (Harrison and Sarre, 1975); city images (Lynch, 1960); regional and national images (Gould and White, 1974) and behaviour in the natural environment (Tuan,1974a; McKenry, 1977). It is clear from this diversity of topics that the man-made environment dominates interest in research. On the other hand, behavioural research within the natural environment seems to be increasingly focusing on topics relating to resource utilization and/or recreation resource usage or what we have referred to earlier as natural recreation resource usage.

The behavioural perspective in Geography has several strengths. By focusing upon the variables which mediate between the mind and the environment, it offers a potential for deeper understanding of decision-making processes (Saarinen, 1969). The perspective has also led to a more intensive concern for the individual per se in the analysis of spatial features (Pocock and Hudson, 1978) and a de-emphasizing of environmental determinist notions which have long been contentious. The behavioural perspective has facilitated new spatial measurement

techniques that have been borrowed from other social sciences. This has given the so-called 'quantitative revolution' balance and has highlighted the association which Geography has with the other social sciences as much as with the physical sciences. This methodological development has in turn contributed somewhat towards the establishment of Phenomenology as a rival to Positivism in the discipline (Relph, 1970; Tuan, 1976a).

The new features or elements of measurement referred to above reflect a new and varying ability of Behavioural Geography to quantify spatial attributes using images, schema, signals, symbols and constructs (Osgood and Suci, 1969; Harrison and Sarre, 1975, 1976; Pocock and Hudson, 1978). On the whole the behavioural perspective is seen as having ushered in a generally more human and equitable approach to theory and research in Human Geography. This study attempts to emphasize this outlook.

2.5 LANDSCAPE LITERATURE

In recent times geographers have been increasingly encouraged to consider the purposeful application of literary insights to their research work. This approach is not regarded as a substitute for the more conventional modes of geographic analyses, but rather as a supplimentary tool to be used in improving on understanding of more subtle aspects of geographic and behavioural environments.

According to Tuan (1976a) the landscape literary approach is the last resort to which geographers appeal when more objective sources cannot be found.

It is interesting, however, to note that as early as 1924 John Wright (Salter and Lloyd, 1977) is recorded in the Geographical Review to have observed that:

> Some men of letters are endowed with a highly developed geographical instinct. As writers, they have trained themselves to visualize even more clearly than the professional geographer those regional elements of the earth's surface most significant to the general run of humanity.
>
> (1924: 659)

Since those early years more and more geographers, such as Tuan (1976); Lowenthal and Prince (1976); Lloyd (1976); and Cox and Golledge (1981) have found it necessary to echo some similar ideas.

2.5.1 Creative Literature

Creative literature reveals what an individual, particularly a sensitive observer, knows about his or her society and the physical environment with which he or she is continously in contact. Lowenthal and Prince see it as offering "artifactual evidence of interactions between man and milieu and of the trials and tensions, promises and fruitions, inherent in environmental relations" (1976: 124). It is not always easy to interpret these man-environment relationships into the real-world context the geographer is used to working with. As a result, a substantial amount of the accurate meaning of these experiences is lost.

Since literature in general depicts situations of human experience, Tuan (1976a) argues that there are five cognitive experiences that literary works succeed in bringing to light. These are: (a) perception of absence

or spatial emptiness, (b) the physiognomy of places, that is, knowing a place through its essential style, (c) the world of fleeting noises and light perceived through all the senses, (d) ambiguity in the interpretation of shared perceptions, and (e) the association of human emotions with events in nature. It should, however, be acknowledged that the experiences with nature are strongly varied from place to place, society to society and culture to culture.

2.5.2 Oral Tradition and Literature

The oral tradition found in most African societies has, like other art forms (creative writing, painting, sculpturing and music), tended to bring out their creator's own environmental experiences for the benefit of society. In non-literate African societies the folklorist acts as the creative writer of historical, environmental and general events of a nation. For example, masterpieces of poetry are known to have existed without transcription. Past events are recounted with contemporary happenings connected through the act of improvisation. Among African people with centralized governments such as the Zulu, for example, the phenomenon of the official whose duty it is to recite the history at the ruler's court, is common. This activity is, equally, carried out at lower levels of society, for example at the clan or tribal level.

Oral traditional literature constitutes written works which have been transcribed from oral recitals and tales passed on from one generation to another. This kind of literature is one that has the potential to contribute significantly to landscape literature. This is to say, it

could well contribute an important interpretation to the meaning of natural recreation activities and resources that have up to now only been viewed and understood in terms of Western standards or principles. African folklore with its characteristic symbolic references, proverbs, riddles, moral parables, myth-of-origin, historical tales, praise-songs and general philosophical thoughts, is part of the main stream of African literature which has an oral tradition. The transcription of this folklore only began at the beginning of this century. Yet, it appears to have maintained its uniformity and continuity over time (Paden and Soja, 1970).

To illustrate African folklore categories it might be noted, for instance, that the significance of a proverb is that it reflects the morality and moulds the conscience of a community or society. For the young, proverbs are used to inculcate an astute morality, whereas for the old they are cited as evidence in legal cases. The constituent feature of the proverb is embellished with elements of flora, fauna and other natural phenomena. According to Nyembezi (1954) the bulk of Zulu proverbs are a result of the observation of the people of human behaviour, of animal behaviour, and the observation of things in general in their environment.

Some good examples are provided in Zulu proverbs by Nyembezi (1954):

(a) The tree is not defiled. (It is improper for a person to defecate under the tree just because he knows he will be passing on).

(b) The umthente grass pricks as it grows. (This could mean a child may exhibit in youth what he is likely to be when older).

(c) No elephant ever found its trunk too heavy.

(d) The dassie lacked a tail by requesting other animals to bring

it one.

(e) The duiker is a wizard, by squeezing the caterpillar onto the faeces of the steenbok.

(f) The calf of the wild buck leaps where the mother has leaped.

(g) The water has dried up for the fish.

(h) The great buffalo hunter is killed by the buffalo.

(i) He is watching the back like a chameleon (a suspicious person).

(j) They bask in the fire of the indungamuzi tree.
(This is a large tree believed to cause quarrelling in a family or village).

These Zulu proverbs emphasize an intimate familiarity of the Zulu people with natural life to the point of incorporating its attributes to their way of life. The life patterns which have been interconnected and harmonised with nature are diverse and innumerable. These include:

(1) The community's social behavioural patterns involving attributes such as civility, health and hospitality, and some which variably centre in the home, marriage, heredity and interpersonal relationships as examplified in proverbs (a), (b), (c) and (f) above.

(2) The reinforcement and reconciliation of the community's moral and ethical judgements with nature. For example, this is reflected in proverbs (f), (g), (i) and (j).

(3) The coherence and harmonization of the community's work patterns and functional activities such as hunting, cattle rearing and fruit collecting, with nature as in proverbs (a), (c), (d) and (h).

(4) The interpretation of philosohical and communal values such as life, death, ancestors, respect, communality and folklore, in terms of natural attributes reflected in proverbs (b), (c), (d) and (i).

Some of the individual proverbs can be interpreted and applied to differing circumstances within the community's diversified life system. For example, proverb (c) which relates to the elephant being always able to carry its 'heavy' trunk, can be interpreted in terms of the work situation, subsistence possibilities, and familial and communal responsibilities. To illustrate further, a head of family who has many dependants (perhaps in a polygamous situation) is expected to be able to support his large family.

In human behaviour and observation of things in the environment people have recognised that situations can emerge that are good and bad, beautiful and ugly, truthful and dishonest, sacred and profane, useful and useless, and important and unimportant. All these situations, and many more, have been portrayed in proverbs to represent varied shades of human experience.

African animal tales and symbolism have a wealth of meaning and references that could play an important role in understanding the cognitions Black people have of wild life and the general natural environment. According to Dhlomo (1939) animals are also regarded as totems (that is as emblems of a clan or individual family); as reincarnations of ancestors; as signs of fortune and at times as omens of ill-luck. This kind of interpretation can also be said of the African plant life and the ways

in which the different species have been cognized and used by different African communities.

2.6 CONCLUSION

Previous research, as reviewed, indicates that the underlying factors which influence people's knowledge of natural recreation resources include the traditional socio-economic variables such as income, age, education and occupation. However, socio-economic factors, although important, are not the only controlling infuences. Some studies have concluded that factors such as taste preferences, ethnicity, recreation-satisfaction and cognitions, studied using techniques such as semantic differentials, photographic cognitions, and the Personal Construct Theory, are all important considerations that could introduce a different perspective in the study of natural recreation resources.

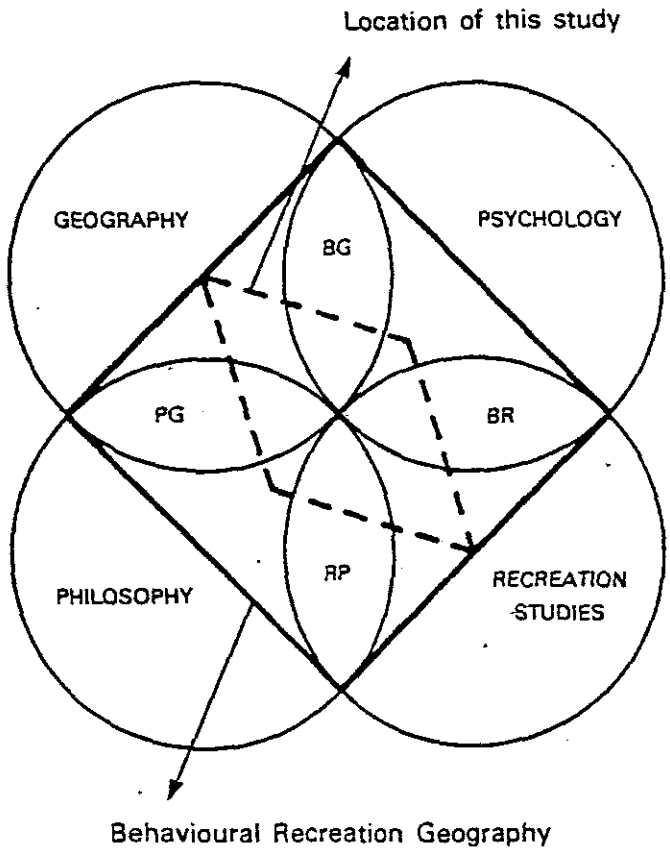
Also, it is evident from the above statement that the field of study covered by this subject is wide and multi-disciplinary. Perspectives from disciplines such as Philosophy (which are introduced in greater detail in the next chapter), Geography, Psychology and Recreation have been incorporated into the study. The relationships between these four disciplines are summarized in Figure 2.3.

The two fields which stand out as the main marriage partners are, however, Geography and Recreation Studies, which are supporting partners. Within the demarcated field of Behavioural Recreation Geography (Figure 2.3) there is an approximated field of study representing the location of this research. In terms of the literature review considered earlier in this

chapter the partnership of Psychology and Philosophy in this study is less dominant to that of Geography and Recreation Studies. However, there is no doubt that the presence of the four subdisciplines reflected as Behavioural Geography (BG), Behavioural Recreation (BR), Recreation

FIGURE 2.3

RELATIONSHIPS IN BEHAVIOURAL RECREATION GEOGRAPHY



BG = Behavioural Geography
RP = Recreation Philosophy
BR = Behavioural Recreation
PG = Phenomenology in Geography

Philosophy (RP) and Phenomenology in Geography (PG) represent an important core area of Behavioural Recreation Geography and this study. It is important to note that Psychology and Philosophy mainly occur as the adjectival constituent of the subdisciplines, whereas Geography and

Recreation are substantive units.

Finally, it is evident that growing attention is being given to Behavioural Recreation Geography in the Western world, whereas this review has also indicated that there is a general scarcity of studies that devote attention to this field in South Africa, particularly those concerned with Blacks as subjects of research.

CHAPTER 3

VALUES, PHILOSOPHY AND THE ENVIRONMENT

3.1 INTRODUCTION

The most interesting thing about cognitions of the environment is that they inevitably structure reality. In both literature and art, the cognitions of the natural environment including, whether directly or indirectly, the recreation environment, have been subject to philosophical and psychological manipulation within cultural traditions. Equally, it is a basic premise of cognitive Cultural Geography, according to Rapoport (1976), that different cultures classify the world differently by means of the use of different taxonomies, whether these be of colours, directions, value, or environmental characteristics. These help to give meaning to the world. It is also widely known that substantial taxonomies used by cultures are frequently based on and proceed from specific elements of the physical environment.

In the context of geographic methodology which was briefly referred to in the previous chapter, the geographic theoretical transition from the physical environment to behaviour and thus to Behavioural Recreation Geography could not be accomplished by assuming constant human values and philosophies. The physical (natural) resources at our disposal are objects endowed either with intrinsic significance or with significance from a Western cultural perspective only. Resources are cultural creations and may therefore also be seen from an African philosophical and value perspective. This realization has been stated in two separate geographic

literatures: both cultural and historical geographers have shown that, even for so-called simple societies (Rapoport, 1980), the role of human philosophies and judgements in resource evaluation, use and management is very important (Rapoport, 1976; O'Riordan, 1981).

Equally, the 'facts' (or, in Wittgenstein's term, "observable states") of Human Geography cannot be viewed independently of 'African' philosophical thought processes whose concerns uphold or confer their meaning, a meaning that directs subsequent action. As a result Geography (whether behavioural or recreational) cannot escape the task of interpreting the domains of consciousness, cognition and what is termed subjectivity. It was mentioned earlier that the 'subjective' domain invariably precludes granting an invariant and universal status to natural phenomena and relationships (Pocock and Hudson, 1978). Such 'subjectivity', as is inherent in African values and behaviour patterns, is, of course, a phenomenon neither easily observable nor measurable in the sense that objects in the physical environment are observable and measurable. If anything, this 'difficulty' of observation serves only to heighten the importance of such phenomena.

The broad development of African value systems or African philosophical thought processes and the recordings of cognitions and interpretations of the African natural environment have been dominated by three distinct periods. These are:

1. The pre-colonial tradition which is characterized by the absence of Western influences.
2. The colonial tradition which ushered in Western cultural influences at the exclusion of African values systems, and

3. The post-colonial tradition which saw the reintroduction and reassertion of African values and philosophies.

This chapter attempts to achieve three things. First, it aims to give a short literary review of African philosophical thought systems against the background of pre-to post-colonial evolution. Secondly, it aims to give a literary interpretation of the natural environment, on the basis of the various literary sources which are available. These sources include perspectives from missionaries, colonialists, explorers and from African traditional backgrounds. Thirdly, the chapter aims to give a short, integrated view of the natural environment as viewed from dominant African philosophical perspectives. These views include those which are current within African communities or which are re-emerging from the traditional or pre-colonial past.

The concepts 'philosophy' (with related culture implied) and 'environment' overlap as do the concepts 'man' and 'nature' as used in Geography. It is useful, however, to treat them initially as distinct in this chapter. In this way we can focus first on African philosophy and later on the natural environment. These concepts provide important complementary perspectives on the philosophical underpinnings of environmental cognition and Behavioural Recreational Geography.

The interplay between philosophy, values and the natural environment is reminiscent of the human cognitive behaviour model shown in Figure 2.2. This model describes the relationship that exists between philosophical and cultural conditions and the eventual behaviour that is made manifest on and in the physical environment. This process occurs within a framework

of on-going relationships between culture and philosophy by way of the process of sharing and assimilation: "Philosophy was not, is not, culture free" (Olela, 1979: 56). Human cultures adapt to both easy and difficult environments. Cultures that are known to have adapted to living in harsh lands tend generally to follow strategies for survival rather than methods which increase surplus production and have complementary or compensatory philosophies (O'Riordan and Sewell, 1981).

In traditional African situations no distinction was made between behaviour or the act on the one hand and belief or the system of beliefs -- that is philsophical thought -- on the other. According to Mbiti (1970: 5) "What people do is motivated by what they believe; and what they believe springs from what they do and experience." This is the essential unity of being human. Accordingly, traditional beliefs and persuasions made no concrete distinction between the spiritual and the physical. For example, some African communities in South Africa perceive physical and spiritual components as uniting to make what is alive or constitutive of life. Consequently ties exist between that which is human and the natural physical environment (Marais, 1972: Tuan, 1974a). As a result it is necessary, at the level of group cognitions and preferences, to know a group's cultural history and experience in the context of its physical setting.

This concept has, according to Ley (1981), long been current in Geography amongst geographers who have supported the idea that an anthropocentric perspective, derived from the philosophies of meaning, is needed to counter the generally prevailing positivist orthodoxy. But, as has been argued, this does not imply that the perspective has only a critical role to play in the development of theory in Geography; it also stands to reveal

a new view of the relationship between people and the environments. This is the role which African philosophical thought, amongst other ways of thinking, can and should play in the field of Behavioural Geography -- in this case, as it is applied to recreation.

It is not the central purpose of this chapter fully to explore the problems posed by the relationships between Philosophy and Geography with reference to Western idealism as proposed by Kant, Ratzel, Hegel and others. Rather, emphasis is placed on African idealism or philosophical perspectives which fit best into the existential or phenomenological approach. It must be remembered that reference has already been made to this approach and its beginnings in the field of modern Human Geography.

3.2 AFRICAN PHILOSOPHICAL THOUGHT

Blacks in South Africa derive their most fundamental self-definition from several cultural and philosophical premises which they share with other African people on the continent. These premises are basic to what is here referred to as African philosophical thought and, in other sources, as African philosophy (Tempels, 1959; Mbiti, 1970; Wiredu, 1979; Keita, 1979; Wright, 1979; Apostel, 1981; Hountondji, 1983). Other related but not symonymous terms used in the field include, inter alia, African thought (Marais, 1972; Maurier, 1979); African personality (Paden and Soja, 1970); African image (Mphahlele, 1974); Kaunda's African humanism (Ruch and Anyanwu, 1984); Africanity (Maquet, 1972); Black psychology (Nobles, 1980); Salvation philosophy (Hountondji, 1983); African world-view (Soyinka, 1976); African social thought (Abraham, 1962); Negritude (Senghor, 1963); and Black consciousness (Manganyi, 1973). These terms

and the concepts to which they point demonstrate, in particular ways, attempts which have been made to come to terms with how traditional and contemporary African (Black) people cognize reality or, according to Ruch and Anyanwu, "make sense of their existence of their destiny and of the world in which they live" (1984: 17).

The concept of 'African philosophy' has been -- and continues to be -- the subject of considerable controversy in Africa. Even today the use of the term and invocation of the concept are not uniformly accepted. What the terms should mean varies greatly from one writer to another. The result has therefore been that many writers, particularly those who have something to say about African values, doctrines, cognitions and outlooks on life, have avoided using the term.

The controversy has focussed on three arguments associated with the interpretation of the existence of the concept of an 'African philosophical thought'. These are: the non-existence argument, the ethnological argument, and the anti-colonial argument. From a contemporary African viewpoint these three headings can be seen as representing a negative view, middle view and positive view of the concept 'African philosophy'. It should be mentioned from the very outset that while these arguments represent broad positions, there are nonetheless many dissentions and variations within these broad positions.

3.2.1 The non-existence argument

The course of debate in this category runs along the line of reasoning which holds that a genuine African philosophy, in the same sense as Western,

Chinese or Indian philosophy, does not exist. This argument has existed since pre-colonial times and persists in the present. According to Apostel (1981), Hountondji (1983), Ruch and Anyanwu (1984) and several other writers, this view was initiated by colonial writers and authorities, and encouraged by Christian missionaries and anthropologists. The strong material powers and psychological pressures exercised by colonial administrations and missionaries have deeply shaken the views of certain Africans concerning their heritage and value systems (Maquet, 1972).

The key operational principle in the non-existence argument revolves around the apparent tendency of the Western tradition to disregard or consider as obsolete any value system that is antithetical to it. Analogous to African philosophy being non-existant, is the 'non-existence' or 'distancing' attitude which most colonial authorities, missionaries, explorers and writers adopted towards the natural African environment. In fact, for many decades since the advent of Whites in South Africa, the natural environment and the ways in which it was interpreted and used by indigenous people have been regarded as profane, heathen or simply primitive. Black cognitions and interpretations of nature were seen to require extensive modification in order to fit into the civilizing, Christianizing and Westernizing goals and programmes of dominant White cultures. Such goals were, in turn, instituted for the benefit and founded on a veneration of Western governments and society.

To the Westerner, the concept 'Europe' as the 'space' of Western Christiandom has been used and applied to an area that was unified, as was Africa, by common roots in history, race, religion, language and philosophical thought. In terms of European ideals, however, Africa is simply that

which is not Europe. It is defined negatively and does not constitute a unified whole in terms of common cultural and philosophical characteristics. From this European viewpoint have emerged such terms as Dark Africa, Black Africa, Africa South of the Sahara, North Africa, West Africa, Central Africa, East Africa and Southern Africa. Africa has never been an entity in the way in which Europe has been (albeit neither deserve so to be seen). Its people, like those of Europe, differ greatly in social levels, language, religion, culture and philosophical thought. Yet Africa has always been associated with distancing, foreigness and fragmentation, while 'Europe' serves as a unifying hold-all.

Since the Second World War the word 'African' has, however, taken on new meanings, particularly from inside the continent. These meanings have begun to suggest the existence, in fact or in powerful imagination -- but one way or another in reality -- of an ideological, political and philosophical entity. Nonetheless, the non-existence (of African philosophy) argument persists.

Some philosophical writers who have emphasized the non-existence of African philosophical thought (either directly or indirectly) include De Beer (1975); Georgiades and Delvare (1975); Rich (1975); Conradie (1977); Maurier (1979) and Crahay (in Apostel, 1981). Most of the authors in this category assign stringent preconditions which would need to be met before an African philosophy could be identified. The position upheld by Maurier (1979) is as follows: to do philosophy is to do conceptual analysis; African thinkers do not do conceptual analysis; therefore, African thinkers do not do philosophy. This therefore suggests that there can be no African philosophy until African thinkers engage in

conceptual analysis.

Reacting to Tempel's (1959) definition of African philosophy, Crahay (in Apostel, 1981) arrives at his own conclusion that there exists an African world-view but not an African philosophy. He lays down the preconditions that African philosophy, like other philosophies, ought to be explicit and not implicit; should be systematic and not only intuitive; and must rely on the existence of proof. Since African philosophy, to Crahay, has none of these positive elements, it therefore does not exist.

Almost all human activities are directed towards a meaning-filled life system, and the same observation is true for African life patterns whether they be mythical, nationalistic or existential. De Beer (1975), however, argues that because mythical imaginations are the basis of African thought they cannot be used to elucidate concrete events, and hence are unphilosophical. Rich (1975) avers that a distinctly African philosophy can hardly be said to exist because it has been carried on the vehicle of African nationalism and is therefore a reaction to Western colonialism. At another level Rich (1975) argues, in concurrence with Maurier (1979), that anything 'theoretical' is un-African and that African philosophy is a way of life, rather than a speculative and excursive system. They therefore argue that there is no African philosophy in the sense of Western philosophy as we know it. Rich (1975) and Conradie (1977) conclude by suggesting that philosophers need to develop a more dynamic concept of African philosophical thought which can come to grips with the problems of a modern human society in transition.

Yet the simple counter-argument remains that all of these dismissals of African philosophy are founded on a Western concept of what philosophy, as intellectual activity, should be, and not on any intrinsic, natural or inevitable 'philosophicality'. In this way, as is true for the 'realness' of a space Europe but the 'unrealness' of a space Africa, what is 'foreign' is treated in terms of what is familiar, as though it were -- right to be -- the same, or at least subject to, the same laws of behaviour.

Likewise, if African geographic interpretations, founded on ways of thinking, have either been ignored or not clearly deciphered, then these omissions are not in themselves justifications for the claim that they do not exist. Geographers, as much as philosophers, need to develop a more dynamic theoretical perspective that can account for the existing relationships between nature, man and culture based on the notions of the reality of 'otherness' rather than the demand for 'sameness'.

3.2.2 The ethnological argument

This section of our discussion highlights the view that African philosophical thought has its foundations in the traditions, rituals, proverbs, folkways, religions, beliefs and linguistic particularities of traditional Africa. The earliest contributor to this idea, and who also gave a detailed account of African ontology, was Tempels (1959). He popularized the idea that the notion of a 'vital force' or 'life force' is common to Africa : the notion that all objects and the universe are charged with forces, that these forces are intimately related with other forces, that reality cannot be separated from personal experience and also that people are part of the natural rhythm of nature. In illustrating this relationship Mbiti

(1970: 5) writes: "I am, because we are, and since we are, therefore I am". This reveals the collectivity or communality in which society and the individual are regarded and the emphasis on being as reality. This notion heralded the beginning of what is today regarded as ethnophilosophy (Hountondji, 1983) or African thought (Maurier, 1979) instead of the concept African philosophy or, perhaps, African philosophical thought.

It is important to note that the pioneering writings of Tempels (1959) indirectly contributed to the earliest philosophical interpretations of the traditional spatial life systems in an African context by a missionary. Most of Tempels' writings were written for European readers, just as were all the descriptive colonial accounts of the African environment by early geographers such as Von Humboldt, Huntington, Stamp, etc (Broek, 1965).

A number of writers besides Tempels (1959) and Mbiti (1970) concur that a concentration on ethnological constructs of the past contribute towards creating an African philosophical thought. They include Bryant (1929, 1949); Maquet (1972); Keita (1979); Wright (1979); Kagame (in Apostel, 1981) and Ruch and Anyanwu (1984). According to most of these writers African philosophical thought thrives on the cultural similarity of experience. Nonetheless,this similarity is potent not because of some particular feature (for example African sculptures or language trait), which is found in them, but because of complexity, and multiplicity of characteristics gives culture its own special look (Maquet, 1972). However, it has been observed that as a result of a number of historical and socio-cultural contingencies such as the colonial and missionary effort,

most of the valuable aspects of African culture and ontology have been undermined (Manganyi, 1973).

In an attempt to rekindle the spirit of African philosophical self-reliance and to warn people of the futility of chasing gods or ideals not their own (Bengu, 1975), Mphahalele writes:

> The question should not be whether we can go back to ancestral worship. It should be whether, in the genuine belief that our ancestors are still with us and have historical and spiritual relevance, we should not allow them to free us mentally. Our ancestors as part of history can, if we allow them, help us snap out of the trance into which we were thrown by Western education so that we can use it to advance the interest of a whole nation, not an elite (1974: 49).

Whilst Mphahlele's contentions could evoke a sympathetic hearing in some people, it is undeniably true that no culture should be imprisoned forever in its traditional philosophy (Hountondji, 1983). And there remains some truth in the idea that abandoning one's own cultural past seems to be the best way to preserve it (Towa in Apostel, 1981).

Interestingly enough, African geographic writers who have invoked behaviour concepts have nonetheless failed to emphasize an African perspective in explaining present day cultural environments in the continent. It should be noted that Western cultural geographers such as Rapoport (1969); Kay (1970) and Tuan (1974a) have devoted considerable attention to non-Western geographic environments, while very few African geographers have contributed a Black perspective to local geographic issues and topics. For those that have contributed, it would be false to suggest that their work is not consciously formulated around certain frameworks of the Western

tradition and environmental philosophies. All African writers, be they philosophical, creative or geographic writers, are "victims of Eurocentric dialectics" (Soyinka, 1976: 128).

3.2.3 Anti-colonial argument

In essence this section deals with the positive writings about the existence of African philosophical thought. Some of these writings have been encouraged by anti-colonial feelings and a common African experience which has tended to produce a unified African world, distinct from and hence comparable to the Western and Asian worlds.

Several references have been made earlier in this chapter to the important premises on which this category of argument rests. At this point it is appropriate to list a few of these: African humanism (Ruch and Anyanwu, 1984); African personality (Paden and Soja, 1970); Africanity (Maquet, 1972); African socialism Friedland and Rosberg, 1964); Negritude (Senghor, 1963) and Black consciousness (Manganyi, 1973). Space does not permit that these concepts be discussed individually; however, some reference will be made to them in this section.

Most of the philosophical writers who adopt a pro-African-philosophical stance, such as Senghor (1963); Manganyi (1973); Wiredu (1979); Towa (in Apostel, 1981); Hountondji (1983) and Ruch and Anyawu (1984), argue that to get a clear picture of African philosophical thought as distinct from Western philosophy, we have to look at the philosophy that Africans are producing today. They also contend that it is necessary to accept the notion that African philosophical thought is an outgrowth of socio-

political and socio-economic philosophies of post-colonial Africa, which are not committed to the authenticity of traditional European philosophy, but are born out of a need promulgated by neglect rather than traditional Western theoretical stances (Jones, 1980).

Wiredu (1979) and Apostel (1981) further assert that the African thinker has to make his enquiries dialectically, in relation to the philosophical writings of other people. This idea is not universally accepted, however, since Hountondji (1983) and others maintain that African philosophy will emerge from texts produced by Africans residing in Africa, and designated by their authors as 'philosophical'. This view is the most radical of all the views expressed here about the existence of African philosphical thought and does not seem to take into account the possible benefits that could accrue from cross-cultural and international relationships.

Dialectical processes that underlie or pervade the development of African philosophical thought have been suggested by Ruch and Anyanwu (1984) in the Hegelian terms of thesis, anti-thesis and synthesis. The thesis relates to the ill-effects wrought by Europe in the African continent in the forms of slavery, colonialism and racialism (see Figure 3.1). This has resulted in a lack of understanding, in feelings of superiority and in the domination of one racial group by another (Ruch and Anyanwu, 1984). The results of this imposition and injustice were already being noted by the beginning of the last century:

> The idea of an original and indelible inferiority in the African character, is a cruel prejudice which hath slain its thousands, and wounded its ten thousands (Young, 1808: 21).

The antithesis is represented by the philosophical stance adopted by those who suffered under what was described under the thesis: racialism and colonialism (see Figure 3.1). The colonialist's language, philosophy and administrative structures are used to fight the established order. Negritude is one of the most prominent African philosophical concepts that attests to the antithesis. Senghor (1966: 2) defines it as: "the sum of the cultural values of the Black world; that is, a certain active presence in the world, or better in the universe". Negritude, Ruch and Anyanwu (1984) contest, as reflecting and opposing Western values, unwittingly makes itself guilty of the same nationalistic dogmatism and one-sidedness that colonialists were accused of. In addition, Mphahlele (1974: 89) sees it as 'a new form of alienation' which only promotes the interest of neo-colonialism and perpetuation of racial separatism. A more plausible argument, suggested by Ruch and Anyanwu (1984), is that the emphasis on colour in studying (Black) man's humanity is unacceptable. Rather, they suggest, the broad phenomenological situation and existence among other people, must be studied.

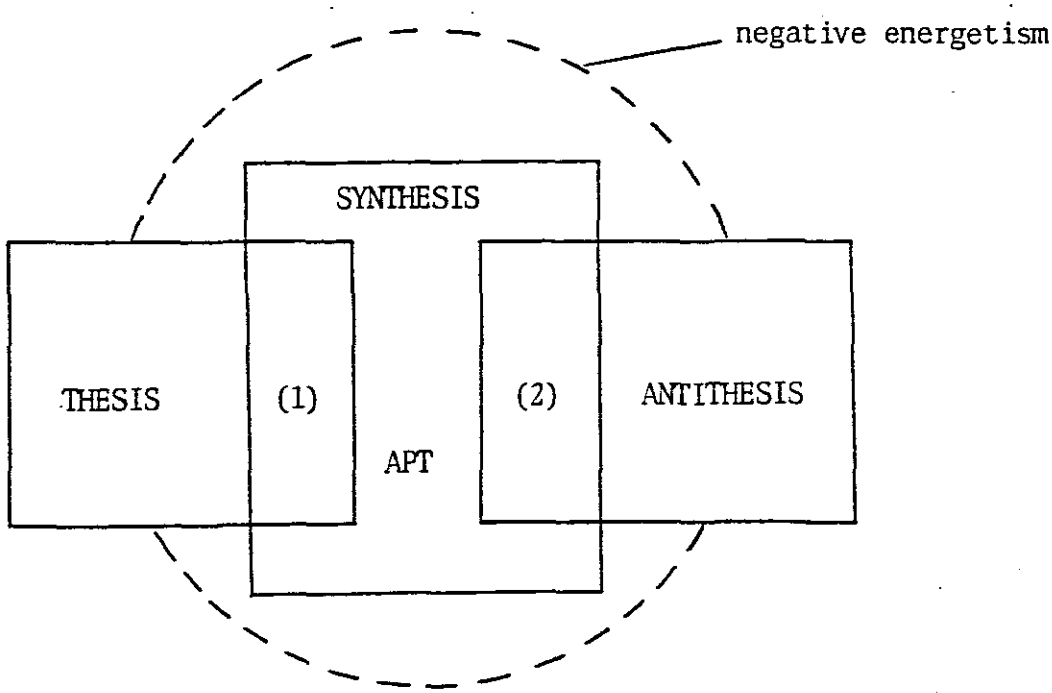
The synthesis in this characterization of a dialectical African philosophy refers to developing an 'own' culture and value system without reference to the past and while using valued contributions from other cultural groups. This position also implies the acceptance of a system of ideas, ideals and values which concern themselves with the way African people of today make sense of their existence, of their destiny in which they live (Ruch and Anyanwu, 1984).

The synthesis is well evidenced in concepts such as Africanity, African

personality, African socialism and some terms of Black consciousness (see Figure 3.1). The concept is seen as a unique cultural heritage shared by many people in an African existential world. According to Maquet (1972: 16), "Africanity is based on a similar experience of the world shared by various societies and on the dissemination of several cultural traits among these societies." This heritage is not racial but is cultural and includes traits such as kinship, marriage institutions, political organizations and world views that are common features of the Black African heritage.

In a similar vain, African personality and humanism emphasize the broad consistencies in the behaviour of human individuals in the African cultural and natural milieu.

FIGURE 3.1: DIALECTICAL PROCESS OF AFRICAN PHILOSOPHICAL THOUGHT



(1)
Western philosophical heritage
and elements of ethnophilosophy

(2)
Neo-negritude
Black consciousness
Radical 'Black alone' philosophy

Three broad categories of inquiry are recognized by Paden and Soja (1970): (a) environmental characteristics both physical and socio-cultural; (b) outward behaviour, and (c) the impact of early childhood experience and genetic factors.

African humanism revolves on the premise that man has many possibilities such as supreme worth, morality, justice and perfection (Kaunda in Ruch and Anyanwu, 1984). The African person's humanism is unmistakably revealed (Ruch and Anyanwu, 1984):

(a) when he is patient and shows his reliance on nature;

(b) when he enjoys meeting and talking with people for their own sake;

(c) when he is forgiving and does not keep a grudge against an offender;

(d) when he is an inveterate optimist; and

(e) when he loves rhythm, music and dance.

It has been suggested that his humanistic character is gradually being influenced by the impacts of Western technological and technocratic culture.

A synthesis that is of relevance to the South African situation is that which involves the concept of Black consciousness or being-black-in-the-world, as used by Manganyi (1973). The philosophical departure of his analysis is largely phenomenological and existential, and asserts that:

> Black consciousness should be understood to mean that there is mutuality of knowledge with respect to the 'totality' of impressions, thoughts and feelings of all Black people. (Manganyi, 1973: 18).

The basic objective of Manganyi's contribution is the attempt to establish a state of equilibrium in the face of a loss of pride and personality in the 'blackness' of Black people. Manganyi (1973: 33) suggests four strategies to be followed in order to achieve this goal. These strategies focus on:

(a) attitudes in respect of our Black beautiful bodies,

(b) our community responsibilities,

(c) our attitudes towards material culture, and

(d) our relationship with time.

Since space does not permit an expansion of this discussion, it is sufficient to mention that Manganyi's contribution does succeed in giving positive insights into Black personality, community and environment as they are affected by the ideological doctrine of 'apartheid' in South Africa. What is important in this contribution is that it is not so much a blatant reaction to the negativism of the apartheid system, but a symptomatic assessment of the results of having lived in that kind of situation for a long time.

Geographers, in this regard, have in many ways interpreted South African spatial phenomena in terms of 'apartheid' ideology. This ideological practice has tended to reinforce several fundamental conflicting or contradictory ideas that dominate the South African landscape. Specifically, these dichotomize: (a) the local or regional communities into racial entities: black and white; (b) the existential experiences into a colonial (racialism) mould and an African mould; (c) the value systems into Westernism versus Africanism, and Christianity versus non-Christianity,

and (d) the protection of the natural environment in terms of European conservation as against African conservation strategies. As a result the South African geographer has had the 'painful' experience of having to work on the local natural environment paying undue attention to discriminatory laws and practices in the planning, management, allocation, modification and protection of natural resources -- and recreation resources in particular.

In concluding this section on African philosophical thought we can perhaps sum up the situation as follows: Because we find ourselves in a continuously changing world it is necessary to adapt accordingly (and continuously). An on-going synthesis is possible between traditional African cultural worlds and modern African worlds. An integrated African thought and true humanism, which rests on African reality and values, while not rejecting the enriching contributions of other cultures, will be genuinely African, but will at the same time have universal importance (Wright, 1979; Apostel, 1981; Ruch and Anyanwu, 1984).

3.3 THE NATURAL ENVIRONMENT

In creating a link between this subheading and the last one, it is necessary to pose a central question: How does African philosophical thought have a bearing on the cognition of the natural environment or resources? This question has been answered in part earlier in this Chapter. However, the precolonial relationship between Blacks and the natural environment deserves greater study, despite the fact that there is a dearth of written literature relating to this subject. It is noteworthy that precolonial life in South Africa was recorded by historians, missionaries and colonial

writers who brought their particular biases to bear on indigenous achievements, artifacts, technologies and failures -- failures might have been the product of years of unwitting experimentation. As a result, little is known of the ecological strategies and environmental perceptions of pastoralists (O'Riordan and Sewell, 1981). Equally, documentation by Kay (1970) shows that colonization brought with it a serious deterioration in man-land relationships, and that a change from traditional foodstuffs to maize monoculture and cattle-keeping, and laying waste of the natural environment (Finlay, 1903), have increased pressure on the land. Yet little is known of the system which predated those of deterioration and decline. In the remainder of this Chapter attention is given to examining, within the limits of the available data, early Black attitudes to nature, the environment in relation to broad philosophical precepts.

3.3.1 Colonial literary accounts

On the whole, the literary accounts of colonists, missionaries and explorers concerning the Natal cultural and natural environment are founded on bias, unsound value judgement and plain inaccuracies. The more these writers (such as Walmsley, 1879; Jenkinson, 1882; Ludlow, 1882; Finlay, 1903; Hobley, 1922; and Bryant, 1929) met with novel scenes and events, the more acute became their cultural bias. Nevertheless, their accounts cannot be dismissed altogether since they actually serve as the only written evidence available for a period characterized, locally, by a flourishing oral tradition. The following themes are useful points concerning environmental attitudes which emerge from such early writings.

(a) Land. The ownership of land as constituting an important part

of the natural environment is well explained by Kidd (1908). Land was communally owned, except that which was alloted for subsistence purposes. However, what needs to be added to this descriptive observation is the concept of mutual existence and the understanding of nature and man in the context of life-force. Within such a philosophical framework, there is a natural regard for land as a reverence of life, which should be used without exploitation. In contrast to this idea, Jenkinson (1882) reports that land in Natal was, even at that early stage, being bought and sold by Whites, who saw it as a possession and an 'object', at the price of four shillings an acre. The quality of the natural environment from around the present major Natal game reserves such as Hluhluwe, Umfolozi and St. Lucia is recorded by Ludlow (1882) as being very 'rough' and luxuriant. Around the water areas there were patches of bush and dense forests that bordered the shores of Lake St Lucia. This environment was regarded by Whites as hostile and as ready to be conquered and alienated.

(b) Flora. Accounts from early missionaries and explorers such as Francis Fynn, John Gunn and others, who were among the first White men to have visited north coastal Natal, indicated that the diversity of wild life was breathtaking. Vegetation, according to Jenkinson (1882) was infested with the palmyra, wild date, and sycamore fig trees, while many other tropical trees grew with rich luxuriance. The thick undergrowth was a mixture of creeping cane-like plants that made it impossible to penetrate the forest land. In less forested areas different species of grass, flowers, succulents and fungi were to be found. All this was used by local inhabitants but was not, it seems, exploited or over-used in any way.

The indigenous forests of Ongoye and Dlinza constituted the highest concentration of the native vegetation of ornamental trees, shrubs, herbs and medicine plants. By the 1930's, as a result of White incursions, both these great forests (Daily News, 1937) had lost the big game: buffalo, lion, zebra and rhinoceros. The rare and ornamental trees were becoming extinct; for example Black stinkwood, which was also regarded as royal timber.

Both Kidd (1908) and Bryant (1929) report on the cultural and symbolic signifince of plants among the Zulus particularly when used either for subsistence or medicinal purposes. For example, the annual rite of the first fruits was performed by the king only after which it was regarded permissible to gather the new fruit, herbs and other edible plants of the season.

The usefulness of this cultural practice in Zulu society is threefold: first, to prevent or subdue the urge to squander the food resources during a season of abundance; secondly, to inculcate and perpetuate a customary practice that constitutes the elements of Zulu tradition; and, thirdly, to express some form of appreciation to the ancestral spirits and the Supreme Being (uMvelinqangi). In support of this notion Mbiti (1970: 56) writes that:

> Nature in the broadest sense of the word is not an empty impersonal object or phenomenon: it is filled with religious significance.

Also that the African's

> beliefs about God are expressed through concrete concepts, attitudes and acts of worship ... This faith is utilitarian, not purely spiritual, it is practical not mystical (Mbiti, 1970: 67).

These philosophical notions in turn feed back to suggest why the floral world was treated resourcefully yet practically as it was, while less than a century of exposures to a few White colonialists had led to serious problems of deterioration. This problem was not limited to flora either.

(c) Fauna. By the middle of the last century accounts were being given by writers such as Leslie (1875); Ludlow (1882); Jenkinson (1882); Finlay (1903) and Bryant (1929, 1949) to the effect that wild animals in Zululand then were in great abundance. "Zululand was a hunters' paradise, a game-park unexcelled in Africa" (Bryant, 1949: 682). Finlay (1903) relates that the buck and other antelope were in so much abundance that at times African herdsmen were trampled to death by huge herds. The variety and profusion of these wild animals encouraged the formation of large parties of hunters which eventually killed large stocks of animals of various types: rhinoceros, buffalo, antelope, hippopotamus, giraffe, elephant, etc. It is argued by some writers that the influx of the White man in South Africa heralded the introduction of an efficient weapon for hunting and exploitation and has undoubtedly resulted in the indescriminate shooting of wild animals, thus bringing several species of big game to the verge of extinction.

Some justifications, whether these are reasonable or not, for the extermination of wild animals have been cited by some of the writers.

Alrick (1938) reports of a game extermination campaign that saw vast droves of zebra, wildebeest and several species of antelope being killed by shooting, driving into precipices or stampede into the river, because some farmers wanted to protect their cattle from the tsetse-fly that was hosted by the wild animals. She also tells of daily trails for two months that saw herds of waterbuck, reedbuck, bushbuck, duiker and kudu being brought down by gunfire. One member of the expedition had 29 buffaloes to his credit simply because he disliked them. There were innumerable extermination expeditions, although only the most bizarre have been written about. An example is the infamous slaughter in 1860, lead by Prince Alfred, Duke of Edinburgh in which 600 head of game were killed in one day (Comrie-Greig, 1984). Such exploitation and waste was inconceivable within traditional Zulu philosophies and norms founded on a sane sense of life-forces.

The attitude towards the natural environment reflected in White expeditions makes a farce of the adoption of ethical considerations as the supreme goal in all hunting endeavours. There seems to be little doubt that the only restraint that seems to be effective in controlling this attitude in modern Western society is the use of legal compulsion. What is interesting is that the indigenous Black people in Natal have not been reported as participating in mass extermination of game, particularly for sporting purposes. However, colonial writers such as Bryant (1929) and Hall (1977) indicate that individual and therefore limited pitfall traps were used as a hunting technique during the Shakan period.

The pitfall traps were used during the 'communal hunts' or 'royal hunts' during Shaka's reign (Bryant, 1949: 686). It is significantly observed

that:

> Among such well-ordered and well-disciplined people as were the Zulus, a public hunt was by no means the mere disorderly dispersal of a chasing, slaughtering rabble of savages, as one might suppose. It was a systematically and scientifically arranged ... devotional exercise. (Bryant, 1949: 682).

The public as well as the royal hunts were elaborately prepared activities that were accompanied by specific symbolic beliefs and behaviour. They were started with a prayer to the ancestors appealing for the protection and goodluck during the chase. The animals that were hunted in the royal hunt usually consisted of 'royal' animals such as the elephant, lion, leopard, Black rhinoceros, and small animals such as the honey badger and weasel. In this way, other animals were, by implication, afforded some indirect but effetive conservational protection. At the same time, the large animals were hunted on such a limited scale that hunt-practices probably did little more than offer a limited (even ineffective) form of culling.

(d) Recreation. This concept, as it is known today, did not exist during traditional times. Colonial writers such as Leslie (1875), Ludlow (1882), Junod (1927) and Bryant (1929, 1949) relate mainly what may be seen as three types of pastimes: hunting, playing and visiting. Hunting, according to Junod (1927), was undoubtedly more developed in remote times than at the turn of the century, and was regarded as the most popular pastime. As mentioned earlier, hunting was a communal traditional activity as was reflected in the organization of public and royal hunts. Both Bryant (1929) and Junod (1927) mention the existence

of professional hunters in African traditional society. These hunters possessed special science of hunting different types of animals. For example, the study of animal footprint shapes and durations, and other characteristics, were of paramount importance in the identification of direction, rate of movement, and sex of the animal. This science was also regarded as hereditary; the fathers normally taught their sons how to be hunters.

Playing was regarded as a less serious community activity and was therefore largely restricted to young African boys. Ludlow (1882) and Bryant (1949) suggest that the pastime activities of young Zulu boys tended to simulate real-life behaviour such as hunting. Examples of play include bird-trapping, bird-hunting, knobbed-stick throwing, assegai throwing, rolling-melon piercing, stick-fighting, rat, roots and berry hunting, swimming, animal-cry mimicry, etc. Pastime activities were differentiated on the basis of age and sex. Females seem to have been less involved in pastime or leisure time activities that had nothing to do with subsisting. Generally, however, it may be seen that both hunting and playing were recreative in the sense that they provided for relaxation and prepared participants for effective involvement in the more serious (subsistence-oriented) facets of life.

Visiting, according to Ludlow (1882) was one way of passing time during traditional times. Visits were made to natural areas such as rivers, lakes, beaches, forests, etc., apart from visits to other people. Besides appreciating nature Zulus also delighted in attending musical parties, festivities and other socio-cultural activities. In short, uses of the environment and recreation activities among Zulus reflect an holistic,

life-force based view of the world, embracing the need for co-operation and care. Contrariwise, many Westerners who have benefited from the colonial heritage or tradition continue to view nature in terms of dichotomies. These Western based contradictions include the modification of the environment on principles favouring either nature or technology; the idea of a natural outlook as opposed to a cultural outlook; and following a Western conservational strategy heavily dominated by technology. The natural environment, as cognized from a Western perspective (assuming the non-existence of an African philosophical influence), is characterized by many writers and social scientists in terms of polar opposites. The opposites include paradise-wilderness dichotomies, sanctity and profanity, conservation and exploitation.

The traditional Zulu alternative to these views serve as useful indications of Black attitudes towards nature.

3.3.2 African literary accounts

Without doubt there is a paucity of accounts written by Black people about their perceptions and practices in the natural environment. What is therefore cited here is information passed on through the oral tradition (Nyembezi, 1954) and interpretations of Black writings written more recently. In addition, the scarcity of African literary accounts is compensated for by the use of creative African literature. The relevance of local African accounts becomes important if we bear in mind Manganyi's (1973: 18) observation that it is:

> the Black scholars of this country who will first of all ask the right sort of questions with a greater probability of arriving at the best answers.

The relationships that emphasize the mutuality of and the co-existence between man, nature and God are deeply rooted in the African existential world. As most Black South African scholars such as Molema (1920); Dhlomo (1939); Vilakazi (1945); Nyembezi (1954); Vilakazi (1965); Ndebele (1972); Mphahlele (1974) and Bengu (1975) have attested in their serious and creative writings, a number of positive beliefs and practices concerning the natural environment were and are to be found in African societies. Some cultural beliefs and practices have characteristics which correspond closely with African philosophical thought. These include the following:

(1) That everything is a force, or has force, some kind of soul that is found in trees, forests, rivers and also in non-living objects, for example a rock (Ruch and Anyanwu, 1984).

(2) That man and nature are part of an inseparable continuum and are not two independent and opposing realities (Mphahlele, 1974; Ruch and Anyanwu, 1984).

(3) That whilst man is related to all living things, he is superior to mere animals on the grounds that he has a higher form of knowledge (Maphalele, 1974; Bhengu, 1975).

(4) That land is communally owned in traditional African society and there is collective societal responsibility towards it and other things of the community (Vilakazi, 1965).

(5) That the relation of land possession to the dead (ancestors), the living and the yet unborn, emphasizes the fact that land was not the object of economic exchange. Rights to land were for work and residence, and perhaps not for recreation purposes (Vilakazi, 1965; Bengu, 1975).

(6) That Black people's family names, titles and eulogia indicate their destiny and may be strongly related to the natural and physical environment they find themselves in (Molema, 1920: Dhlomo, 1939).

The transformation of philosophical values, including the elements listed above, to environmental situations is evidenced by the fact that the natural resources such as mountains, forests, lakes, rivers, springs and water holes are to Blacks not merely interesting or beautiful 'scenic' features. They are the handiwork of uMvelinqangi (The Almighty) from whom the ancestors and the people at large have descended. Blacks see reflected in the surrounding landscape mythological stories of the lives and deeds of the ancestral beings they revere. This, by its nature would inculcate a positive cognition of the natural environment.

Attachment to natural environments which have been used as communal residential places rather than having been simply 'places', is much more intense among Black people, in particular those in the north-coastal region of Natal. The result is that tears are likely to be shed if ancestral graves, home sites and the general landscape are, sometimes unwittingly, desecrated or replanned by governmental agencies. To the eyes of Blacks, Western-based governmental procedures seldom, if ever, have the right attitude and approach to nature planning and conservation. Yet African literary accounts do argue that there is merit in procedures used by traditional societies and man in regulating relations to the natural environment. It is noted that African myth, art, religion, rituals, folkways and ethnophilosophy were very useful tools in providing taboos whereby to order these relations; to keep some kind of limit on population,

resource exploitation; and to give some sort of psychic and economic stability to the way communities lived.

That African philosophical views of the relations of man, society and nature are an organic unit, is emphasized by Madingoane (1979: 2) when he writes:

> I must define the value of humanity
> to myself
> And the value of myself to humanity
> and let my reality take its course
> so that man can explore
> the various avenues
> the various levels
> of reality
> to make it possible for himself
> and his fellow man
> to rediscover themselves
> how I love man as man
> and how I hate man as self.

Another development of the relationship between man and nature, and the timelessness of nature in contrast to the passing away of the cultural world and human existence is evident in the following Zulu poem by Vilakazi (1945: 18):

> OKOMHLABA KUYANDLULA
>
> Huba we Nomkhubulwane.
> Hub'ingoma yezilwane:
> Inyon' eyodw' ikhala endle,
> Inhlwel' ifikelwe ngumnyama,
> Ishay' ubala ngezimpiko,
> Ingazi laph' iqonde khona,
> Unjal' umphefumalo wami,

(The poem, in free translation, would read as follows:

OF THIS EARTH PASSES

Sing oh Nomkhubulwane[1]
Sing a song of the animals:
Lone bird that sings in the wilderness,
Overcome by dusk and darkness,
Fluttering its wings in vain
Not knowing where its going to,
Such is my soul).

The important symbolic role played by nature in the relationships between man and man, and man and society within the Black community (Ngubane, 1980) continue to remind us of the need to understand intergroup philosophies in relation to the natural environment. Mphahlele acknowledges that there is "one huge complex of life" (1974: 44) involving an interplay between the Supreme Being, the human beings, the animals, the earth, the sky, the river, the mountain and the forest. He maintains that nature will make us whole if we are spiritually at peace with the Supreme Being and all other living things.

The divergence of the idea-systems of Blacks from those of Whites makes it difficult for one group to understand the attitudes and behaviours of another without first admitting the 'differentness' or 'otherness' of the systems. For example, attitudes towards nature seen from a Black perspective suggest that Western values seek to defy, subjugate and conquer nature. This Black-White divergence is emphasized by Mphahlele (1974:71) in his own unique and critical way when he writes:

---

1 Nomkhubulwane is the 'sky-princess' or heavenly princess who, according to the Zulu legend, is partly human being, partly animal, and also appears as the mist or a grass or river landscape. From time to time she gives advice and rules to young girls (Vilakazi, 1965).

> I have not yet seen an African explore territory or climb mountains for mere conquest; I have not seen him sit on a lonely rock or river bank or lake shore fishing; I have not yet seen him develop game parks, except what he inherited from colonialism. It is a silly western idea to conserve wild life for the entertainment of foreign tourists. (1974: 71).

The critical interpretations of Black perceptions of the natural environment expressed by Mphahlele (1974) here and elsewhere in his writings can be explained as follows:

(a) The fact that Mphahlele (1974) is critical of conservation for the sake of stimulating the tourist trade possibly ensues from his dislike for Western values as they manifested themselves in Colonialism and Capitalism. In addition, the conservation and protection of animals does not seem to be ethically sound, when human beings are without land and other means of subsistence. This view is also supported by a study for the KwaZulu Government which concluded that Blacks see game reserves "as a white man's hobby" (Bulger, 1981: 6) and should rather be converted into grazing land.

(b) The idea of 'exploration' and 'conquest' of territory of natural areas, though it seems to be essentially psychological, evokes thoughts and expressions usually popular in colonial literature. The idea of subjugating nature is inimical to African traditional philosophy.

(c) Mphahlele (1974) states that he is unable to sympathize with Western people who weep over the disappearance of some animal

species. The expression of this unsympathetic feeling possibly stems from what has been mentioned under (a). Also, it is possible that Mphahlele and his fellow Africans do not have guilt feelings associated with western or colonial attitudes to wildlife, such as the wholesale slaughter of animals by colonial hunters and explorers.

(d) Mphahlele (1974) argues unconvincingly thatAfricans prefer visiting people than visiting natural scenery. Referring to precolonial times, some writers (Ludlow, 1882) mention accounts in which visits to natural areas were undertaken. Perhaps, people with particular expertise such as hunters, poets, deviners, medicine men, etc., would have visited the natural areas more than visiting other people.

In concluding this section it is worth noting that Mphahlele (1974); Manganyi (1973) and other writers do acknowledge that African culture is strongly under the influence of Western technology. It therefore stands to reason that African traditional attitudes towards natural areas which have not even made themselves generally known might now not even get an opportunity to emerge. Mphahlele (1974) accepts also that if the leisure class, transport and communications systems continue to grow and if African values adapt accordingly, then it may well be that more African people will patronize wildlife conservation areas.

3.4 PHILOSOPHY AND THE ENVIRONMENT

The two most important concepts considered in this chapter -- philosophy

and the natural environment -- are closely related: African philosophy, unless it is derived from an alien culture, is necessarily constructed out of the salient elements of social and physical settings (Ruch and Anyanwu, 1984). For example, in traditional African societies the physical setting is the overriding natural influence that has many attributes and presents many constraints. This relationship is illustrated in the case of traditional Zululand or 'Shaka-country' which constituted a natural area in which the Zulu people lived close to the forest-grassland environment. This environment influenced their livelihood patterns: game hunting, cattle rearing, food gathering and ploughing, and the use of plants and roots as a source of health and healing. It also afforded people a detailed knowledge of the fauna and flora useful to the community as a whole. Out of all of this there emerged a sense of life which in turn fed back to maintain an harmonious balance.

In other words, it is undoubtly clear from what has been discussed so far in this chapter that the cognition and manipulation of the natural environment are related to the use value dictated by the philosophical and cultural circumstances prevelent within a society. The intention in the preceeding section of this chapter was to illustrate four important premises which underlie the rest of this thesis:

(a) That sufficient literary material of an ontological and phenomenological nature is available to justify the adoption of an Africanist philosophical approach as a basis for undertaking action research.

(b) That concepts such as ethnophilosophy, Africanity, Negritude and African humanism, and the dialectical arguments and abstractions

they share, have every chance of being merged and seen as a single field known as African philosophical thought.

(c) That an interpretation of the African natural environment by Blacks can best be achieved through understanding the insights or innate knowledge consistant with Black existential experiences and African philosophical thought.

(d) That there exists an important pervasive relationship between African philosophical thought experiences and natural geographic interpretations of the environment.

If the intentions which underlie this chapter have been successfully presented then it is clear that interpretations of man's self-image and his cognitions of the natural environment will have to be seen as part of a broader epistemology requiring admission of an African and 'other' view of the world. What is more, if our eventual concern is to protect the natural environment, this must be undertaken in terms of our cognitions of both socio-cultural and natural environments. Lowenthal and Prince (1976:29) rightly concur that "environmental appreciation beyond sheer livelihood is ... seen as a mockery of urgent social and economic needs". In agreement, Leonard (1975) also goes on to urge us in a specific way that "we should continue to give top priority to unfashionable human problems. Fighting hunger, malnutrition, and rats should be given priority over saving wildlife" (1975: 53).

Considering that Black people have been reported as having little interest in nature reserves and conservation (Mphahlele, 1974; Bulger, 1981), which is perhaps because of counter-cultural and philosophical cognitions, financial constraints and the legacy of colonial oppression, something

has to be done to change the situation. The fact that Black people in South Africa are painfully aware of the relatively luxurious and easy way of life their White counterparts lead, acts as sufficient motivation for them to aspire to that very type of life (Hugo, 1974), which will perhaps be at the disadvantage of the natural environment.

Also important in this respect is the attempt to broaden both the philosophical ethics (including African values) and the training of individuals for environmental awareness and enjoyment. In many instances people are handicapped by sectarian thinking, ideological commitment and by entrenched interests, both academic and administrative (Birch, 1982). Those involved tend to see any form of synthesis as a threat to their security and privileged situation. If the proponents of each sector can work together regardless of disciplinary or philosophic boundaries to develop a new comprehensive ethic for environmental policy, then the definition and realization of objectives will become easier and safer than at any time in history (Birch, 1982).

This study has specific objectives and the chapters which follow attempt to show: first, whether the natural environment as it is today has changed substantially from what it was in traditional African times; secondly, if Black values and cognitions of the natural environment have already been overtaken by Western existential influences; and thirdly, some positive influences that African culture and philosophical thought might still exert on the changing South African outdoor recreation system. After all, Paden and Soja (1970) argue that traditional African personality and socio-cultural structures do not simply break down and disappear under the pressures of modern life, but live on in various and varying

forms. Today reality (Ruch and Anyanwu, 1984) demands a sympathetic understanding of people from a perspective of their own beliefs, practices and ideas.

This chapter, as a prelude to those which follow, has presented a philosophical rather than a substantive argument. It has tried to establish the possibility and indeed necessity of reasoning with and for African philosophy and values in the context of the geographic environment. However, the argument has not extensively tackled and integrated substantive questions regarding particular values, philosophies and the environment. Nonetheless, it is an attempt to call for African philosophical perspectives and relationships in the manipulation of the natural recreation environment. The conclusions arrived at cannot be expected to be more than tentative: the paradox of African philosophy and values, that they are at once traditional and mysterious, and re-emerging from passivity and the past, makes philosophical discussion difficult. Perhaps the main implication of this chapter is that work in Geography should progressively be committed to a situation in which it addresses itself to the philosophical values of African people, to values which have been misunderstood or simply ignored in the past.

CHAPTER 4

THE PHYSICAL SETTING

4.1 INTRODUCTION

This study aims to examine the cognitions of Blacks as they relate to current natural recreation resources in the north-coastal region of Natal. While the previous chapter paid attention to the role of philosophy and values in interpreting the natural recreation environment, this chapter deals with the physical environment in the study area (see Figures 1.1 and 1.2). For the purpose of studying human cognitions of the natural recreation environment, it is useful to focus on the functional, physical environment, the environment most pertinent to the people being investigated. The exploration of the physical environment in this situation represents *an examination of the recreation-behaviour setting -- the primary arena* in which cognitions arise and behaviours are enacted. Cognitions which emerged from respondents in the study and which are presented in later sections of the study are related to behaviour in the physical environment in order to complement the philosophical argument already assumed as being part of the respondents' recreation attitude -- and behaviour -- formulation system. In short, while Chapter 3 dealt with the matrix in which thought and action are included, this chapter considers a specific source of information -- the physical environment -- which provides a starting point for particular thought processes.

The compilation of data relating to the setting and nature of some of the major natural recreation resources in the study area, was achieved

through a simple but effective and reliable combination of three methods:

(1) A review of major written materials relating to the natural and game reserve areas.

(2) The use of a self-administered questionnaire amongst agencies and bodies administering major natural recreation areas (see Appendix C).

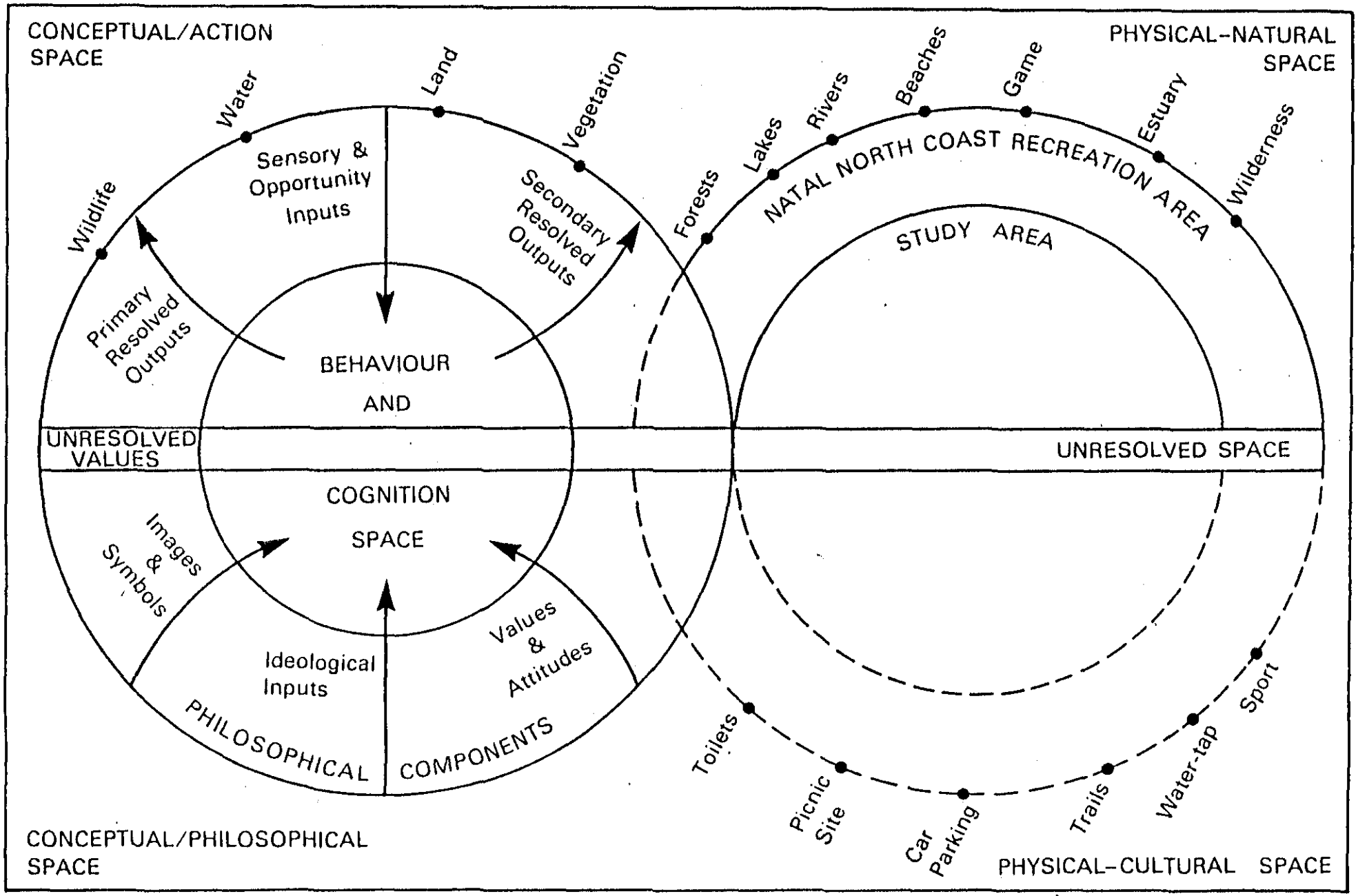
(3) An area survey, and interviews conducted amongst the authorities responsible for the management and control of the recreation resources.

Inevitably, information which proved difficult to come by or to verify using the first two methods was later to be acquired or updated by means of the third -- local surveys of the problematic areas or resources. Such was the case, for example, with most information required about recreation resources under the control of the KwaZulu Bureau of Natural Resources and the Natal Forest Region under the jurisdiction of the Department of Environment Affairs.Questionnaires to these organizations were either held back, because their information source was inadequate, or forwarded to another office which was regarded as having appropriate information about local natural resources.

4.2 THE CONCEPTUAL MODEL

It was mentioned that Chapter 3 presents the role of philosophy and values in interpreting behaviour within the natural recreation environment. In response, this chapter provides a conceptual model of spatial recreation behaviour (Figure 4.1) by means of which human spatial behaviour,

FIGURE 4.1 CONCEPTUAL MODEL SHOWING THE RELATIONSHIP BETWEEN PHYSICAL AND CONCEPTUAL SPACES IN THE NORTH-COASTAL REGION OF NATAL



in relation to specific natural recreation resources, can be examined and understood. The model has several advantages for this study and, more generally, for research in the field of behavioural recreation studies. First, it facilitates an understanding of the integrated relationship between the philosophical, behavioural (recreational), and physical components of Behavioural Recreation Geography. Secondly, it has wide applicability not only to natural recreation research but to other areas of outdoor recreation research. Thirdly, the model represents an interdependent system in which all elements play an important part in the final spatial behaviour and cognition of recreationists. Because the model represents a 'whole' system, there is a possibility of explaining any one or several elements which make up the spatial behaviour of natural recreation resource users. Finally, the model, as mentioned earlier in this section, can be implemented in relation to the use of a number of research methodologies and techniques such as secondary data, questionnaires, personal interviews, resource observation or case studies.

The basis of the model rests on the fact that there are recreationists or potential recreationists interacting (behaving) with one another, as well as with their environment, and that the interaction takes place in a particular kind of physical environment (natural recreation resources). The model describes and explains these interactions and the cognitions which preceed and succeed them. The rationale for the model is based on interaction at two levels: that of 'conceptual space' and that of 'physical space' (Figure 4.1). The nature of the interaction may be seen as a set of inputs and outputs, of a conceptual and physical nature, all of them essential for spatial decision-making processes, including resource creation, allocation and protection.

The value of the model lies in the fact that whether or not there exists a discrepancy between spatial behaviour and the nature of the landscape, the relationship may be viewed in terms of resolved and/or unresolved inputs and outputs. Behaviour and cognition in space are also influenced by such factors as the physical -- natural and cultural -- space and the conceptual -- action and philosophical -- space, and of course the characteristics of the users of these spaces. Behaviour and cognition can be visualized in terms of two types of outputs, the primary and the secondary resolved outputs. The primary resolved outputs relate to the set of modifications of the natural environment that have been instituted by some authoritative bodies such as management, government, semi-government or private owners. These modifications of the environment are the first which define the general type of natural resource uses such as developing beaches, forests, wilderness, camping, roads and many other facilities. The secondary resolved outputs relate to any further modification of the natural environment by users of that environment. This kind of usage may not be similar to the manner in which it was conceived by the recreation managers, planners and authorities. For example, in this chapter it will be demonstrated that White recreation users in the study area have influenced the kind of facilities that have been provided for them by the governmental agencies.

This chapter will describe peculiarities of natural recreation resources and explain the existence or nonexistence of recreation facilities and opportunities within the study area. The existence of these peculiarities will be determined by identifying patterns of recreationists' actual use of the natural recreation resources and relating those patterns to other elements in Figure 4.1. It is the relationship which is of great

concern to this study and ultimately to those who plan and manage the natural recreation resources, because an understanding of Black recreation behaviour patterns in space will lead to better predictions of most behaviour and cognition of the recreation landscape.

4.3 THE STUDY AREA

The decision to investigate the north-coastal region of Natal was influenced by the nature of the physical qualities of the natural recreation resources in the region as well as by its being the area occupied by the study group (see Chapter 5).The study area, which consists of seven magisterial districts; has the largest concentration and diversity of natural recreation resources in Natal. This area of approximately 30 000 square kilometres, stretching from Ubombo to Durban, as shown in Figure 1.2, is usually sunny and humid with a seasonal rainfall averaging an annual of 1300mm. The subtropical vegetation includes a preponderence of natural coastal forests, shrubs, mangrove swamps and interspersed savanna.

Since the study area is a subset of the Natal North Coast Region (see Figure 4.1) it is evident that the diversity of spatial elements for both natural and cultural physical spaces is well represented in the study area. It is also important to note that in this study there is little difference between the set-subset relationships as visualized in Figure 4.1. The study area comprises seven magisterial districts of the twelve districts which constitute the Natal North Coast Region. Appendix A shows the five districts (unshaded) which are not part of the study area. These are Ngwavuma, Mapumulo, Lower Tugela, Ndwedwe and Pinetown. Secondly, through the analysis of an inventory of natural recreation resources of

Natal enumerated under headings such as open beaches, rock-tidal pools, scenic areas, natural forests, unspoiled river valleys, waterfalls, waterbodies, nature reserves, birdlife and game parks by Ferrario (1981: 102), it has been possible to show that the study area has 146 of the 204 natural recreation resources available in the north-coastal region. This means that the study area has a high percentage of natural recreation resources so that it is not, in any real sense, unrepresentative of the larger Natal North Coast (Recreation) Region.

4.4 THE NATURAL RECREATION AREA

Normally the term 'natural recreation areas' refers to areas dominated by such resources as lakes, rivers, beaches, forests, wilderness, estuaries, lagoons, waterfalls, waterbodies and/or game which have a more-or-less well-defined domain -- the area. When the need arises to group such resources and resource areas in broad classes according to similarity in resource characteristics, considerable theoretical and methodological problems arise. Even when carefully undertaken, resource groupings have severe limitations if they are oversimplified. A grouping which uses terms such as 'game', 'water', 'forest','wilderness' and 'unique landform' clearly has problems which relate to definition, to overlap and to the problem of reduced analytical meaning.

In order to present, therefore, a clearer picture of the natural recreation areas in the study area, two methods of analysis have been used. The first is a macro-analysis of geographical elements, facility features and visitor patterns as they pertain to recreation resources. The second is a micro-analysis which discusses individual samples of natural recreation

resource areas representing four themes: game, water, forests and wilderness. This form of data organization, whilst attempting to give some sense of order in the diversity of information that is used in this chapter, also facilitates an understanding of the analytical units that are constituent parts of the conceptual-physical space relationships (see Figure 4.1).

4.3.1 A macro-analysis

The Natal North Coast Region is a unique natural recreation environment sculptured by the particular vegetation, climate, flora, fauna and topography of the area. On analysing the 35 developed natural recreation resources (Appendix G), it was discovered that the dominant recreation types fall into four broad categories: game related; beach related; forest and wilderness related, and river related resources. Other recreation types, for example mountain resources, do not feature in any significant way in this region.

In the Natal North Coast Region, the natural recreation resource areas under study (as reflected in Figure 4.1) range in size from the smallest of five hectares (Clive Cheesman Nature Reserve) to the sizeable 47 753 hectares of Umfolozi Game Reserve. As indicated in Table 4.1, the average size of the developed and undeveloped recreation resources in this region is a little more than 1000 hectares of the total area. Only ten (28 percent) of these natural recreation areas (N=35) have virgin or undeveloped recreation land; examples include Richards Bay Game Reserve, St Lucia Park, St Lucia Game Reserve, Eastern Shores Nature Reserve and Ubizane Game Ranch. Some of this virgin land is presently inhabited by birdlife,

TABLE 4.1: SIZE OF NATURAL RECREATION AREAS SHOWING FREQUENCY AND PERCENTAGE OF AREA UNDER RECREATION AND OF TOTAL AREA

AREA IN HECTARES	UNDER RECREATION		TOTAL AREA	
	n	%	n	%
1. 1 - 100	7	21	7	20
2. 101 - 500	5	15	5	14
3. 501 - 1 000	10	28	10	28
4. 1 001 - 5 000	3	9	3	9
5. 5 001 - 10 000	2	6	2	6
6. 10 001 - 50 000	7	21	8	23
	34*	100	35	100

(* N = 34. Richards Bay Game Reserve is not open for recreation, hence it is not included to make N = 35)

small antelope and other small mammals, and some of these particulary in Richards Bay, are outside the reach of recreationists because the natural area is closed for the public. What is also evident in Table 4.1 is that there is no clear pattern emerging from variations in developed and undeveloped natural recreation areas in term of size. However, it seems that more (23 percent) of the largest natural recreation resource areas include land that is underdeveloped.

There is strong competition between the need to retain the natural areas or virgin lands as they are and the demand to develop them for other land-use purposes such as agriculture, residence and industry. The Kenneth

Stainbank Nature Reserve, situated in the heart of greater Durban, is a good example of this situation. The conversion of unspoilt natural areas to residential or industrial areas, is dependent on who owns, controls and maintains such areas. A sizeable percentage (57 percent) of the 35 recreation parks and reserves under study are owned or controlled by the Natal Provincial Administration or its agency the Natal Parks Board. Other important owners or controllers of the sample natural recreation areas include private organizations and individuals such as the Wildlife Society and the owners of Nyala, Mhlopheni and Ubizane Game Ranches (20 percent). In addition, owners include municipalities (14 percent) and government agencies such as the KwaZulu Bureau of Natural Resources (9 percent) which controls, inter alia, Ngoye and Nkandla Forest Reserves and Kosi Bay Nature Reserve.

The site and ownership of natural recreation areas has some bearing on the usage and types of resource features found within these areas. As reflected in Figure 4.1, the sensory and opportunity inputs are influenced by primary resolved outputs, that is, the sets of modifications emerging from authoritative bodies. The resultant resource features or characteristics are numerous and diverse, and need some reorganising. The single major reason behind grouping and analysing resources according to similar characteristics is to discover patterns that would facilitate the understanding of the subject matter at hand. Table 4.2 and the data that follow concerning the distribution of the type of fauna, flora, waterbodies and landforms within the north-coastal region, makes use of the synthetical and analytical methods. What becomes clear from Table 4.2 is that, of the types of fauna tabulated, antelope are found in 36 percent of the natural recreation parks and reserves. This is so because

antelope are more adaptable than the big game and predators. Their food source is abundantly available in the coastal grassland and swamp forests, and they inhabit both small and large natural parks and reserves.

TABLE 4.2: MAIN TYPES OF FAUNA FOUND IN DIFFERENT NATURAL RECREATION AREAS OF THE STUDY AREA

FAUNA	RESERVES (f)	RESERVES (%)
1. Big game	5	10
2. Predators	6	12
3. Antelope	19	36
4. Small mammals	10	19
5. Birds	12	23
	52*	100

(* N = 35, Some Recreation Reservesindicated having more than one type of fauna)

The population of predators such as lion, leopard, cheetah and hyena, and big game such as giraffe, rhinoceros, hippopotamus and buffalo are not substantial. They do not seem to occur outside the large natural reserves such as Hluhluwe, Umfolozi and Mkuzi, and in these reserves they thrive because they are legally protected. The small mammals such as the mongoose, bushbaby, monkey, suni, hare, squirrel, etc. and many species of birds are abundantly available in many of the small natural parks and reserves (19 and 23 percent respectively) of the Natal North Coast.

The analysis of data from the self-administered questionnaire shown in

Appendix C, reveals that the dominant types of flora in the study area are shrubs and coastal forests. About 43 percent of the natural parks and reserves indicated this. The kind of flora involved includes plants such as Illala palm, wild date palm, Natal wild banana, giant-leaved fig, common coral tree, broad-leaved raisin tree, marula, white pear, water berry (Umdoni), Natal plum, etc. (Natal Parks Board, 1981b). Thirty-six percent of the respondents from the recreation resource areas studied, selected coastal lands as the dominant feature and, to a lesser extent, flatlands, grasslands, marshes, valleys, hills and mountains. The coastal lands are also washed and swamped by rivers such as the Mkuze, Hluhluwe, Umfolozi, Umhlatuzi and Umgeni. These five rivers, except the Umhlatuzi, support recreation reserves that actually bear their names (Appendix G). These rivers directly sustain the flora and fauna and, indirectly, recreation pursuits, particularly during times of drought. This sustenance at times turns into a disaster with the occurence of tropical cyclonic floods such as occured recently when 'Demoina' struck on January 31st, 1984.

The next important point of our discussion relates to understanding the role played by the character of facilities in explaining the nature of the recreation experience available to recreationists in the north-coastal region of Natal. The proposed conceptual model (Figure 4.1) helps in describing the relationships and domain of components important to the experiences of a recreationist. In addition, there are three points of departure in looking at the provision of facilities within the natural recreation areas, which can be associated with the secondary resolved outputs. The first is that which advocates having no additional man-made facilities within the natural recreation resource area. The second

advocates providing only basic necessities such as tap-water, toilets, and zoned picnic, camp and fishing sites. The third maintains that most natural areas must be actively modified to include modern conveniences facilities such as tarred roads, telephones, electrified kitchen facilities, resurfaced play fields, etc. This is an existing (and important) feature of some parks in Oregon and other parts of the United States (Magi, 1979).

In the Natal North Coast Region there are, as reflected in Table 4.3, a few natural recreation resource areas that do not have additional man-made facilities. Resource areas that more or less characterize that situation are Richards Bay Nature Reserve, St Lucia Reserve, Ngoye Forest Reserve and to a lesser extent, Dukuduku, Mihobi, Clive Cheesman and Enseleni Nature Reserves. Equally, natural recreation resource areas that contain modern convenience facilities such as public transport, sports, showering, child-play and refreshment facilities are not numerous and are available prominently in not more than five of the 35 developed resource areas (14 percent). These five are: Albert Falls, Midmar, Umgeni valley, Sodwana and St Lucia Park, and what is common about all of them is that they are water-related recreation resource areas. In addition, three of them are located not far away from urban metropolitan areas. On the other hand, recreation resource areas within the Natal north-coastal region (Table 4.3) that provide basic necessities such as toilets, tap-water, zoned picnic and camp sites are predominant. These are found in not less than 25 of the 35 developed resource areas (71 percent).

A more global view of Table 4.3 may be read from rows 36 and 37 which consider facilities in relation to all 35 developed resource areas. From these, the following pattern emerges:

TABLE 4.3: CHECKLIST OF FACILITIES AVAILABLE IN RECREATION RESOURCE AREAS IN THE NATAL NORTH COAST REGION

RESOURCE AREAS \ FACILITIES	1. Huts/Rondavels	2. Toilets	3. Picnic sites	4. Camp sites	5. Fishing	6. Braai-spots	7. Swimming	8. Trails	9. Hunting	10. Showering	11. Activity progs.	12. Water Acts.	13. Outdoor Educ.	14. Sports	15. Child-play	16. Refreshment	17. Electricity	18. Water tap	19. Pub.Transp.	20. Car-parking	21. Total facilities	22. Facilities per Resource Area(%)
1. H.-Johnson Reserve		X	X	X		X		X			X		X				X	X		X	10	50
2. Dukuduku Forest			X			X		X												X	4	20
3. Albert Falls Resort	X	X	X	X	X	X	X			X		X		X	X		X	X		X	14	70
4. Umgeni Reserve	X	X	X	X		X	X	X		X	X	X	X	X		X	X	X	X	X	17	85
5. Mihobi Reserve			X			X		X												X	4	20
6. C-Cheesman Reserve	X		X			X							X								4	20
7. Nyala Game Ranch	X	X	X	X		X	X	X	X	X			X			X	X	X		X	14	70
8. Bona Manzi Ranch	X	X	X			X	X		X	X							X	X			9	45
9. Mhlopheni Reserve	X	X	X	X		X		X	X	X	X		X							X	11	55
10. Palmiet Reserve			X			X		X			X	X	X								6	30
11. Springside Reserve			X			X		X					X							X	5	25
12. R/Bay Reserve																					0	0
13. Midmar Reserve	X	X	X	X	X	X	X					X		X	X	X	X	X		X	14	70
14. Cape Videal Reserve	X	X	X	X	X	X	X	X				X						X		X	11	55
15. Ndumu Reserve	X	X				X		X									X	X			6	30
16. Umfolozi Reserve	X	X	X			X		X					X				X	X			8	40
17. Hluhluwe Reserve	X	X	X			X							X				X	X			7	35
18. Umhlanga Lagoon		X	X			X	X	X			X	X	X					X		X	10	50
19. Enseleni Reserve			X			X		X										X		X	5	25
20. Sodwana Bay Park		X	X	X	X	X	X			X		X			X	X	X	X		X	13	65
21. Umlalazi Reserve	X	X	X	X	X	X						X			X	X	X	X		X	12	60
22. False Bay Park	X	X	X	X	X	X		X		X		X						X		X	11	55
23. Mkuzi Reserve	X	X	X	X		X		X		X		X					X	X		X	11	55
24. St Lucia Park		X	X	X	X	X		X				X	X	X	X	X	X	X		X	14	70
25. Charters Creek	X	X	X		X	X						X	X				X	X			9	45
26. Fanie's Island	X	X	X	X	X	X						X					X	X			9	45
27. Mapelane Reserve	X	X		X	X	X	X					X					X	X			9	45
28. St Lucia Reserve					X																1	5
29. Ngoye Forest			X					X					X								3	15
30. Inanda Park		X	X	X		X		X			X		X				X	X		X	10	50
31. Ubizane Ranch								X	X				X				X	X	X	X	7	35
32. Marionwood Reserve		X	X			X		X			X		X				X	X		X	9	45
33. K-Stainbank Reserve		X	X			X		X			X		X		X	X		X		X	10	50
34. Itala Reserve	X	X	X	X	X	X	X	X										X		X	10	50
35. Krantzkloof Reserve		X	X			X		X										X		X	6	30
36. TOTAL	18	25	30	16	12	31	10	23	4	8	8	13	18	4	6	7	19	26	2	23		
37. FACILITY IN RESOURCE AREAS(%)	51	71	86	46	34	89	29	66	11	23	23	37	51	11	17	20	54	74	6	66		

(a) Facilities that are offered by more than 60 percent of the developed resource areas include toilets, picnic, braai-spots, trails, water-taps and car parking.

(b) Facilities that are offered by less than 20 percent of the developed resource areas include public transport, sports, hunting and refreshments.

Another view of Table 4.3 may be read from columns 21 and 22 representing facilities per individual resource area. The data in these columns (Table 4.3) show that the range of facilities available per resource area is from 0-85 percent and dominant at the 50 percent level.The data is also presented graphically in Figure 4.2 and show the following pattern within the developed resource areas in the Natal north-coast region:

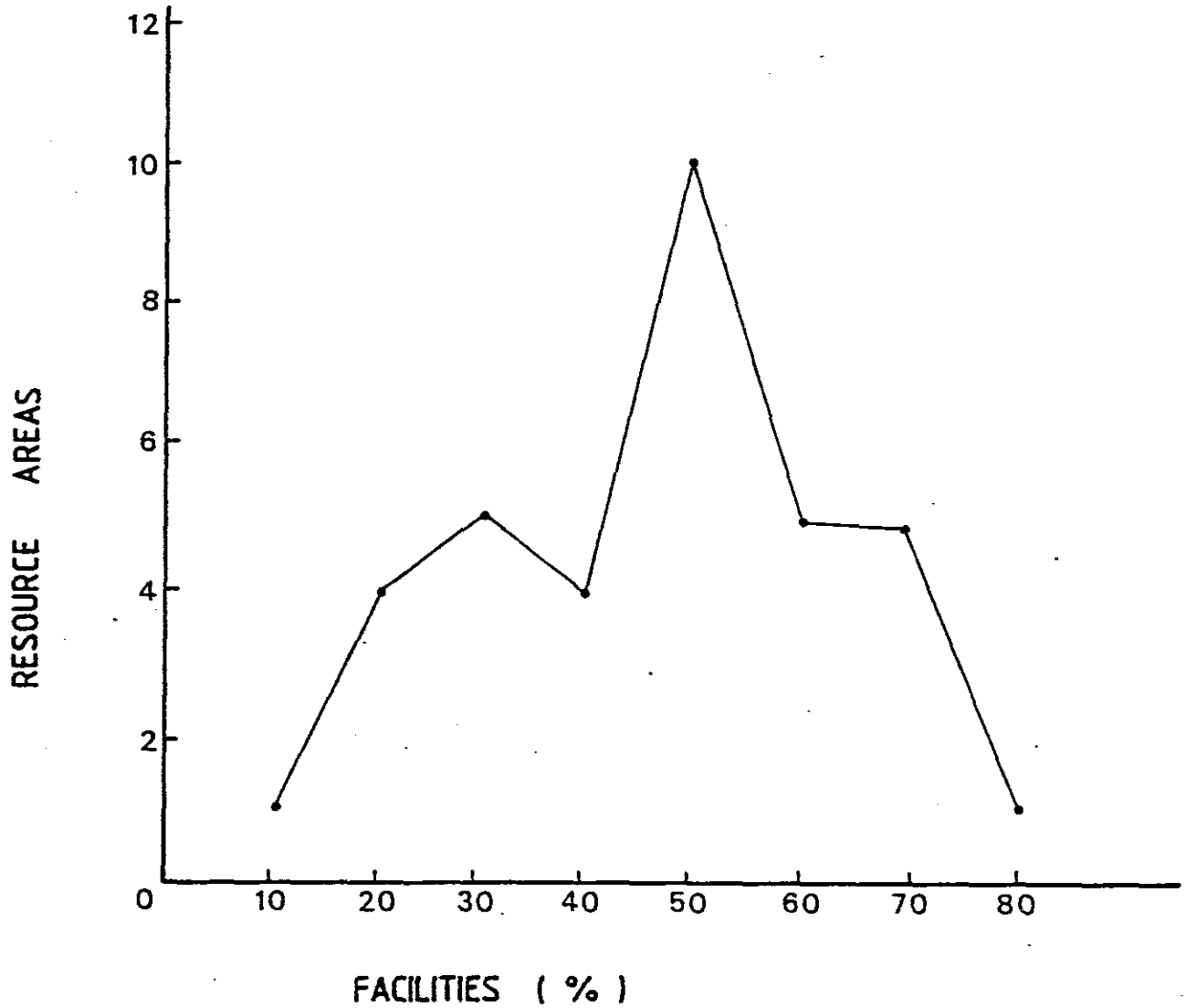
(a) A relatively low number of recreation resource areas (4) have less than 20 percent of the range of possible facilities available for individual resource areas.

(b) A moderate number of recreation resource areas (6) offer a varying number of facilities with a range of 20 to 70 percent of individual resource areas.

(c) A relative low number of recreation resource areas (4) have more than 70 percent of the facilities available within individual resource areas.

(d) The largest number of developed recreation resource areas (actually

FIGURE 4.2 FREQUENCY OF AMOUNT OF FACILITIES (%) IN RECREATION RESOURCE AREAS



ten), have an average of 50 percent of the facilities occuring within individual resource areas.

The most dominant idea reflected in both Table 4.3 and Figure 4.2 is that the popular facilities were fewer and offered by a moderately low number of developed resource areas. This was the case with the least popular facilities which included hunting, public transport, child-play,

sport and refreshment facilities. The choice of these facilities in some ways reflects the type of values predominant amongst White South African recreationists. These are that:

(a) Local recreation behaviour patterns are dominated by the motor car.

(b) There is great attachment to modern convenience facilities and these being transferred to the natural environment.

(c) There is preference for outdoor activities which include eating 'braai-ed' or barbecued food.

The unresolved space and values in our conceptual model (Figure 4.1) reflect the existence of unknown entities within the natural recreation space in the Natal North Coast. Not all the facilities are available to all population groups in Natal. Table 4.4 shows those facilities that

TABLE 4.4: FACILITIES EXISTING AND OPEN OR CLOSED TO BLACKS IN THE NATAL NORTH COAST REGION

FACILITY	EXISTING (%)	OPEN(%)	CLOSED(%)
1. Braai-spot	89	79	21
2. Picnic	86	76	24
3. Tap-water	74	67	33
4. Toilets	71	55	45
5. Trail	66	61	39
6. Car-park	66	58	42
7. Electricity	54	44	56
8. Huts/Rondavels	51	42	58
9. Outdoor Educ.	51	45	55
10. Camp	46	36	64
11. Water activity	37	30	70
12. Fishing	34	24	76
13. Swimming	29	16	84
14. Showering	23	24	76
15. Activity programs	23	24	76
16. Refreshment	20	15	85
17. Child-play	17	12	88
18. Sports	11	12	88
19. Hunting	11	16	84
20. Public Transport	6	7	93

are generally available and those that are either open or closed open to Blacks in the Natal North Coast recreation resources. The general picture which emerges from the table is that the higher the availability of a facility within recreation areas, the more likely it is to be open to all race groups. The lower the availability the more likely it is to be restricted and the less likely it is to be available to Blacks.

The theoretical review (Chapter 2) and the conceptual analysis (Figure 4.1) suggest that information concerning the environment, the people and their cognitions, the recreation facilities offered, and how these are administered are all important aspects of information used by recreationists in their decision to visit natural recreation resources. This was observed by John Muir as far back as 1901 when he wrote:

> The tendency nowadays to wander in the wilderness is delightful to see. Thousands of tired, nerve-shaken, over-civilized people are beginning to find that going to the mountain is going home.
>
> (Muir 1901: 4).

The following Tables (4.5 and 4.6) give an indication of the kind of people who use recreation resources areas on the Natal North Coast. It is these visitor's cognitive and behavioural spaces that are primarily influenced by philosophical considerations and secondarily by sensory and opportunity inputs (Figures 4.1). The largest population group amongst the visitors to natural parks and reserves is, predictably, White (87 percent) and the lowest (equally predictably) Blacks (2 percent). This pattern reflects an acute situation if we consider this in relation to the nation's population, 15 percent of whom are Whites, 3 percent are Indian, 9 percent Coloureds and 74 percent are Blacks (Cooper, et al. 1985: 185).

It is important also to see the 'low visit' figures (2 percent) for Blacks, in terms of the ideas advanced earlier by Mphahlele (1974) and a research report by Tinley and Van Riet (Bulger, 1981: 6) to the effect that:

> Game reserves are seen by the majority of Zulu people as a Whiteman's hobby. If there were to be any major political change tomorrow the KwaZulu Government would be under pressure to deproclaim the wild areas and turn them back to the people for grazing land.

In addition to visitors being predominantly White, they are also predominantly from Natal (Table 4.5). The high percentage of local visitors (59 percent) to these resource areas could be accounted for by factors such as distance, limited accommodation facilities, the absence of intensive or 'Wild-Coast' (casino) type entertainment, and the high cost of travelling.

TABLE 4.5: VISITORS TO THE NATAL NORTH COAST RECREATION RESOURCE AREAS(%)

	FREQUENCY*	PERCENTAGE
1. ETHNIC GROUP		
Whites	76	87
Indians	8	9
Coloureds	2	2
Blacks	2	2
	88	100
2. PLACE OF ORIGIN		
Natal	51	59
Transvaal	15	18
Overseas	7	8
O.F.S.	6	7
Cape	5	6
Neighbouring-countries	2	2
	86	100

*(Frequency (f) = computed from mean percentage value per group and place respectively.)

TABLE 4.6: VISITORS TO THE NATAL NORTH COAST BY RECREATION RESOURCE AREA (PER ANNUM)

NUMBER OF VISITORS	NUMBER OF RESOURCE AREAS	PERCENTAGE
0 - 500	1	3
501 - 1 000	6	3
1 001 - 5 000	6	19
5 001 - 10 000	3	9,5
10 001 - 50 000	17	53
50 001 - 100 000	3	9,5
More than 100 000	1	3
	32*	100

*(N = 35. No figures available for Ngoye Forest, Richards Bay and St Lucia Game Reserves.)

The figures in Table 4.6 show that 17 of the recreation resource areas (53 percent) account for an average of 30 000 visitors to the Natal North Coast recreation areas per annum. Whilst two of the resource areas attracted less than 1 000 visitors per annum, one area attracted more than 100 000 visitors. This pattern emerges as a result of the high Natal visitorship (see Table 4.5) and the perennial type of recreation activities offered in that particular resource area.

This section has attempted to bring into focus some specific surveyed information using a macro-analytical approach. The approach actually paid attention to geographical (recreational) elements and facility features such as the sizes of different recreation resource areas, the flora and fauna in the region and facilities found within each resource area. In addition, visitor patterns relating to place of origin, ethnic composition and visits to individual resource area were considered. This physical-

natural space analysis has attempted to bring to light the basis on which some of the conceptual and action spaces involving sensory and opportunity inputs have come to being.

4.3.2 A micro analysis

Now that the global picture of the natural recreation areas has been discussed, let us briefly explore the physical -- both natural and cultural -- spaces, and the conceptual-action space attributes (Figure 4.1) within specific natural recreation resource areas in the Natal North Coast region. The individual natural recreation resource areas to be investigated are:

1. Umfolozi Game Reserve
2. Kenneth Stainbank Nature Reserve
3. St Lucia Park
4. Nyala Game Ranch
5. Ngoye Forest Reserve

The purposive selection of these five recreation resources has been undertaken to offer a range of resource and location types within the study area.

4.3.2.1 Umfolozi Game Reserve

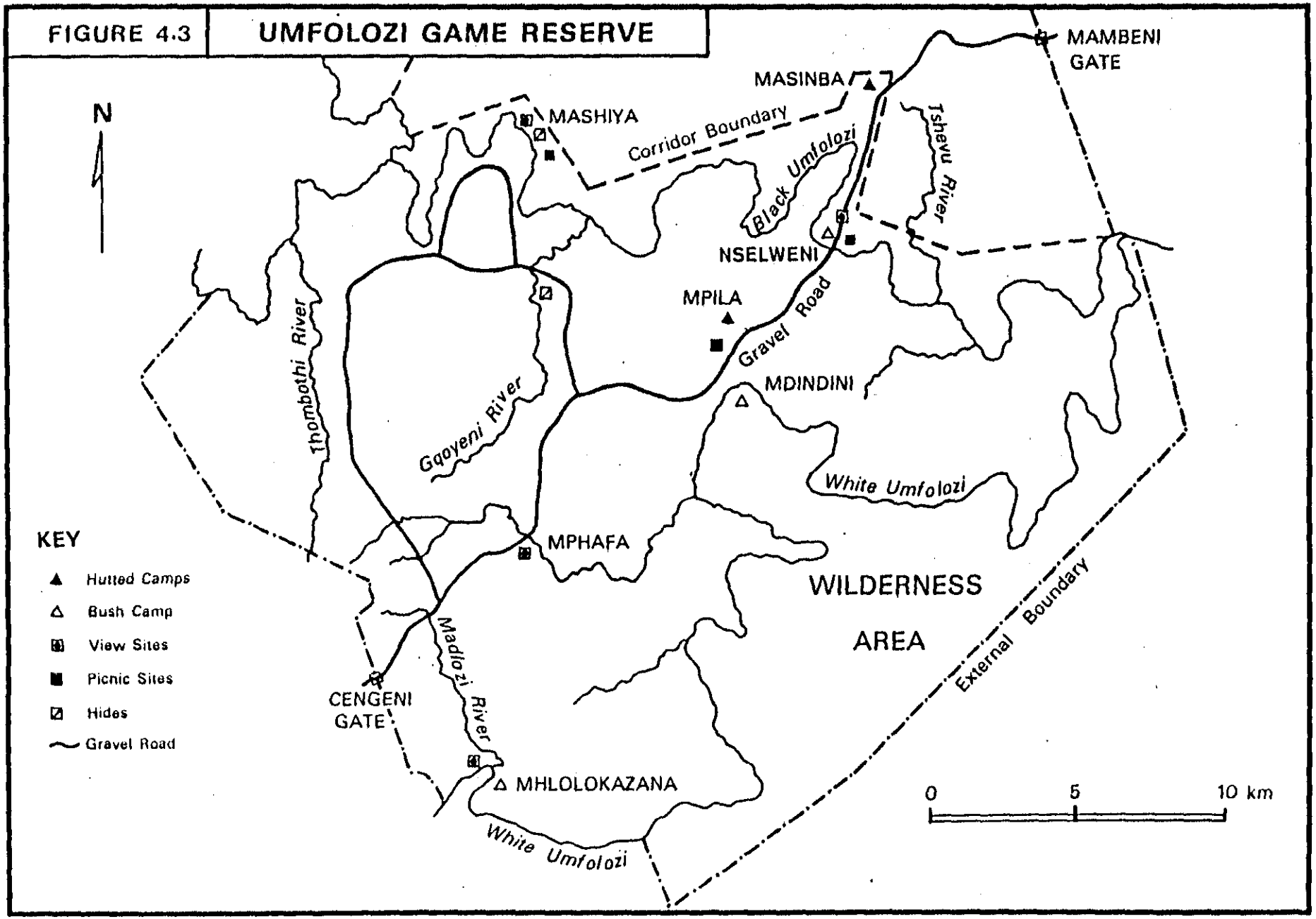
Umfolozi Game Reserve is located at the place where King Shaka conducted his royal and communal hunts using the 'pitfall' hunting technique, at the confluence of the Black and White Umfolozi rivers. Archaeological and historical evidence shows that the game pits were dug where the courses of the Black and White Umfolozi rivers form a bottleneck, and also that

the Umfolozi area was then teeming with buffalo, elephant, rhinoceros, kudu, zebra and many other animals (Hall, 1977).

This wildlife sanctuary is one of three areas besides Hluhluwe and St Lucia which the Natal Government of the 1800's established as 'Game Reserves'. The Umfolozi Game Reserve was actually established on the 27 April 1897. In 1910 the Natal Provincial Administration took control of all the game and nature reserves in Natal. It was not until 1947 that legislation was passed proclaiming that national parks, game and nature reserves under the Natal Provincial Administration and other statutory bodies be consolidated under the Natal Parks, Game and Fish Preservation Board - (Natal Parks Board). Today it administers all aspects of nature conservation and public recreation in Natal. It also controls, manages and maintains most parks, resorts and game and nature reserves in Natal (Natal Parks Board, 1984).

Umfolozi Game Reserve covers an area of 47 753 hectares and is located about 30 kilometres north-west of Mtubatuba (see Figure 1.1). The game reserve has a mean annual rainfall of 750 mm but is usually less than 700mm, exceptionally high, but rare, falls accounting for the high mean. The vegetation is a result of the relatively warm and dry climate dominated by dry thornveld or bushveld with thorny species of acacia and not too long savannah grasses. Umfolozi Game Reserve depends heavily on both the Black and White Umfolozi rivers and their tributaries (see Figure 4.3) for the scenic attributes and functionality of most of the waterholes, view sites, hides and picnic sites. During times of drought and floods the working situation of all these facilities within the game reserve are strongly affected.

FIGURE 4.3 UMFOLOZI GAME RESERVE



Source: Natal Parks Board (1981)

The present day Umfolozi Game Reserve has about 50 animal species among which are 900 rhinoceros, 900 buffalo, 1300 wildebeest, 650 zebra, giraffe, lion, leopard, cheetah, hyena, baboon, crocodile, warthog, many varieties of antelope and about 300 species of birds. The reserve is regarded as the home of the white rhinoceros and through effective game conservation strategies the rhinoceros has been reintroduced in many other parts of the country. These animals can be seen from game sites such as the hide, waterhole, picnic site and bush camps (Reader's Digest Illustrated Guide, 1983). The southeastern section of the game reserve, (Figure 4.3), has about 24 000 hectares set aside as a wilderness area. Trail parties are organized under the supervision of a ranger as part of an outdoor education programme (Natal Parks Board, 1981a).

The questionnaire responses from game reserve authorities, (Appendix -C) indicate that in 1984 Umfolozi Game Reserve received 20 103 visitors. Of these, 92 percent were Whites, 6 percent were Blacks and 2 percent Indians. No Coloureds are recorded as having visited the reserve in 1984. It should be noted that this number of visitors reflects a 40 percent drop from the average numbers of the previous two years. This is because of the effect of the 1983 drought and the January 1984 'Demoina' flood. About 50 percent of the visitors originated from Natal, 29 percent from overseas countries and 21 percent from the other provinces of South Africa.

The visitors are accommodated in five camps. These include two hutted camps: Mpila with 12 huts and Masinda with 6 huts, and three bush camps: Mdindini with 3 huts, Nselweni with 4 huts and Mhlolokazana with 4 huts. Most of these camps have hot and cold water, flush toilets, gas fridges, cooking and bedding facilities (Natal Wildlife, 1983).

In conclusion, it should be noted that the Umfolozi Game Reserve is experiencing a wide range of pressures from drought and floods on one hand, and increased interest in visiting the reserves on the other. Problems operating immediately outside the reserve, cited by Cooper (1984: 104), are an increase in the human population; the number of domestic animals on the land; natural areas converted to agriculture; soil erosion; destruction of the natural forests and woodlands, etc. These problems are likely to affect the game reserve directly in the near future. In fact, they actually eliminate any possibility of expanding the area of the game reserve.

4.3.2.2 Kenneth Stainbank Nature Reserve

Kenneth Stainbank Nature Reserve, like Umfolozi Game Reserve, is proudly associated with King Shaka in that one of his military kraals (known as Ndabankulu) was sited in what is now the nature reserve. It was not until the second half of the 19th century that the property on which the nature reserve now stands was acquired by Henry Stainbank of the Natal pioneer family. On the 12th October 1959 Kenneth Stainbank, an heir to the property, decided to donate the 214 hectare property to the South African public on specific provision that it shall be used exclusively for the purposes of nature conservation (Natal Wildlife, 1985).

After protracted negotiations the Kenneth Stainbank Nature Reserve, which is presently located within Yellow Wood Park Township (see Figure 4.4), was officially proclaimed on the 12th February 1963 and the Natal Parks Board was given responsibility for its control and maintenance. The Board accordingly laid its objective as being: "too conserve plants and animal

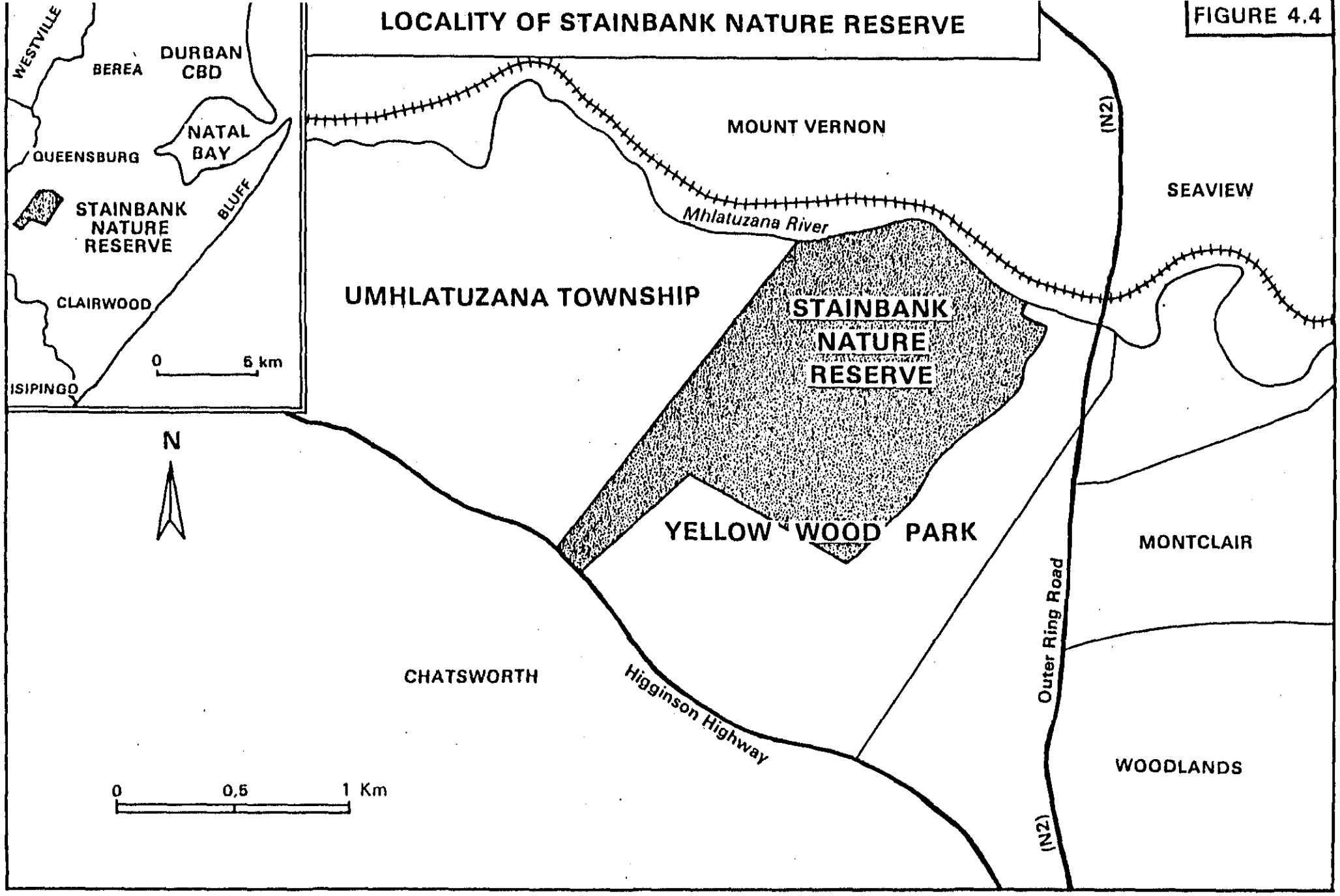
species and habits, and to permit use of the reserve for education research and recreational purposes" (Natal Wildlife, 1985: 4). It was also stipulated in the agreement that if any other contrary purpose was contemplated, the land would revert to the Stainbank heirs.

According to Bourquin (1984) this natural park or reserve is small (214 hectares), being under 1000 hectares. It has unspoilt climax coastal forests and grasslands which have species that are not found anywhere else in South African (Natal Wildlife, 1985). The nature reserve is located only 14 kilometers south-west of Durban city centre and therefore, its greatest material value is that it is one of the few remnants of mature forest vegetation that is within an area of high urban development.

The encroachment of infrastructural developments, such as roads, pipelines and service cables, into the Kenneth Stainbank Nature Reserve is real and threatening. A proposal to lay a sewage pipe through the main valley of the reserve was contested successfully, and the pipe was subsequently sited along the Umhlatuzana railway line (see Figure 4.4). Presently there is a proposition to site an access road to the residential area of Chatsworth through the nature reserve instead of through the Umhlatuzana river valley.

The natural recreation features and facilities in the Kenneth Stainbank Nature Reserve are not out of proportion to its size and urban location. It has a viable population of red duiker, blue duiker and bushbuck. Also to be seen are zebra, impala, nyala and giraffe. There are also about 160 species of birds. The facilities include two picnic sites and well sign-posted self-guided nature trails. There are no camping

FIGURE 4.4



Source: Wild Life Society — Natal (1982) and Moss (1985)

or overnight facilities.

The reserve also contains the headquarters of the Wilderness Leadership School which runs conservation education courses for people of all population groups. According to Bourquin (1984), visitors to this reserve number about 20 870 per annum of whom over 10 000 are students attending nature conservation courses (Goetz, 1985), other important ongoing projects at the Stainbank Reserve include the monitoring of acid rain on the reserve vegetation and pollution of the water resoruces (Reader's Digest Illustrated Guide, 1983).

4.3.2.3 St Lucia Park

The St Lucia Lake natural park complex (Figure 4.5) is actually made up of four separate reserves: St Lucia Park; False Bay Park; St Lucia Game Reserve and the Eastern Shores Nature Reserve. For the purpose of our discussion, this section will concentrate on St Lucia Park only since the nature and character of the entire estuary is well represented in the Park. According to the Natal Parks Board (1979), St Lucia Park consists of the land around the estuary and a strip of approximately 1 kilometre around most of the lake shore.

Historically, the area around lake St Lucia was inhabited by African people who actually called the lake Cwebeni laseNtlengeni - the lagoon of the rafts. The name 'Santa Lusia' was given by the Portuguese mariners exploring the south-eastern coast of Africa (Van Zyl, 1973; Natal Parks Board, 1979). The claims to ownership of Lake St Lucia, not mentioning

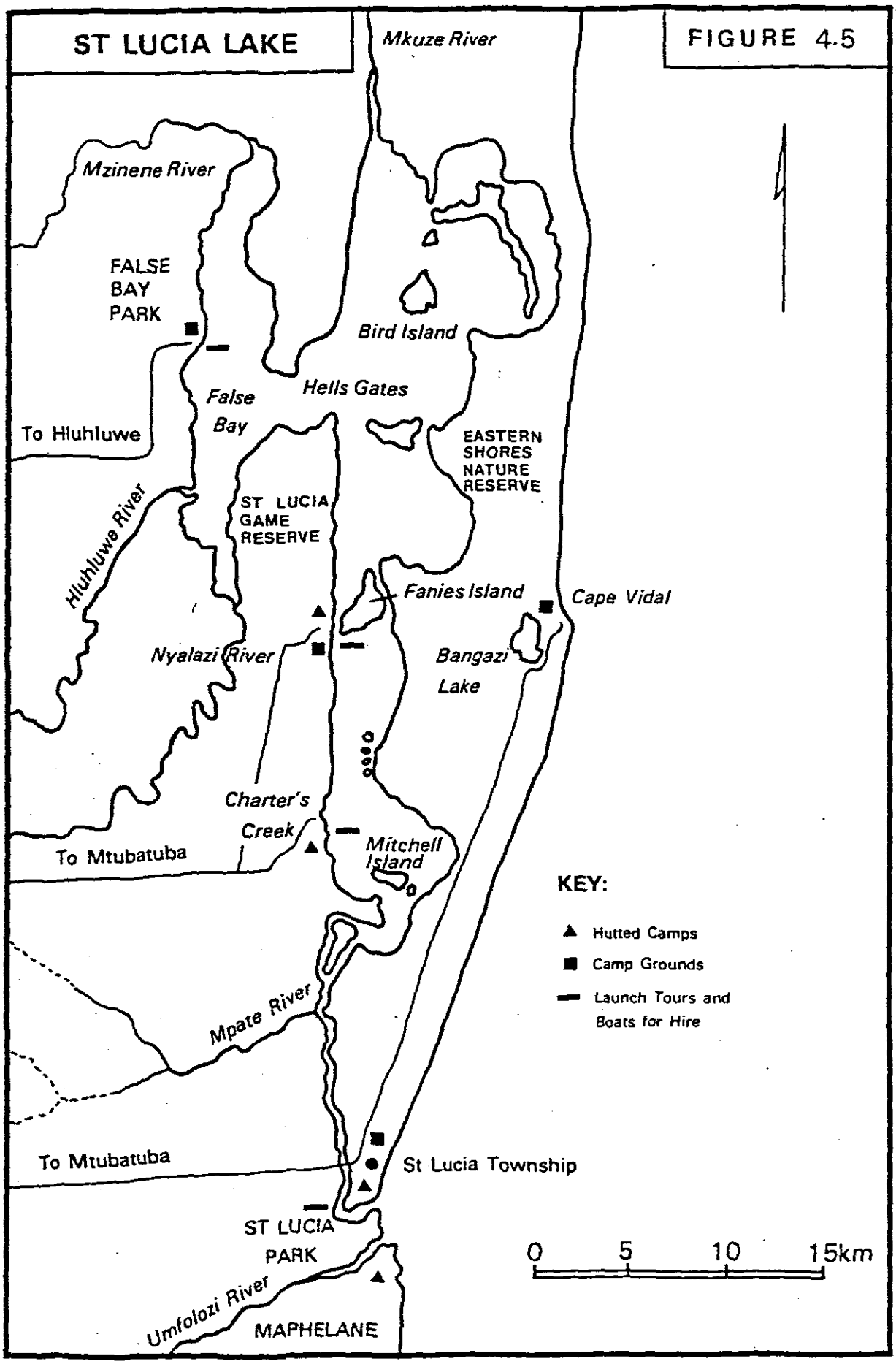
those of the Africans, have varied considerably the last three to four centuries. These have included the claims of Portuguese, the Germans, the British and the Boers of the New Republic. Eventually ownership was granted to the British in 1884 through annexation. By 1897 the Natal Colonial Government proclaimed Lake St Lucia a game and nature reserve. In 1947 the control, management and maintenance of the St Lucia Reserve was transferred to the Natal Parks, Game and Fish Preservation Board.

Over this period the St Lucia area was perceived very differently by authorities, hunters, explorers and ordinary people:

> Wetlands to the naturalist are places of tranquil beauty, rich in colour, alive, critically important to our wildlife. To the thoughtless developer they are muddy, murky wastelands, teeming with bugs and biting things, fit only for damming, draining, developing and - inevitably - destroying.
>
> (Our Living World, 1985a: 7)

In actual fact Teale (1984) argues that by 1947 the government and local farmers had initiated some projects on land adjacent to the Lake. There was vast government afforestation, canalization of rivers and the disruption of the natural flow of fresh water into the lake. These all imply that there are serious ecological problems in store for the lake.

St Lucia Park, as a block of 12 545 hectares, was proclaimed on 31st August 1939, consisting of the estuary area and land around the lake. This area also included Charters Creek, Fanies Island and Maphelane (see Figure 4.5), which has been declared a nature reserve in its own right on the 30th November 1984 (Cooper, 1985). Recent reports indicate that the total area of St Lucia Park, including land that is not available



Source: Natal Parks Board (1979)

for recreation is approximately 31 000 hectares. Lake St Lucia, being one of the biggest marine lakes in Africa, supports a large variety of water related animals. These include approximately 600 hippopotami, 1000 crocodiles, 300 different species of birds, such as pelicans, flamingoes, ibises, ducks, herons, fish eagles, and kingfishers and a variety of fish that are of marine origin (Natal Parks Board, 1979; Teale, 1984). The mammals that are found around St Lucia Park include the vervet monkey, jackal, duiker, nyala, bushbuck, steenbuck, reedbuck, bushpig, and spotted hyena. The big-game referred to by early explorers of this area are no more to be found (Natal Parks Board, 1979).

St Lucia Park receives 17 762 visitors per annum, 90 percent of whom are Whites, 8 percent are Indians and about 1 percent each for Coloureds and Blacks. The majority of the visitors (66 percent) are from the three provinces besides Natal (32 percent) and the rest from foreign countries (2 percent). Facilities that attract most of these outside visitors are predominantly water-related and include hutted camps and camping sites by the lake shores at Charters Creek (15 huts) and Fanies Island (14 huts). There are also self-guided trails, fishing, boating, picnicking and other water activities such as launch tours.

In conclusion it is worth reiterating that the natural environment which existed a century ago in St Lucia Park continues to disappear at an alarming rate. An important question to ask is, what would happen if many more people that do not have respect for wildlife continue to monopolize all the priveleges associated with the use of reserves such as St Lucia Park ?

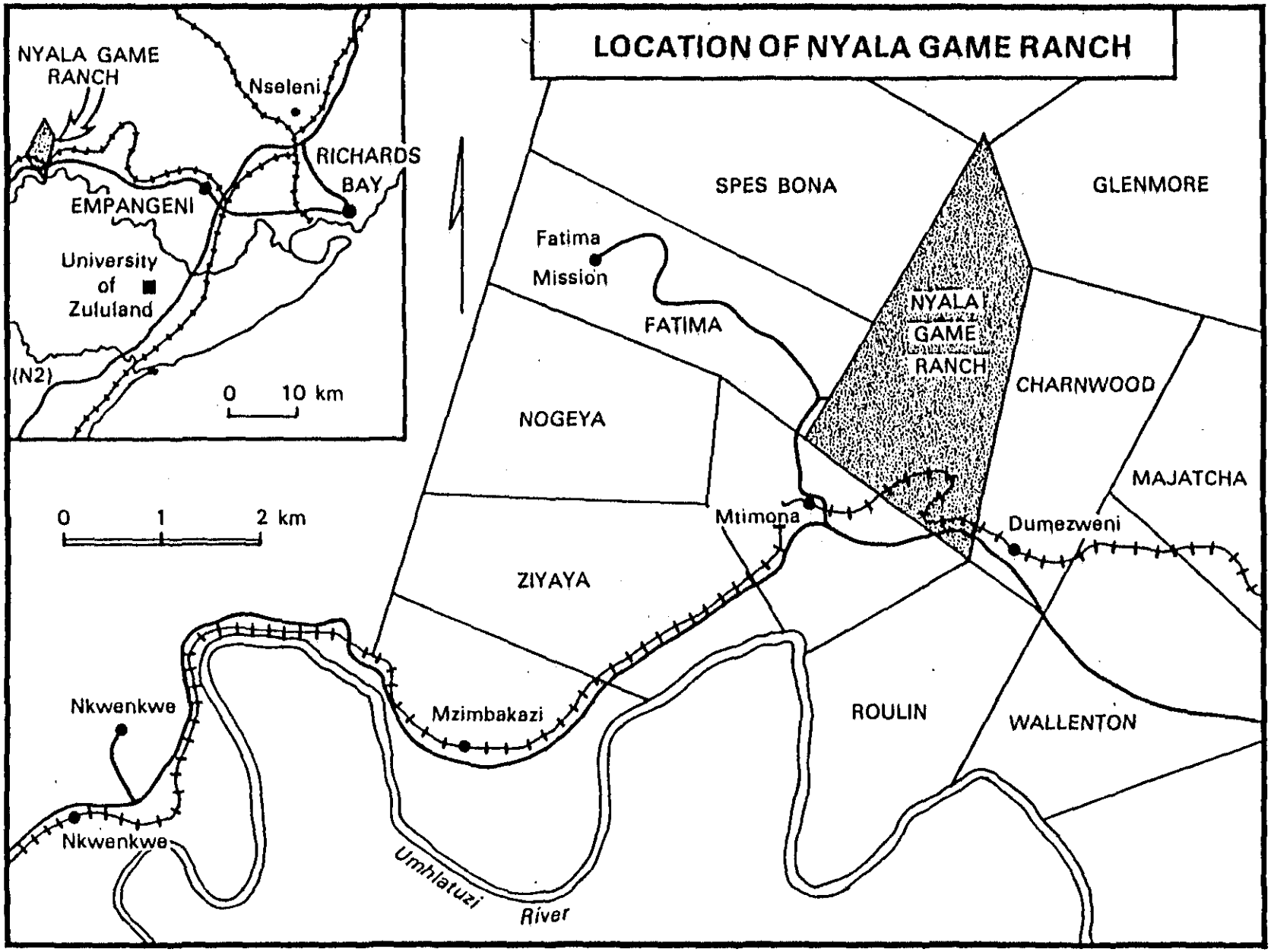
4.3.2.4 Nyala Game Ranch

Nyala Game Ranch is privately owned by the Scott-Barnes family. The ranch has a total of 460 hectares of game land. It is situated about 23 kilometres from Empangeni (see Figure 4.6) on the Empangeni-Nkwalini road. It is situated on the hilly coastal landscape that has a vegetation dominated by dry thornveld and bush clump grassland. The ranch does not have perennial streams but thrives on the humid coastal climate and numerous waterpans and dams, about 10 within the ranch.

Nyala Game Ranch has a variety of antelope such as impala, nyala, kudu, reedbuck, blesbuck, bushbuck, steenbuck, duiker, wildebeest, zebra, warthog, several small mammals, and a variety of bird species. These animals are mainly kept for being viewed, studied or generally 'experienced through our senses': Occasionally American and German trophy hunters are allowed to shoot a buck for a fee. There are lectures provided for organized groups and courses for school children offered on subjects such as ecology, conservation, game ranching and pollution. These are given together with some field work through trails and hiking (Reader's Digest Illustrated Guide, 1983; Scott-Barnes, 1983).

A response to the questionnaire (Appendix G) indicates that the visitors to Nyala Game Ranch average 5000 per annum and are mainly school groups. A large percentage (83 percent) of these are Whites; Blacks constitute 12 percent, Indians 1 percent and Coloureds 4 percent. The origin of these visitors is dominated by Natal (97 percent) and the rest are from overseas. Accommodation at Nyala Ranch consists of three camps: two hutted-camps, Mbondwe and Hlati and one bush camp, Umvumvu. Both Mbondwe

FIGURE 4.6



Source: Trigonometrical Survey Office (1973)

and Hlati provide comfortable rondavels with electricity, toilets, hot and cold showers, electric appliances and a resident cook. On the other hand Umvumvu camp provides rustic bush living and has rustic huts, toilets, mattresses and utensils for cooking.

In conclusion, it should be mentioned that the private nature reserves such as Nyala Game Ranch and others (see Appendix G) provide a valuable service for the cause of nature conservation. The situation would be different if it were general policy in South Africa that whenever there is virgin land to be transferred from state to private enterprise, a condition be included that the land must preferably be used as a nature reserve or natural recreation resource. Alternatively, a joint effort between the state and private owners might be entered into in protecting natural areas that are potential nature reserves (Sunday Tribune, 1981; Our Living World, 1985 b). In the mean time such private game ranches as they exist offer a useful basis for conservation and for education.

4.3.2.5 Ngoye Forest Reserve

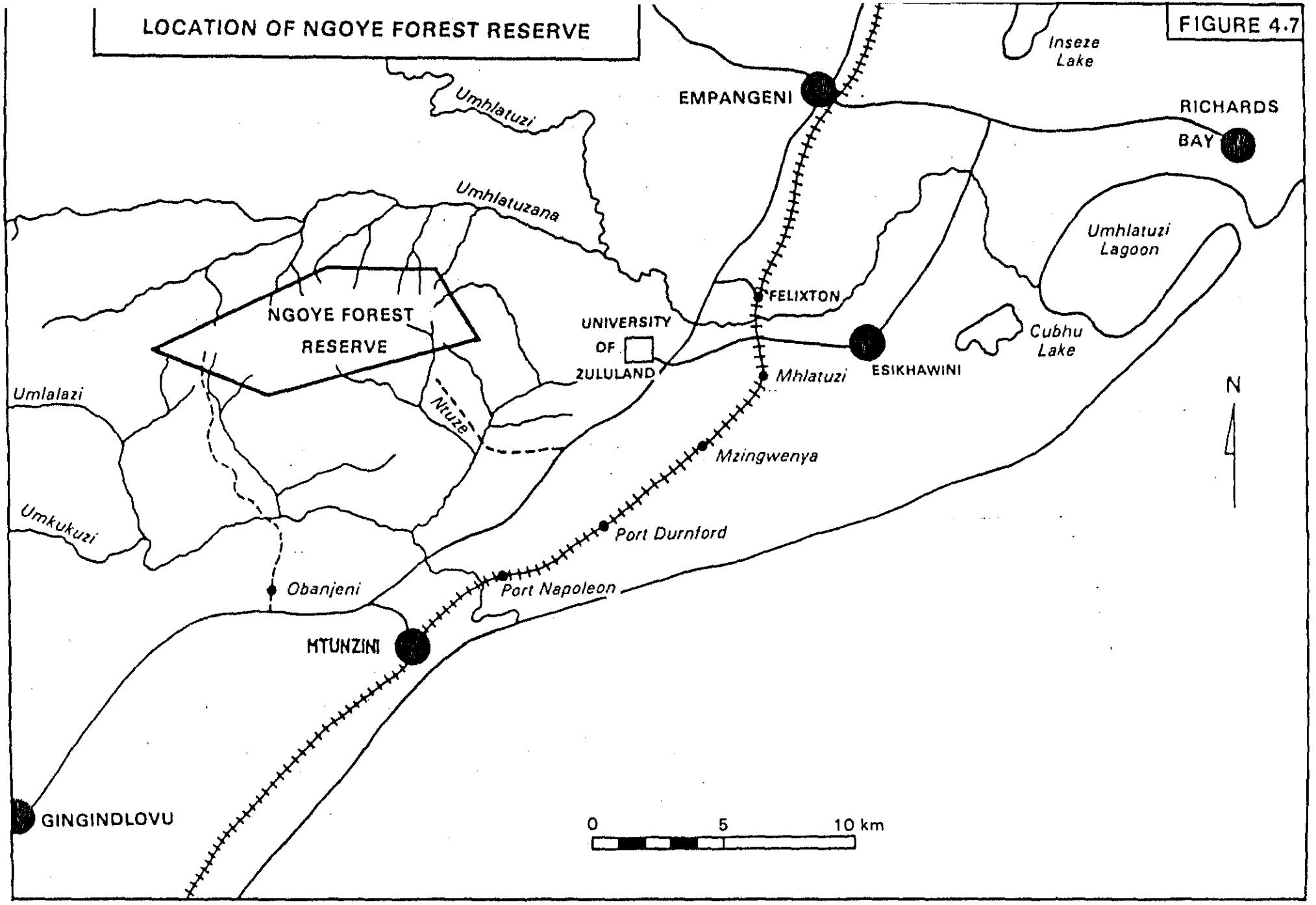
Ngoye Forest has featured prominently in the traditional history of the Zulu people. It is a place that was used for refuge by those at war or in conflict with society. For long it was used as a 'school' and herb-source for many traditional healers, herbalists and medicine-men (Bryant, 1949). It was also used as a hunting ground by the local people and some areas still have remains of game pits.

Ngoye forest was only proclaimed as a reserve in 1913 by the Forest Department of the Union Government. However, before that in 1909,

the Ngoye Forest Company was granted a concession to exploit indigenous trees for timber from the area. This was, however, discontinued when the forest was proclaimed a reserve and it was only around 1924 that all extractions of timber were legally discontinued. Presently, the reserve is controlled and maintained by the KwaZulu Bureau of Natural Resources, which also runs a forest guard camp occupied by two forest guards.

Ngoye Forest Reserve is located approximately 30 kilometres south-east of Empangeni and about 8 kilometres from the University of Zululand. The forest reserve covers an area of 3 904 hectares of unspoilt indigenous mountain forest which has some plant and animal species not found elsewhere in South Africa. The forest vegetation benefits from seasonal rainfall which has a mean annual fall of 1319mm,an interior 20°C mean temperature-humidity relationship and from the watery slopes of the deeply incised Ntuze river valleys (Hope and Mulder, 1979). The forest also includes about 1 000 hectares of grassland, about 500 hectares of which covers the eastern section of the forest and the other 500 hectares spread in small patches around the forest perimeters.

The main vegetational feature of the forest reserve is the climax forest which has an affinity with the Tropical Rain Forest and is distinguished from forest margin by its continuous canopy, large size trees and poorly developed shrub (Huntley, 1965). Another unique feature of the Ngoye Forest Reserve according to Huntley (1965) is that it forms a link between the tropical forest of East Africa and the temperate forests of Knysna and Tsitsikama. The general vegetation in Ngoye reserve includes trees, ferns, yellow-flowered creepers, cycads and orchids. Other indigenous



Source: Trigonometrical Survey Office (1973)

trees present are the yellowwood, stinkwood, fig and forest umdoni.

Common plant species occuring in the Ngoye Forest Reserve which are rare or absent in the rest of South Africa include:epiphytic fern, epiphytic orchid, hemiparasite and canopy tree. It has one of the rarest cycads in the world: Encephalartos woodii. Some other rare species of the cycad that were to be found in this forest are now extinct (Reader's Digest Illustrated Guide, 1983).

The mammalian fauna of the Ngoye forest is very sparse due to poaching by local people. The following mammals are found Nsamango monkey, vervet monkey, chacma baboon, bushpig, bushbaby, mole, red duiker, grey duiker and large species of birds. The animals common to Ngoye Forest Reserve that are rare in the rest of South Africa include the following Ngoye centipede, forest green butterfly, Ngoye red squirrel, green barbet and Delegorgue's pigeon (Reader's Digest Illustrated Guide, 1983).

Visits to the Ngoye Forest Reserve are controlled by the KwaZulu Bureau of Natural Resources. Because this is a restricted area few visitors are allowed to enter. Permission has, however, been granted to researchers, conservationists and other nature conservation enthusiasts. There are, unfortunately, no records of the statistics of visitors to the resource according to a response to the questionnaire sent to the KwaZulu Bureau of Natural Resources. The forest reserve is, recreationally speaking, undeveloped.

In conclusion, Huntley (1965) and Ntuli (1985) think that Ngoye Forest Reserve must continue to be conserved both for the benefit of scientific research

and posterity. This is simply because the reserve is the most valuable indigenous dense forest in Natal from phyto and geographic considerations (Huntley, 1965). In addition, the great conservational value of the Forest Reserve to the local Black community has not yet been appreciated. Projects through which more information and practical use of the reserve to the local community must be established. The Black community must be made to feel that the Forest Reserve is part of their legacy.

4.4 CONCLUSION

The physical actuality of the environment in the Natal north-coastal region, as presented in this chapter, has been found to reflect a few characteristic patterns:

(a) Natural recreation resources are adversely pressured by political, industrial, agricultural and individual or sectional interests.

(b) Natural recreation resources are subject to a progressive decrease especially in terms of indigenous coastal forests, big game and predator cats.

(c) The dominant users of these resources are Whites and where Blacks are allowed access to the parks, not all of the facilities provided are open to all population groups.

(d) The visitors to the natural recreation resources are at once increasing and demanding more modern convenience facilities, which have an (often) negative impact on the environment.

Since the control, planning and development procedures in Natal, as in all provinces in South Africa, do not include the cognitions and judgements

of Black people, it is clear that there is a preponderence of unresolved values and spaces, as shown in Figure 4.1 In addition, it indicates clearly that the procedures employed are not representative. In other words, questions which are critical to successful planning and control remain unresolved: for instance, the natural recreation agencies in Natal know little about the Black potential recreationists who are presently not using these resources and the relationship their usage will have with the future patterns of recreation. To further substantiate this viewpoint there may be widespread agreement with the comment by Piper (1984) that the development and planning of the Durban Metropolitan Open Space System must reflect the aspirations of all the people. For Blacks, the basic requirements for existence will always include clean water, decent dwellings and operational schools. Piper (1984: 54) continues:

> The Open Space plan is fantastic, but how can an open space policy be formulated such that it took into account not only the aspirations of the rich white community but also the aspirations of all the other people who live in the Durban Metropolitan area?

The main object of this chapter has been to introduce the nature of the physical environment which actually represents the basis for the recreation-behaviour setting -- the primary arena in which cognitions arise and behaviour are enacted. Since this chapter provided a starting point for the revelation of particular thought processes, mainly as described by authoritative recreation agencies in the Natal North Coast, subsequent chapters (six and seven) are devoted to the analysis and interpretation of cognitions which have emerged from respondents in the study area.

CHAPTER 5

FIELD RESEARCH METHODOLOGY

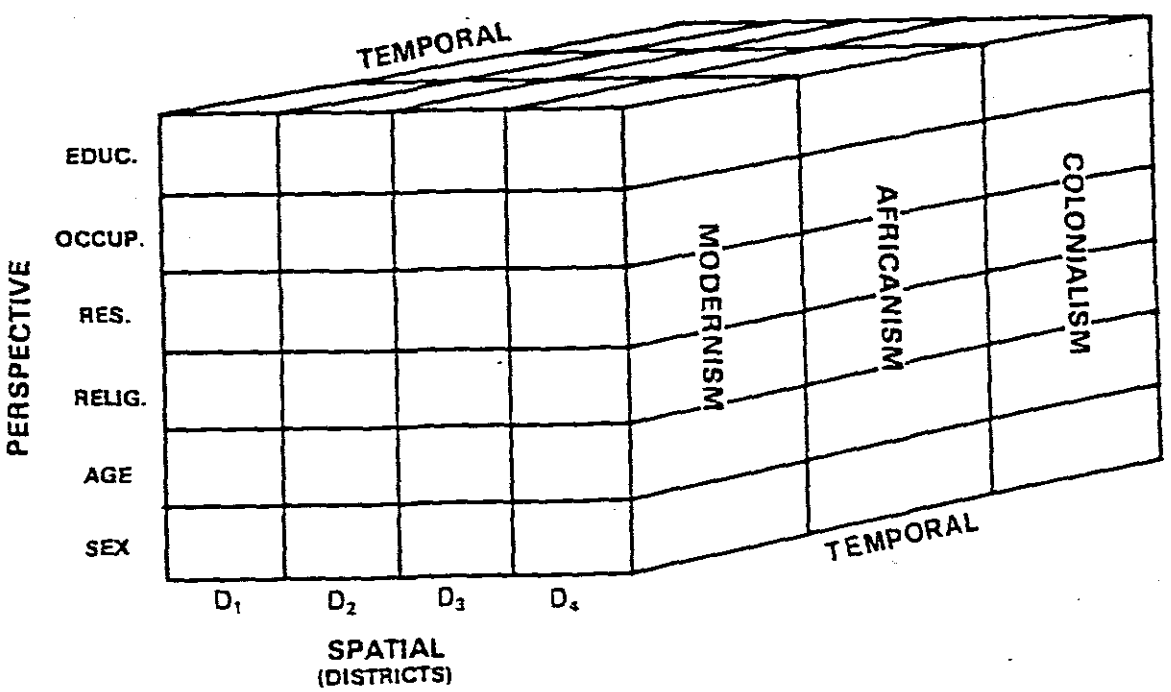
5.1 INTRODUCTION

Human geographers are, and have long been, in disagreement concerning the degree of emphasis which should be placed on theory and formal methodology when designing a research programme. Whilst some argue against the overuse of theory and methodology as the basis of research, others emphasize the sole importance of the hypothesis testing strategy (Weisberg and Bowen 1977). In this study, like many others in Human Geography, the middle ground of seeking to build or develop some theory from relationships found in the data is favoured. However, the greatest difficulty in the realm of Human Geography and particularly in the case of Behavioural Geography, is the lack of basic, primary data. Consequently, much research activity has had to depend on survey-research approaches to data collection and subsequent analysis has been constrained by the method of data collection (Moore and Golledge, 1976).

It is also true that poorly developed methodology in social sciences and particularly in Behavioural Geography, has often resulted in a tendency to abstract or generalize from total behaviour in real-life situation, an intellectual activity which has its own interpretational problems (Saarinen, 1969). A specific feature of research in Behavioural Geography that should be noted is its process-oriented approach in which people are seen as society-based decision-makers, acting as intervening variables between the physical environment and emerging patterns of spatial behaviour

(see Figure 2.2). Ideally, the research methodology which ought to be adopted in this study would be one which attempts to integrate the various theoretical and practical elements of the real recreation-resource world. A comprehensive representation of these elements is seen in Figure 5.1 which consists of a matrix of spatial and temporal elements (Mitchell, 1979). In other words, the analysis of natural recreation resources in the Natal north-coastal region, may be persued through one or more of the specific temporal perspectives, spatial elements and demographic characteristics (Figure 5.1), as well as their combined interactions.

FIGURE 5.1 MODEL OF DIMENSIONS OF NATURAL RECREATION RESOURCES ANALYSIS



Source: Adapted from Mitchell (1979)

This chapter is divided into three broad sections: First, 'Research Design' in which the research population and sample, the instrument construction (which includes pilot work), the questionnaire format, the collection of data, and the translation and coding of the questionnaire are discussed. Secondly, 'Data Analysis' in which the methods of analysing data are presented; and thirdly, 'Hypotheses' in which the hypotheses and some tentative, early conclusions are offered.

5.2 RESEARCH DESIGN

The identification of the research problem and rationale for its selection as a suitable geographic and topical research issue have been established for the reader in this thesis. At this stage, the treatment of research design is essentially a matter of stating the procedure and methods concerned with the data base, the sample, the research instrument and techniques for gathering information about the respondents' cognitions of natural recreation resources. Though the techniques for analysing information are part of the research design in this study, they are treated under a separate subheading. This chapter is not, then, the result of original research in the area of methodology or techniques, but a statement of geographic research procedures used here and for which there exists a large body of critical literature. By its nature, this study has not required the use of the post-test research design which is used when the researcher needs to exert control over variables in a behavioural situation.

In order to achieve the desired effect in elliciting generalized cognition

responses it was necessary to collect a variety of sets of data using a variety of techniques. First, it was useful to focus on the physical nature and functionality of the natural environment upon which the actors perform. This was the purpose of the previous chapter. Secondly, it was important to determine the respondents' cognitions using a diversified research instrument as described below. The information derived from these procedures provided some interpretations and conclusions about the nature of Black cognitions of recreation resources in the north-coastal region of Natal.

5.2.1 Population and sample selection

The selection of subjects to be interviewed is a difficult task, particularly when the study to be undertaken covers a very wide area, has large regions of sparsely distributed population, is time consuming, expensive, and as a result cannot involve a great number of respondents (see Appendix A).

The 1980 Population Census (RSA 1980) shows that Blacks within the four research districts consists of 277 000 persons, comprising 46 200 households. In each of these districts the household population was as follows: Ubombo-Hlabisa 9 400; Lower Umfolozi 7 200; Eshowe-Mtunzini 6 200, and Durban-Inanda 23 100. These household figures were determined by dividing the population of each of the research districts by six, which is the average Black family-size per household. After considering the aggregate unit of analysis of 46 200 households, the exploratory nature of this research and homogenous character of the sample, it was determined that 515 household-respondents would constitute

an adequate sample size. The 46 200 household population and the sample size of N=515 constitutes a greater than one percent representative sample.

The 1980 Population Census (RSA 1980) also indicates a decrease in the rural population figures from Ubombo to Durban. This reflects an increase in terms of rural to urban distributions, a characteristic ratio which was utilized in working out the sample distribution (see Table 5.1). Similar rural to urban variations were found in population density within the districts themselves. However, because the peri-urban sample was characteristically more urban than rural, the sample was biased slightly in the direction of urban population in the region. This was predominantly so in Lower Umfolozi district because of the Empangeni-Richards Bay Metropolitan Complex and the Durban-Inanda district because of the Durban Metropolitan Complex (see Table 5.1).

TABLE 5.1: SAMPLE SIZE DISTRIBUTION IN THE STUDY AREA (1984)

DISTRICT	URBAN		PERI-URBAN		RURAL		TOTAL
UBOMBO-HLABISA	KwaMsana	15	Mtubatuba	19	Hluhluwe Mpukunyoni	28 19	81
LOWER UMFOLOZI	Ngwelezana Nseleni	24 26	Mevamhlope Matshana Eniwe	18 10 15	Mabhuyeni Cwaka	10 8	111
ESHOWE-MTUNZINI	Esikhawini Vulindlela	22 18	Gobandlovu	12	Obanjeni KwaDlangezwa Gingindlovu	22 48 31	153
DURBAN-INANDA	KwaMashu Ntuzuma Umlazi	42 29 39	Inanda KwaShembe	30 26	Emachobeni	13	170
TOTAL		206		130		179	515

A stratified random sampling technique was employed to reduce cost and increase the efficiency of the sample. The intended stratifications for sampling were sex with a 50:50 ratio and the urban/peri-urban/rural status with a 40:20:40 ratio. What eventually emerged was a 54:46 male/female ratio and a 40:25:35 urban/peri-urban/rural ratio.

This cognitive study uses an instrument that has semantic differentials and photographs, and therefore very long interviews (44 questions and 187 variables) were expected. This meant that the sample had to be relatively small. Considering the homogeneity of the area and people studied, it was thought that a sample size of 515 was large enough to prevent an exceptional group of people or area from exerting undue influence or bias on the results (Bailey, 1982).

Finally it should be mentioned that a strict adherance to the random sampling techniques was frustrated by the scattered nature of population in rural areas (See Appendix A), the disorganized peri-urban house pattern, the unavailability of working males in Black homes and attendant high costs in terms of both time and money.Occasionally the interviewing team had to resort to incidental or convenience sampling strategies (Bailey, 1982). That is, where the random system broke down, the investigator was instructed to choose the closest respondent in order to redeem the research effort.

5.2.2 Instrument construction

The variables included in the data collection instrument were selected on the basis of theory which hypothesized relationships between social-cultural situations and the natural recreation system within the Natal north-

coastal region. The demographic variables selected for analyses were: socio-economic status (occupation and education), family size, sex, age and place of residence. The 'personal background' variables were hypothesized to explain the variance in cognitive differences which were assumed to be the responses to the natural recreation system.

The construction of the instrument followed six developmental phases: (a) the preliminary and pilot preparations; (b) the development of the main questionnaire format which included the selection of appropriate semantic constructs, rating scale technique and photographs; (c) the pilot collection of data; (d) the translation of the questionnaire into the language of the respondents; (e) the main phase of data collection, and (f) the coding of the questionnaire. The crux of these developmental phases lay in the assumption that the cognitive meaning of natural recreation resources could and would be determined using a semantic differential technique. This is explained in greater detail in the following sections.

5.2.2.1 Pilot work

After a preliminary compilation of theoretical information from literature, people, recreationists and recreation authorities and agencies, a pilot study questionnaire was constructed. The pilot study being a 'mini'duplicate of the proposed study utilizing all important aspects of the project, it had the aim of perfecting the validity, reliability, and appropriateness of a set of working questions.

All pilot work interviews were undertaken in the Mtunzini district at KwaDlangezwa and Esikhawini. The initial questionnaire was divided

into three sections. Part one contained 15 closed-ended questions concerned with the personal background of the respondent. Part two consisted of a combination of ten open-ended and eight closed-ended questions on the cognition of leisure and recreation concepts, facilities and resources. Part three contained four sets of seven-point semantic differential scales, each set using eight elements or concepts and 24 standard constructs or bipolar adjectives, shown in Table 5.2. The eight elements referred to leisure time, to recreation places, and to six photographs showing recreation resources such as a river, lake, forest, beach, game park and wilderness area (see Appendix E).

From a total of 30 photographs, 24 were finally selected and utilized in the study. The photographs were of distinctive environments that the investigator thought represented important aspects of the natural recreation resources. The list of 24 standard constructs (Table 5.2) is based on surveys of scales and lexicons of environmental descriptors used in writings of Osgood and Suci (1969); Osgood, et al. (1957); Bechtel (1976); Golant and Burton (1976); Palmer (1979) and Neulinger (1981); and on a number of the pilot interviews.

TABLE 5.2: THE ORIGINAL STANDARD CONSTRUCTS

1. Good - Bad	13. Friendly - Hostile
2. Useful - Useless	14. Exciting - Boring
3. Important - Unimportant	15. Unique - Common
4. Holy - Unholy	16. Cheering - Depressing
5. Rewarding - Unrewarding	17. Clean - Dirty
6. Valuable - Valueless	18. Fair - Unfair
7. Beautiful - Ugly	19. Inspiring - Uninspiring
8. Adequate - Inadequate	20. Crowded - Uncrowded
9. Accessible - Inaccessible	21. Expensive - Inexpensive
10. Underused - Overused	22. Worthwhile - Worthless
11. Restricted - Open	23. Private - Public
12. Safe - Dangerous	24. Sacred - Profane

The original questionnaire took just over an hour to complete and most interviews were conducted by the investigator himself. In order to reduce the time required for each interview, half of the paired constructs were eliminated retaining only the first 12 shown in Table 5.2. The adjectives that were ambiguous, duplicated and difficult to translate to Zulu were therefore not included in the semantic differential scale. It is clearly imperative that subjects should understand the concept or construct in order to obtain valid results, so criteria listed here form a valid basis for judging the constructs to be included.

After the pilot study was completed, the results which emerged were as follows: Firstly, personal background questions that were in part one of the questionnaire were transferred to part three because of subject resistance to respond on personal questions early in the interview. Secondly, a selection of 30 photographs representing a variety of natural recreation resources was finally reduced to 24 photographs, six of which (photograph numbers 2, 5, 8, 10, 13 and 18) specifically represented a river, lake, forest, beach, game and wilderness area, respectively. Also, pilot work indicated that a set of colour photographs was better understood and interpreted than a set of black and white photographs. Hence, colour photographs were used in the main survey. Thirdly, the semantic differential seven-point scale using a simple seven-rung ladder chart was discarded in favour of a five-point scale because of the interpretational confusion which the seven-point scale created for the respondents. Research findings on rating scales by Morris and Van der Reis (1980 : 107) confirm that:

> although very few respondents had difficulty remembering the alternative answer in the five-point verbal scale, there were, for the respondents, 'too many answers for a person to remember' in the seven-point scale.

Finally, pilot study results indicated an overall response rate of over 80 percent. A total of 50 interviews were conducted in the pilot study by the researcher; five people refused to participate and three were eliminated because of incomplete responses resulting from the advanced age of the respondent and disliking being interviewed for more than 15 minutes. The pilot survey provided an actual response rate of 84 percent.

5.2.2.2 Questionnaire format

The format of the main questionnaire was designed on the basis of the pilot study. The wording and sequence of the items were designed to demonstrate the degree of content knowledge, beliefs or cognitions held by the respondents. The main questionnaire consisted of three parts. The first part was aimed at cognitions of resources, leisure, recreation areas and facilities. The second part of the questionnaire sought cognitions through use of photographs. Both the first and second parts of the main questionnaire contained two sets each of a five-point semantic differential scale with simple 5-rung ladder charts (see Appendix-B), each containing a set of eleven standard or bipolar adjectives. The third part of the main questionnaire requested personal particulars such as age, sex, marital status, occupation, education, and family size. Respondents' names were not recorded.

A break-down of the main questionnaire into smaller categories was as follows: cognition of leisure (question 1 to 5); cognition of resources (question 6 to 10); visits to recreation areas and facilities (question 11 to 15); recreation ownership and development (question 16 to 17); semantic scaling of recreation value (question 18 to 19); recreation photographic images (question 20 to 29); and demographic characteristics (question 30 to 44). A copy of the questionnaire designed for this study is included in Appendix B. Eighteen questions (about 40 percent) of the 44 questions were 'open-ended' so as to elicit the respondent's undirected cognition. The questions also concentrated on natural recreation resources, areas, facilities and activities in which the respondent or his associates as recreationists or potential recreationists engaged in.

Two sections of the questionnaire format that need additional attention are the photographic image assessment and the semantic differential scales. The literature review presented in Chapter 2 covers a substantial number of studies related to these sections. Photographs are a valuable medium for depicting the environment (Deregowski, 1980b) and have been used effectively as the basis for rating scales (Morris and Van der Reis, 1980). In this study the photographs were used successfully in combination with semantic differential or verbal rating scales. Out of the following types of rating scales: verbal; visual (photographic); graphic and numerical, Morris and Van der Reis (1980) found that verbal rating scales were superior to the non-verbal rating scales in measuring levels of satisfaction. Visual (photographic) rating scales were found to be more successful than graphic and numerical rating scales. The numerical scale was the most difficult to manipulate and was dependent

on the educational achievements of the respondent.

The emphasis in the 5-rung ladder chart was visual: specific terms like 'good' to 'bad' or 'beautiful' to 'ugly' were used rather than the graphic rating or numerical rating character of each rung of the ladder. The questions relating to the natural recreation resources, areas and facilities were operationalized by asking the degree of satisfaction with the existing resources using a one to five continuum for responses. The ladder-rung one indicated complete satisfaction or agreement with existing resources while ladder-rung five indicated complete dissatisfaction or disagreement.

In the actual interviewing, modification of wording was performed in order to eliminate high-order abstractions, for example, by hinting to respondents that each ladder-rung actually represents a 'neutral', 'mild' or 'extreme' position of a semantic differential. This assured the better communication of clear meaning. An example of the semantic differential items used may be seen in Table 5.3.

TABLE 5.3: WEIGHTING VALUES OF SEMANTIC DIFFERENTIAL ITEMS

	Extremely	Mildly	Neutral	Mildly	Extremely	
GOOD	1	2	3	4	5	BAD
USEFUL	1	2	3	4	5	USELESS
BEAUTIFUL	1	2	3	4	5	UGLY

The bipolar adjective pairs chosen for inclusion in this study form several 'lexicons of environmental descriptors' (Bechtel, 1976: 111): They were purposely selected to be representative of Osgood's factor

labeled 'evaluation' (Osgood and Suci, 1969). These were selected mainly because not all the original Osgood adjective pairs were judged appropriate as a result of the pilot study and in the investigator's assessment of the local situation. However, several adjective pairs of the non-evaluative variety such as 'activity' and 'potency' were also incorporated. The bipolar adjectives considered not suitable for the study were eliminated during pilot work. Finally, it needs to be noted that according to Rapoport (1976), cognitive domains correspond in a predictable manner to semantic domains, so that there is a strong cognitive relationship between people's view of the physical world and their language.

5.2.2.3 Collection of data

The collection of necessary data in the field was achieved through the administration of a semi-structured interview schedule. This is a form used in personal interviews conducted by interviewers, which attempts at the same time, to achieve a reasonable level of person-to-person contact (Bannon, 1976). The diversity and complexity of the interview schedule accompanied by the illiteracy and language difference necessitated the use of suitable interviewers to assist the researcher to collect information.

Also, because the study as a whole is restricted to Black subjects it was thought suitable to employ Black interviewers since they were likely to be given more candid responses.Six senior geography students from the University of Zululand were carefully briefed and instructed as to how they should interview different types of respondents, in particular those who might not understand English or what research is all about.

The recording of responses was also emphasized; questions were clarified and techniques for handling refusals were reviewed.

A difficult problem arose in determining the most consistent procedure of collecting data in peri-urban and rural places. In such circumstances interviewers were shown the area within a district that was to be covered for a particular day on a 1:50 000 map. Each interviewer was then expected to cover a small portion of that area within the magisterial districts (see Appendix A and Table 5.1). The interviewing team tackled small but spread-out areas as groups in order to avoid the clustering of responses. This procedure was also followed with ease and consistency within the urban areas. The respondents answered questions using the three different formats. For example, interviewers were instructed that personal particulars were to be completed at the end of the interview. On the whole, the questionnaire instructions were self-explanatory. For the questions using photographs respondents were told:

> We want to find out how you feel about various parts of the natural recreation areas by selecting and responding to any number of the 24 photographs given to you.

The above statement had to be communicated to the respondents with great care since, during pilot work, some respondents tended to select photographs on the basis of their photographic quality rather than the attributes of the image depicted.

Visual appearances of the natural recreation resources were simulated by means of a set of 24 colour photographs (Appendix - E) given to respondents to select as they wished. These photographs were initially

selected from pilot work involving a set of more than 30 photographs randomly taken from the Natal north-coastal region. The final photographs were selected because they seemed to be the best representatives of the variation of a larger set. The number of photographs used (24) has no significance except that in the investigator's opinion it was the smallest number that presented sufficient quality of image variation.

Respondents were also shown a five-point scale ladder chart and asked to respond to pre-selected photographs numbers: 2, 5, 8, 10, 13 and 18 showing scenes of a river, lake, forest, beach, game and the wilderness, respectively.

5.2.2.4 Translation of the Questionnaire

On the one hand, most social researchers are in agreement about the existence of linguistic barriers in cross-cultural research. On the other hand, the literature review presented in Chapter 2 has made reference to the effectiveness and reliability of the semantic differential technique in cross-cultural research. Also, it has been clearly demonstrated that people who use different languages none the less have and use meaningful semantic opposites as a pillar of their logical construction (Osgood, 1969; Kumata and Schramm, 1969). Despite this assertion, the concepts and constructs that were found to be difficult to understand and interpret in the semantic differential scales were eliminated.

The questionnaire as a whole was translated from English to Zulu by the investigator and checked for accuracy by the Department of African Languages at the University of Zululand (Appendix B). However,

no back translation from Zulu to English was undertaken. Concepts that were expected to be unfamiliar to African respondents were either avoided or explained in longish phrases. Some of the latter that were found imperative to use include: leisure which was translated to Zulu as isikhathi sokukhululeka, an English equivalent of which would be 'time that is obligation free'. Another is recreation being ukuzijabulisa/ ukuzithokozisa or ukuphumuza umzimba or (a new term) ukungcebeleka these are translated respectively: 'to amuse oneself' or 'to rest or relax the body' or 'recreation' (see Appendix H). In actual fact the concept ukungcebeleka meaning 'enjoying of freetime or holiday time' or very broadly 'recreation' was brought up and established by the Zulu Language Board in Pietermaritzburg in 1985 (Ngcongwane, 1985).

It may be difficult to convey the researcher's precise intention and meaning if concepts such as these are not familiar and not directly translatable. This is an important problem that was overcome by the use of two to three-word phrases and by employing interviewers who are Zulu speakers and yet who understood English very well.

On the whole it can be said that there were few constraints imposed by the language problem since a large percentage of the questionnaire was administered to the subjects in Zulu. On a very few occasions some of the well educated respondents actually demanded to complete the questionnaire themselves.

5.2.2.5 Coding of Questionnaires

It was anticipated that the large number of questions and responses

from this survey would require computer-assisted analysis of the data. Unfortunately by the time the questionnaire was ready for duplication and distribution to the respondents, no particular computer facility or programme was readily available and decided upon for use at the University of Zululand. It was then decided that the following post-coding procedure would be employed: first, responses were initially coded after the questionnaire had been answered by respondents (Bailey, 1982); Secondly, when the interviewing process was completed and the investigator had completed a computer familiarization service offered by the University of Zululand Computer Centre, the final details were established and the coding was completed. Thirdly, the resultant codes were checked for possible inaccuracies through use of a specially devised post-coding questionnaire-response editing programme.

The coding of the questionnaire depends on the type of questions used. For this project the coding of closed-ended questions did not present difficulties. The open-ended questions were accompanied by some operational difficulties such as those which relate to what Weisberg and Bowen (1977) call the contextual approach. This is the process of using all response categories that the respondents actually used. That is, the large number of answers given by the respondents are categorized to common coding schemes. For example (see Appendix B), the preliminary Questions 1 to 5 on 'What do you do during your free time?' (question also including friends and White people), revealed short clusters of 5 possible codes: recreation (01), home chore (02), sports (03), piece-work (04) and do nothing (05). Secondly, Question 6 on the possible use of natural resources revealed clusters of 15 possible codes. Questions 20 through 28 on cognitions of natural areas through photographs revealed clusters of

17 basic possible codes.

The second major operation of reading each response to each open-ended question and deciding what category is best for that particular response, was undertaken by the researcher himself. The accuracy of this coding procedure relied on the specificity of the code-categories and checking for the researchers opinion not to affect the respondent's choice. To check for some of the coding inaccuracies and response misinterpretations a questionnaire-response editing programme or what Weisberg and Bowen (1977) call a verifying program, was devised. The computer programme in this case actually checked all questions and variables of the total number of observations (N=515) against a correctly coded programme.

The data collected in the field were keyed-in and entered into an IBM Model 3341 computer. Some standardized data processing techniques associated with Statistical Analysis System (SAS) were applied to the data files or matrix to insure proper retrieval and ease of application for a variety of statistical applications or procedures. More information about computerization will be treated under Data Analysis below.

5.3 DATA ANALYSIS

Upon the completion of field work each questionnaire was scanned for interview recording errors, questionnaire coding and data keying-in inaccuracies. As mentioned earlier, the accessing of data to the computer was done in such a way that it could be retrieved from member files and processed further employing any available statistical package from the IBM computer at the University of Zululand. All data were run on

the IBM model 4331 using the Statistical Analysis System (SAS) programme which provides tools for information storage and retrieval, data modification and programming, statistical analysis and file handling (Ray, 1982). Table 5.4 provides an overview of the research assignments and respective statistical analysis and computer programme.

Relevant to the analysis and evaluation of the natural recreation resources as cognized by Blacks in the north-coastal region of Natal, the researcher used the following statistical procedures in their varying forms: frequency and percentage distribution tables; mean, median and standard deviation scores; cross-tabulations with the Chi-square analysis; and semantic differential scales which included some factor analysis and coefficients of correlation.

TABLE 5.4: OVERVIEW OF STATISTICAL ANALYSIS AND COMPUTER PROGRAMME PER ASSIGNMENT PERFORMED

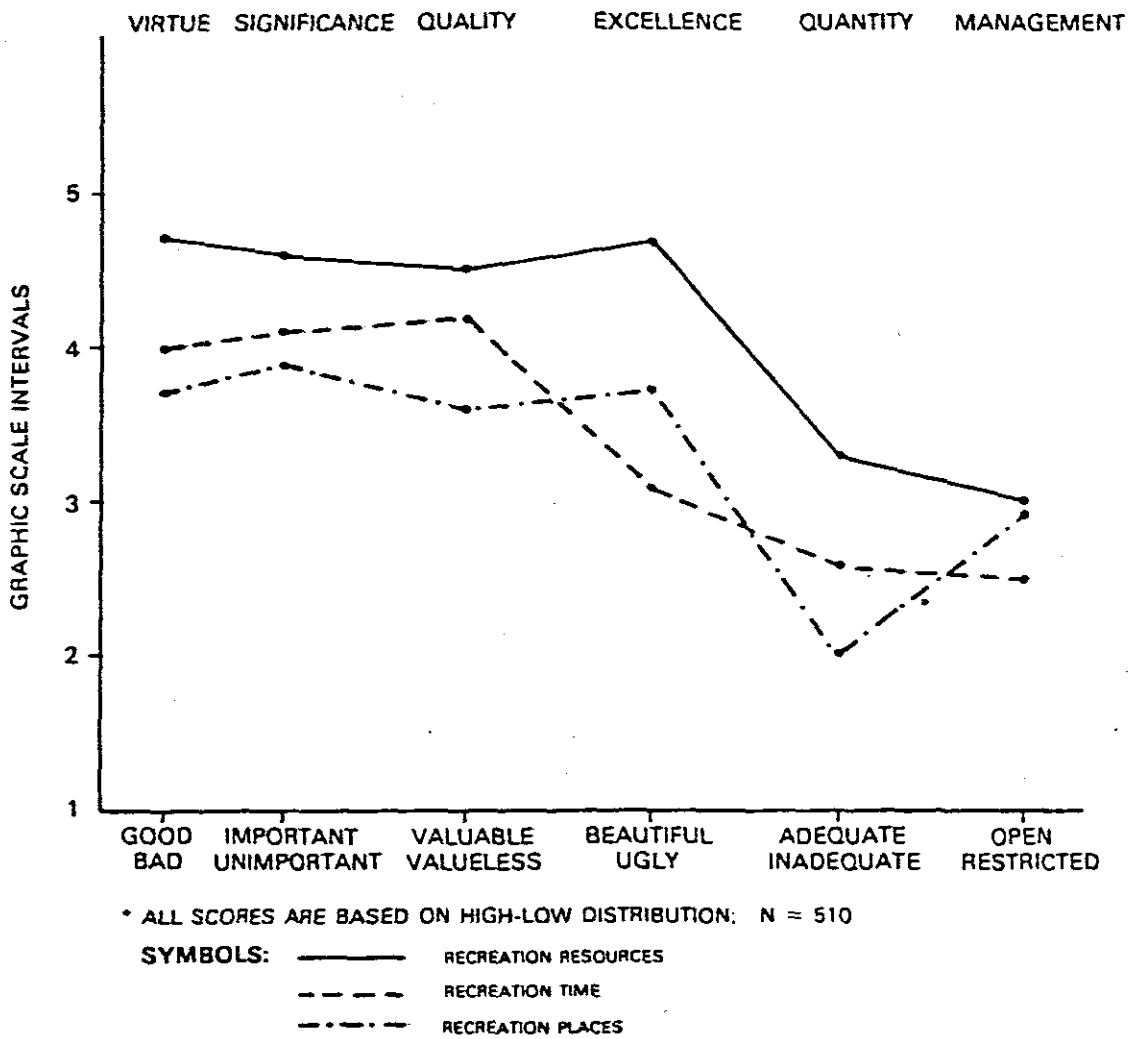
ASSIGNMENT	STATISTICAL ANALYSIS	COMPUTER PROGRAMME
1. Identification of demographic features or recreation agencies	Frequencies and percentages	SAS (Proc.Freq.)
2. Identification of leisure recreation areas and facilities plus the demographic characteristics	Frequencies and percentages	SAS (Proc.Freq.)
3. Identification of leisure, recreation areas and facilities versus some demographic characteristics	Cross tabulations or contingency tables with Chi-square	SAS (Proc.Freq.-Tables/Chisq)
4. Description of the natural recreation resources	Semantic differential statistic using median scores	SAS (Proc. Univariate)
5. Relationships of Association among natural recreation resources attributes	Correlation Analysis and Factor Analysis	SAS (Proc.Corr. and Proc.Factor)

The two principal statistical methods that were repeatedly used to analyse the data were: first, the frequency distributions and cross-tabulations which were used to present all the items from those that had to do with the cognition of leisure, recreation areas and facilities to the demographic characteristics and their combinations; and secondly, the relationship among the concepts and constructs emerging through photographs and other items were measured using factor analysis and coefficients of correlation. A matrix involving environmental concepts acquired from photographs and cognitive statements matched with the 12 construct or bipolar adjectives was analyzed to reveal what meaning the subjects give to the natural recreation resources.

Another method that was used effectively to reveal the meaning of the natural recreation environment through photographs and statements, was the construction of the semantic differential profiles from mean evaluation scores and bipolar adjectives. An example of this analysis is given in Figure 5.2 which illustrates profiles of three recreation concepts: recreation resources, recreation time and recreation places. These are analysed on the bases of six characteristics: virtue, significance, quality, excellence, quantity and management all derived from bipolar adjectives. What is evident from this profile (Figure 5.2) is that all recreation characteristics are positively viewed except that the quality and management of recreation time (leisure) and places are somewhat ambiguously viewed.

It should also be noted that frequency and percentage distributions have been calculated for all the questions in the main survey questionnaire and in the questionnaire sent to the recreation agencies already dealt

FIGURE 5.2 MEAN EVALUATION DIMENSION SCORES ON THREE RECREATION CONCEPTS: SEMANTIC DIFFERENTIAL TECHNIQUE



with in Chapter 4. On the other hand the main attribute of the photography-based semantic differential technique and related statistical procedures actually helped to unfold the Black cognitions (evaluations and meanings) of the natural recreation resources. The relevance of this procedure was in that each concept and a set of bipolar adjectives (constructs) was analysed and tables drawn up to identify:

(1) the concepts that were used to represent the aspects of the natural recreation environment,

(2) whether the concepts noted were seen in a positive or negative way,

(3) the constructs that features prominently in each natural recreation resource concept or component, and

(4) whether the constructs could be identified as positive or negative.

Once the material was identified it was aggregated for all respondents (N=515) for each segment of the natural recreation resources. It was also compared with the rest of the cognition-based questions or items.

5.4 HYPOTHESES

The following hypotheses are proposed. These are based on the findings of related literature, the philosopical issues reviewed earlier, observations, and the pilot study. A number of these hypotheses were specifically generated for the purpose of gleaning some understanding of and insight into the stated objectives.

(1) It is hypothesized that, in general, Black people have favourable cognitions of the natural recreation resources.

(2) The whole exercise of studying Black cognitions of recreation resources is undertaken with the knowledge that Black people in South Africa have been largely assimilated into the Western life styles. That is, experiencing high urban population density, high levels of technology, routinized work patterns,

and receiving cash wages which may be used to buy recreation time, opportunity or experience (Hugo, 1974). Hence, it is hypothesized that urban and peri-urban residents will have a more favourable cognition of natural recreation facilities and activities than rural people.

(3) The interpretation and appreciation of natural recreation resources in modern Western societies tends to over-emphasize the element of deliberate judgement and comparison with standards, whereas the traditional pattern of Blacks is to show feelings and experiences of delight, enjoyment and veneration of natural resources. Hence, it is hypothesized that Blacks will be shown to have a positive view of the aesthetic aspects of natural recreation resources.

(4) According to a study reported by Burger (1981) it has been concluded that Black people see game reserves as a White man's hobby amidst their abject poverty and landlessness, and favour that such areas should be converted to agricultural land. Hence, it is hypothesized that Black people view natural recreation resources first as a means of subsistence and secondly something to be conserved. (Enjoyment of aesthetic aspects is not antithetical to either of these views).

(5) Black people's cognitions concerning the use of natural recreation resources for recreation activities are related to the location of their residences relative to the different resources.

It is therefore hypothesized that rural Black people living adjacent to the natural recreation resources will have the least favourable cognitions of the natural recreation resources.

(6) The pursuit of recreation activities varies significantly with changes in the attributes of demographic variables (Tinsley and Kass, 1978: Noe, 1978).

It is therefore hypothesized that:

(a) Better educated respondents will have more positive cognitions of natural recreation resources;

(b) Younger respondents will have more positive cognitions of natural recreation resources than older respondents; and

(c) Male respondents will have more positive cognitions of natural recreation resources than female respondents.

5. CONCLUSION

In focusing attention on an exploratory and multidimensional investigation and method of research such as is used in this study of the cognitions of natural recreation resources of Black people, neither the researcher nor the reader should be blinded by 'preconceptions, expectations and convictions' (Mitchell, 1979: 54) that exist in previous research and current thinking, to the point of overlooking any unexpected results. A balance between structured and unstructured information and the manipulation of results, will be accepted as the most suitable method of investigation.

It is also the feeling of the researcher that the research design

and method of analysis as conceived here, does not sufficiently reveal all the subtleties associated with the values and beliefs of the subjects in relation to their cognitions of natural recreation resources. Situations such as the cognition of the environment being delimited into dichotomies such as 'ours' and 'theirs'; the trees and animals being ours and the canefields and game reserves being theirs are not catered for in this study. These kinds of cognitions reveal or explain the natural environment as an area of 'symbolic social conflict' (Appleyard, 1979: 152), an area which needs, therefore, to have its own kind of social justice.

There are other inevitable shortcomings in the research design and methods of analysis employed in this study:

1. Individual respondents may interpret a symbol stimulus (concept, construct or photograph) entirely at the symbolic level, while others may associate it with the signals that a symbol represents, while yet others may have a mixed interpretation (Harvey, 1981).
2. The photographs used in the research instruments are clearly not a substitute for the real environment; each display requires use of one sense (sight) rather than all the five senses.
3. The preselection of the concepts (elements) and constructs (descriptors) in formulating the research instrument tends to be biased more towards the researcher than the subject.
4. The semantic differential bipolar adjectives being translated to Zulu loose a certain degree of meaning.

Despite these weaknesses, it can be concluded that the value of this thesis as a contribution to research in the field of Recreation is

not in any way diminished. Some of the literature reviewed in this paper has presented a positive interpretation of what have been listed as weaknesses here, and most importantly, the study draws on the strengths of a range of methods and approaches in such a way as to offer a viable blend of qualitative and quantitative research methodology, and all which that implies.

CHAPTER 6

PRESENTATION AND ANALYSIS OF DATA

6.1 INTRODUCTION

It should be remembered that in this study the cognition of natural recreation resources, whether anticipated or experienced, refers to the way in which Black respondents cognize or 'see and know' their recreational situation. What is being emphasized here is what the subjects feel they experience rather than what outside observers believe to happen. Therefore the cognized environment can be seen as providing a valuable basis for an interpretation of spatial behaviour which might be usefully explained on the basis of subjective evaluations* of real world information and measurement.

In this chapter the experiences of the subjects based on the field research are presented and analysed, primarily in tabular form. For the most part the data presented are taken as self-explanatory in this chapter. In the following chapter a more detailed interpretation of these results, involving an interplay between the Africanist and Western philosophical perspectives, will be considered.

As mentioned under the heading of 'Data Analysis' in Chapter 5, the data gathered will provide information relating to the five assignments

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* That is, evaluations which are subject based rather than researcher based.

mentioned in Table 5.4. For this chapter, these five assignments may be summarized into four categories as follows:

(1) The presentation of the demographic variables.

(2) The cognition of leisure, recreation resources and facilities.

(3) The photographic image analysis of natural recreation resources.

(4) The semantic differential analysis of concepts and constructs.

The first of these four categories identifies the respondents in terms of demographic characteristics without necessarily referring to their cognitions or recreation behaviour. The rest of the categories particularly relate to the cognitions of natural recreation resources or recreation behaviour. The demographic variables in some sections of the analysis are then cross tabulated and compounded with variables from the remaining categories.

6.2 RESPONDENTS' CHARACTERISTICS

The sample used in this study shows a wide diversity of variables in age, residence, occupation and family size. The demographic characteristics of the subjects and the diversity of sub-variables are presented in summary in Table 6.1. The data shows an approximately even split between the sexes with a mean age of 26,5 years for both males and females. Family size is about 50 percent dominant at the level of 6-10 individuals per family; that is, a mean and median family size of 7,5.

The subjects were also asked to reveal their places of residence which were divided into two types: the family home, that is, a permanent

TABLE 6.1: DEMOGRAPHY OF RESPONDENTS

VARIABLE	SUB-VARIABLE	ABSOLUTE FREQUENCY	FREQUENCY PERCENTAGE
SEX	Male	279	54
	Female	236	46
		515	100
AGE	18 - 29 years	290	56
	30 - 49 years	185	36
	50 - 75 years	40	8
		515	100
FAMILY HOME	Urban	125	24
	Peri-urban	108	21
	Rural	282	55
		515	100
OCCUPATIONAL HOME	Urban	187	36
	Peri-urban	117	23
	Rural	133	26
	Unemployed	78	15
		515	100
FAMILY SIZE	1 - 5	175	34
	6 - 10	253	49
	11 - 15	59	12
	16 - 20	28	5
		515	100

home of the respondent associated with his familial origins; and the occupational home, a temporary or subsequently permanent home associated with the respondent's place of work. An analysis of figures in Table 6.1 reveals a tendency to associate the family home with the rural areas (55 percent) and occupational home with urban/peri-urban areas (59 percent).

If we assume Standard 10 to be a cut-off point of comparison between the more educated and less educated subjects, then Table 6.2 shows that 54 percent of the respondents were without Standard 10. On the other hand, more than half (55 percent) of the young (18-29 years) Black respondents were in possession of a Standard 10 certificate. There was also a preponderance of respondents (21 percent) who showed that their heads of family had had education up to Standard 6. This analysis agrees well with the occupational achievements revealed by respondents in Table 6.2 indicating that about 50 percent occupy unskilled positions. The response situation concerning the heads of families is even more acute; about 60 percent of the respondents indicated that family heads were unskilled.

TABLE 6.2: SOCIO-ECONOMIC DEMOGRAPHY OF RESPONDENTS

EDUCATION	RESPONDENT		FAMILY-HEAD	
	Absolute Frequency	Frequency Percentage	Absolute Frequency	Frequency Percentage
No formal Education	22	4	90	18
Standard 2	55	11	97	19
Standard 2	38	7	64	12
Standard 6	139	27	110	21
Standard 10	121	24	58	11
Cert. without Std.10	27	5	25	5
Cert. with Std. 10	74	14	46	9
Degree	39	8	25	5
	515	100	515	100
OCCUPATION	RESPONDENT		FAMILY-HEAD	
	Absolute Frequency	Frequency Percentage	Absolute Frequency	Frequency Percentage
Unskilled	251	49	304	59
Semi-skilled	90	17	72	14
Skilled	80	16	72	14
Professional	94	18	67	13
	515	100	515	100

It is important to note that a substantial proportion of the young people (40 percent) were unskilled, yet about 50 percent of the skilled and professional respondents were below the age of 30. For purposes of interpretation later in the study, it is important to note that 84 percent of respondents indicated that they are Christians.

A response to other demographic variables indicates that almost three-quarters of the respondents (73 percent) had stayed for more than 10 years in their family homes, whereas less than half (46 percent) had stayed for more than 10 years in their occupational homes.

This implies that there is a continuing process of migration of people from occupational homes, which are predominantly located in urban/peri-urban areas, to family homes in rural areas. This conclusion is also supported by the fact that 61 percent of the subjects indicated that they had been born in rural areas, irrespective of the fact that 65 percent of the respondents were drawn from the urban/peri-urban environment (see Table 5.1). In regard to the means of transport most used, which is an important component of the recreation system, 80 percent of the respondents revealed that they relied on the use of public transportation.

6.3 COGNITION OF LEISURE TIME

This study views recreation time, leisure time and free time as broadly conveying the same meaning; that is, time that is free from obligatory work and from satisfying the basic necessities of life. On being asked what the respondents and their friends do during non-working leisure or free time, the responses summarized in Table 6.3 were recorded. These

TABLE 6.3: ACTIVITIES DURING FREE TIME

ACTIVITIES	RESPONDENTS		FRIENDS	
	Absolute Frequency	Frequency Percentage	Absolute Frequency	Frequency Percentage
Recreation	388	59	363	62
Home Chores	133	20	86	15
Sport	60	9	77	13
Piece work	50	8	29	5
Nothing	30	4	32	5
	661	100	587	100

(N = 515. Some respondents gave more than one response)

reflect a strong representation of recreation activities as compared to moderate (28 percent for respodnents; 20 percent for friends) reflection of subsistence activities (home shares and piece work).

A cross-tabular analysis of the use of leisure time as against sex and age variables indicates an even split between males and females regarding the use of leisure time, and a predominance of young people using their free time for recreation purposes (59 percent) rather than subsistence activities. The results of the cross-tabulation revealed a relationship between the variables of age and leisure time that is moderately significant (X^2 = 11,6; df = 8; p = 0,1) and a contingency coefficient that is low at 0,2.

A further cross tabulation shown in Table 6.4 summarizes the relationships between leisure time and place of work. The results indicate that the observed differences are significant at the 0,5 level. The contingency coefficient for this table is moderate at 0,3. This indicates that

TABLE 6.4: AGGREGATED USE OF LEISURE TIME BY PLACE OF WORK (%) AMONGST ALL RESPONDENTS

ACTIVITIES	TOWNS AND CITIES		SMALL TOWNS & VILLAGES		UNEMPLOYED		TOTAL	
	N	%	N	%	N	%	N	%
Recreation	143	63	83	52	71	55	297	58
Home chores	40	18	36	22	34	27	110	21
Sport	15	7	15	9	13	10	43	8
Piece work	16	7	15	9	5	4	36	7
Nothing	12	5	12	8	5	4	29	6
	226	100	161	100	128	100	515	100

(N = 515; Chi-sq = 26,5; df = 24; p = 0,5. The corresponding contingency coefficient is 0,3 (Siegel, 1956 : 196).)

there is a moderately weak overall relationship between leisure time activities and place of work. What is important to note, however, is the existence of an approximately even distribution of results between large and small towns, with a strong representation of the unemployed in small towns. A majority of the unemployed (65 percent) spent their leisure time engaging in recreation and sport, rather than doing home chores and piece work (31 percent). For both small and large places of work more than 60 percent of the respondents indicated spending their leisure time participating in recreation and sport.

On considering the cognized similarities and differences in the use of leisure time between Blacks and Whites, 61,7 percent of the respondents expressed a viewpoint that White people do different things from what they themselves do during their free time. The 'different things' include recreation with a 55 percent response; sport 25 percent; home chores

11 percent, piece work 8 percent and doing nothing 1 percent response. In subsequent questions these 'different things' were actually cognized by respondents as not being very different from what it was thought Whites do during their free time; engaging in recreation and sport. This notion was also supported by the fact that 70 percent of the respondents indicated that they would like to do the very 'different things' done by Whites. The cognized cross-cultural similarities in favour of engaging in recreation and sport during free time are being encouraged and supported by the acculturation, modernization and urbanization of Blacks in the broad South African socio-economic space.

A cross-tabular analysis considering the notion of different things done by Whites during their free time as against the respondents' occupational categories is shown in Table 6.5. The largest percentage (28,0 percent) represents the unskilled respondents who indicated that they thought Whites do different things from what Black do during their free time.

TABLE 6.5: BREAKDOWN OF COGNITIONS OF FREE TIME BY OCCUPATION OF RESPONDENTS (%)

RESPONSE	UNSKILLED	SEMI-SKILLED	SKILLED	PROFESSIONAL	TOTAL
YES	28,0	12,4	9,8	11,5	61,7
NO	16,7	6,5	6,9	8,2	38,3
	44,7	18,9	16,7	19,7	100,0

(N = 515; Chi-sq. = 9,2; df = 8; p = 0,5. The corresponding contingency coefficient is 0,1).

It is also important to note that all occupational categories of the respondents (Table 6.5) indicated a positive response to the usage of free time by Whites. The observed response difference was moderately significant at the 0,5 level. Another cross-tabular analysis that came into view was the cognition of free time usage by Whites as seen in terms of the residential location of the respondents. The results indicated a positive cognition of recreation time which, however, did not vary significantly in terms of the urban-rural component.

In general, about 90 percent of the respondents believed that Whites spend their free time engaging in recreation and sport, and about 10 percent of the respondents believed they engage in home chores and piece work related activities. On the other hand, about 80 percent of the respondents believed they and their friends engaged in recreation and sport,. whereas about 20 percent engaged in home chores and work related activities. It is interesting to note that 37 percent of the respondents were not sure whether they wanted to do what Whites do or not. This uncertainty,reflected in more than a third of the respondents, seems to have been encouraged by the knowledge that engaging in what Whites do for recreation has far-reaching financial implications for relatively less financially privileged Blacks within the study area. Another possible experience that is a source of conflict in the mind of a potential Black recreationist is the long standing racial categorization and selective usage of social and recreational public places and areas in South Africa as a whole. In other words, respondents seem not to be certain as to whether they would like to engage fully in all kinds of recreation activities that Whites enjoy, particularly when they, as Blacks, know full well that they do not yet have the basic infrastructural

facilities necessary for a better quality of life. Equally, respondents are pressumably well aware that they did (and do) not have recreation facilities on a par with Whites; nor do they have the same disposable income and sufficiently unrestricted areas available for use.

It is significant that almost one respondent in five (19 percent) expressed the view that they do not want to do what Whites do during their free time. The reasons given were aggregated and then grouped into broad categories. Economic factors were the most important accounting for 32 percent of the reasons, while 23 percent gave social reasons such as social discrimination and alienation, residential areas, familial relations and, community and social belonging. Equally, a variety of cultural reasons accounted for 22 percent of the reasons, while 13 percent stressed political reasons and 10 percent described reasons that showed a lack of knowledge about what Whites do as a group. Some of the actual comments expressed include: 'Whites have a different view of the world from our own'; 'Whites have a lot of money to afford using it on free time'; 'Sport facilities for us are far below a desirable standard to waste time on'; and 'I normally do not do a thing because it is done by somebody else, especially Whites.'

6.4 COGNITION OF RESOURCES

An important aspect of this study revolves around learning more about Blacks'uses of natural recreation resources such as lakes, rivers, beaches, game areas, forests and wilderness areas. The respondents were asked to indicate for what purposes they used a lake, river, beach, game area, forest and wilderness area. The responses have been totalled and are

presented in order of importance in Table 6.6. For all six different recreation resources a mean aggregate of 33,7 percent of the respondents thought they would use them first for recreation purposes, then for domestic (21,3 percent), farming (14,3 percent), aesthetic (7 percent), sport (6,8 percent) and so on (see Table 6.6). What is strikingly evident from Table 6.6 is the alternating occurence of recreation-sport and domestic-farming components as majority uses of the different natural recreation resources. The largest single response (67 percent) or a nucleated response (85 percent) of the people surveyed indicated, not surprisingly, that they would use the beach for recreation or recreation and sport, respectively. It should be noted that the latter excludes fishing, as will be seen later in this chapter (Table 6.10).

TABLE 6.6: THE AVERAGE COGNIZED USE OF NATURAL RECREATION RESOURCES BY RANK (%)

PURPOSE OF USE	LAKE	RIVER	BEACH	GAME	FOREST	WILDER= NESS	MEAN
Recreation	32	25	67	35	13	30	33,7
Domestic	23	42	5	1	48	9	21,3
Farming	28	21	1	3	4	27	14,0
Aesthetic	2	1	3	22	5	9	7,0
Sport	10	8	18	3	1	1	6,8
Ecological	1	-	-	22	4	7	5,7
Hunting	-	-	-	7	9	6	3,7
Of no use	2	1	1	1	2	5	2,0
Educational	-	-	1	5	2	2	1,7
Business	-	1	-	-	7	1	1,5
Subsistence	1	1	1	-	3	1	1,2
Medicinal	-	-	3	1	2	1	1,0
Religious	1	-	-	-	-	1	0,4
	100	100	100	100	100	100	100

N = 515

The natural recreation resources such as the river (63 percent) and the lake (51 percent) were importantly used for domestic and farming purposes. The forest was also seen (48 percent) as an important domestic related resource which included activities such as building, fire-wood and herbs collecting. The wilderness area was split one third each way between recreation (30 percent), domestic and farming (36 percent), and the rest of the uses (33 percent). The association of the river, lake, forest and wilderness area with domestic and farming uses or activities, rather than more recreational, sporting and ecological pursuits, is encouraged by socio-economic constraints and spatial inequalities that Blacks experience in every-day life in South Africa. It is also worth noting, not surprisingly so, that the game area (4 percent) and the beach (6 percent) were the only natural recreation resources that did not feature prominently for domestic and farming uses. The reasons are both socio-economic and legal. The game area seems to present a rather different kind of majority use; aesthetic-ecological (44 percent) coupled with recreation (35 percent). As mentioned earlier the game and beach resources are significantly seen as representing those kind of resources that are not viewed for subsistence purposes.

The ideas presented so far are the result of an analytical appraisal of the use of natural recreation resources. However, before bringing this section to a close, it may be useful to give a synthetical appraisal of the same data reflected in Table 6.6. This would help achieve a global perspective of the results and therefore a deeper understanding of the use of the natural recreation resources. In addition, the synthesis or cluster analysis method is an important technique which could afford us an effective procedure of exploring conceptual research.

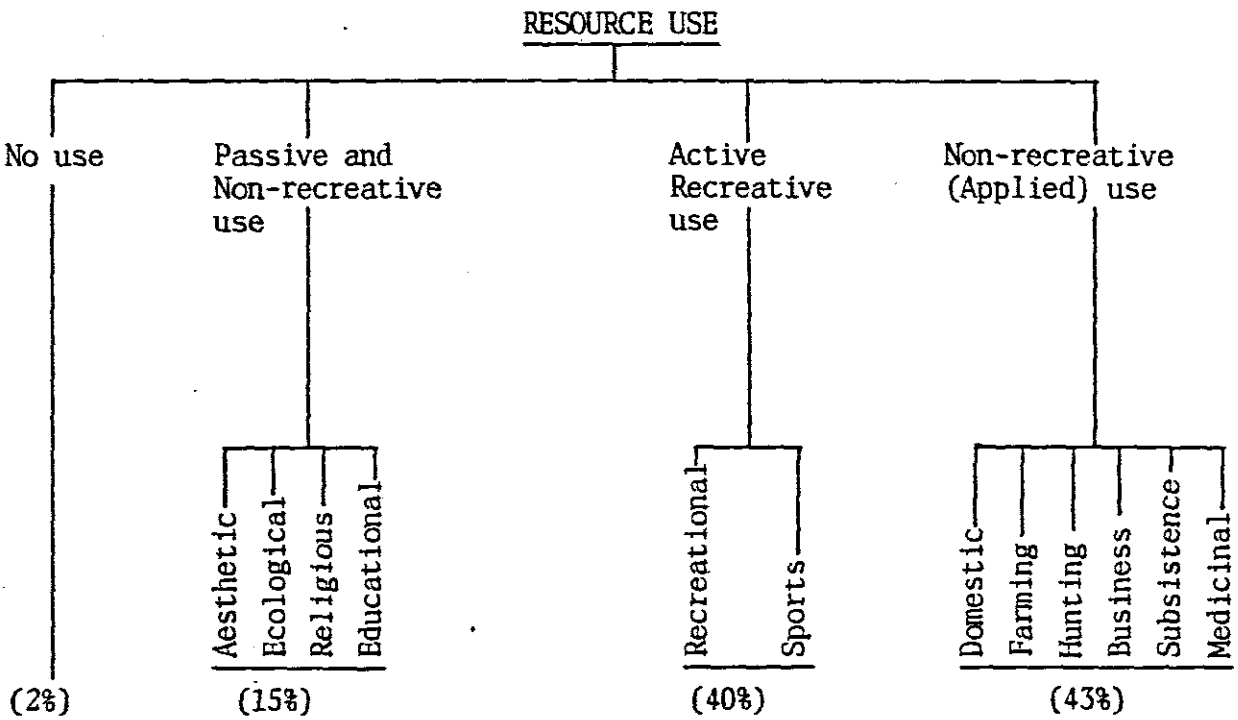
For instance, its hierarchical nature allows the comparative relationships among the natural recreation resources to be categorized and understood at various levels of detail. However, it should be pointed out that such clusters can have severe limitations if they are oversimplified and also that too often it is difficult to find two activities, or resource uses in this case, for which the resource requirements are sufficiently similar for clustering.

The cluster analysis proceeded by categorizing resource uses and aggregating percentage values of similar purposes of resource use, given in Table 6.6. The purposes of resource use were categorized into four components which approximately describe the nature or type of natural recreation resource use as shown in Figure 6.1. These components are:

(1) no use for resources (2 percent);
(2) passive recreative and non-recreative uses (15 percent);
(3) active recreative uses (40 percent); and
(4) non-recreative (applied) uses (43 percent).

What Figure 6.1 represents is a picture of four major groups of resource uses: first, the 'no use' category which could be identified with a lack of response or the perception of the resources as being of no immediate use. Second, the 'passive and non-recreative use' which refers to unorganized activities that place less emphasis on physical exertion and may symbolize a functional use of natural resources with human ecological and aesthetic intentions and appreciation. Third, the 'active recreative use' which generally relates to sporting activities which are energetic and physical, such as swimming, bush-walking and canoeing.

FIGURE 6.1: NATURAL RECREATION RESOURCE USE MODEL



Fourth, the 'non-recreative (applied) use', devised for this study, to refer to functional uses of natural resources which place emphasis on subsistence and man's dependence on domestic, farming, hunting, medicinal and business activities.

It is the outcome of the cluster analysis (Figure 6.1) which is important here. This can be inferred in that more than two in every five respondents (43 percent) indicated that they would use the natural recreation resources for non-recreative subsistence purposes. Equally, 40 percent of the respondents thought they would use these resources for active recreative uses. Whereas a minority of respondents (2 percent) regarded natural resources as being of no significant use, about one sixth (15 percent) thought they could be used for passive recreative pursuits. This moderate but very important response associates natural recreation

resources with aesthetic and ecological ideals which include conservation and preservation of natural resources. To some extent ,these ideals serve to contradict a stereotype that Blacks have no deep regard for the appreciation, conservation and preservation of natural resources.

A further analysis of the use of natural recreation resources can be achieved through use of a cross-tabular analysis of cognitions of resource use by occupation of the respondents (see Table 6.7). What is striking about the table is that the majority use of resources is closely identified

TABLE 6.7: RESPONSE SCORES OF NATURAL RECREATION RESOURCE USE BY OCCUPATION OF RESPONDENT

PURPOSE OF USE	UNSKILLED		SEMI-SKILLED		SKILLED		PROFESSIONAL		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Recreation	64	28	36	37	17	20	34	34	151	29,3
Sport	5	2	2	2	2	2	3	3	12	2,3
Domestic	70	31	24	25	30	35	24	24	148	28,7
Farming	37	16	17	18	15	18	14	14	83	16,1
Medicinal	2	1	3	3	1	1	-	-	6	1,7
Ecological	21	9	6	6	7	8	8	8	42	8,2
Religious	1	-	-	-	-	-	-	-	1	0,2
Educational	2	1	-	-	1	1	4	4	7	1,3
Hunting	9	3	3	3	3	4	3	2	18	3,5
Aesthetic	14	6	4	4	2	2	6	6	26	5,0
Subsistence	2	1	1	1	3	2	1	1	7	1,4
Business	2	1	-	-	2	2	3	2	7	1,4
Of no use	1	-	1	1	3	4	2	2	7	1,4
	230	100	97	100	86	100	102	100	515	100,0

(N = 515; Chi-sq = 53,3; df = 44; p = 0,1; The corresponding contingency coefficient = 0,3).

with domestic and farming uses for all occupational categories of the respondents although, an aggregate, recreation (29,3 percent) has a slight edge on the second most popular use, that is, domestic (28,7 percent). Both the skilled (53 percent) and the unskilled (47 percent) respondents decidedly cognized the natural recreation resources as being used for domestic and farming purposes. Among the semi-skilled respondents, two in every five considered domestic and farming uses (43 percent), and recreation and sport uses (39 percent) as being of equal importance. This was also found to be the case with professional respondents when they selected domestic and farming uses (38 percent) and recreation and sport uses (37 percent).

What emerges from and is repeatedly reconfirmed by this analysis is that the subsistence factor or 'survival instinct' is important to people in relation to the use of natural recreation resources within the Natal North Coast. It seems the people surveyed whether high salary earners or not, are deeply concerned about using natural recreation resources but not merely for recreational, sporting, aesthetic and good-taste purposes. They seem, in fact, to favour resource uses that are more functional, subsistence and 'survival' in character. This trend, as has been mentioned so often, is indicative of a disturbed or perhaps abnormal socio-economic environment that influences the recreation landscape in South Africa, and more particularly in the study area.

Besides responding to questions on the use of natural recreation resources, respondents were also asked what they and their friends thought of natural recreation places in general and also in their local areas. These series of questions revealed that an average of 88 percent of the respondents thought they and their friends view the natural recreation places positively. This at the very least suggests that the respondents have some knowledge

of the natural recreation situation in general. On the other hand, it is interesting to note that there is a strong negative (43 percent) view of natural recreation resources in the respondent's local areas. The sea and beaches were identified as constituting the dominant area of influence by the respondents. These were followed by game parks and reserves, lakes and rivers, forests and wilderness areas and the least considered being hills and mountains.

6.5 RESOURCE OWNERSHIP AND DEVELOPMENT

Underlying many of the changes in economic, cultural and political situations pertaining to the recreation system are changes in recreation resource ownership and development (Bryant et al., 1982). Respondents were required to indicate how they viewed the ownership and developmental priorities of natural areas and facilities. A closer look at data summarized in Table 6.8 provides some useful indications as to whom the respondents think the natural recreation resources belong. It is interesting to note that there is an approximately even split between the respondents who think the resources belong to the government, Black community or White community.

TABLE 6.8: RANKED COGNITION OF OWNERSHIP OF NATURAL RECREATION RESOURCES(%)

RANK	ENTITY	FREQUENCY*	PERCENTAGE
1	The Almighty	441	38
2	Government	228	19
3	Black Community	185	16
4	White community	178	15
5	Myself	138	12
		1 170	100

(N = 515;Each subject gave as much responses as there were entities to be ranked).

* In order to calculate overall frequencies, the number of respondents who gave a particular ranking was divided by that ranking, thereby inverting the rankings in order to weight them appropriately.

The subjects were also asked to reveal their feelings about the priority to be followed in developing infrastructural areas and facilities within the Natal North Coast region. To achieve this the subjects were asked to rank the facilities which appear in Table 6.9.

TABLE 6.9: RANKED COGNITION OF DEVELOPMENTAL PREFERENCE OF AREAS AND FACILITIES (%)

RANK	FACILITY	FREQUENCY*	PERCENTAGE
1	Schooling	317	25
2	Agriculture	239	19
3	Housing	213	17
4	Industry	210	17
5	Church	151	12
6	Recreation	123	10
		1 253	100

(N = 515; Each subject gave as many responses as there were facilities to be ranked).

* In order to calculate overall frequencies, the number of respondents who gave a particular ranking was divided by that ranking, thereby inverting the rankings in order to weight them appropriately.

What eventually emerged (Table 6.9) is that recreation facilities, our immediate subject of concern, were among those ranked lowest. The schooling facility was ranked highest; this giving credence to the notion that the schooling problem in South Africa is pervasive and a priority issue. The results seem to introduce a new perspective about the perception of natural recreation resources, namely that, whereas recreation areas are important and greatly needed, there are basic infrastructural needs that ought to be given priority within the Black community. Recreation is therefore not a priority facility. This also confirms the subsistence viewpoint which has been suggested in the analyses prior to this one.

6.6 VISITS TO RECREATION AREAS AND FACILITIES

In this section of the study respondents were asked to indicate how often they visited, participated in and cognized the accessibility of recreation areas and facilities such as the beach, fishing, picnic, camping, game, wilderness and watersports areas. A summary of responses to each of these questions is presented in the tables that follow. What becomes evident from Table 6.10 is that except for visiting the beach, game reserves and watersport (mainly for swimming) areas, the respondents showed that they largely do not visit other natural recreation areas and facilities such as fishing areas (63 percent), camping areas (64 percent), picnicking (49 percent) and wilderness (48 percent) areas.

TABLE 6.10: MEAN PERCENTAGE VISITS TO NATURAL RECREATION AREAS IN THE NATAL NORTH COAST REGION

RECREATION AREAS	NIL	YEARLY	½ YEARLY	MONTHLY	WEEKLY	TOTAL
Beach	17	38	24	16	5	100
Fishing	63	14	8	9	6	100
Picnic	49	29	14	4	4	100
Camping	64	21	10	3	2	100
Game	30	44	14	9	3	100
Wilderness	48	19	9	12	12	100
Watersport	32	13	9	15	31	100
Mean Totals	43,3	25,4	12,6	9,7	9,0	100

N = 515

The reasons indicated repeatedly for the poor support for these natural recreation areas and facilities range from financial and other personal issues, such as the lack of knowledge about the workings of the facilities,

to administrative (legal) and socio-political constraints.

With regard to actual participation in some activities related to the natural recreation areas and resources (see Table 6.11), swimming was about the only popular activity undertaken either on a yearly basis or monthly basis by most respondents. On the other hand, recreation activities that were most poorly participated - in included boating (85 percent), hunting (75 percent), fishing (71 percent) and camping (64 percent). The very few subjects who participated in natural recreation

TABLE 6.11: RESPONDENTS' MEAN PERCENTAGE PARTICIPATION IN RECREATION ACTIVITIES

RECREATION ACTIVITY	NIL	YEARLY	½YEARLY	MONTHLY	WEEKLY	TOTAL
Swimming	27	24	19	17	13	100
Fishing	71	9	7	7	6	100
Picnicking	51	27	14	5	3	100
Camping	64	20	10	4	2	100
Hunting	75	11	4	6	4	100
Boating	85	7	4	2	2	100
Wilderness-(Appreciation)	42	24	14	10	10	100
Mean Totals	59,3	17,4	10,3	7,3	5,7	100

N = 515

activities indicated that they did so predominantly on a half-yearly to yearly basis (28 percent) and rarely on a weekly basis (6 percent). The reasons for this poor response are basically similar to those mentioned earlier in this chapter. However, some of these reasons will be discussed

in greater detail in the next chapter.

According to Rushton (1981) time distance is probably a more accurate definition of spatial distance than distance in kilometres. To find out the role played by distance and time as a restraining factor in visiting the natural recreation areas and facilities, the time distance responses were sought in the question: "How long would it take you to reach some of the following recreation areas?" The responses are presented in Table 6.12 and are aimed at showing the potential and actual travel time taken by the subjects to reach the nearest natural

TABLE 6.12: RESPODNENTS' TRAVEL TIME TO THE NEAREST NATURAL RECREATION AREAS IN THE NORTH COAST REGION OF NATAL (%)

RECREATION AREAS	½ HOUR	1 HOUR	2 HOURS	+ 2 HOURS	TOTAL
Beach	42	32	16	10	100
Fishing	50	31	14	5	100
Picnic	42	27	21	10	100
Camping	31	31	20	18	100
Wilderness	37	24	18	21	100
Game	13	21	26	40	100
River/Lake	72	17	7	4	100
Mean Total	41.0	26.2	17.4	15.4	100

N = 515

recreation areas and facilities. The table shows that over two thirds (67 percent) of the respondents cognized the nearest natural recreation areas and facilities to be one hour or less of travel time from their homes. Further still, 85 percent of the respondents suggested that

they were within two hours of travel time from the natural recreation resource areas. This clearly suggests that travel time and distance do feature prominantly as restraining factors in deciding to travel to the natural recreation areas within the study area. It is also important to note that whereas most of the recreation areas were cognized by the majority of respondents (Table 6.12) to be readily accessible, a minority of the respondents (13 percent) regarded game recreation areas to be the least accessible.

In another set of questions respondents were asked to reveal recreation areas and facilities they hoped or aspired to visit, and also to advance some reasons for not being able to visit them. Table 6.13 gives a summary of these responses. It is evident from the table that financial constraints (58,7 percent) constitute the leading reason restraining recreationists from visiting leisure areas and facilities. Other reasons of restraint in their aggregated and ranked sequence include: 'facilities not available' (16,1 percent); 'lack of knowledge about facilities' (10 percent) and 'facilities restricted for Blacks' (7,5 percent). The latter reasons on 'availability' and 'restriction' of areas and facilities seem to point directly to the legal and administrative constraints that have affected Black cognitions and enjoyment of leisure and recreation pursuits in the Natal North Coast region.

The fact that two in every five of the people surveyed revealed that they have intentions or aspirations of visiting recreation areas and facilities seem to support the results mentioned earlier that very few Blacks actually visit the natural recreation areas. Equally, the reasons mentioned here actually concur with what has been stated so often earlier

TABLE 6.13: RESPONDENTS' VISIT-ASPIRATIONS TO RECREATION AREAS AND FACILITIES (%)

AREAS AND FACILITIES	RANKED REASONS OF RESTRAINT	REASON FREQUENCY PERCENTAGE	TOTAL FREQUENCY PERCENTAGE
Recreation	1. Financial constraints 2. Facility not available 3. Restricted for Blacks	22,6 10,6 7,5	40,7
Towns and Cities	1. Financial constraints 2. Do not know how 3. Have no means of transport	18,2 6,3 3,1	27,6
Country and Farms	1. Financial constraints 2. Have no means of transport 3. Facility not available	7,9 3,0 1,9	12,8
Overseas and Foreign Country	1. Financial constraints 2. Do not know how 3. Have no means of transport	6,4 2,3 1,6	10,3
Sport	1. Facility not available 2. Financial constraints 3. Do not know how	3,3 3,1 1,4	7,8
Relatives	1. Financial constraints	0,5	0,5
None at all	1. Facility not available	0,3	0,3
		100,0	100,0

(Respondents N = 515; Total Responses = 695; Some respondents gave more than one response.)

in this chapter. It should, however, be mentioned that since the question responded to in this section did not restrict the subjects to natural recreation resources, such as beaches, rivers, lakes, forests, game and wilderness areas, the respondents took the liberty of revealing their generalized aspirations to visit places, persons, areas and facilities of their interest.

6.7 PHOTOGRAPHIC IMAGES OF RESOURCES

Images are an important component of our cognitive system or better still, our spatial behaviour (Bennett and Chorley, 1978; Tranter and Parkes, 1979). The use and cognition of recreation resources can be broadly translated through and seen as the image represented by a site, region or resource. To use Harvey's terminology, it is the 'signal' or 'symbol' presented to the individual by the site (Harvey, 1969).

In this section respondents were given 24 colour photographs (see Appendix E) representing natural recreation resources. They were asked to select a maximum number of photographs they preferred most. A total of 17 photographs were predominantly selected and these are briefly described, ranked, and reasons for their preference explained in Table 6.14. Photographs 3, 15, and 24 (see Appendix E) emerged as the most preferred and represent the game parks and reserves. The reasons given for the preference of this resource or its image are noted by the respondents as either being aesthetic, natural or recreational. These are concepts expressing a sense of taste and appreciation rather than functionality. Out of the remaining categories of resources such as lakes, rivers, beaches, wilderness and forest areas represented in Table 6.14, the water-related photographic images seem to be the next preferred after the game park and reserves.

Also, pursuing this mode of synthesizing resource data into categories of ecological-subsistence dichotomies, very few of the photographic images were primarily read as being of subsistence or functional importance to the respondents (see Table 6.14). By way of categorising the reasons

TABLE 6.14: RANKED PREFERENCES OF NATURAL RECREATION RESOURCES AND FACILITIES DEPICTED IN 17 PHOTOGRAPHS

Rank	Photograph Number	Description of Photograph	Preference Frequence	Frequency Percentage	Reasons for Preference
1	03	Three standing giraffes	126	9,5	Natural - Aesthetic
2	15	Entrance to Hluhluwe Game Reserve	111	8,4	Recreational - Aesthetic
3	24	Giraffes drinking water	107	8,1	Natural - Aesthetic
4	09	Traditional huts in rural area	106	7,9	Cultural
5	06	Man fishing in deserted beach	103	7,8	Recreational
6	01	Big tree in wilderness area	85	6,4	Natural - Aesthetic
7	23	Beach-Lagoon environment	83	6,3	Recreational - Aesthetic
8	04	Man and boat at a lake pier	79	5,9	Recreational
9	20	Modern thatched rondavel	77	5,8	Cultural
10	14	Camp-site next to lake	72	5,5	Recreational
11	22	Three water-drinking Inyala	71	5,3	Aesthetic - Recreational
12	07	Boat at lake-side campsite	68	5,1	Recreational
13	17	River park environment	63	4,7	Recreational - Aesthetic
14	11	A grazing gemsbok	54	4,1	Aesthetic - Ecological
15	16	Gate and fence of game reserve	42	3,2	Ecological
16	12	Entrance to False Bay Game Park	41	3,1	Recreational - Aesthetic
17	19	Trees and stream in a park	39	2,9	Recreational - Natural
			1327	100,00	

(Respondents N = 515; Total Responses = 1327; Total number of possible reasons = 15)

for preference of photographic resource images, aesthetic-natural-recreation reasons have assumed some prominance over a number of other reasons identifiable in Table 6.14.

In contra-indication to the results reflected in Table 6.14 respondents were again given the same 24 photographs and asked to select a maximum number of those they thought they least prefer. A modest number of 10 photographs were selected, particularly those that had featured in the bottom 8 of the most preferred in Table 6.14. The least preferred photographs (see Table 6.15), represent a mixture of different types of recreation resource images identifiable in the game reserve features, the lake, river and beach facilities and the wilderness areas. The dominant reasons for disliking these photographic images are not easy to understand; however, these have been conviently categorized into reasons such as psychological (danger and fear); socio-economic and administrational.

There are photographic resource images that have been viewed in conflicting terms by respondents. These are represented in photographs 9, 6, and 1, and are ranked within the first six of the photographs that are both most preferred and least preferred (see Tables 6.14 and 6.15 for comparison). The photograph number 9, for example, shows three traditional huts in a rural environment. The reasons for the conflicting cognition rests on the fact that the responses to this image were found to have been evenly split in terms of urban-rural residence or background of respondents. The urban subjects interpreted the photographs as representing an environment that is socio-economically depressed, whereas the rural subjects saw them as depicting an area that symbolizes their roots and tradition, and therefore culturally important.

TABLE 6.15: RANKED LEAST PREFERRED RECREATION RESOURCES AND FACILITIES DEPICTED IN 10 PHOTOGRAPHS OUT OF 24

RANK	PHOTOGRAPH NUMBER	DESCRIPTION OF PHOTOGRAPH	DISLIKE FREQUENCY	FREQUENCY PERCENTAGE	REASONS FOR DISLIKE
1	09	Traditional rustic huts	113	23,1	Socio-economic
2	16	Gate and fence of game reserve	68	13,9	Administrational
3	04	Man and boat at a lake pier	57	11,6	Psychological - socio-economic
4	19	Trees and stream in park	50	10,2	Climatic environment
5	06	Man fishing in deserted beach	42	8,6	Psychological (danger)
6	01	Big tree in wilderness area	39	8,0	Psychological (fear)
7	12	Entrance to False Bay Game Park	35	7,1	Administrational
8	14	Camp site next to lake	30	6,1	Administrational
9	23	Beach-lagoon environment	29	5,9	Psychological (danger)
10	07	Boat at lake-side campsite	27	5,5	Socio-economic
			490	100	

(Respondent N = 515; Total Responses = 490; Total possible reasons = 15).

Some of the conflicting sentiments have emerged from statements evoked from the following photographic images:

Photograph 9 (Traditional huts).

'It represents my heritage which I'm very proud of';

'It's traditional, when things were still good';

'The buildings are poorly done, fire could easily destroy them';

'It shows remoteness and dryness of places given to us'.

Photograph 6 (Man fishing in deserted beach).

'Of swimming and fishing. I can fish and feed myself';

'The sea is beautiful and suggests cleanliness and purity';

'The place is isolated and can be dangerous'.

Photograph 1 (Big tree in wilderness area).

'The beauty of nature with tall indigenous trees';

'Depicts serenity, tranquility and abundance of nature';

'Forests are dangerous to me because of robbers and wild animals'.

Another important variation of the analysis of photographic images is reflected in items 22 to 28 of the questionnaire (see Appendix B), which requires the respondents to select a set of photographs that represent a specific natural recreation resource they like most. Respondents were also to express some sentiments or thoughts evoked by the photographs. Out of a possible total of 940 responses to all sets of photographs representing six kinds of natural recreation resources (Table 6.16), the first sets of three photographs preferred were those representing some aspect of game resource.The preference of this resource constitutes about 56,6 percent of the total responses covering all six types of natural recreation resources. The leading thoughts evoked by the (game resource) photographs

TABLE 6.16: COGNITION THROUGH A SET OF PHOTOGRAPHS REPRESENTING A SPECIFIC NATURAL RECREATION RESOURCE

PHOTOGRAPH	DESCRIPTION OF PHOTOGRAPH AND RESOURCE	FREQUENCY	PERCENTAGE	THOUGHTS EVOKED BY PHOTOGRAPH
15	Entrance to Hluhluwe Reserve (Game Resource)	103	21,2	Ecological: game protection
24	Giraffes drinking water (Game Resource)	89	18,3	Natural: wild and carefree
03	Three standing giraffes (Game Resource)	78	16,1	Aesthetic: beautiful animals
01	Big tree in wilderness (Wilderness Resource)	62	12,8	Natural-Aesthetic: beauty of nature
14	Campsite by the lake (Water Resource)	53	10,9	Recreation: enjoyment of water
23	River lagoon or estuary (Water Resource)	52	10,6	Recreation: ideal area for activity
06	Man fishing at the coast (Water Resource)	49	10,1	Recreation: good for subsistence
TOTAL		486	100,0	

(Respondents N = 515; Total responses to all sets of photographs = 940; Total possible kinds of sets: game, beach, lake, river, forest and wilderness)

were characterized by ecological, natural and aesthetic notions. The more functional notions such as subsistence, hunting, fishing, medicine, irrigation, etc. were not predominantly featured in this analysis. The actual sentiments expressed by the respondents were as follows:

Photograph 3 (Three standing giraffes).
'Shows the importance of water in animal survival';
'Game area with colourful animals'.
Photograph 15 (Entrance to Hluhluwe Game Reserve).
'Reminds me of our tour to Hluhluwe with our school';
'It makes me think of the serenity of the wild life'; and
'It shows just how much care is uselessly given to animals than human beings'.
Photograph 24 (Giraffes drinking water).
'The difficulty with which animals feed and drink'; and
'The importance of wild animals and wildlife'.

Next in order of preference were the water related resources which constitute about 22 percent of the total responses and these tended to evoke sentiments that are associated with 'recreation' as an activity, as a provider of subsistence and as a source of pleasure. These sentiments were expressed in the following manner:

Photograph 6 (Man fishing in deserted beach).
'This can help if I run short of work';
'A good place for relaxing'; and
'Man is disturbing nature'.

Photograph 14 (Camp site next to lake).

'Expensive. It reminds me of my poverty';

'We are not allowed to patronize such area'; and

'Nothing interesting except the standing cars'.

Photograph 23: (River lagoon or estuary).

'Symbolizes love. Think of my girl friend, we use to visit such places';and

'Makes me think of God as the maker of nature and the beginning of life'.

6.8 SEMANTIC DIFFERENTIAL ANALYSES

As this study actually adopts a multi-analytic approach in looking at the research problem, the semantic differential is one such technique used to quantify the meaning of natural recreation resources and other related concepts. As mentioned earlier (refer to Chapter 2), the real advantage of this method is that one can obtain quantitative comparisons between the meaning of different concepts, as well as between the way in which different groups view the same concept (Bechtel, 1976; Neulinger, 1981). Let us now consider some of these analyses.

The initial step was to construct a concept-scale polarity matrix, identified in Table 6.17. This was constructed from frequency values and their proportions identifiable in Appendix F. In working out the polarity matrix in Table 6.17, two conceptual ideas were born in mind. First, that the adjective scale polarity can be identified through adjectival ratings such as, for example, extremely good, moderately good, neutral, moderately bad, and extremely bad. Secondly, that there is intensity within polarity which for our purposes can be proportionately designated as follows: extreme (60-100 percent); moderate (20-59 percent) and

TABLE 6.17: CONCEPT-SCALE POLARITY MATRIX WITH POLARITY INTENSITY

	SCALE SYMBOLS	I NATURAL PLACES	II LEISURE TIME	III GAME RELATED PHOTO IMAGES	IV WATER RELATED PHOTO IMAGES
Good-Bad	GD-BD	eGD	eGD	mGD	eGD
Useful-Useless	UF-UL	eUF	eUF	mUF	eUF
Important-Unimportant	IM-UI	eIM	eIM	mIM	eIM
Holy-Unholy	HO-UH	mHO	eHO	mHO	mHO
Rewarding-Unrewarding	RE-UR	eRE	eRE	mRE	mRE
Valuable-Valueless	VA-VL	eVA	eVA	mVA	eVA
Beautiful-Ugly	BE-UG	eBE	mBE	mBE	eBE
Adequate-Inadequate	AD-IA	mIA	mIA	mAD	mAD
Accessible-Inaccessible	AC-IC	mAC	mAC	mAC	mAC
overused-Underused	OV-UD	mOV	mUD	mOV	mOV
Open-Restricted	OP-RE	mRE	eOP	mRE	mRE
Safe-Dangerous	SA-DA	mSA	mDA	mDA	mSA

(N = 515; Polarity intensity: e = extremely; m = moderately; n = lowly)

low (0-19 percent). The concept-scale polarity matrix in Table 6.17 may appear to be non-numerical at a glance, however, the basis for its construction is numerical.

The polarity intensity value was achieved by selecting the highest frequency response for each bipolar adjective. These frequencies and proportions appear in tabular form in Appendix F. Then the frequency values were categorized in terms of either being extreme (60-100 percent), moderate (20-59 percent) and low (0-19 percent).

From the polarity matrix presented in Table 6.17 relationships can be discerned about concepts and scales or constructs. Reading along the rows it becomes evident that the top seven scales of each of the concepts -- natural places, leisure time and water-related images -- achieved an extremely positive response, only the game-related concept being cognized as moderate throughout. On the other hand, the bottom five scales reveal a moderate response that varies from positive to negative polarities depending on the concept and scale involved. For example, natural places and leisure time are regarded as moderately 'inadequate', whereas game and water-related resources are moderately 'adequate'. All concepts except for leisure time are cognized as being moderately 'restricted'. On considering concept I; natural places, we observe that it was described as extremely 'good', 'useful', 'important', 'rewarding', 'valuable', 'beautiful', and moderately 'holy', 'inadequate', 'accessible', 'overused', 'restricted' and 'safe'.

The general structuring and spread of concept-scale relationships appearing in Table 6.17 suggests a summary of an analytical procedure that will

be adopted in working the rest of this section. The first approach features the 12 bipolar adjective scales or constructs as categorized into two groups of analysis. The first cluster of seven scales or cognitive constructs exhibits an abstract characteristic and the last cluster of five a concrete characteristic. The second approach accentuates the use of basically three or more concepts relating to the natural recreation places, leisure time and resources photographic images which may either be game-related, water-related or vegetation related.

6.8.1 The abstract-concrete constructs

In order to achieve additional analysis from this section, the abstract-concrete cognitive categories already referred to earlier can further be broken down into dimensions. These will help us achieve more meaning and better interpretation of cognitive information of natural recreation resources. Whilst engaging in this form of analysis, it should be born in mind that the composition of extended numerical categories in describing the spread and intensity of adjectival scales or constructs can create severe interpretational problems (Golant and Burton, 1976). However, a large number of bipolar adjective scales were constructed in an attempt to obtain a representative sample of the possible dimensions along which concepts can be judged.

In Table 6.18 five dimensions are reflected designating: virtue, quality, significance, quantity and functionality within the bipolar adjective scales. The mean and standard deviation scores worked out reflect a near-uniform attribute for all the dimensions, except for the quantity and functionality dimensions. This confirms the idea expressed earlier

TABLE 6.18: CONCEPT DIMENSIONS AND MEAN AND STANDARD DEVIATION SCORES FOR NATURAL RECREATION PLACES

DIMENSION 1 : VIRTUE	MEAN	SD	CONSTRUCT ORIGIN
Good-Bad	3,7	4,2	Osgood et al.
Beautiful-Ugly	3,7	4,2	Osgood et al.
Holy-Unholy	3,1	4,2	Osgood et al.
DIMENSION 2 : QUALITY			
Valuable-Valueless	3,6	4,2	Osgood et al.
Rewarding-Unrewarding	3,5	4,3	Unassigned
Safe-Dangerous	2,9	4,3	Osgood et al.
DIMENSION 3 : SIGNIFICANCE			
Important-Unimportant	3,9	5,9	Osgood et al.
Useful-Useless	3,7	4,2	Unassigned
DIMENSION 4 : QUANTITY			
Adequate-Inadequate	1,9	4,5	Unassigned
Overused-Underused	2,9	4,3	Unassigned
DIMENSION 5 : FUNCTIONALITY			
Open-Restricted	2,2	4,5	Unassigned
Accessible-Inaccessible	2,5	4,4	Unassigned

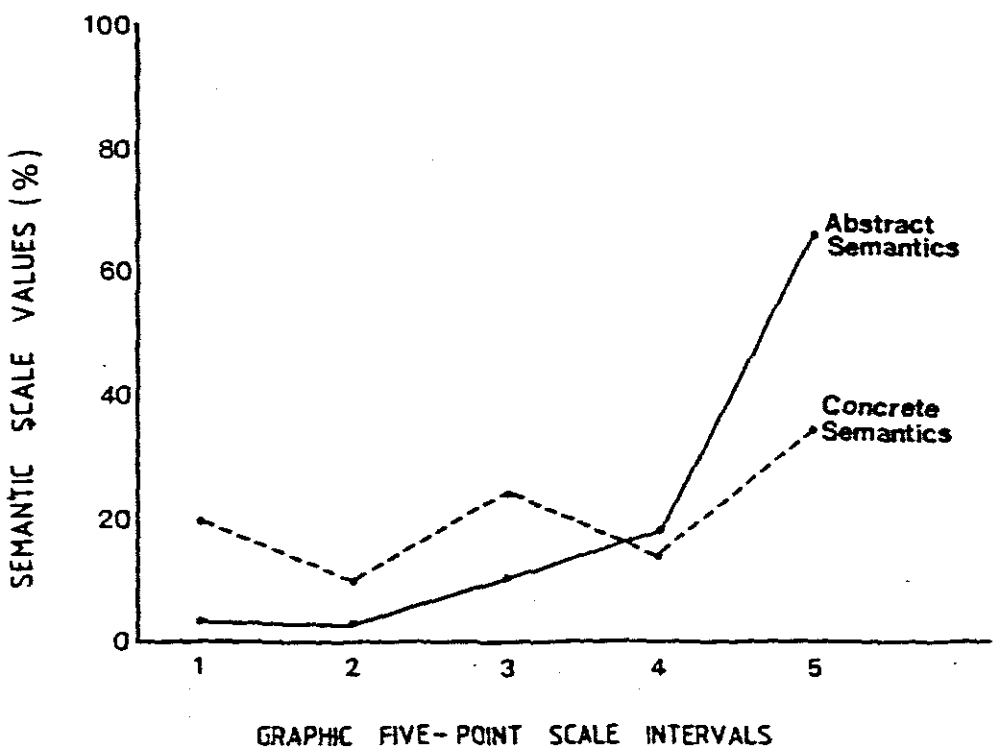
SUMMARY OF DIMENSION SCORES

DIMENSION	IDENTIFICATION	MEAN TOTALS	MEAN RATIO	MEAN RANKS
1	VIRTUE	10,5	3,5	2
2	QUALITY	10,0	3,4	3
3	SIGNIFICANCE	7,6	3,8	1
4	QUANTITY	4,8	2,4	4
5	FUNCTIONALITY	4,7	2,3	5

that the abstract constructs are cognized more positively than the concrete constructs found in dimensions 4 and 5. However, it should be noted that the categorization of constructs into dimensions has slight variations. For example, the 'safe-dangerous' construct is grouped with abstract constructs here.

A summary of ranked dimensions values identified in Table 6.18 indicates that the 'significance' dimension of natural recreation places is the most positive and highly regarded. This followed by dimensions of virtue, quality, quantity and lastly functionality. It must be kept in mind that the mean values for these dimensions do not necessarily exist in any one person. They are useful, however, in terms of making comparisons among dimensions and constructs.

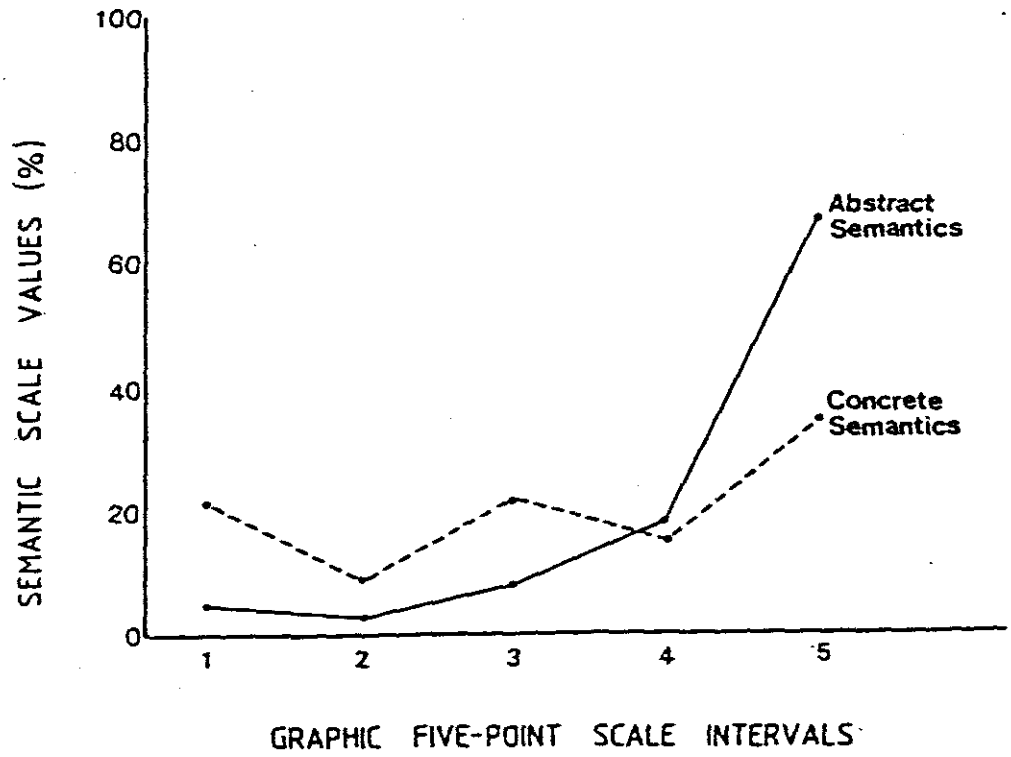
FIGURE 6.2 AGGREGATED PROPORTIONAL SEMANTIC RESPONSES TO NATURAL RECREATION PLACES



In order that relationships between adjectival scales or constructs and concepts such as natural recreation places, leisure time and resources photographic images could more readily be identified, graphical representations for concrete and abstract semantics were worked out. A series of five figures (Figs. 6.2, 6.3, 6.4 and 6.5) have been computed from semantic scale proportional values in Appendix F.

Figure 6.2 shows that natural recreation places are described in terms of extreme positive abstract semantics at more than 60 percent response level. For all the five-point scale intervals, that is, the extreme positive to the extreme negative polarity, the concrete semantics describe natural recreation places at the 20 percent average response level.

FIGURE 6.3 AGGREGATED PROPORTIONAL SEMANTIC RESPONSES TO LEISURE TIME



This kind of semantic description is also obtained in the cognition of leisure time. That is, leisure time is basically described in positive abstract terms or constructs such as 'beautiful', 'good', 'valuable', etc., and also in negative concrete terms such as 'inadequate', 'restricted', 'inaccessible', 'underused', etc. (See Figure 6.3).

On considering responses towards natural recreation resources for which photographs were used as a stimulus, similar or consistent responses were attained with what was observed in Figure 6.2 and 6.3. This is

FIGURE 6.4 AGGREGATED PROPORTIONAL SEMANTIC RESPONSES TO WATER RELATED RESOURCES

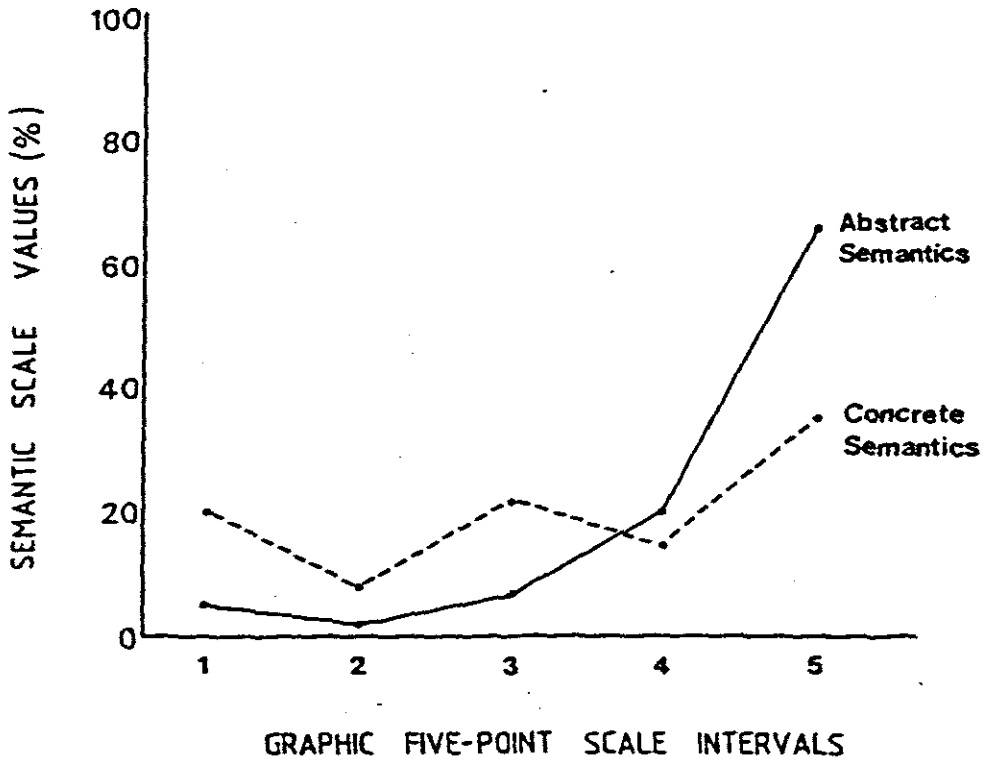
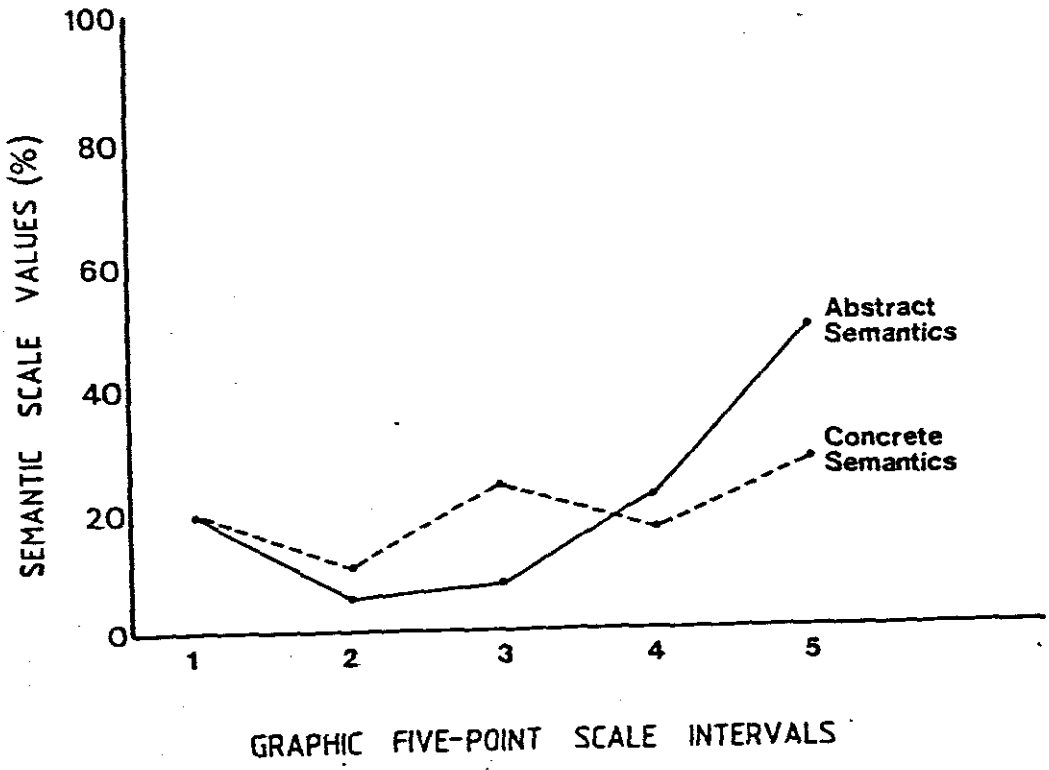


FIGURE 6.5 AGGREGATED PROPORTIONAL SEMANTIC RESPONSES TO GAME RELATED RESOURCES

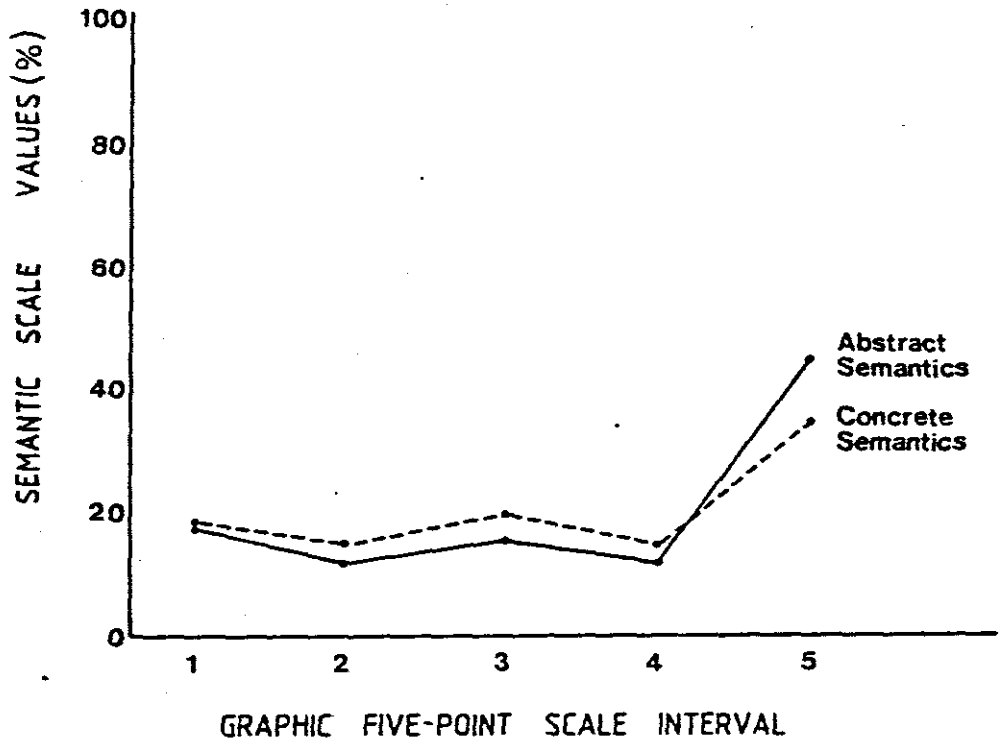


also particularly true for the water-related resources (see Figure 6.4).

What is prominent and interesting in Figure 6.5 is the deviation reflected in the responses toward the game-related resources. The response at the extreme negative scale is such that the game parks and reserves are described equally in both the abstract and concrete terms at the 20 percent response level.

The response to natural recreation resources that are vegetation-related

FIGURE 6.6 AGGREGATED PROPORTIONAL SEMANTIC RESPONSES TO VEGETATION RELATED RESOURCES



such as forest reserves and wilderness areas (see Figure 6.6), are neither positively nor negatively described in concrete terms at an average response of 20 percent. These resources are described as being 'inadequate', 'overused', 'restricted' and 'inaccessible'. On the whole they are functionally regarded as important for subsistence purposes. Also to be noted, Figure 6.6 represents the only dominance of concrete semantics or constructs over abstract semantics in describing the cognition of natural recreation resources.

6.8.2 The concept dimensions

The procedure of concept analysis or what were earlier designated as elements in the literature review section, is employed to gain an understanding of the cognitive meanings of responses towards natural recreation resources. Also, it is employed to reveal the existing relationship between one concept and another by inter-correlating the constructs that are associated with each concept. The three basic concepts that are presented include natural places, leisure time and natural recreation resources as depicted on photographs. It is expected that this method of analysis will probably bring forth differing results on items that have been presented earlier in this section (paragraph 6.8).

A description of the means and standard deviations of the three cognitive concepts is given in Table 6.19. These reflect some similarities in distribution of natural places and leisure time, and an increased distribution of resource images. There are basically two possible reasons for this value increase in the third cognitive concept: (1) that it appears as a combination of water, game and vegetation-related resources and, (ii) that because the stimulus-response was elicited in relation to photographs rather than mental maps or constructs the subjects tended to overrate what they saw on the photographs.

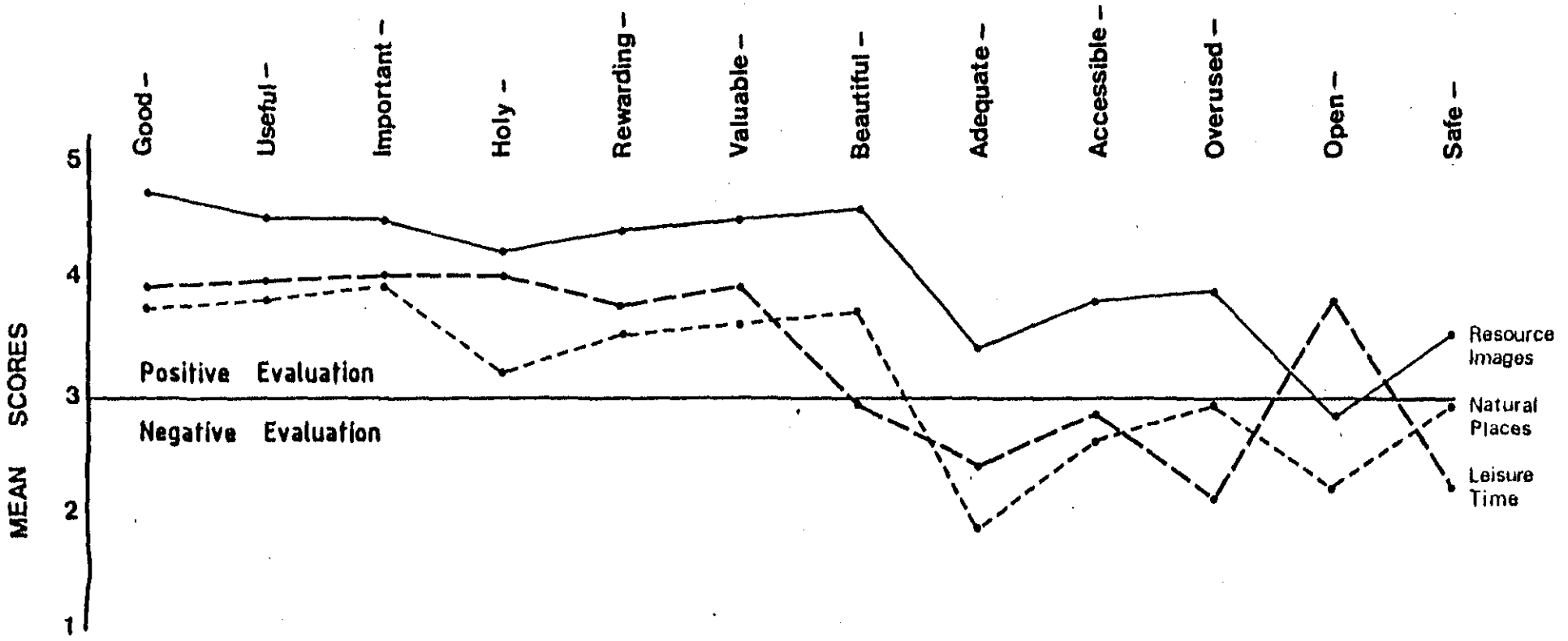
The statistical data shown in Table 6.19 are summarized more effectively in Figure 6.7. The latter illustrates that in comparison with semantic differential constructs ranging from 'good-bad' to 'safe-dangerous', resources images as components of the natural recreation environment in the north-coastal region of Natal were viewed very positively. The

TABLE 6.19: DESCRIPTIVE SCALE MEANS FOR LEISURE TIME AND NATURAL RECREATION RESOURCES AND PLACES

SCALE: High value - Low value	LEISURE TIME			NATURAL PLACES			RESOURCES IMAGES		
	$\bar{x}$	Me	SD	$\bar{x}$	Me	SD	$\bar{x}$	Me	SD
Good - Bad	3,88	5	5,94	3,72	5	4,25	4,69	5	6,18
Useful - Useless	3,88	5	5,94	3,75	5	4,23	4,58	5	6,19
Important - Unimportant	3,92	5	5,94	3.92	5	5,93	4.59	5	6,19
Holy - Unholy	4,00	5	5,92	3,17	5	4,36	4,21	5	6,22
Rewarding - Unrewarding	3,77	5	5,97	3,50	5	4,30	4,39	5	6,22
Valuable - Valueless	3,96	5	7,27	3,62	5	4,27	4,49	5	6,21
Beautiful - Ugly	2,90	4	6,14	3,73	5	4,24	4,64	5	6,19
Adequate - Inadequate	2,36	3	6,17	1,94	3	4,52	3,35	3	5,40
Accessible - Inaccessible	2,88	4	6,09	2,59	4	4,45	3,78	4	5,33
Overused - Underused	2,20	3	6,16	2,91	4	4,38	3,89	4	5,30
Open - Restricted	3,79	5	5,97	2,23	3	4,50	2,88	3	5,44
Safe-Dangerous	2,24	3	6,18	2,95	4	4,39	3,49	4	5,38

(N = 515. The values are calculated rating scales ranging from one to five)

FIGURE 6.7 MEAN EVALUATION OF SINGLE ADJECTIVE SCORES FOR THREE RECREATION CONCEPTS



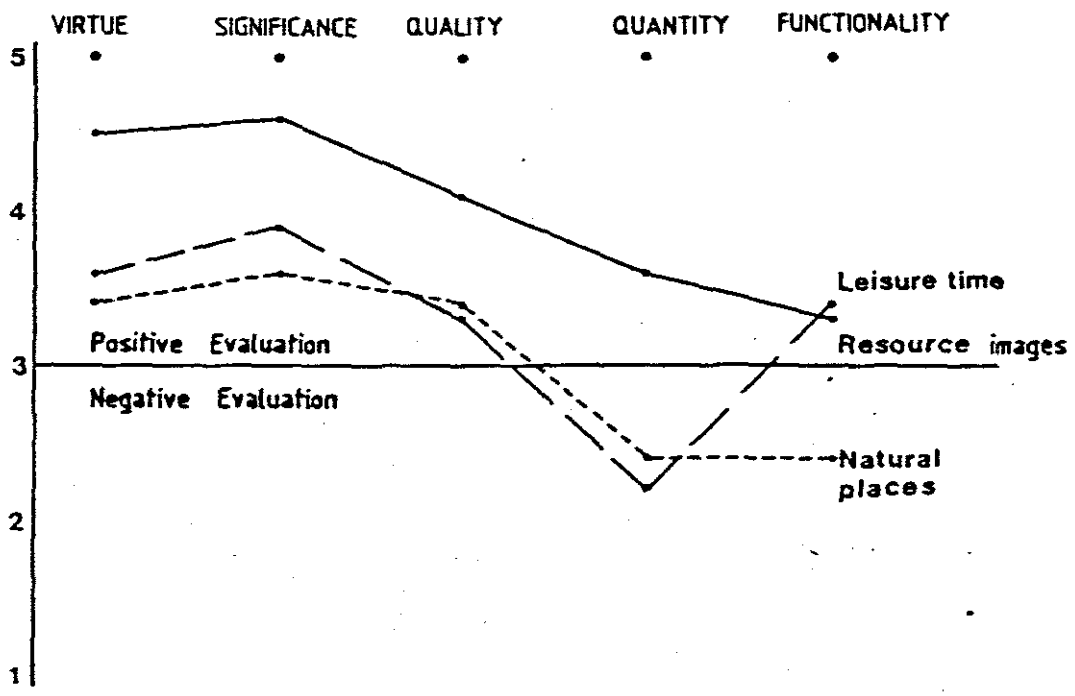
N = 515; All scores are based on high-low distribution
The negative equivalent of the bi-polar adjective is omitted though operational

natural places and leisure time concepts were evaluated as having greater value, but also tended to cross each other for constructs such as 'beautiful-ugly', 'adequate-inadequate', 'overused-underused', 'open-restricted' and 'safe-dangerous'. What is to be specially noted is that only the natural places were negatively evaluated as being 'inadequate'. Also, that whereas leisure time was highly and positively evaluated to be 'open' or 'unrestricted', natural places were evaluated as 'restricted'.

The clustering of concepts into five cognitive dimensions -- virtue, significance, quality, quantity and functionality in terms of Table 6.18, reflects that on the whole all concepts are positively evaluated. However, the quality and functionality of natural recreation places is again negatively evaluated, and leisure time is seen to be low in terms of quantity only (Figure 6.8).

FIGURE 6.8

MEAN EVALUATION OF AGGREGATED DIMENSION SCORES FOR THREE RECREATION CONCEPTS



6.8.3 Concept-scales correlated

To this point we have used frequencies, means and standard deviations to generate matrices and profiles as a method of analysing semantic differential data. Some statistical analysis employing simple correlation and modified factor analysis provides a more rigorous approach for determining concept-scale similarity. In the tables that follow the Pearson product-moment correlation was applied to cognitive scales of each of the three major concepts: leisure time, natural recreation places and resource images. The fundamental aim in this analysis is to ascertain the similarity or lack of it in the evaluation of the three major concepts.

Table 6.20 shows a matrix of correlation coefficients. The coefficients

TABLE 6.20: SEMANTIC DIFFERENTIAL SCALE CORRELATION MATRIX FOR LEISURE TIME

SCALE	1	2	3	4	5	6	7	8	9	10	11	12
1. Good-Bad	1,0											
2. Useful-Useless	0,6	1,0										
3. Important-Unimportant	0,5	0,8	1,0									
4. Holy-Unholy	0,4	0,7	0,7	1,0								
5. Rewarding-Unrewarding	0,4	0,6	0,7	0,6	1,0							
6. Valuable-Valueless	0,5	0,7	0,7	0,6	0,7	1,0						
7. Beautiful-Ugly	0,02	-0,02	-0,02	-0,01	-0,04	-0,01	1,0					
8. Adequate-Inadequate	0,1	-0,01	0,03	-0,1	0,00	-0,05	-0,1	1,0				
9. Accessible-Inaccessible	0,1	0,1	0,2	0,1	0,1	0,1	-0,2	0,2	1,0			
10. Overused-Underused	0,1	0,00	-0,01	-0,1	-0,03	0,03	-0,2	0,5	0,4	1,0		
11. Open-Restricted	0,2	0,3	0,3	0,3	0,3	0,3	0,1	-0,03	0,1	0,1	1,0	
12. Safe-Dangerous	-0,2	-0,1	-0,1	-0,1	-0,1	-0,1	0,3	-0,2	-0,2	-0,2	-0,1	1,0

N = 515; Significance level at 0,0001.

show that the adjectival scales or constructs describing leisure time in terms of 'good-bad', 'useful-useless', 'important-unimportant', 'holy-unholy', 'rewarding-unrewarding', and 'valuable-valueless' are high and positively inter-correlated (r=0,7), The highest positive correlation (r=0,8) exists between the 'useful-useless' and 'important-unimportant' constructs. With the exception of the 'beautiful-ugly' (r=-0,01) construct, the first seven of these constructs (Table 6.20) that were highly correlated are actually abstract constructs. On the other hand, the rest of the constructs such as 'adequate-inadequate', 'accessible-inaccessible', 'overused-underused', 'open-restricted' and 'safe-dangerous' are on the whole either negatively and lowly correlated or not correlated at all. These constructs are also functional in character.

On the whole what is implicit in Table 6.20 is that the description of leisure time in terms of abstract constructs is uniform and for the most part positively consistent. This finding adds to the validity of the notions already expressed in other sections of this chapter that subjects in the Natal North Coast Region also view natural recreation resources on the basis of aesthetic and good taste attributes. In addition, these abstract attributes reinforce the idea that the subjects, in responding to the stimuli (constructs), also makes use of their intuitive, socio-cultural and philosphical values which influence evaluation of natural recreation resources.

The correlation matrix for adjectival scales or constructs describing the natural recreation places (Table 6.21) is very similar to the one presented in Table 6.20 and discussed earlier. What is evident from Table 6.21 is that the first seven of the construct scales have a moderate to high correlation coefficient (r=0,4 to r=0,8). These are all abstract

TABLE 6.21: SEMANTIC DIFFERENTIAL SCALE CORRELATION MATRIX FOR NATURAL RECREATION PLACES

SCALE	1	2	3	4	5	6	7	8	9	10	11	12
1. Good-Bad	1,0											
2. Useful-Useless	0,6	1,0										
3. Important-Unimportant	0,5	0,7	1,0									
4. Holy-Unholy	0,4	0,5	0,5	1,0								
5. Rewarding-Unrewarding	0,4	0,5	0,5	0,5	1,0							
6. Valuable-Valueless	0,5	0,6	0,6	0,5	0,8	1,0						
7. Beautiful-Ugly	0,7	0,6	0,5	0,4	0,4	0,5	1,0					
8. Adequate-Inadequate	0,03	0,01	0,00	0,1	-0,05	-0,02	0,01	1,0				
9. Accessible-Inaccessible	0,1	0,2	0,2	0,2	0,1	0,1	0,05	0,3	1,0			
10. Overused-Underused	0,2	0,2	0,2	0,2	0,1	0,3	0,2	0,1	0,3	1,0		
11. Open-Restricted	0,00	0,08	0,01	-0,06	0,08	-0,01	0,04	-0,03	-0,2	-0,07	1,0	
12. Safe-Dangerous	0,2	0,3	0,2	0,4	0,3	0,3	0,3	0,08	0,3	0,3	-0,07	1,0

N = 515; Significance level at 0,001.

constructs and include the 'beautiful-ugly' construct which was negatively correlated (r=-0,01) for the leisure time concept, but is now moderately correlated (r=0,5) for the natural recreation places. A low correlation was recorded between the functional (concrete) constructs such as 'adequate-inadequate', 'accessible-inaccessible', 'overused-underused', 'open-restricted', and all other cognitive constructs. The poor correlation suggests that there is need to consider the positive or negative aspect of the cognitive constructs if a qualitative assessment of the concepts or elements is to be made. In other words, the relationship between the abstract and concrete attributes of the concepts or elements is dependent on the qualitative nature of the cognitive constructs.

Each of the three differential scale matrices discussed in this section

have, on the whole, similar results. However, Table 6.22 has higher correlation coefficients (r=0,9) than has been the case with the previous two tables. The first seven construct scales relating to photographic resource images (Table 6.22) are prominantly described in terms of abstract cognitive constructs with a coefficient range of r=0,7 to r=0,9. The functional (concrete) constructs ranging from 'adequate-inadequate' through

TABLE 6.22: SEMANTIC DIFFERENTIAL SCALE CORRELATION MATRIX FOR PHOTOGRAPHIC RESOURCE IMAGES

SCALE	1	2	3	4	5	6	7	8	9	10	11	12
1. Good-Bad	1,0											
2. Useful-Useless	0,9	1,0										
3. Important-Unimportant	0,9	0,9	1,0									
4. Holy-Unholy	0,8	0,8	0,8	1,0								
5. Rewarding-Unrewarding	0,9	0,9	0,9	0,8	1,0							
6. Valuable-Valueless	0,9	0,9	0,9	0,7	0,9	1,0						
7. Beautiful-Ugly	0,9	0,8	0,9	0,7	0,8	0,8	1,0					
8. Adequate-Inadequate	0,2	0,2	0,2	0,3	0,3	0,3	0,2	1,0				
9. Accessible-Inaccessible	0,2	0,2	0,2	0,3	0,3	0,3	0,2	0,6	1,0			
10. Overused-Underused	0,3	0,3	0,3	0,3	0,3	0,3	0,2	0,4	0,5	1,0		
11. Open-Restricted	0,3	0,3	0,3	0,4	0,3	0,3	0,3	0,2	0,1	0,2	1,0	
12. Safe-Dangerous	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,3	0,3	0,3	0,3	1,0

N = 515; Significance level at 0,001

'open-restricted' actually recorded a low (r=0,3) but relatively improved, correlation coefficient as compared to previous tables. The existence of moderately high correlation value (r=0,6) between the construct 'safe-dangerous' and most other cognitive scales does also confirm the improved value of the relationships.

The reasons for the relatively higher correlation coefficients in Table

6.22 seem to be largely based on the fact that the response stimuli used in this table were visual (see photographs in Appendix E) and through these the semantic adjectival responses were solicited. On the other hand, Tables 6.20 and 6.21 made use of word statements relating to leisure time and natural recreation places in the Natal north-coastal region.

6.9 CONCLUSION

This chapter has in various ways attempted to give a quantitative analysis and presentation of surveyed data, in a manner understandable to recreation readers. Despite the fact that there are a variety of short-comings associated with the kinds of research methods used (see paragraph 5,3) this study can be said to have a valuable contribution to offer to the field of Behavioural Recreation Geography, and in particular the methods of evaluating the meaning of the natural environment to Blacks within the Natal North Coast region.

In addition to other analyses, a variety of correlations and relationships has been worked out between various frequencies of personal information of respondents and photographic cognitive scales, semantic cognitive scales and natural recreation resource characteristics. However, for most part the results have shown that there is a lack of correlation between these components. These findings imply two things: either (1) that the semantic and cognitive descriptions of natural recreation and leisure resources are not necessarily influenced by most of the personal characteristics of the subjects, or (2) that there is an inbuilt weakness in the cognitive evaluation techniques used. For example, just measuring the frequency with which a particular concept or element in the natural recreation

environment is responded to, a group of subjects can be quite misleading in that any weighting that might be assigned these concepts is ignored. However, this must not be regarded as detracting in any substantial manner from the value of this study as a contribution to the field or Recreation Geography since the results are consistent and show the same broad, similar patterns of response emerging. In addition, the interpretational explanations and submissions in the next chapter will help place the analytical problems into clearer perspective.

CHAPTER 7

INTERPRETATION OF DATA

7.1 INTRODUCTION

The results and discussions of the previous chapters provide a framework for considering some interpretations and conclusions about the cognitions of natural recreation resources. The emerging interpretation of the findings seeks to reveal some differences and similarities in relationships pertaining to four special aspects of this thesis. These aspects are the related literature reviewed, the philosophical and value system, the actual physical setting of the study area and the presentation and analysis of research data. The advantage of adopting such a multi-faceted procedure or strategy defined by these aspects is clear: instead of producing a plethora of individually useful but collectively unrelated studies, this exercise will help produce integrated and complementary research findings.

A closer look at the interrelationships presented in the conceptual model (Figure 7.1), shows that the literature reviewed offers a wealth of information about the diverse aspects of Behavioural Recreation Geography that inter-connects with other research elements and procedures. Some of the procedures or investigations undertaken in Chapter 5 and 6 have already highlighted the importance of cognitive concepts and philosophical values in recreation research, and it is the aim of this section to present an integrated review that will provide some conclusions and points for further research. It should also be clear to anyone examining

FIGURE 7.1 INTERPRETATIONAL RELATIONSHIPS OF RECREATION RESEARCH FINDINGS

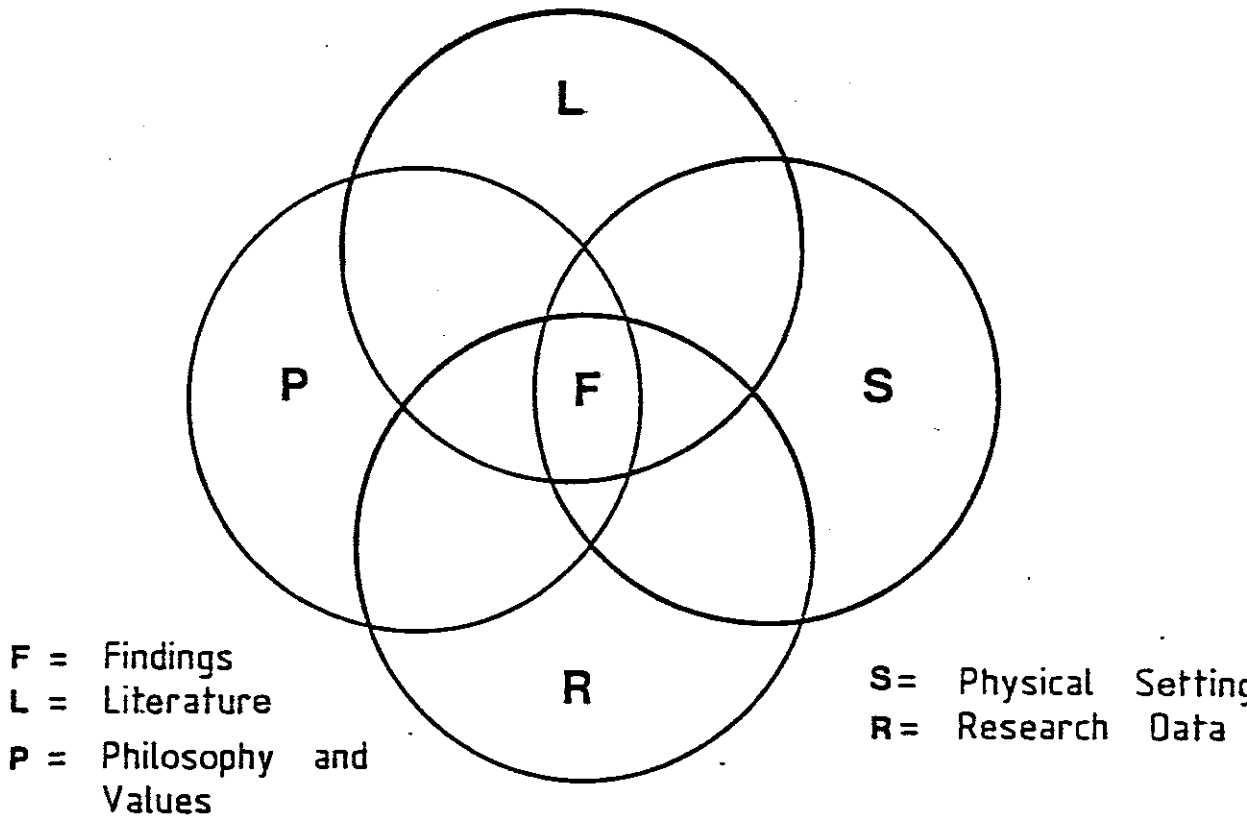


Figure 7.1 that the role played by the actual physical condition of recreation resources is that of consolidating or verifying the cognitions of Black recreationists and potential recreationists within the north-coastal region of Natal(see also Figure 4.1 on page 127).

7.2 INTEGRATED INTERPRETATION

The integration of the four aspects (Figure 7.1) of discussion presented in this chapter is treated on the basis of the research objectives and related questions this investigation has set itself to answer.

In order to set the direction for this chapter, it will be useful to review the main objectives. The study aimed:

(1) To reveal the cognitions Black people have with regard to the identification, management, utilization and conservation of natural recreation resources and facilities as presently defined by the recreation authorities.

(2) To identify some value systems that are strongly associated with and involved in the formulation of images and cognitions Black people have towards the present recreation resources and facilities.

(3) To pinpoint variables that are fundamentally involved in influencing the cognition and use of natural recreation resources and facilities as presently defined by the recreation authorities.

The last section of this chapter will also be devoted to interpreting these objectives on the basis of the hypotheses stated in Chapter 5 of this investigation.

7.2.1 Cognitions of natural resources

The cognition of natural resources is treated here on the basis of the first objective of this study, which addresses itself to the identification, utilization, management and conservation of natural recreation resources.

7.2.1.1 Resource identification

Black cognitions relating to recreation resource identification or awareness

in the north-coastal region of Natal is influenced by factors that are not necessarily obvious, but are numerous and very much interrelated. Basically, respondents have revealed that they and their friends cognize natural recreation resources very positively (88 percent) and are very much aware that those recreation resources in and near to their communities are somewhat poor, 'inadequate' and 'restricted'. This cognition is supported by the fact that in reality there are few natural recreation areas used by and created for Blacks in South Africa (Van der Wal and Steyn, 1981). However, the survey responses from recreation agencies suggested that most natural recreation facilities are open to all people, and it seems Blacks did not visit these facilities possibly due to a lack of awareness and opportunity. The detailed reasons for this situation will receive attention later in this chapter.

Awareness implies that if people do not know that something exists or is open to them then they will obviously not bother to go and visit, or use it. The first kind of awareness is not a problem in the north-coastal region of Natal because Black respondents have indicated that they are aware of the existence of the natural recreation resources as used by Whites, and would also like to use these resources as Whites do during their free time. Theory states that people passing or coming to know of a leisure area or facility that has all the attributes of quality, accessibility, beauty, openness and safety, will be more likely to be patronized than others that have negative attributes (Mercer, 1977a; Tinsley and Kass, 1978). Identification of the Natal north-coastal region as a functional recreation area is frustrated by factors such as financial constraints, administrational restrictions, availability of facilities and knowledge about facilities. The second kind of awareness,

that of opportunity, is an important problem to be dealt with later in the chapter.

The awareness phenomenon is also clearly and cogently reflected in the high and positive intercorrelation of constructs such as 'good-bad', 'useful-useless', 'important-unimportant', 'holy-unholy', 'rewarding-unrewarding', 'beautiful-ugly' and 'valuable-valueless'. This implies that the established recreation resources and facilities in the Natal north-coastal region are cognized or imagined as catering for those who are apparently free of administrative restrictions and possess the knowledge and means to participate in using them.

7.2.1.2 Resource utilization

The 'philosophical' and 'value' influences which act on the cognition and use of natural recreation resources and facilities among the Blacks have been indirectly noted by Manganyi (1973), Mphahlele (1974) and Ruch and Anyanwu (1984). Some of these emphasize the coexistence of man and nature, communal ownership of resources and familial association with natural phenomena as found in clan or family names. One could go on to argue that those whose clan name is Ndlovu (Elephant), Ngwenya (Crocodile) or Nhlanzi (Fish) are likely to have a mythical relationship or interpretation that could harbour a sympathetic attitude toward the natural feature, be it an animal or plant they share a name with. However, it must be quickly stated that philosophical influences are not easily translatable when they occur as a behaviour pattern and, in particular, when it relates to the utilization of natural recreation resources.

Since nothing more than a bare outline of a complex picture is possible here, let us start this explanation from the research point of view. Recreation research in the study area has established that, in general, fewer Blacks as compared to Whites spend time visiting natural recreation areas. This phenomenon is always clouded by financial and administrative constraints within a community, which usually influence recreation resource utilization. For example, Torkildsen (1983) suggests that people who cannot feel identified, or who feel ill-at-ease, or uneasy with the style of management and organization of recreation resources, or with other people using the facilities, will be deterred from using the resource.

What would the recreation situation be like if there was general socio-economic equality among the different ethnic groups? Perhaps, still, recreation resources would not be utilized in a manner similar to the one currently operational. Support for this argument is found in the fact that respondents in the north-coastal region of Natal cognize that Whites recreate differently from Blacks (62 percent) and that although water-related recreation resources are the most visited (73 percent), fishing as an activity is, in particular, the least favoured. In addition, the aesthetic and ecological forms of recreation, as matched with the functional type, are positively cognized. What all this suggests is that, intuitively, or perhaps philosophically, Black potential recreationists in the north-coastal region favour the natural environment as a recreation resource despite the fact that they depend on it and cognize it as a resource that is also, or even primarily, functionally important.

What is also evident from the above statement is that the respondents

in the study area tend to view the utilization of recreation resources and their semantic interpretations in terms of aesthetic values. It would appear that such cognitions of nature are more apparent than real. This inclination is supported by the fact that Blacks have tended to see themselves as part of nature, whereas Whites view nature as subordinate to them (Ruch and Anyanwu, 1984). The identification with nature was apparent among most subjects irrespective of their demographic characteristics such as age, sex, education and place of residence, as will be seen later in this chapter. Cognitions of nature were also evident in views expressed by respondents such as:

> 'The natural areas always afford me tranquility and peacefulness';
> 'The giraffe is a symbol of nature more than man is';
> 'It reminds me of places I like, where I swim and relax';
> 'It gives a picture of rural life which seems very closely associated with nature'.

Mphahlele argues that 'the herb will cure you if your mind is at peace with the ancestors because you and the herb and all organic life are united into a mystery you can only conceive by living it' (1974: 44). This implies that nature will sustain all those who have a good understanding of it and, perhaps, also have accessibility to and control of it.

In this study one would expect to have found that because most Blacks are not well endowed socio-economically, they would be inclined to view all recreation resources and activities on the basis of subsistence. However, that is not always the case, since aesthetic cognitions have shown a substantial dominance of the situation. It should be noted, also, that the value systems that reinforce the aesthetic and good-

taste cognitions of natural recreation resources utilization have been de-emphasized by a number of historical and socio-cultural contingencies such as the colonial and missionary efforts.

Besides this aesthetic interpretation of natural recreation resources, there is no doubt that both modernization and the introduction of socio-economic changes will have a considerable impact on the workings of the recreation system in South Africa. For example, it is widely accepted that the motor car contributes towards the socialization of the natural recreation environment (Cosgrove and Jackson, 1972). This tendency has been particularly observed in most of the recreation parks and reserves in the study area: 66 percent of them have car-parking facilities and other transport related facilities (see Table 4.3). In view of the absence of exhaustive information relating to such facilities as far as Blacks are concerned, most of the statements on this subject would be speculative. With this qualification in mind, it is possible to view pending socio-economic changes as an important influence on the cognition of recreation resource utilization. In this connection, the recreation behaviour aspirations of the respondents reflected earlier in Table 6.13 show that respondents would like to visit all the quality recreation areas and facilities pending the availability of resources, and removal of financial and administrative constraints. Peterson (1974) sees the degree of congruence between user-aspiration and his or her cognized reality as constituting the quality of recreation experience.

7.2.1.3 Resource management

The management of natural recreation resources in any area is an important

component of the recreation system that influences the manner in which resources are cognized. This is well described by Mitchell (1979: 3) who writes that:

> resource management represents the actual decisions concerning policy or practice regarding how resources are allocated and under what conditions or arrangements resources may be developed.

At present the whole issue of responsibility for natural recreation management is in a state of flux. For example, there are intentions of transferring all the functions of the Natal Parks Board to the National Parks Board. Whilst this is in progress the KwaZulu Bureau for Natural Resources and the Natal Parks Board, which controls most of the parks and reserves in the study area (Appendix G), are negotiating some form of amalgamation which would put all decision-making responsibilities of the region in the hands of a single management body (Ferreira, 1986).

In order to place the problem of resource management strategy in the context of this study, it has to be noted that decision-making procedures in the past have not considered the feeling of the vast Black rural population which occupies most of the land adjacent to the natural recreation resources. The results of this study show that the respondents, whilst believing that all natural recreation resources belong to the Almighty, vest the general caretaker position equally in the hands of the government, the Black community and the White community (see Table 6.8). It is suggested here that this allocation of responsibility is seen in terms of the existential situation of the respondents which also includes a tradition of inequitable government policy and spatial

inequalities, all considered on the basis of the theory of cognitive dissonance (Mitchell, 1979).

Another view of the management situation by the respondents is that natural recreation places can be construed as being both inadequate and restricted (Table 6.17), yet overused. This clearly implies that the respondents do not associate themselves with the 'overusers' of the natural recreation resources. However, they valued dimensions of virtue, significance and quality (Figure 6.8). The negative cognitions of the management of the natural recreation system are supported by Ferreira's (1986: 19) statement that the Black rural population:

> have all too often sat hungry outside a fenced off area teeming with game in which white men drove round in their cars and had braais outside their air-conditioned hutted camps ... (1986: 19).

A further indication of the negative cognitions described above is discerned in that respondents have shown least preference for photographs depicting the gate and fence of a game reserve (see Table 6.15). The reasons for disliking the 'gate and fence' photographic images were expressed in statements such as:

> 'It gives me a feeling of being shut out and not being free'; and
> 'It is not nice to be imprisoned for the rest of your life'.

The cognitive attributes discussed so often in Chapter 6 constitute the recreation behavioural perspective which should be specially noted by recreation agencies, managers, coordinators and planners in control

of natural recreation resources in the north-coastal region of Natal. The fact that only 2 percent of the visitors to natural parks and reserves are Black while 74 percent of the country's population is Black, and, as shown in this study, cognizes the functional and concrete aspects of recreation in more negative terms (inadequate and restricted), indicates a serious oversight or neglect by planners, managers, administrators and decision-makers. This is compounded by the cognition of the development of the recreational infrastructure as a 'low-priority' activity in comparison with education, agriculture and housing (Table 6.9). Local recreation managers and planners should therefore recognize the importance of the ideas expressed by Bannon (1976: 33) in the context of this study that:

> recreation and parks must seek to be a new and compelling priority. It must resist being regarded in times of need as a frill or luxury. It is a vital human requirement, especially during times of stress, one which touches a root cause of much personal and civic discontent (1976:33).

In addition, because data addressing the preference and priority situation of the recreation infrastructure are direct and specific, the results must be regarded as definitive or conclusive. Further, these should be of interest to those in recreation resource management in the Natal north-coastal region, who are concerned with the possibility of resource modification and substitution, in relation to user education and motivation.

In the context of resource management, the geographer as an analyst has the ultimate goal of obtaining insights into and understanding of the spatial allocations of resources, relationships between man and his environment, or the complexity of regions (Mitchell, 1979). An important

facet of recreation management reflecting the reality of the situation in the study region is that parallel to the Black population increase, irrespective of its ineffective recreation participation or involvement, there exists a growing demand for game, water, vegetation and landform resources (refer to Chapter 4). Recreation resource management decisions are of concern to society as a whole including the Black community. Therefore the decision-maker's goals and value standards should not only cater for the White community's welfare, as reflected in the recreation characteristic pattern and values in Chapter 4, but also consider the Black community.

7.2.1.4 Resource conservation

The single most important aspect of the objectives of this study has been to establish the nature and pattern of recreation cognitions in the context of conservation and preservation of natural resources. Colonial and historical writings have suggested that Black people have no regard for the 'intelligent' use of natural recreation resources. The term 'intelligent' is usually meant to imply uses of resources which emphasize resource exploitation, economic surpluses and conservation in terms of Western value standards.

What theory has also suggested is that there is a lack of scientifically written documentary evidence that supports or refutes these value loaded notions or stereotype. For example, according to O'Riordan (1981), the allegation that hunting tribes destroyed far more animals than they appeared to require for food and hides, is groundless and allows considerable latitude for speculation and prejudice. In the past these assumptions

have often been unquestioned among Blacks and have passed unchallenged. As a result, the basis of explaining or elaborating the positive use of natural resources that are associated with recreation, indirectly apply to African value systems and philosophical interpretation of natural resources, the oral-tradition and creative modern African writings referred to in paragraph 2.5 and the cognitive analyses of recreation resources undertaken in the Natal north-coastal region.

The uneasy compromise which forms Black people's environmental ideals is reflected in the confusion over what philosophical and value systems should govern their behaviour towards the natural recreation environment. This confusion is evident in their traditional or cultural translation of natural environmental processes in contra-distinction to modern Christian values. Despite the notion that African philosophical thought processes pervade and, perhaps, predominate natural recreation behaviour patterns, the fact that 84 percent of the respondents are Christians introduces a fundamental cognitively-based belief that bears contention in its making. For example, in the context of conservation, Christianity is at times associated with ideals that man is superior to nature, that man must have control over nature, that man must exploit and subdue nature for his survival and that man must be fruitful and multiply (O'Riordan, 1981). On the other hand, African philosophical thought suggests that though man is superior to nature, he is inseparable from it, and that nature should not be subjugated or exploited beyond the point of satisfying basic needs or subsistence.

In the real world the influence exerted by and the adoption of the Western way of life amongst a majority of the African population in South Africa

has strong fundamental and subtle cognitive implications which are difficult to 'read' and interpret. However, it stands to reason that some African philosophical thought processes continue to influence Black cognitions of natural recreation resources. In the context of conservation, it is interesting to note that in this study a small majority of Blacks revealed that they use or would use natural recreation resources for ecological purposes (55 percent; refer to Figure 6.1).

This cognitive notion is also expressed by the majority of professional and better educated respondents. If we perceive a conservationist as one who is concerned about "the beauties of nature in roughly inverse proportion to the number of people who can enjoy them" (Galbraith in Bennett and Chorley, 1978: 15), then we find that respondents in this study are conservation-minded in cognizing natural recreation places and resources as predominantly beautiful, good, useful, important, holy, rewarding and valuable (Figure 6.7). These are some of the aesthetic and good taste attributes that respondents might have acquired intuitively from socio-cultural tradition, philosophical values and the general ethos they have been exposed to for generations on end.

A closer analysis of the cognitive concepts which describe the ecology of natural recreation places shown in Figure 6.18, reveals a dimensional classification that stresses 'significance', 'virtue' and 'quality' interpretations over 'quantity' and 'functionality'. This, interestingly, implies that Blacks, whilst experiencing a relatively depressed and restricted socio-economic and recreation environment, have a positive attitude towards the conservation and preservation of natural recreation areas and facilities. Yet it should actually be difficult to awaken a meaningful

interest, cognition or improvement of environmental conservation among those who live on the edge of starvation as is the case with many places that are part of the study area of this research. This is also suggested in a statement by Hanks (1982: 4) that most of the designated wildlife areas of this land are "close to, or surrounded by, degraded rural lands, and as isolated sanctuaries their future is bleak in the absence of a positive rural land use strategy".

Another form of analytical procedure using photographic images of specific natural recreation resources provided results that suggested that the cognitions evoked by photographs numbers 15, 3 and 24 were either ecological, natural or aesthetic (see Table 6.16). What is once more expressed in these analyses is the dominance of the philosophical expression and acceptance of conservational principles without placing some emphasis on the existing and needed functional principles and subsistence relief needed by most of the Black inhabitants of the study area. These sentiments are based on statements such as:

Photograph 15: 'The safety given to animals by this place';
'It protects such animals and restricts us from such facilities'.

Photograph 3: 'How animals are easily killed by people and drought';
'The way we should learn about nature';
'Shows the importance of water in animal survival'.

Photograph 24: 'Of nature conservation; the world will be so ugly if there are no animals';
'The mystery of nature and how animals behave'.

One expects that the photographs used above depicting wild animals and game areas, would in essence, evoke thoughts about hunting. Notwithstanding the fact that hungry and unemployed Blacks around the game areas would welcome venison from these game sanctuaries, very few respondents (7 percent) in fact revealed that they would use these areas for hunting (Table 6.6). Within the limits of what appears to be possible, philosophical and cultural value systems seem to be behind the positive cognition of this recreation facility. It will be remembered that hunting has evolved out of an elaborate cultural tradition within African culture.

To conclude, despite the fact that nature conservation in South Africa is shared by a large number of different agencies, particularly the Natal Parks Board, Wildlife Society and KwaZulu Bureau for Natural Resources in the study area, very few seem to have consistently and specifically addressed the conservation problem in relation to Black socio-economic and political issues. To illustrate this shortfall Zaloumis,(1984:130), in an editorial article entitled 'The Modernization of Nature Conservation in South Africa' which, typically, does not refer to any Black socio-economic or spatial issues, concludes that:

> We know what to conserve, we know how to conserve, we know why to conserve: time is running out and we must work together as a matter of urgency.
>
> (Zaloumis, 1984: 130)

What is also of immediate interest Zaloumis (1984) suggests, is whether we know who should be involved in conservation. If we consider the present natural recreation management strategies, involving educational, administrational and socio-economic inadequacies there seems to be

no structured programme thatinvolves Blacks as decision-makers or decision receivers at or from the highest authoritative level. For many decades now, Blacks have been ignored or not represented where decisions are taken as regards conservation matters.

Because of the particular history and character of the conservation movement in South Africa, and its failure to involve Blacks, it can all too easily be regarded as a hobby or pastime for the affluent White upper middle class which has no immediate concern for nor understanding of the basic necessities of life among rural Black people. A more complete and succinct picture of the situation is conveyed in Luten's paraphrased statement that: 'A society does not exist to serve its recreation and conservation system. A society exists to serve the people who comprise it' (McKenry, 1977: 120).

7.2.2 Philosophy and Values

There is a particular need here to reiterate the notion that philosophical thought processes and value systems play an important role in shaping or influencing Black cognitions of the natural recreation resources. This is particularly so since, in behavioural outdoor recreation geography, we are dealing with the natural environment and its spatial forms, composed of elements as varied as recreation resources, activities of mankind, an environment given form and meaning through the behaviour and philosophical thoughts of man on earth (Magi 1979). However, in the context of the quantitative procedures used in this study more than a bare outline of a complex picture is possible here. In other words, it is important at the outset to recognize that the interpretation

of results that bears a 'fact-value' or 'objective-subjective' distinction has serious limitations since it is over-simple in application and methodological clarity.

To start with, let us briefly consider the African philosophical meaning of recreation in the context of this study. The fundamental philosophical and traditional interpretation of the concept recreation amongst Blacks is such that it is seen as 'leisure time' or 'unobligated time' and may not necessarily be tied to 'activity' during free time (see Appendix H) or regarded as antithetical to work as is the position in the Western work ethic situation, where the basis for earning leisure time is engaging first in hard work. Recreation activities in African traditional societies were much interwoven into the general fabric of life (Woomington and Hart, 1977). Though the recreation concept as such did not exist in traditional times, an interpretation that attempts to explain the situation experienced then is such that recreation in the true African idiom could be seen as any activity undertaken during functional time that has aesthetic, artistic and spiritual implications. Functional time, in this context would be time which, according to communal perceptions or mores, could be used for activities beneficial to an individual, his or her family and society. This time predominantly occurs during the day in contrast to night.

An illustration of this interpretation of recreation might be useful. If for instance, an individual or group of people went on a hunting outing, and did so for subsistence reasons as well as for emotional, artistic, spiritual and communal well-being, this would be seen as partly a recreation activity. The outing is normally carried out during

a specific time period under specific cultural regulations or mores. If some sport or festivity was participated in this was, in many instances, done with a view to carrying out some communal obligation. Further, this was done during what can be called substitute time. That is, time that would have been used for another equally important and functional activity.

Contemporary Blacks are under the influence of and have adopted a large variety of life patterns from Western society. These, amongst others, include urban life, education, consumerism,religion, the Protestant work ethic and attendant recreation patterns. To a large extent the demographic data presented in this study reflect these kinds of influence. The respondents are Christian (84 percent), educated (76 percent beyond Standard 6), have urban homes (46 percent), have urban employment (62 percent) and use their free time for sport and recreation (68 percent). Notwithstanding the fact that the respondents cognize that they do different things from what Whites do during their free time (62 percent), they revealed that they would like to do those things (69 percent), that is,engage in sport and recreation too.

In many ways the research data cited in earlier chapters show that despite the fact that there are positive cognitions and aspirations towards recreation resources and activities, there is a lurking contradictory unwillingness to participate in them. For instance, we know that only 2 percent of the respondents actually visit natural recreation parks and reserves in the north-coastal region of Natal. There are two possible explanations for the occurence of this contradictory situation. First, let us consider the negative situation or unwillingness to participate.

It may be argued that whatever the values of Black people may be construed to be, they (Blacks) will always be searching for 'quality in life - a quality home, quality work, and combined importantly with quality monetary reward and quality leisure time' (Barkham, 1973: 220). However, because of spatial inequalities and poverty among Blacks, practical economics lie at the root of negative Black cognitions and attitudes towards natural recreation resources. As a matter of priority, Blacks cannot afford to spend money on recreation pursuits and facilities (see Figure 6.1 and Table 6.9). This is also reinforced by the fact that respondents reflected that they rarely participated in boating (15 percent), hunting (25 percent) and camping (36 percent) all of which are money-related activities. Although fishing was found to be an activity engaged in by the White lower socio-economic group in a study by Taylor (1984), the respondents in the north-coastal region of Natal do not take to fishing because of negative socio-cultural associations. In traditional Zululand eels, and in some areas fish as well, were seen as related to snakes and therefore not preferred for eating.

Secondly, the positive situation or positive cognition towards recreation resources seems rather difficult to explain when it has been generally argued that economic and subsistence necessities influence Black potential recreationists to stay away from natural recreation resources and facilities. A pervasive notion that keeps on recurring in this study is one which points to two operational concepts that help to explain the positive cognition of natural recreation resources: (1) ecological use or consciousness, and (2) abstract cognitive semantics. The notion of ecological use or consciousness as an explanatory model comes from the findings that many of the respondents (55 percent) identify usage of

natural resources with the man-resources balance usually associated with conservation. The conscious use of natural recreation resources for aesthetic, recreational, religious, educational and ecological purposes also represents a form of activity through which an individual or community could achieve a state of internal growth and spiritual well-being. To advance further the explanation of ecological consciousness expressed by respondents, it is proper to relate its emergence to the African philosophical thought processes discussed in Chapter 3; Para.3.4-3.5. Philosophically, natural resources are communally owned, are accorded spiritual meaning and respect, are a source of existence, may be associated with ancestral spirits and are related to man in the context of life-force. This short explanatory outline of a complex situation attempts to reveal the indomitability of the traditional African personality and socio-cultural values in a changing world.

The interpretation of abstract cognitive semantics as explanatory constructs which have African philosophical relationships is unique to this study. Both the abstract and the concrete cognitive semantics appearing in Figures 6.2; 6.3; 6.4; 6.5 and 6.6 are based on the constructs or adjectival scales that can in turn be construed to reveal some philosophical meaning. The abstract set of cognitive semantics includes bipolar constructs such as: 'beautiful-ugly'; 'good-bad'; 'valuable-valueless'; 'holy-unholy', 'rewarding-unrewarding' and 'safe-dangerous'. It is suggested here that the consistent construal or invocation of 'abstract' bipolar adjectives in describing the natural recreation environment, is a process that is dependent on the language system (semantics) of the respondent. Philosophical language attributes and other value systems will tend to influence how, for instance, an individual respondent describes a

forest, sea, lake, river, game area or wilderness in the context of his experiential world.

It is therefore suggested that the positive, abstract cognitive terms used by respondents in construing natural recreation resources are inspired by intuitive feelings towards such resources. These feelings are governed by philosophical values advocating a mutual and inseparable relationship between man and nature. In addition, these philosophical values include the communal interpretations of ownership, spirituality, rites and morality of natural resources. In support of these ideas, as related to natural resources, Apostel (1981: 298) writes:

> The cosmic humanism ... corresponds perfectly with the fact that the relation with the earth, the basic equality and power of attribution of the use of the earth by the elders, representing the ancestors, was proeminent in the consciousness of the African.

According to Brightbill and Mobly (1977) values and the social order are inseparable. If we intend shaping the natural environment for the better and moulding the individual and his values toward self-fulfilment, then all sections of society will have to be addressed.

In the context of the two contrasting ideas discussed above, the term 'recreation' begins to refer to the manner in which different people cognize all the things they do during their specific leisure or unobligated time. In interpreting the concept recreation a view which begins to emerge is that which is either Western-value oriented or African-value oriented. What can be identified from this dichotomy (at least as much as has been discussed in this study) is that the modern African conception

of recreation emphasizes the notions of abstract and subjective response of feelings of pleasure, appreciation and personal worth. These notions are generated by some of the experiences Blacks encounter, on a daily basis, in the South African recreation landscape. These experiences include being restricted from:

(1) participating in all but some of the existing natural recreation activities and facilities;

(2) taking part in organizational decision-making processes;

(3) belonging to many of the existing recreation organizations, agencies and societies; and

(4) contributing an African philosophical perspective in the formulation of recreation policy.

The Western value-oriented notions need no further discussion here because they have been extensively treated earlier. The emphasis in this section requires that attention be placed more on African philosophical thought processes which provide a base and framework for our presentation, analysis and interpretation of data.

In concluding this section it can be stated that the relative philosophical adequacy of these contrasting (positive cognitive and negative participation) formulations is a matter that should stimulate continuing debate. Suffice it to say that additional studies of cognition recreation using African philosophical interpretations should be entered into. Whether this procedure is useful and philosophically sound is, perhaps, dependent on it being appropriate to the study, rather than upon its viability *per se*.

7.2.3 Aesthetic components

Cognitions of natural recreation resources are many and diverse. Some, for instance, may be general while others are specific. And, it is also true that while some are physical, others may be socially or psychologically based. But, most predominantly in this study, cognitions have been specifically construed as being either aesthetic or functional. This dichotomous interpretation is also seen in the light of the ecological-subsistence and abstract-concrete constructs so often referred to earlier. The aesthetic constructs are seen here as a source of recreational or aesthetic satisfaction. For instance beaches, lakes, rivers, forests, game and wilderness areas, contribute to an individual or respondent's cognized sense of pleasure, appreciation and well-being.

The cognized aesthetic components seen in terms of concept-dimension such as 'virtue', 'quality' and 'significance' of natural recreation resources (see Table 6.18) in the north-coastal region of Natal, represent a clear indication of the dominance of aesthetic values over functional values. The recorded aesthetic components seemed to differ very little by age, sex, education, occupation and residence within the study area. The perceived aesthetic qualities or attributes of the natural recreation landscape are a function of the interaction of man and the environment in the Natal North Coast region. Elements of this interaction have been identified in earlier chapters and are, in brief written as follows.
The symbolization of some of the natural 'recreation' resources by some of the respondents with the supernatural is clearly evidenced by the fact that a majority of the respondents regarded natural recreation resources as belonging to the Almighty.This is in keeping with assumptions

underlying African philosophical thought about the life-force, ancestral spirits and the coexistence of man, nature and God. Despite the fact that an insignificant number of respondents saw religion as a reason for preference and usage of natural recreation resources, the aesthetic interpretations of the 'holy-unholy' bipolar construct were both positive and highly inter-correlated with other abstract constructs such as 'good-bad'; 'useful-useless'; 'important-unimportant'; 'rewarding-unrewarding' and 'beautiful-ugly'.

On the whole, natural recreation resources in the real world are characterized by a progressive decrease or disappearance of indigenous plants and forests, big game and predator cats. This is the case, for example, in natural recreation places such as Ngoye Forest, St Lucia Park and Stainbank Nature Reserve, among others. Perhaps, this is what has made respondents indicate the greatest preferance for game parks, which actually depend on animals and a wilderness habitat to be viable. In terms of Table 6.14 the reasons for the preferences were evaluated as being either aesthetic, natural or recreational. These concepts were construed as expressing a sense of taste and appreciation for the natural environment. In addition, a correlation coefficient analysis of this same idea (see Table 6.21) has reflected a positive and strong relationship between cognitive constructs such as good, useful, important, holy, rewarding, valuable and beautiful.

The recreation landscape in the north-coastal region of Natal is, to many Blacks, spatially restricted. The types of activities and facilities provided for in some recreation areas are high-income based. What the recreation system presupposes is that the participant possesses the

facilities and financial support that would give him a fulfilling recreation experience. Some of the technical or motorized appliances or gadgets used include: campers, beach buggies, power boats, power generators, gas stoves and fishing equipment. It is, perhaps, not surprising that natural recreation areas and facilities are described at an idealistic level in terms of abstract and aesthetic constructs such as good, holy, beautiful, rewarding, useful and valuable (see Figures 6.2; 6.4; 6.5; and Table 6.21). The natural environment, according to O'Riordan (1981: 202), is 'all things to all men at all times, it is to be life supporting, useful, and yet beautiful'. This sequence of environmental cognition is implicitly similar to the one operating in the study area. The environment is appreciated foremostly if it is able to sustain its inhabitants and secondly if it is able to remain beautiful without necessarily sustaining its inhabitants. The cognitive constructs used to describe the natural recreation resources in the study area reveal the idea that whilst the natural environment is beautiful it does not adequately support the Black inhabitant as it should.

Leisure time is an important component of natural recreation environment in the north-coastal region of Natal. Some mean aggregated evaluation of concept-dimensions (see Figure 6.8) have, however, revealed that leisure time was cognized to be higher than natural places in terms of 'virtue' and 'significance' (aesthetic values) and almost equal on the 'quality' dimension. In view of the fact that the interpretation of leisure time and recreation among Blacks tends to be similar and that both concepts de-emphasize the relaxation element associated with the recreation experience, a similarity in semantic values as shown in Figures 6.2 and 6.3 could have been anticipated. Only the functionality values showed a major variance (Fig.6.8).

Leisure time is seen to be functionally important as against natural places because the respondents, perhaps, see leisure time as being free time during which they may participate in recreation, sport and other activities. On the other hand, natural places are regarded as less functional, perhaps, mainly because they have been cognized and described as restricted, inadequate and inaccessible for Black participation and usage.

What is noteworthy in this section is that the general interpretation of the cognition of natural recreation resources in terms of the aesthetic component cannot be conclusively explained. The pervasive theme of interpretation has been that the respondents uphold an aesthetic and abstract meaning of the natural recreation environment in the face of the environment failing to sustain them adequately. In support of this line of reasoning Lowenthal and Prince (1976) identify two opposing ideas operating in what they call 'environmental aesthetics' for the less privileged in an affluent society. First, there is the acceptance of the principles of environmental beautification and conservation prior to achieving any improvements in the socio-economic and political spheres. This situation seems to be fully operational in the north-coastal region of Natal. What actually prevails is the idea that the less priviledged and those unaware of the sensory stimulus of the environment are continually restored and refreshed by its mere existence (Lowenthal and Prince, 1976). They also argue that 'our dependence on a rich sensate environment transcends our needs for food, shelter and clothing' (1976: 118). This assertion seems to be very idealistic. Yet, it does appear to exist in the north-coastal region of Natal as has been supported by some of the results referred to earlier.

Secondly, there is the rejection and postponement of environmental beautification until socio-economic and political inequalities are resolved. This idea is based on the premise that it is ethically wrong for some people to enjoy a better quality of life, in the form of natural recreation facilities and amenities, while others are deprived of it. This argument has been referred to earlier in this study. For instance (see Table 6.9), recreation facility and amenity needs were cognized to be less important than other basic infrastructural needs such as schooling, housing, industrial and agricultural facilities. Further, some functional cognitions of natural recreation resources have also supported the premise mentioned above and are now given a more detailed treatment in the next section.

7.2.4 *Functionality components*

It has been mentioned repeatedly that personal philosophies of the respondent are important factors which influence the cognition, selection and interpretation of natural recreation resources. These philosophies, though not immediately obvious and tangible, have contributed to the dichotomization of the cognitive concept-dimensions into the aesthetic and functional types. The functionality components represent aggregated ideas emerging from subsistence and concrete results of analyses described in greater detail in Chapter 6. These have been worked out in terms of concept-dimensions such as 'quantity' and 'significance' of natural recreation resources (see Table 6.18). The breakdown of the concepts to bipolar constructs include the following: 'adequate-inadequate'; 'accessible-inaccessible'; 'overused-underused' and 'open-restricted'.

If we consider recreation and leisure time in an African traditional

sense, that is, both concepts being simultaneously connected with day to day communal activities or, as suggested by Woolmington and Hart (1977: 42), being 'tightly interwoven into the general fabric of life', the evaluation and cognition of their preferences and usage is here expected to be interpreted as being functional. However, the functional categorization is not a foregone conclusion because there are many other influences such as modernization, urbanization, education and religion, that make the whole picture a complex one. It is therefore proper that an approach which utilizes both contrasting procedures mentioned above should be used in explaining the interpretation of data.

It is interesting to note that less than two in every five respondents (40 percent) and their friends use their free time for functionally cognized activities such as home chores and piece work. In addition, it is, perhaps, not surprising that 65,7 percent of the unemployed use their free time for sport and recreation rather than functional work. What has possibly happened is that the unemployed respondents interpreted or misinterpreted 'recreation' as constituting some form of functional engagement that is equally seen as a form of 'leisure activity' and 'piece work' at the same time. Some examples could include: informal jobs like selling clothes, food and services at sporting activities like soccer and festivals; gambling and entertainment. All these activities are perhaps seen as being both 'work' and 'recreation' related.

Much more evidence of the cognition of the functionality of natural recreation resources is reflected in the even-split of responses between active-recreative and applied non-recreative uses (shown in Figure 6.1). In particular, the applied non-recreative uses are seen as representing

the functional meaning of resource usage, which is here interpreted from either a Western or African perspective of the cognition of recreation and leisure concepts. In terms analyses used in the study (see, for example, Table 6.7), the natural recreation resource usage in terms of ecological, subsistence or functional categorizations revealed a weak relationship in terms of occupation, education, religion, sex, age and residence. To illustrate this difference, the age variable reflected that 41,4 percent of the young Blacks cognize the use of natural recreation resources to be associated with functional uses. This and other functional interpretations of the use of natural recreation resources, emphasize the idea cited earlier, that practical economic and spatial inequalities lie at the root of Black attitudes towards the recreation system in the north-coastal region of Natal.

Black respondents as potential recreationists exist and operate within a society that is recreation-centred. This makes their cognition of the natural recreation landscape, either in terms of aesthetic-ecological or subsistence-functional concept-dimensions, very important.This importance is further highlighted when one considers that usage of natural recreation resources is intended to: (a) support life, (b) enhance economic value, or (c) preserve sensory pleasure (O'Riordan, 1981). The functionality component in this regard is very important because it is immediately determined or supported by the first two criteria: support of life and enhancement of economic value. Respondents in the north-coastal region of Natal can be regarded as emphasizing this rationale in looking at natural recreation resources. This is reflected in the ranking and priorization of infrastructural facilities (Table 6.9), where schooling, agriculture, housing and industry are seen as being far more

immediately important than recreation.

The functionality characteristics have also been associated with concept dimensions such as 'quantity' and 'functionality' (Table 6.18). However, the concept-scale polarity (Table 6.17) of natural recreation places construed the functional concepts as being moderately inadequate, overused, restricted and yet accessible. It is interesting to note that natural recreation resources are functionally described in negative terms save when reference is made to their accessibility. Indeed, reality and research results show that recreation areas and facilities in the north-coastal region of Natal are within an hours' travel-time for the majority of respondents. It has also been argued earlier in this chapter that the cognition of natural recreation resources as being inadequate, overused and restricted is founded on socio-economic and administrative circumstances operating in this area. For example, beach facilities for Blacks in Durban and other areas in the Natal North Coast are of a temporary nature, overcrowded, lacking in facilities and restricted in terms of ethnic groups (McGowan, 1984; Natal Mercury, 1985). However, some of these conditions are in a state of modification which in itself serves to generate ample debate and uncertainty about the future of the beach recreation landscape.

Another important interpretation of natural recreation resources in the north-coastal region of Natal, is that which uses the 'functionality' concept, which is repeatedly reflected in cognitive concrete semantics (Figure 6.2; 6.4; 6.5 and 6.6). The aggregated results in these analyses show that the concrete semantic values are less positively scored than the abstract semantic values, which immediately suggest that the functional interpretation of natural recreation resources is less positively viewed

than is the aesthetic interpretation. This idea continues to recur in various analyses of natural recreation resources that are water related, game related and vegetation related. This negative cognitive attribute of concrete or functional semantics clearly suggests that respondents are not happy with the natural recreation situation for what can be regarded 'practical' reasons. At present a considerable portion of the existing natural recreation resources and reserves in the study area are located next to Black areas. The fact of the matter is that the quality of life in these areas needs urgent and considerable improvement, particularly in relation to agriculture, education, housing and infrastructural services. Another point of possible discontent is that of the paternalistic attitude of recreation authorities such as the Natal Parks Board. The management procedures of some of these authorities have not resulted in economic support and development of the areas next to the natural parks and reserves comparable to those in industrial urban centres within the Natal North Coast.

Leisure time has also been cognized in the context of the functionality component, just as has been the case with natural recreation areas. This is reflected in the similarity of results in Figure 6.2, showing a semantic response to natural recreation places, and Figure 6.3, showing similar responses for leisure time. Another reason for the possible congruence of relationships, is that leisure time and recreation in the African context, are similarly construed. However, it should be remembered that leisure time in the evaluation of concept-dimensions (Figure 6.8) was cognized as functionally superior to natural places, and the possible reasons for this cognition were given in paragraph 7.2.4.

7.2.5 Operational variables

The demographic variables that are of particular interest to this study were selected from theoretical material which pays attention to relationships between socio-economic phenomena and natural recreation resources within the context of the Natal north-coastal region. A variety of personal and socio-economic variables, such as sex, age, education, occupation and residence, have been considered for analysis in this section and seem to play an important role in the development and expression of cognitive abilities (Francescato and Mebane, 1973; Kaplan, 1976). These variables, of course, constitute a significant portion of the many variables that were actually operational in this study. However, a possibility remains that such variables (place of birth, place of work, religious affiliation, family size and means of transport) can be accounted for in some underlying relationships in other sections of this study. The main personal and socio-economic variables were actually considered in relation to themes in recreation, such as preferences, usage, photographic images and semantic analyses.

A substantial number of studies seem to indicate that demographic variables play a considerable role in influencing patterns of natural recreation (Mercer, 1977a). Some of these variables are, however, less influential than others. This actually means that the influence of variables can therefore vary from area to area, situation to situation and analysis to analysis.

In the context of this study there is evidence that a considerable amount of recorded cognitive analysis (in recreation use and preference) differed

very little by age, sex, education, occupation and residence within the north-coastal region of Natal. This general cognition is supported by Havinghurst (Mercer, 1977 b; O'Connor, 1970) whose studies concluded that leisure and recreation activities are more closely related to value systems and personality than to the social variables of age, sex, education and occupation. He found that differing variables in subjects tended to evoke similar values from their recreation, even though its content is different. It is, therefore, to be expected that subjects who have the same kind of philosophical values and experiences should cognize their natural recreation environment in a fairly similar manner than it would be otherwise. Notwithstanding this broad picture of variable performance, there were a few variations whose particular relevance to natural recreation cognition will now be discussed briefly.

7.2.5.1 Occupation

Occupational status is highly related to income levels and both are important determinants of recreation activities that recreationists will either directly or indirectly cognize, select and participate in (Mercer, 1977b and Neulinger, 1981). Occupational bias was reflected in the evaluation of the use of natural recreation resources in terms of ecological and subsistence categorizations. Professionals rated ecological uses more highly than they rated subsistence uses, whereas the unskilled rated the subsistence uses higher than the ecological uses. This evaluation is to be expected because people of greater financial wealth or outlay can afford to be 'extravagant' and 'academic' about subsistence related

natural resources. This notion is also supported by Peterson's argument when he writes that "the less affluent members of society cannot afford the investments of time, transportation, equipment, and skill development that are required for participation in ... recreational pursuits" (1976: 85).

Notwithstanding the above-quoted bold statement, the results of this study have revealed widely differing and in some respects diametrically opposed cognitions of leisure time and recreation resources. On the question of leisure time, the unskilled revealed that though they regard Whites as doing different things, recreationally, they think free time should be used for recreation and sport purposes. These activities were predominantly seen as being White hobbies. Possible explanations of this subjective cognition and construal of leisure time and recreation, within the African cultural context, were given earlier in this section.

A consideration of both leisure time and natural recreation places in terms of cognitive bipolar constructs correlated among themselves (Tables 6.20 and 6.21), reflected a higher relationship for abstract or aesthetic constructs as compared to the concrete or functional constructs. An extension of this analysis, in terms of the demographic background of respondents, disclosed no significant differences from what was shown by similar analyses earlier. These findings therefore support the notion that demographic variables may determine the cognitive constructs in a recreation environment. In addition, it should be noted that philosophical values of individual respondents create a more complex picture of the situation.

7.2.5.2 Education

The relationship between education, occupation and recreation has traditionally been considered a very strong one. Probably, the main reason for this is that education is a major factor in determining occupation, income and, therefore, socio-economic status, which in turn influences recreation behaviour patterns (Mercer, 1977b; Neulinger, 1981). This relationship is immediately obvious if we compare cognitive responses in terms of education and occupation in relation to natural recreation characteristics such as free time (Table 6.5), recreation use (Table 6.7), preferences and visit-aspirations (Table 6.13). Although a remarkable consensus was found between the relationships of education and occupation there was very little cognitive variation within the education variable.

Although it might have been expected that educational standards would influence recreation cognitions, this was not the case. Black subjects on the whole, within the study area, indicated that they were equally or uniformly literate in as far as natural recreation was concerned. Perhaps, if our emphasis was in considering cultural or man-made recreation activities the situation would have been different. For example, it is interesting to note that the ecological-subsistence categorization of the use of natural recreation resources is not based on educational achievement. This implies that the pervasiveness of African philosophical and traditional values could still be present in Black cognitions of natural recreation resources. In this case, one does not need to have acquired formal education which is believed to inculcate a positive attitude towards natural recreation resources. The positive attitude also includes the awareness, utilization, conservation and management

of recreation resources.

7.2.5.3 Age

Age, like education and occupation (although possibly to a much lesser extent) exerts some influences on outdoor recreation behaviour patterns. Neulinger and Breit (1971) and Mercer (1977b) found that younger people were more likely to cognize positively and participate actively in recreation activities than older people. Obviously, physical capability is an important factor accounting for this cited relationship. However, since in the context of this study, recreation use and participation are predominantly 'natural' and involve categories that are aesthetic or ecological and subsistence or functional, the age variable is likely to play a more distinctively influential role than would commonly be expected. The distinctiveness referred to is that which evolves from African cultural and philosophical values, which influence the cognition of natural recreation resources and should be more prevalent in older people than the younger. The reason for this is that young Blacks (as confirmed also in this study) are more prone to the influence of Western values through having more contact with 'Western type' education, Christian religion, urbanization and communications media, than is the case with older people.

To substantiate this distinctive situation, the young Black respondents, just as the older, indicated that they do not participate in fishing activities (62 percent) yet they frequently visit the beach (87 percent). These respondents prefer to use natural resources for domestic and farming uses (33 percent), than for sports (7 percent) in particular. This behaviour pattern is more typical of older people. However, this distinctively

'grown up' attitude towards natural recreation resources suggests that in some respects the young have a mature conceptual or cognitive ability when it comes to interpreting the recreational environment. On the whole it was somewhat expected that young respondents might prefer active recreative uses (49 percent) involving activities such as recreation and sport, as against the older group (43 percent) preferring non-recreative (applied) uses such as domestic chores, farming, hunting, medicinal and subsistence uses.

The dominant aesthetic or ecological and recreative uses as opposed to the subordinate subsistence or functional cognition and use of natural recreation resources, are strongly influenced by African philosophical values and existing spatial inequalities in the South African recreation landscape. This is clearly beyond dispute. It is also indisputable that this influence is not only pervasive but also cuts across the age and other variables.

7.2.5.4 Sex

In spite of the fact that Neulinger and Breit (1971) and Neulinger and Raps (1972) have reported that females are significantly less satisfied than males with the amount of leisure and recreation they cognize to be at their disposal, very little research information can be said to exist in South Africa which addresses Black male-female relationships in this regard. In general, the recorded cognitive preferences in the north-coastal region of Natal differ very little by sex. What actually influences the situation, making it even more complex in the study area, is that many

of the natural recreation pursuits considered, such as hunting, fishing, camping, picnicking and wilderness-hiking, are traditionally male-dominated activities. However, the results of the various analyses do not necessarily reflect this male dominance.

For instance, cross-tabulations have revealed an even-split between males and females in as far as the cognition of leisure time, the use of recreation resources, inter-ethnic preferences and photographic images of resources. The major reasons for the congruent relationships are as follows: First, most of the recreation themes analysed were presented in a manner which de-emphasized, the 'masculine' character in activities. For example, the usage of analytical categories such as 'ecological-subsistence', 'abstract-concrete', 'aesthetic-functional', and other concept-dimensions and photographic analyses included all sexes. Secondly, the fact that Black males, as much as females, do not participate significantly in the natural recreation activities within the South African recreation landscape, immediately eliminates the sex variable. This implies that the role of the sex variable, in relation to natural recreation perspectives, will only emerge and become operational when the total recreation and socio-economic landscape has assumed a new character.

7.5.2.5 Residence

Just as recreation behaviour and cognitions of natural recreation resources are culture-bound, so the place of residence is also not value free. At a more localized scale rural areas, as compared to urban areas, vary considerably in their natural recreation resource endowment. It is therefore to be expected that respondents who have had a rural experiential

background will be more positively disposed towards natural recreation resources than urban respondents.

Generally,however,it can be said that the cognition of natural recreation differed insignificantly by residential place within the north-coastal region of Natal. This phenomenon is related to the fact that a large percentage of the urban people (61 percent) have rural origins. In addition, the cognition of leisure time and the use of natural recreation resources reflect a weak difference in terms of urban-rural dichotomies. On the one hand, using photographic images, the urban respondents have tended to cognize the natural recreation resources in terms of 'cultural' cognitions or descriptions, identified in statements such as:

> 'The place is too traditional for me' (Photograph:9)
> 'Zulu warriors who were not at all afraid' (Photograph 22)
> 'It's traditional, when things were still good' (Photograph 9)

This may further be explained by existing notions that urban people have lost touch with day to day traditional life patterns and are therefore reminiscing the past. On the other hand the rural respondents quite pointedly cognized the natural recreation resources in terms of aesthetic-ecological values.

Another significant variation from the congruent relationships which predominate the urban-rural component is that urban respondents evaluated the natural recreation resources as being used predominantly for sports and recreation. Whereas in contrast, the rural respondents see the resources as being used for domestic and farming purposes. This pattern of response is obviously influenced by the high degree of interaction of the rural people

with the natural environment, as compared to urban people who are exposed to man-made sporting and highly modified natural recreation areas and facilities.

With regard to the recreation aspirations of the Black people, the urban respondents indicated a wish to participate more in recreation activities, whereas many rural people indicated a strong desire to visit or stay in urban areas and actively engage in recreation from there. For both groups the lack of financial sources was the most important restraint amongst others (see Table 6.13). This contrasting cognition seems to suggest that the rural respondents were not very much concerned about their 'advantageous' proximity to natural recreation facilities. To them a visit to urban areas possibly implies two things: (a) An opportunity to participate in well-developed and better facilities available in urban areas. (b) An opportunity to be employed and therefore possess a source of income that would facilitate entrance into natural recreation areas and facilities next to their rural environment.

7.2.6 Recreation aspirations

There is little doubt, from what has been discussed previously, that the recreation aspirations of Blacks are strongly influenced by their philosophical and cultural value systems, and the general state of the recreation system. Amidst these factors there are, in particular, three specific problems which confront the South African recreation landscape. These according to Hanks (1982: 1), include:

(a) The rapid population growth rate, which if not controlled will, by the middle of the next century, exceed the level of

environmental tolerance.

(b) The increase in deforestation, which is leading to the dissappearance of indigenous forests and virgin land

(c) The growing inequality in the sharing of resources between the privileged and the less privileged.

These problems have been referred to earlier in this study and do not now warrant a protracted discussion in order to place them in the context of this analysis.

However, the following remarks should be understood or merely be seen as clarifying some ideas in this discussion. The recreation aspirations of the respondents are embodied in their cognition of what a priority activity is, of what the best use and management of recreation should be, and of what leisure time is. In the context of the data already analysed (see Table 6.13), recreation as a modern free time activity and state of involvement which results in human satisfaction and well-being, is highly preferred as opposed to other activities of a similar nature such as sport, visiting and touring. This cognition of recreation cuts across the inter-ethnic preferences as is evidenced by the fact that Blacks aspire,for the greater part,to do what Whites do during their free time.In considering the aesthetic-functional dichotomy of cognizing recreation, it is the aesthetic component which is most desired by most respondents, irrespective of age,sex,education,occupation and residence variables.

Theoretical support for recreation aspirations based on the preference of an aesthetic component is revealed in accepted notions that Blacks are aware of an interrelationship with nature to a large extent as opposed to a sense of defiance or subjugation.

This view is very much correlated with the beautification, with aesthetics and with artistic cognitions of natural recreation resources. As regards the inter-ethnic preferences for using free time for recreation purposes revealed earlier, it is not clear from the results whether Blacks, in aspiring to do what Whites do, also include the type of values upheld by White South African recreationists. Some of these values include:

(a) motor car-dominated recreation pursuits;

(b) modernized convenience facilities within the natural recreation environment; and

(c) outdoor activities that include camping and eating 'braai-ed' or barbecued food.

However, one might expect that through the modernization and socialization of Blacks, the respondents would most likely aspire to participate in these modernized recreation activities and facilities. The notion of human aspiration for recreation quality has been referred to several times in this study. As a result, it is in the course of searching for this experience that Black recreationists will be confronted by the already existing modern recreation value systems, which are, to a large extent, mechanistic and materialistically inspired.

7.3 HYPOTHESIS INTERPRETATION

The preceeding section was devoted to the general interpretation of cognition of natural recreation resources in the north-coastal region of Natal. In this section results are compared with hypotheses concerning the cognitions of natural recreation resources and a summary of the

findings for the hypotheses is presented in the discussion to follow. These hypotheses (see paragraph 5.4) were derived from the general body of theory outlined in Chapters 2 and 3. Each is presented below, followed by a brief discussion of the findings.

(1) It is hypothesized that in general Black people have favourable cognitions of natural recreation resources. The specific contentions of this hypothesis are accepted in full.

The results showed that in general there were positive cognitions of natural recreation resources, particularly when the recreation resources were categorized in terms of the aesthetic concept-dimensions. However, favourable cognitions of natural recreation resources are not completely universal among the rural, unskilled and poorly educated as was expected. When the resources were categorized as functional, the respondents tended to cognize them as being inadequate, restricted and inaccessible. This pattern may, as earlier stated, be due to the low degree of interaction between rural Blacks and the natural recreation resources.

(2) It is hypothesized that urban and peri-urban residents will have a more favourable cognition of natural recreation facilities and activities than rural people. This hypothesis is accepted in full.

Data analysis showed that in many instances both the urban and peri-urban respondents cognized the natural recreation resources positively. This finding is independent of the fact that both

urban and rural variables displayed an even-split relationship. However, favourable cognitions also emerged when natural recreation resources were equated with participation in recreation and sport, as against functional or subsistence activities such as hunting, fishing, farming and medicinal activities (herbs collecting).

(3) It is hypothesized that Blacks have a positive view towards the aesthetic aspects of natural recreation resources. More than any other hypothesis this one is most positively reflected in various concept-dimensions, bipolar semantic constructs and correlation matrices, and is therefore accepted.

The highest cognitive and use levels were shown in several analyses (Figure 6.21 and Tables 6.2; 6.4; 6.5 and 6.6) and these appeared to be constant for various personal variables such as sex, age, education, occupation and residence. The general subjective structuring or cognition of natural recreation resources by Blacks, though positive, reflects the negative experiences of not being able to participate in recreation areas and facilities. Hence, establishing a rationale by respondents that if one cannot participate in or have something in actuality, then, all one can do is participate or have it for oneself in theory.

(4) It is hypothesized that Black people also view natural recreation resources first as a means of subsistence and secondly as something to be conserved. The results support this hypothesis

revealing the dominance of the non-recreative applied uses and the abstract-functional semantic concept-dimensions. Therefore, this hypothesis is also accepted.

The specific contentions of this hypothesis are reflected in analyses of the active-subsistence uses, concept-dimension of 'quantity' and 'functionality', and cognitive concrete semantics discussed earlier in this chapter. All these revealed a moderate positive cognition of natural recreation resources and tended to vary equally for most socio-economic variables, with the exception that the rural and less educated varied insignificantly in cognizing natural recreation resources as a means of subsistence.

(5) It is hypothesized that rural Black people living adjacent to the natural recreation resources will have the least favourable cognitions of natural recreation resources. The specific intention of this hypothesis was to consider the Black people living adjacent to the natural recreation resources as rural people. The rural respondents actually occur as a constituent part of the residence variable. Under these circumstances the results did not support the idea of 'least favourable cognitions of natural recreation resources'; therefore, this hypothesis must be rejected.

Although there was no direct identification of specific areas adjacent to natural recreation parks and reserves, the rural component was read as cognizing both the aesthetic and functional elements of natural recreation resources as being positive. This is also confirmed by the fact that there was a positive

persistant relationship between influences of the urban and rural variables.

The results did not support this hypothesis, perhaps since discrepancies have been found to exist between the cognitive behaviour of rural respondents and the actual field observations of participants who are specifically located next to game reserves. Some individual comments have reflected negative sentiments towards game reserves which, of course, do not by themself significantly represent the totality of natural recreation resources this study is concerned with

(6) It is hypothesized that the better educated respondents, the younger respondents and the male respondents will have more positive cognitions of natural recreation resources. In view of the fact that it has been stated earlier that the positive cognitions of natural recreation resources differed, though insignificantly, by variables such as age, sex, education, occupation and residence, the general picture presented by this hypothesis must therefore be rejected. This is based on the general contentions of each of the three variables not supporting positive cognitions included in the hypothesis.

However, on taking a closer look at the socio-economic status and age variables, it was found that for each of the variables there is an inherent variation supporting the idea that the professional, skilled and highly educated (socio-economic status) respondents have a more positive cognition of natural recreation resources. Equally so, the younger respodnents were cognized

as being positively disposed to natural recreation resources. The idea that there are variations based on aesthetic versus functional elements does not detract anything from the positive stance adopted by the young and higher socio-economic status respondents or groups.

7.4 CONCLUSION

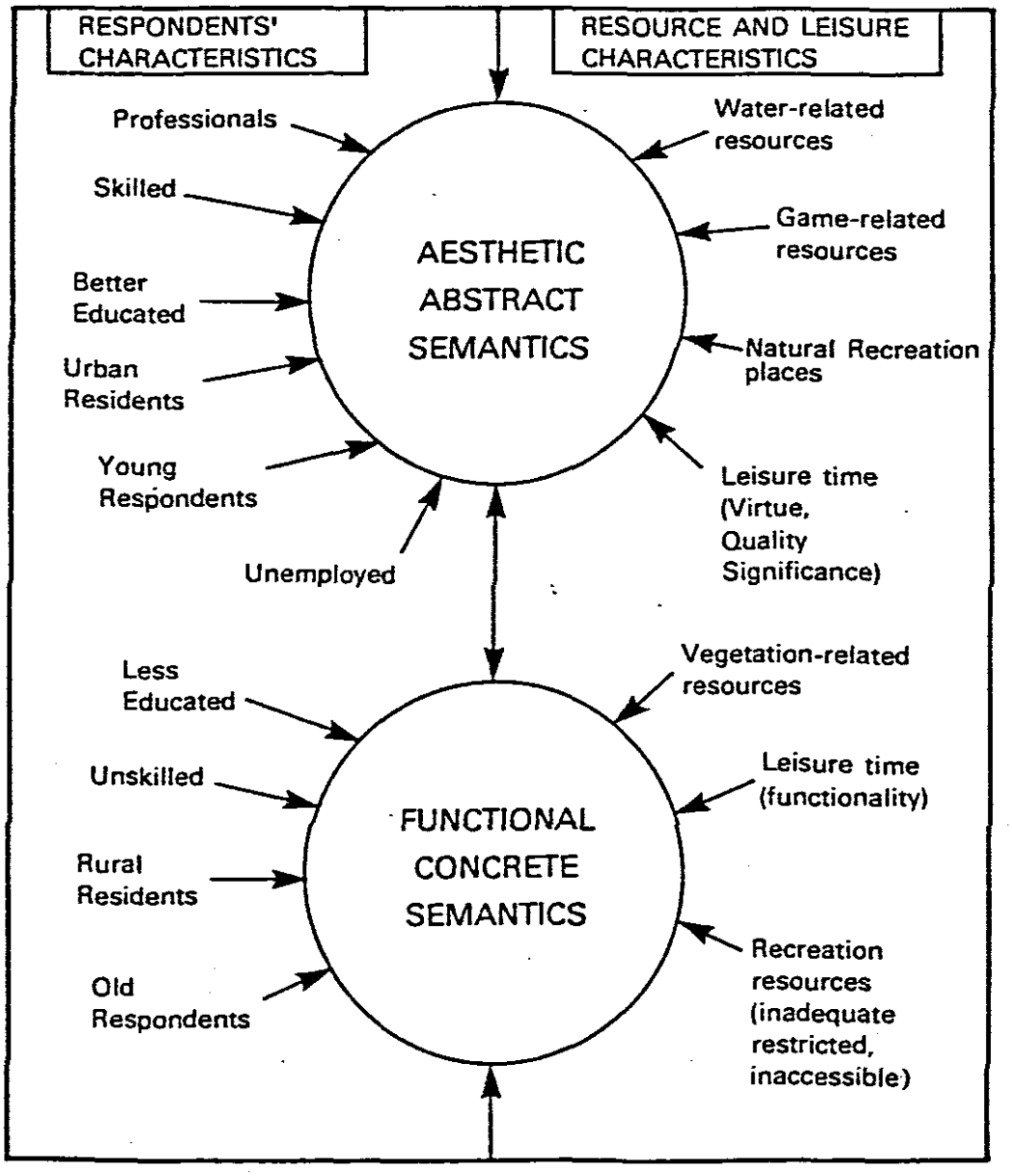
The characteristic interpretations of cognitions of natural recreation resources provided in this chapter, in particular those that have used philosophical, aesthetic and abstract procedures, are difficult to evaluate in objective terms. Such inquiries obviously are in danger of being subverted by the utilitarian goals and quantitative or positivistic techniques with which geography is to a large extent pre-occupied.

In concluding this chapter the evaluation and interpretation of natural recreation resources within the north-coastal region of Natal can be summarized by referring to the schematic model in Figure 7.2. The evaluation has emphasized two major themes as core-areas of analysis: the aesthetic-abstract attributes and the functional-concrete attributes. These attributes have been closely associated with several demographic variables and recreation and leisure resource characteristics.

Despite the fact that most demographic variables were recorded as differing very insignificantly by age, sex, education, occupation and residence in so far as the negative-positive cognitions of natural recreation resources within the Natal North Coast are concerned, the general picture supported a positive cognition of recreation resources and leisure

FIGURE 7.2

A SCHEMATIC MODEL OF RECREATION SEMANTIC EVALUATION IN THE NORTH-COASTAL REGION OF NATAL



time. Furthermore, within the positive cognitions, an evaluation of recreation resources using the aesthetic-functional attributes emerged as revealing a variation in preferences and uses in terms of age, education, occupation and residence. There were no cognitive differences on the basis of sex.

While these conclusions appear to be meaningful, they are presented only as modifications of some aspects of the hypotheses. The reason for this is that some conclusions are based on observed preferences, uses and cognitive correlations. The fact that emphasis has been placed on the cognition of aesthetic-functional attributes of the natural recreation resources should not cast some doubt on the validity of the semantic related method of analysis used. Notwithstanding that the overall finding reflects a positive cognition of natural recreation resources, it will be interesting to know if the similarity of findings using both the semantic scaling, photographic-image evaluation techniques and standard preference measurement, will be maintained if this method of analysis is replicated in another study.

The evaluation of Black cognitions of natural recreation resources of an area such as the north-coastal region of Natal is a necessary exercise if the general natural recreation system is to be made equitable and remodelled to cater for every person in the population. In addition, the results become even more interesting if the general cognition is negative and the interpretation presented was arrived at through careful considerations. However, since the general findings in this chapter reflect that natural recreation is not cognized as a priority activity, and that natural recreation resources are positively cognized on aesthetic and negatively on functional bases, an important starting point for further analyses which involve Blacks as subject of research seems to have been reached.

CHAPTER 8

SUMMARY, CONCLUSIONS AND IMPLICATIONS

8.1 INTRODUCTION

This investigation examined Black cognitions of natural recreation resources in the north-coastal region of Natal. To date, very little data have been available on Black cognitions or recreation behaviour patterns, uses and preferences for natural recreation resources. In particular, no such data have previously existed for the north-coastal region of Natal.

The purpose of this chapter is to present an evaluation of the research objectives by means of a concise statement of conclusions based on the exploration of factors associated with the cognitions of use and preferences of natural recreation resources within the general resource setting of the study area. In addition, a few suggestions implied by the study results in relation to the present natural recreation system will be proposed. Following this brief evaluation, selected comments appropriate to a continuation of this research or future research directions are offered.

It must, however, be stressed that the study was not intended to be an exhaustive and definitive discourse on all the variables which might be brought to bear on the problem but, instead, a selectively exploratory excursion into cognitive processes and natural resource use and preference within the confines of the study area and the sample. The most important feature

of this study lies in the understanding gained of the philosophical subtleties associated with the cognition of natural recreation resources within the study area.

8.2 SUMMARY

This study has dealt with several major factors which largely account for the cognitions of natural recreation resources and facilities within the north-coastal region of Natal. The basis of the research procedure was the use of two separate sample populations. The first survey (N=515) investigated the general Black population's cognitions of an behaviour towards natural recreation resources and facilities. The second survey (N=35) sought to establish the operational situation of organizations or agencies engaged in the administration and management of recreation.

The first analytical procedure employed the descriptive tools of tabulating the demographic variables and values of leisure and recreation resources and facilities. The second analytical phase utilized 24 photographs from which photographic images of natural recreation resources and facilities were evaluated. The third analytical objective entailed using a variety of cognitive constructs and concepts. From this the graphing of mean scores, using the semantic differential technique, was achieved. This procedure also employed correlation matrices in order to verify the presence of distinct relationships and meaning dimensions in relation to Black cognitions of natural recreation resources and facilities.

In view of the study objectives, hypotheses and findings reiterated and fully discussed in the previous chapter, the next phase of this

discussion summarizes the major conclusions reported earlier.

8.3 MAJOR CONCLUSION

The discussion contained in and the conclusions drawn from the present study are operationally valid for the sample (N=515) drawn in the north-coastal region of Natal. Because there is a lack of specialized knowledge about Black cognitions or particular Black public reactions to natural recreation resources, parks and facilities (Butler-Adam, 1984a), there is little latitude available for generalizing about natural or outdoor recreation areas across the board. However, it should be stated that it is felt that this study is meaningful or will be in future for many more Blacks and a wider area than considered in this study.

The major conclusions drawn from the study objectives, hypotheses and other findings are now presented in concise statements:

(1) Consensus exists which clearly reflects that the identification or awareness of natural recreation resources and facilities by Blacks is high and that they are positively cognized.

(2) The research findings show a negative cognition by Blacks of the current utilization of natural recreation resources. Though this negative cognition is supported by the real world figures of utilization, there was, however, a positive cognition of aesthetic and ecological constructs of natural recreation resources.

(3) Research evidence indicates a negative cognition of the management of natural recreation resources by the authorities. The cognitive constructs that were functionally associated with management

of natural recreation resources and facilities were found to be 'inadequate' and 'restricted'.

(4) A positive association between the cognitions of respondents and natural recreation resources was identified. The positive attributes were reflected in the dominant selection of concept-dimensions such as 'significance', 'virtue' and 'quality' of the recreation resources over 'quantity' and 'functionality'.

(5) In the context of the study area there is general evidence that there are no significant differences by age, sex, education, occupation and residential variables which influence the cognition and use of natural recreation resources and facilities either positively or negatively.

(6) On the basis of categorizing cognitions of natural recreation resources into aesthetic and functional cognitive constructs, there was variation by education, occupation and place of residence. These are, for instance, that on the one hand the less educated, unskilled and rural subjects cognize the natural recreation resources positively on functional bases. On the other hand, the better educated, skilled and urban subjects cognize the resources positively on aesthetic bases (see Figure 7.1). These differences are arrived at in terms of the aesthetic-functionality dichotomy rather than the positive-negative analytical findings of cognized natural recreation resources (See item 5 above).

(7) Black people within the north-coastal region of Natal cognize natural recreation resources as a means of subsistence first, and secondly as something that can be conserved. Research evidence shows support for this hypothesis and also indicated that recreation cannot be considered as a priority activity above necessities

such as agriculture, schooling, housing and industrial activities.

(8) On the strength of the preponderence of aesthetic, abstract and ecological construal of cognition of natural recreation resources by the respondents, it was concluded that the philosophical and cultural value systems are strongly associated with and intuitively involved in the formulation of images and cognitions which Blacks have towards the present natural recreation resources and facilities.

An attempt needs to be made to reconcile the two contrasting notions which, on the one hand, argue that Blacks cognize natural recreation resources positively and aesthetically (as has been amply shown in this study) and on the other hand, suggest that Blacks have shown little interest in visiting the presently existing natural recreation resources and facilities, is further considered. Whereas it has been shown that both the positive aesthetic and functional cognitions of natural recreation resources are strongly linked with African philosophical thought processes, the following ideas also suggest why Black people behaviourally show little current interest in nature reserves and facilities.

(a) Basically, it has been argued, Africans have grown, lived with and subsisted on nature and therefore see nature not as a resource in terms of novelty (Mphahlele, ca 1984).

(b) It may also be argued that Blacks have been dispossessed of good and luxurient land with the result that they now find no interest in supporting the protection of wild animal in game reserves, when the people do not have sufficient land for

for agricultural purposes.

(c) In terms of Black financial circumstance, a trip to a game reserve is cognized as being expensive and cannot be afforded by ordinary people. The whole financial scheme is such that moneys used in game reserves do not filter back into the Black community (Ferreira, 1986).

(d) The general spatial inequalities which Blacks have experienced make it difficult for them to think of natural recreation resources as being for everybody. Some Blacks, out of fear of humiliation by way of racial rebuffs, elect to stay away from natural recreation areas and facilities.

The results of this inquiry have not produced an overwhelming set of difficulties which impede the effort of drawing reasonable conclusions about the cognition of natural recreation resources and facilities. For instance, some difficulties could relate to: (a) the working of semantic differential scales; (b) the translation of concept and constructs from Zulu to English; (c) the interpretation of semantic related quantities into qualitative statements; and (d) the philosophical interpretations of emerging qualitative natural recreation constructs. On the contrary, the similarity and recurrence of some findings from different analyses used in this study, seem to confirm some of the major concluding statements expressed earlier. It should, therefore, be noted that any future effort to understand Black people's relationships to the natural recreation environment and its institutionalization, as parks and reserves, must recognize the complexity of the phenomena.

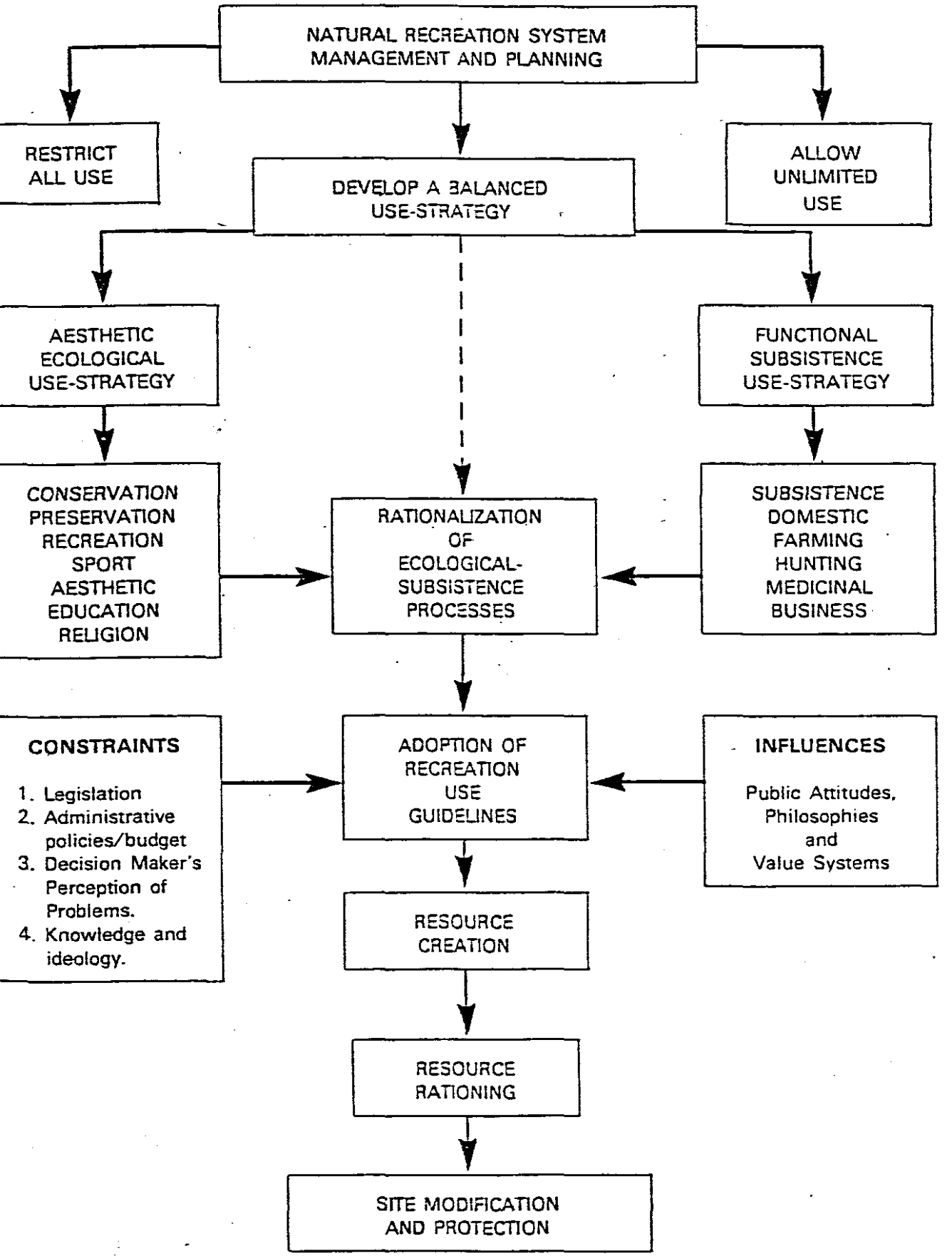
8.4 IMPLICATIONS

The results of this study have indicated, throughout, a positive cognition of natural recreation resources, particularly on aesthetic bases. Whereas this is so, in the real world very few Blacks participate in natural recreation activities. These findings have important implications for the planning and management of natural recreation resources in the north-coastal region of Natal. It is a major thesis of this investigation that recreation research and subsequent recreation planning play, or should play, a critical role in effective planning and management both at present and in future. Planning and management policies that reflect freely operating Black recreationists, involving their needs and desires will have implications beyond the north-coastal region of Natal.

The natural recreation planning and management systems model in Figure 8.1 summarizes the two-fold cognition, use and preference strategy for future recreation planning purposes. Working upon the basis of the results of the present study, it is apparent that in order to achieve the equitable and effective creation, rationing, modification and protection of natural recreation resources and facilities, a balanced rationalization of 'aesthetic' and 'functional' attributes or constructs of these recreation resources have to be considered. Indeed, the general body of theory also suggests that the aesthetics of recreation resources of facilities must improve from being seen as a frill (Bannon, 1976), to becoming a functional necessity (Barkham, 1973; Ferreira, 1986). The achievement of this balanced recreation state also hinges on changing the legal and administrative policies as promulgated and interpreted by predominantly White decision-makers in the South African recreation system.

FIGURE 8.1

THE RECREATION MANAGEMENT AND PLANNING SYSTEMS MODEL SHOWING USER-STRATEGY IN THE NATAL NORTH-COASTAL REGION



Adapted from Mitchell (1979)

Black recreation cognitions and behaviour patterns based on African philosophical thought processes and values are vital for a recreation landscape that has any intentions of recognizing a Black presence in the South African existential situation. As a result these values must find room for expression and inclusion in decision formulation in the total recreation scene in South Africa.

The concrete implications drawn in this discussion are offered as an illustration of how environmental cognition research can contribute to better planning and management decisions. Despite the fact that in this study the situation in South Africa is referred to in general terms, no pretense is made at a comprehensive treatment of all recreation management issues. Rather, the study intends not only to draw attention to Black cognitions of natural recreation resources, but also to the role which behavioural recreation and geographic research has in this subject matter.

On the basis of recreation management, it should be obvious from the results of this study that the growth of the Black population, cognitions and conservation attitudes towards natural recreation resources have important implications for the local recreation system as a whole. Perceiving natural recreation within a broader ecological framework, the country's conservation authorities have identified some goals to be achieved by the year 2005 (Konigkramer, 1980). These relate to:

(a) Government and public awareness of the need for conservation;

(b) the creation of many conservation areas within South Africa; and

(c) the initiation of effective control of spatial problems such as soil erosion, pollution and urbanization.

In this study conservation is not cognized as a priority need or activity among the subjects in the study area. Some other studies (Bulger, 1981) have also revealed that the local people in the north-coastal region of Natal do not see any use for the conservation areas because they derive no direct benefit from them. These findings are of immediate importance for the conservation authorities. This therefore implies that more than it has been stressed before, the problems of Black population growth and related environmental cognitions reported in this study should receive more research attention. In addition it should be stressed that the importance and understanding of philosophical and socio-cultural imperatives suggested earlier should be reinforced by providing an equitable spatial and recreation system for all.

Another important point, which has implications for this study, is the consistency with which the positive cognition of natural recreation resources and facilities has occured. More specifically it was observed that the aspects of natural recreation environment are constant and invariant with demographic variables such as age, sex, education, occupation and residence. If the commonalities between Black cognitions and the general body of theory could be clearly identified there would be very much less requiring specific consideration and environmental construing for cultural and philosophical facilities would also become easier. The philosphical representation of natural recreation resources as being 'aesthetic' or 'functional' has an implicit value judgement which need to be made explicit. This complexity of relationships immediately calls

for more cross-cultural cognitive research, particularly that which emphasizes the non-literate past and the value and importance of non-Western traditions.

There is also evidence in support of the notion that variations in the cognition and preference of natural recreation areas and facilities are more strongly based on personal and socio-economic variables used than on ethnic or racial status. This can be explained by the fact that this study has not at any point in the analysis of cognitions of natural recreation resources used respondents in terms of different racial or ethnic categories.

In the context of the general body of theory cited in this study combining elements from Geography, Recreation, Psychology and Philosophy research in Behavioural Recreation Geography has important implications for the theoretical and methodological status of Geography. As such, this study has two illustratory attributes for geographers: First, the possibility for greater awareness and advancing the frontiers of geographic knowledge (Saarinen, 1969). This essentially means broadening main stream Human Geography to include methods and concepts from other social sciences. Secondly, it fosters a research strategy that moves away from considering theoretical problems, to applying concepts, methods and techniques in resolving societal problems (Mitchell and Draper, 1982). Thirdly, it reflects the necessity of using theory and practice in establishing geographic knowledge. This is supported by Boyce (1974) who writes:

> By observing reality through a conceptual framework, imperfections, peculiarities, and deviations from a general concept can be identified. Conversely, examination of factual reality is necessary, if for no other reason than to suggest needed improvement in theory ... Thus a careful blend of fact and theory is a prerequisite to sound geographical understanding. Theory without facts, or with only a few facts to verify the theory, often leads to blind acceptance of presumed spatial arrangements - arrangements that may exist only in the mind of the theoretician.
>
> (Boyce, 1974: 2).

Further, the conclusions drawn in these geographical studies have a considerable contribution to make in the resolution of future planning and management policies, if only they can be communicated to the right people and authorities, and in good time.

8.5 FUTURE RESEARCH

This study has devoted much attention to several aspects of Behavioural Recreation Geography, including theoretical and methodological areas such as: measurement of meaning, semantic differential analysis, photographic-image assessment, Personal Construct Theory, African philosophical and value perspectives, and the conceptualization and modeling of ideas. The conclusions and implications drawn from this study suggest the need for more attention to be focused upon a more complete synthesis of existing theory. The method of theory construction applied in some sections of the study is basic and, perhaps, speculative but it is also intuitively appealing and is a line of research which needs to be pursued further.

In the context of this study the most challenging questions that recreation resource planners, managers, researchers and analysts need to answer

are: What do natural recreation environments mean to Black people who actually use elements of these environments? How do Blacks cognize their White counterparts? How do Black recreationists relate to people or agencies who manage natural recreation reserves and facilities? What elements of African philosophical perspectives play a vital role in the cognition of natural recreation resources? How compatible are the goals and expectations of various natural recreation resource users and potential users? What are the physical attributes of the natural recreation resources that would provide criteria for making decisions in an African context? These research questions, and many more, are an indication of further research needed in this area. Some of these questions can also be tackled using the models, theories and methodologies discussed in this study.

Finally, future research into the cognitive or behavioural mechanisms associated with the influences of socio-cultural and political experiences of Blacks in South Africa is important. This kind of research could provide additional information about the effects of inequitable government policies and spatial inequalities on Black cognitions of the recreation landscape. This appears to be a fruitful area of research for further study.

8.6 CONCLUSION

The results of this investigation have indicated that natural recreation resources and facilities in the north-coastal region of Natal are, generally, positively cognized by Black respondents. It has also indicated that Black construals of these resources into aesthetic and functional units

are accompanied by differences in demographic characteristics. As a result, it can be said that it is not so much the resources per se that generate negative cognitions but the policies and bureaucracies experiences by the respondents within the study area. In this context, it seems abundantly clear that natural recreation experience is strongly influenced by socio-cultural components about which little research has been conducted in order to understand or demonstrate their role in Behavioural Recreation Geography.

Finally, the problems of Black cognitions of natural recreation resources and their association to African philosophical values appear to be well suited to geographic investigation. This study extends our knowledge concerning the cognitions of use, and preferences, of natural recreation resources and demonstrates the aesthetic and functional nature of recreation resource allocation and protection in the north-coastal region of Natal. Thus, geographers may apply their spatial and behavioural expertise in other similar situations to solve many other contemporary outdoor recreation planning problems. The versatility of a geographer working with spatial, behavioural and philosophical information simultaneously, emphasizes the nature of his contribution to the social sciences in relation to a specific problem. As White (1963: 426) has stated, we should:

> ... not (be) interested in staking out professional claims in this domain of science. What does seem important is to recognize intellectual problems which call for solution and which because of their relation to spatial distributions and human adjustment to differences in the physical environment are of interest to geographers.

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BIBLIOGRAPHY

A'Bear, D.R. and Little, A.M. (1977): Techniques in Evaluating Natural Resources for Recreation. Pietermaritzburg: Natal Town and Regional Planning Commission.

Abel, N. and Stocking, M. (1981): The Experience of Underdeveloped Countries. In O'Riordan, T. and Sewell, W.R.D. (Eds.): Project Appraisal and Policy Review. New York: John Wiley and Sons.

Abler, R., Adams, J.S. and Gould, P.R. (1971): Spatial Organization: the Geographer's View of the World. Englewood Cliffs: Prentice-Hall.

Abraham, W.E. (1962): The Mind in Africa. Chicago: University of Chicago Press.

Allen, D.L. (1975): Man and the Environmental Ethic. In Tybout, R.A. (Ed.): Environmental Quality and Society. Ohio State: University Press.

Alrick, J. (1938): The Experiences of a Woman 'Tenderfoot' in an Early Game Extermination Campaign. Cape Times, July 8, 1938.

Altman, I., Rapoport, A. and Wohlwill, J.F. (Eds.) (1980): Human Behaviour and Environment: Advances in Theory and Research. Vol. 4. Environment and Culture. New York: Plenum Press.

Amedeo, D. and Golledge, R.G. (1975): An Introduction to Scientific Reasoning in Geography. New York: John Wiley and Sons.

Apostel, L. (1981): African Philosophy: Myth or Reality? Gent (Belgium): E.Story - Scientia Publishers.

Appleyard, D. (1973): Notes on Urban Perception and Knowledge. In Downs, R.M. and Stea, D. (Eds.): Image and Environment. Chicago: Aldine Publishing Co.

Appleyard, D. (1979): The Environment as a Social Symbol. Journal of the American Planning Association, Vol. 45(2) 143-153.

Arnold, S. (1980): The Dilemma of Meaning. In Goodale, T.L. and Witt, P.A. (Eds.): Recreation and Leasure: Issues in an Era of Change. Pennsylvania State College: Venture Publishing Inc.

Aschmann, H. (1972): People, Recreation, Wild Lands, and Wilderness. In Aschmann, H. and Dasman, R.F. (Eds.): Population Crisis: and interdisciplinary perspective. London: Scott, Foresman and Co.

Bailey, K.D. (1982): Methods of Social Research, (2nd Ed.). New York: The Free Press.

Baker, R.B. (1942): African Drums. London: C. Hurst and Co.

Bannister, D. (1981): Personal Construct Theory and Research Method. In Reason, P. and Rowan, J. (Eds.): Human Inquiry: A Sourcebook of New Paradigm Research. New York: John Wiley and Sons.

Bannister, D. and Fransella, F. (1971): Inquiring Man: The Theory of Personal Constructs. Harmandsworth: Penguin Books.

Bannon, J.J. (1976): Leisure Resources: Its Comprehensive Planning. New Jersey: Prentice-Hall.

Barkham, J.P. (1973): Recreational Carrying Capacity: a Problem of Perception. Area, Vol.5(3), 218-222.

Bechtel, R.B. (1975): The Semantic Differential and other Paper and Pensil Tests. In Michelson, W. (Ed.) Behavioural Research Methods in Environmental Design. Stroudsburg: Dowden, Hutchinson and Ross, Inc.

Bechtel, R.B. (1976): The Perception of Environmental Quality: Some New Wineskins for Old Wine. In Craik, K.H. and Zube, E.H. (Eds.): Perceiving Environmental Quality: Research and Application. Environmental Science Research. New York: Plenum Press.

Becker, D.G. (1977): Proxemics and Recreational Spatial Behaviour in Yellowstone National Park Grounds. Unpublished Ph.d. Thesis, University of Illinois, Department of Geography.

Begg, G. (1978): The Estuaries of Natal. Natal Town and Regional Planning Report, Vol.41. Pietermaritzburg: Natal Town and Regional Planning Commission.

Behrens, H.P.H. (1984): Oom Paul's Great Fight to Preserve Game. African Wildlife, Vol. 38(2): 45-54.

Bengu, S.M.E. (1975): Chasing Gods Not Our Own. Pietermaritzburg: Shuter and SHooter.

Bennett, D.B. (1975): Camping and Environment Education Research and Evaluation Related to Environmental Actions and Behaviour. In van der Smissen, B. and Myers, J.L. (Eds.): Research Camping and Environmental Education. The Pennsylvania State University.

Bennett, R.J. and Chorley, R.J. (1978): Environmental Systems. London: Methuen and Co.

Berger, P.L. (1984): Democracy in Today's World. Dialogue Vol.2(64): 2-6.

Berglund, A. (1976): Zulu THought: Patterns and Symbolism. London: C.Hurst and Co.

Birch, T.H. (1982): Man the Beneficiary? A Planetary Perspective on on the Logic of Wildland Preservation. In Barrett, R.N. (Ed.): International Dimensions of the Environmental Crisis. Boulder: Westview Press.

Borgman, A. (1982): Technology and Nature in Europe and America. In Barrett, R.N. (Ed.): International Dimensions of the Environmental Crisis. Boulder: Westview Press.

Bourquin, O. (1984): The Value, Management and Costs of Small Nature Reserves. Proceedings: Durban Metropolitan Open Space System. Pietermaritzburg: Natal Town and Regional Planning Commission and Wildlife Society of South Africa.

Boyce, R.B. (1974): The Basis of Economic Geography. New York: Holt, Rinehart & Winston.

Brett, E.A. (1963): African Attitudes: a Study of the Social, Racial and Political Attitudes of some Middle Class Africans. Johannesburg: South African Institute of Race Relations.

Brightbill, C.K. and Mobley, T.A. (1977): Educating for Leisure-centred Living (2nd Ed.). New York: John Wiley and Sons.

Brislin, R.W. (1980): Cross-cultural Research Methods: Strategies, Problems, Applications. In Altman, I., Rapoport, A. and Wohlwill, J.F. (Eds.): Human Behaviour and Environment: Advances in Theory and Research. Vol.4. Environment and Culture. new York: Plenum Publishing Corp.

Brockman, C.F. and Merriam Jr., J.C. (1979): Recreational Use of Wild Lands. New York: McGraw-Hill Book Co.

Broek, J.O.M. (1965): Geography: its scope and spirit. Columbus, Ohio: Charles E.Merrill Books.

Brush, R.O. (1976): Perceived Quality of Scenic and Recreational Environments: Some Methodological Issues. In Craik, K.H. and Zube, E.H.(Eds.): Perceiving Environmental Quality: Research and Application. Environmental Science Research. New York: Plenum Press.

Bryant, A.T. (1929): Olden Times in Zululand and Natal. London: Longmans, Green and Co.

Bryant, A.T. (1949): The Zulu People: As They Were Before the White Man Came. Pietermaritzburg: Shuter and Shooter.

Bryant, C.R., Russwurm, L.H. and McLellan, A.G. (1982): The City's Countryside: Land and its Management in the Rural-urban Fringe. London: Longman Publishers.

Bulger, P. (1981): White Man's Game. Sunday Tribune September 13, 1981:6.

Burgess, J.A. (1979): Place-Making: The Contribution of Environmental Perception Studies in Planning. Geography. Vol.64: 317-326.

Burton, T.L. (1970): Recreation Research and Planning. London: George Allen and Unwin Ltd.

Bury, R.L. and Stout, N.J. (1970): A Thesaurus of Keywords for Indexing and Retrieval of Recreation Literature, Journal of Leisure Research, Vol.2(3): 191-204.

Butler-Adam, J.F. (1977): Proposals for a Research Strategy for Outdoor Recreation in S.A.: Presented to the Recreation Plan Working Group, Unpublished Paper. Pretoria: Department of Planning and the Environment.

Butler-Adam, J.F. (1978): 'Deep as the Sea': Images of the World of Behavioural Geography. The South African Geographer, Vol.6(1): 57-71.

Butler-Adam, J.F. (1981): A Recreation Study of Albert Falls Public Resort. Town and Regional Planning Report - Volume 47. Pietermaritzburg: The Natal Town and Regional Planning Commission.

Butler-Adam, J.F. (1982): A Recreation Study of Albert Falls Public Resort. Supplementary Series Report 2, Pietermaritzburg: The Natal and Regional Planning Commission and the Natal Parks Board.

Butler-Adam, J.F. (1984a): A Framework for the Social Analysis of Recreation. Paper presented at the SAASSPER Biennial National Contress. Cape Town.

Butler-Adam, J.F. (1984b) Recreation in Natal: Images, Behaviour and the Local System. S.A.Journal for Research in Sport, Physical Education and Recreation. Vol. 7(1): 121-131.

Butler-Adam, J.F. and Sutcliffe, M.O. (1977): Recreation User Survey. Pietermaritzburg: Natal Town and Regional Planning Commission.

Buttimer, A. (1976): Exploring the Social Dimension of Environmental Knowing: A Commentary. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross, Inc.

Calvin, J.S., Dearinger, J. and Curtain, M. (1972): An Attempt at Assessing Preferences for Natural Landscapes. Environment and Behaviour, Vol.4: 447-470.

Capelle, Jr., R.B. (1973): Space Searching Behaviour: Recreation space from the urban resident's point of view. Unpublished Ph.D. Thesis. University of Pitssburgh.

Carlson, R.E., MacLean, J.R., Deppe, T.R. and Peterson, J.A. (1979): Recreation and Leisure: The Changing Scene (3rd. Ed.). Belmont: Wadsworth Publishing Co.

Cawood, B.G. (1980): Open Space Areas of Greater Durban: a preliminary survey. Natal Town and Regional Planning Reports, Vol.45. Pietermaritzburg: Natal Town and Regional Planning Commission.

Cheatham, G.W. (1973): Construction of an Attitude Scale for Evaluation of Student Attitude Towards Recreation. Unpublished Ph.D. Thesis, University of Minnesota: Department of Recreation Education.

Christiansen, M.L. (1975): Impact of Activities on the Environment: An Operational Perspective. In van der Smissen, B. and Myers, J.L. (Eds.): Research Camping and Environmental Education. Penn. State HPER Series No.11 College of Health, Physical Education and Recreation. The Pennsylvania State University.

Clawson, M. and Knetch, J.L. (1966): Economics of Outdoor Recreation. Baltimore: The John Hopkins University.

Cole, A. (1977): Perception and Use of Urban Parks: A Melbourne Case study. In Mercer, D. (Ed.): Leisure and Recreation in Australia. Malvern: Sorrett Publishing Co.

Cole, M. and Scribner, S. (1974): Culture and Thought. New York: John Wiley and Sons.

Comrie-Greig, J. (1984) The Law of the Jungle. African Wildlife. Vol 38(5): 174-183.

Conradie, A. (1974): African Philosophy. Unpublished paper for the Killie Campbell Africana Library, Durban.

Cooper, C., Shindler, J., McCaul, C., Potter, F. and Cullum, M. (1985): Race Relations Survey - 1984. Johannesburg: South African Institute of Race Relations.

Cooper, K. (1984): The Three Tragedies of the Mfolozi Floodplain. African Wildlife Vol. 38(3): 104-105.

Cooper, K. (1985): Proclamation of Maphelane Nature Reserve. Natal Wildlife Vol. 26(2): 4-5.

Coppock, J.T. (1982): Geographical Contributions to the Study of Leisure. Leisure Studies. Vol.1: 1-27.

Cosgrove, I. and Jackson, R. (1972): The Geography of Recreation and Leisure. London: Hutchinson and Co.

Cox, K.R. (1981): Bourgeois Though and the Behavioural Geography Debate. In Cox, K.R. and Golledge, R.G. (Eds.): Behavioural Problems in Geography Revisited. New York: Methuen and Co.

Cox, K.R. and Golledge, R.G. (1969) Behavioural Problems in Geography: A Symposium. Evanston: Northwestern University Press.

Cox, K.R. and Golledge, R.G. (1981): Behavioural Problems in Geography Revisited. London: Methuen.

Craik, K.H. (1972): Psychological Factors in Landscape Appraisal. Environment and Behaviour. Vol.4: 402-422.

Craik, K.H. (1973): Environment Psychology. Annual Review of Psychology. Vol.24: 403-422.

Craik, K.H. and Zube, E.H. (1976): Perceiving Environmental Quality: Research and Applications. Environmental Science Research. New York: Plenum Press.

Craik, K.H. and Zube, E.H. (1976): The Development of Perceived Environmental Quality Indices. In Craik, K.H. and Zube, E.H. (Eds.): Perceiving Environmental Quality: Research and Applications. Environmental Science Research. New York: Plenum Press.

Crandall, R. (1979): Social Interaction, Affect and Leisure. Journal of Leisure Research, Vol. 11(3): 165-181.

Crowe, D.R. (1972): A Casestudy in Recreation Geography: Spatial Interaction and Camper Perception. Unpublished Ph.D.Thesis, University of Florida, Department of Geography.

Daily News (1937): Correspondent. December 8, 1937.

Daniel, T.C. (1976): Criteria for Development and Application and Perceived Environmental Quality. In Craik, K.H. and Zube, E.H. (Eds.): Perceiving Environmental Quality: Research and Application. Environmental Science Research, New York: Plenum Press.

De Beer, C.S. (1975): Hermeneutical Philosophy, Myth and African Thought. In Georgiades, D.S. and Delvare, I.G. (Eds.): Philosophy in the African Context. Johannesburg: University of the Witwatersrand.

Department of Constitutional Development and Planning (1983): Richards Bay - Empangeni Draft Guide Plan, Pretoria: Department of Constitutional Development and Planning.

Deregowski, J.B. (1980a): Some Aspects of Perceptual Organization in the Light of Cross-cultural Evidence. In Warren, N. (Ed.): Studies in Cross-cultural Psychology. London: Academic Press.

Deregowski, J.B. (1980b): Perception. In Triandis, H.C. and Lonner, W. (Eds.): Handbook of Cross-cultural Psycholgy: Basic Processes, Vol.3.Boston: Allyn and Bacon Inc.

Deregowski, J.B. Ellis, H. and Shepherd, J. (1973): A Cross-cultural Study of Recognition of Pictures of Faces and Cups. International Journal of Psychology, Vol. 8(4): 269-273.

Dhlomo, H.I.E. (1939): Nature and Variety of Tribal Drama. Bantu Studies, Vol.XIII. Johannesburg: University of Witwatersrand.

Downs, R.M. (1976): Personal Constructions of Personal Construct Theory. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross Inc.

Downs, R.M. (1981): Cognitive Mapping: a Thematic Analysis. In Cox, K.R. and Golledge, R.G. (Eds.): Behavioural Problems in Geography Revisited. New York: Methuen and Co.

Downs, R.M. and Stea, D. (1973): Cognitive Maps and Spatial Behaviour: Process and Products. In Downs, R.M. and Stea, D. (Eds.): Image and Environment. Chicago: Aldine Publishing Co.

Driver, B.L. (1975a): Elements of Outdoor Recreation Planning. Michigan: The University of Michigan Press.

Driver, B.L. (1975b): Quantification of Outdoor Recreationists' Preferences. In van der Smissen, B. and Myers, J.L. (Eds.): Research Camping and Environmental Education. Penn State HPER Series No.11 College of Health, Physical Education and Recreation, The Pennsylvania State University.

Driver, B.L. and Tocher, S.R. (1974): Towards Behavioural Interpretation of Recreational Engagements, with Implications for Planning. In Driver, B.L. (1975) (Ed.): Elements of Outdoor Recreation Planning. Michigan: The University of Michigan Press.

Ducsik, D.W. (1974): Shoreline for the Public. Cambridge: Massachusetts Institute of Technology.

Duncan, J.S. and Duncan, N.G. (1976): Social Worlds, Status Passage, and Environmental Perspectives. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross, Inc.

Dunn, D.R. (1975): Recreation, Open Space and Social Organization. In Van Doren, et al. (Eds.): Land and Leisure: Concepts and Methods in Outdoor Recreation. London: Methuen and Co.

Dunn, M.C. (1976): Landscape with Photographs: Testing the Preference Approach to Landscape Evaluation. Journal of Environmental Management. Vol. 4: 15-26.

Eiken, D.K. (1978): Attitudes Concerning State Recreation Service in North Dakota. Unpublished Ph.D. Thesis, The University of Utah: College of Health.

Ellis, H., Deregowski, J.B. and Shepherd, J. (1975): Description of White and Black Subjects. International Journal of Psychology. Vol.10(2): 119-123.

English, P.W. and Mayfield, R.C. (1972): Man, Space and Environment. New York: Oxford University Press.

Farina, J. (1980): Perceptions of Time. In Goodale, T.L. and Witt, P.A. (Eds.): Recreation and Leisure: Issues in an Era of Change. Pennsylvania State College: Venture Publishing Inc.

Ferguson, A.G. (1979): Some Aspects of Urban Spatial Cognition in an African Student Community. Institute of British Geographers. Vol.4(1): 77-93.

Ferrario, F.F. (1978): An Evaluation of the Tourist Resources of South Africa. Publication No.1, Department of Geography. University of Cape Town.

Ferrario, F.F. (1981): An Evaluation of the Tourist Potential of KwaZulu and Natal. Durban: KwaZulu Development Corporation.

Ferreira, G. (1986): The Big Battle for the Bundu. Sunday Tribune. March 23, 1986.

Finlay, F.R.N. (1903): Big Game Shooting and Travel in South-East Africa. London: T.Fisher Unwin.

Fishbein, M. and Ajzen, I. (1975): Belief, Attitude, Intention and Behaviour. Reading: Addison-Wesley Publishing Co.

Fox, S. (1980): Too many People, Too Little Land Threatens Wildlife. Sunday Times. December 7, 1980: 11.

Francescato, D. and Mebane, W. (1973): How Citizens View Two Great Cities: Milan and Rome. In Downs, R.M. and Stea, D. (Eds.): Image and Environment. Chicago: Aldine Publishing Co.

Friedland, W.H. and Rosberg, C.G. (1964): African Socialism. Stanford, California: Stanford University Press.

Georgiades, D.S. and Delvare, I.G. (1975): Philosophy in the African Context. Johannesburg: University of the Witwatersrand.

Gibbon, A.B. (1976): Outdoor Recreation Survey of the Port Elizabeth Area. Unpublished M.A. Thesis, Department of Geography, University of Port Elizabeth.

Godbey, G. (1978): Recreation, Park and Leisure Services: Foundation, Organization and Administration. Philadelphia: W.B.Saunders Co.

Goetz, R. (1985): Kenneth Stainbank Nature Reserve. MOSS Newsletter Vol.6: 11-13.

Golant, S. and Burton, I. (1976): A Semantic Differential Experiment in the Interpretation and Grouping of Environmental Hazards. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross Inc.

Gold, J.R. (1974): Communicating Images of the Environment. Centre for Urban and Regional Studies. Occasional Paper No.29 University of Birmingham.

Gold, J.R. (1980a): An Introduction to Behavioural Geography. London: Oxford University Press.

Gold, S.M. (1980b): Recreation Planning and Design. New York: McGraw-Hill Book Co.

Gorden, M. (1975): Ecology as Ideology. In Tybout, R.A. (Ed.): Environmental Quality and Society. Ohio State University Press.

Gould, P.R. (1969a): The structure of Space Preference in Tanzania. Area. Vol. 5: 29-56.

Gould, P.R. (1969b): Methodological Developments since the Nineteen-fifties. In Board, C. et al. (Eds.): Progress in Geography, Vol.1. London: Edward Arnold.

Gould, P.R. and White, R. (1974): Mental Maps. Baltimore: Penguin Books.

Gray, D. and Pelegrino, D. (1973): Reflections on the Recreation and Park Movement. Duduque, Iowa: William, C. Brown Publishers.

Gregory, S. (1974): The Geographer and Natural Resources Research. South African Geographer, Vol.4: 371-382.

Groves, D.L. and Kahalas, H. (1976): Recreation Expectations. Regional Studies., Vol.10: 193-200.

Haas, G.E. (1979): User Preferences for Recreation Experience Opportunities and Physical Resource Attributes in Three Colorado Wilderness Areas. Unpublished Ph.D. Thesis, Colorado State University: Department of Recreation Resources.

Hagen, M.A. and Jones, R.K. (1978): Cultural Effects on Pictorial Perception: How Many Words is One Picture Really Worth. in Walk, R.D. and Pick, H.L. (Eds.): Perception and Experience. New York: Plenum Press.

Haggett, P. (1979): Geography: A Modern Synthesis (3rd Ed.). New York: Harper and Row.

Haigh, H. (1985): Personal Interview. Regional Director of Forestry. Natal Forest Region. Pietermaritzburg: (Department of Environmental Affairs)

Hall, D. (1976): Geography and the Geography Teacher. London: Allen and Unwin.

Hall, M. (1977): Shakan Pitfall Traps: Hunting Technique in the Zulu Kingdom. Annals of the Natal Museum, Vol. 23(1): 1-12.

Hammand-Tooke, W.D. (Ed.) (1974): The Bantu-speaking Peoples of South Africa. London: Routledge and Kegan Paul.

Hanks, J. (1982): Environmental Education and the Quality of Life. Unpublished Paper Presented at the International Conference on Environmental Education. Mooirivier: Treverton College.

Harrison, J.A. and Sarre, P. (1971): Personal Construct Theory in the Measurement of Environment Images: Problems and Methods. Environment and Behaviour, Vol.3: 351-374.

Harrison, J.A. and Sarre, P. (1975): Personal Construct Theory in the Measurement of Environmental Images. Environment and Behaviour, Vol. 7(1): 3-58.

Harrison, J.A. and Sarre, P. (1976): Personal Construct Theory, the Repertory Grid, and Environmental Cognition. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross Inc.

Hart, R.A. and Moore, G.T. (1973): The Development of Spatial Cognitions: A Review. In Downs, R.D. and Stea, D. (Eds.): Image and Environment: Cognitive Mapping and Spatial Behaviour. Chicago: Aldine.

Harvey, D. (1969): Explanation in Geography. London: Edward Arnold.

Harvey, D. (1973): Social Justice and the City. London: Edward Arnold.

Harvey, D. (1981): Conceptual and Measurement Problems in the Cognitive-behavioural Approach to Location Theory. In Cox, R. and Golledge, R.G. (Eds.): Behavioural Problems in Geography Revisited. New York: Methuen and Co.

Hayes, W.A. (1980): Radical Black Behaviourism. In Jones, R.L. (Ed.): Black Psychology (2nd Ed.). New York: Harper and Row Publishers.

Heimstra, N.W. and McFarling, L.H. (1978): Environmental Psychology (2nd Ed.). Monterey: Brooks Cole Publishing Co.

Hellman, E. (1940): Problems of Urban Bantu Youth. Johannesburg: University of the Witwatersrand.

Hillery, G.A. and Lincoln, A.J. (1978): Leisure, Freedom and Crowd Behaviour. Journal of Leisure Research, Vol. 10(3): 219-225.

Hjelte, G. and Shivers, J.S. (1978): Public Administration of Recreational Services. Philadelphia: Lea and Febiger.

Hobley, C.W. (1922): Bantu Beliefs and Magic. London: H.F. and G. Witherby.

Hogg, D. (1977): The Evaluation of Recreational Resources. In Mercer, D. (Ed.): Leisure and Recreation in Australia. Malvern: Sorrett Publishing Co.

Honikman, B. (1976): Personal Construct Theory and Environmental Meaning: Applications to Urban Design. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross Inc.

Hope, A.S. and Mulder, G.J. (1979): Hydrological Investigations of Small Catchments in the Natal Coastal Belt and the Role of Physiography and Land-use in the Rainfall-Runoff Process. KwaDlangezwa: University of Zululand.

Hountondji, P.J. (1983): African Philosophy: Myth and Reality. London: Hutchinson University Library.

Howe, E. and Kaufman, J. (1981): The Values of Contemporary American Planners. Journal of the American Planning Association, Vol. 47(3): 266-278.

Hudson, R. (1980): Personal Construct Theory, the Repertory Grid Method and Human Geography. Progress in Human Geography, Vol. 4(3): 346-359.

HSRC (1984): Bibliographic Computer Print-out on topic: Behavioural Recreation Geography. Pretoria: Human Sciences Research Council.

Hugo, M.L. (1974): An Investigation into the Nature and Magnitude of the Demand for Outdoor Recreation Among the Urban Black Communities of South Africa. South African Journal of African Affairs, Vol.2: 57-66.

Hugo, M.L. and Hattingh, P.S. (1972): Outdoor Recreation in Pietersburg and Environs: Present Patterns and Demand. Publication of the University of the North, Series A (5). Pietersburg.

Huntley, B.J. (1965): A Preliminary Account of the Ngoye Forest Reserve, Zululand. Journal of South African Botany Vol.31: 177-205.

Iglesias, E. (1971): Development and the Human Environment. In Mouton, L. (Ed.): Development and Environment. Report of the United Nations Conference on the Human Environment. Founex, Switzerland June 4-12, 1971.

Isaacs, S. and Michael, W.B. (1971): Handbook in Research and Evaluation. San Diego: Edits Publishers.

Ittleson, W.H. (1976): Environment Perception and Contemporary Perceptual Theory. In Proshansky, H.M., Ittleson, W.H. and Rivlin, L.G. (Eds.): Environmental Psychology (2nd.Ed.) New York: Holt, Rinehart and Winston.

Ittleson, W., Franck, K. and O'Hanlon, T. (1976): The Nature of Environmental Experience. In Wapner, S., Cohen, S. and Kaplan, B. (Eds.): Experiencing the Environment. New York: Plenum Press.

Jacob, G. and Schreyer, R. (1980): Conflict in Outdoor Recreation: A Theoretical Perspective. Journal of Leisure Research, Vol. 12(4): 368-380.

James, P.E. and Jones, C.F. (1954): American Geography: Inventory and Prospect. Syracuse: Syracuse University Press.

Jenkinson, T.B. (1882): Amazulu: The Zulus, Their Past History, Manners, Customs and Language. London: W.H. Allen and Co.

Jensen, C.R. (1977): Leisure and Recreation: Introduction and Overview. Philadelphia: Lea and Febiger.

Johnston, R.J. (1981): The Dictionary of Human Geography. Oxford: Basil Blackwell Publishers.

Johnstone, R.J. (1983): Philosophy and Human Geography: An Introduction To Contemporary Approaches. London: Edward Arnold.

Jones, R.L. (1980): Black Psychology, 2nd Ed. New York: Harper and Row Publishers.

Jooste, M.E. (1973): A Socio-Agogical Reflection on Outdoor Recreation with Reference to a Special Spatial Investigation. Unpublished M.Ed. Thesis. Pretoria: University of Pretoria.

Jubenville, A. (1978): Outdoor Recreation Management. Philadelphia: W.B.Saunders Co.

Junod H.P. (1927): The Life of South African Tribe London: Macmillan & Co.

Junod, H.P. (1938): Bantu Heritage. Johannesburg: Hortors Ltd.

Kaplan, R. (1976): Way-finding in the Natural Environment. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross Inc.

Kay, G. (1970): Rhodesia: A Human Geography. London: University of London Press.

Keita, L. (1979): The African Philosophical Tradition. In Wright, R.A. (Ed.): African Philosophy: An Introduction. Washington D.C.: University Press of America.

Kidd, D. (1908): Kafir Socialism. London: Adam and Charles Black.

Kelly, G.A. (1955a): The Psychology of Personal Constructs. Vol.1. New York: W.W. Norton and Co.

Kelly, G.A. (1955b): The Psychology of Personal Constructs. Vol.2. New York: W.W. Norton and Co.

Kerlinger, F.N. (1973) Foundations of Behavioural Research 2nd Ed. New York: Holt, Rinehart and Winston.

Keyter, C. (1962): Holiday and Travel Facilities for Non-Whites in South Africa. Johannesburg: Race Relations Publications.

Kies, C.W. (1982): *Problems Relating to the use of Leisure in Soweto:* A Preliminary Survey. Pretoria: Human Sciences Research Council.

Konigkramer, A. (1980): The Ruined Earth. The Daily News, December 3, 1980: p.29.

Kopytoff, I. (1964): Socialism and Traditional African Society. In Friedland, W.H. and Rosberg, C.G. (Eds.): African Socialism. Stanford, California: Stanford University Press.

Kraus, R. (1978): Recreation and Leisure in Modern Society. Santa Monica, Cal.: Goodyear Publishing Co.

Kumata, H. and Schramm, W. (1969): A Pilto Study of Cross-cultural Meaning. In Snider, J.G. and Osgood, C.E. (Eds.): Semantic Differential Technique: A Sourcebook. Chicago: Aldine Publishing Co.

Lamont, T. (1983): Demographic Changes and their Effect on the Provision of Leisure Resources. A Paper Presented at the International Symposium of the South African Association for Sports, Physical Education and Recreation, Durban.

Lavery, P. (1975): The Demand for Recreation. Town Planning Review, Vol. 46(2): 185-199.

Leonard, J.W. (1975): Ethics and Reality. In Tybout, R.A. (Ed.): Environmental Quality and Society. Ohio State University Press.

Leslie, D. (1875): Among the Zulus and Amatongas. Edinburgh: Edmonston and Douglas.

Levy, J. (1979): A Paradigm for Conceptualising Leisure Behaviour. Journal of Leisure Research, Vol. 11(1): 48-60.

Ley, D. (1981): Behavioural Geography and the Philosophies of Meaning. In Cox, K.R. and Golledge, R.G. (Eds.): Behavioural Problems in Geography Revisited. New York: Methuen and Co.

Ley, D. and Samuels, M.S. (1978): Introduction: Concepts of Modern Humanism in Geography. In Ley, D. and Samuels, M.S. (Eds.): Humanistic Geography. Bechenham: Croom Helm.

Lime, D.W. and Stankey, G.H. (1974): Carrying Capacity: Maintaining Outdoor Recreation Quality. In Van Doren, C.S.; Priddle, G.B. and Lewis, J.E. (Eds.): Land and Leisure: Concepts and Methods in Outdoor Recreation. London: Methuen.

Little, A.M. and Phelan, A.J. (1978): St Lucia Estuary: Evaluation of National Resources. South African Journal of Science Vol. 74: 8-11.

Lloyd, W.J. (1976): Landscape Imagery in the Urban Novel: A Source of Geographic Evidence. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross, Inc.

Lowenthal, D. (1961): Geography, Experience and Imagination: Towards a Geographical Epistemology. Annals of the Association of American Geographers, Vol.51: 241-260.

Lowenthal, D. (1972): Research in Environmental Perception and Behaviour: Perspectives on Current Problems. Environment and Behaviour, Vol.4: 333-342.

Lowenthal, D. and Prince, H.C. (1976): Transcendental Experience. In Wapner, S., Cohen, S.B. and Kaplan, B. (Eds.): Experiencing the Environment. New York: Plenum Press.

Lowenthal, D. and Bowden, M.J. (1975): Geographies of the Mind. New York: Oxford University Press.

Ludlow, W.R. (1882): Zululand and Cetewayo. London: Simpkin, Marshall and Co.

Lugg, H.C. (1949): Historic Natal and Zululand. Pietermaritzburg: Shuter and Shooter.

Lynch, K. (1960): The Image of the City. Cambridge: M.I.T. Press.

MacEwen, A. and MacEwen, M. (1982): National Parks: Conservation or Cosmetics? London: George Allen and Unwin.

Madingoane, I. (1979): Africa my Beginning. Johannesburg: Ravan Press.

Magi, L.M. (1979): *Recreation Land-use in Central Lane County: Patterns and Contents.* Unpublished M.A. Thesis, University of Oregon: Department of Geography.

Manganyi, N.C. (1973): Being-Black-in-the-World. Johannesburg: Spro-Cas/Ravan Press.

Maquet, J. (1972): Africanity: The Cultural Unity of Black Africa. New York: Oxford University Press.

Marais, E.J. (1972): African Thought. Alice: Fort Hare University Press.

Matthews, W.H. (1976): Resource Materials for Environmental Management and Education. Cambridge: The M.I.T.Press.

Maurier, H. (1979): Do We Have an African Philosophy? In Wright, R.A. (Ed.): African Philosophy: An Introduction, (2nd Ed.). Washington D.C.: University Press of America.

Mbiti, J.A. (1970): African Religions and Philosophies. New York: Anchor BOoks.

McCall, J.R. and McCall, V.N. (1977): Outdoor Recreation: Forest, Park and Wilderness. Beverley Hills: Benziger Bruce and Glencoe Inc.

McElwain, D.W. and Kearney, G.E. (1976): Aboriginal Cognition. Psychology Series No.1. Canberra: Australian Institute of Aboriginal Studies.

McGowan, K. (1984): On the Waterfront: Caught in a net. Sunday Tribune, November 25, 1984.

McKenry, K. (1977): Value Analysis of Wilderness Area. In Mercer, D. (Ed.): Leisure and Recreation in Australia. Malvern: Sorrett Publishing Co.

Mercer, D.C. (1970): The Geography of Leisure: A Contemporary Viewpoint. Geography, Vol.55(3): 261-272.

Mercer, D. (1971): The Role and Perception in the Recreation Experience: A Review and Discussion. Journal of Leisure Research, Vol. 3(4): 261-276.

Mercer, D.C. (1972): Behavioural Geography and the Sociology of Social Action. Area, Vol.4: 48-52.

Mercer, D. (Ed.)(1977a): Leisure and Recreation in Australia. Malvern: Sorrett Publishing Co.

Mercer, D. (1977b): The Factors Affecting Recreation Demand. In Mercer, D.(Ed.): Leisure and Recreation in Australia. Malvern: Sorrett Publishing Co.

Meyer, H.D. and Brightbill, C.K. (1964): Community Recreation. New Jersey: Prentice-Hall.

Meyersohn, R. (1969): The Sociology of Leisure in the United States: Introduction and Bibliography, 1945-1965. Journal of Leisure Research, Vol.1: 53-68.

Mitchell, B. (1979): Geography and Resource Analysis. London: Longman Group Ltd.

Mitchell, B. and Draper, D. (1982): Relevance and Ethics in Geography. London: Longman Group Ltd.

Moeller, G.H.; MacLachlan, R. and Morrison, D.A. (1974): Measuring Perception of Elements in Outdoor Environments. (Forest Service Research Paper NE 289) Upper Darby, PA.: Northeastern FOrest Service, USDA.

Molema, S.M. (1920): The Bantu: Past and Present. Edinburgh: W.Green and Son Ltd.

Monod, Th. (1965): Conservation of Natural Resources in Africa. In Wolstenholme, G. and O'Connor, M. (Eds.): Man and Africa. London: J.&A. Churchill Ltd.

Moore, G.T.(1976): Theory and Research on the Development of Environmental Knowing. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing: Theories, Research and Methods. Stroudsburg: Dowden Hutchinson & Ross, Inc.

Moore, G.T. and Golledge, R.G. (1976): Environmental Knowing. Stroudsburg: Dowden, Hutchinson and Ross Inc.

Morris, N. and van der Reis, A.P. (1980): An Investigation of the Transferability of Rating Scale Techniques to Transport Research in a Developing Country. National Institute for Transport and Road Research, C.S.I.R. Technical Report RT/21/80. Pretoria.

Mphahlele, E. (1974): The African Image. London: Faber and Faber.

Mphahlele, E. (ca 1984): The Politics of Education. The Capricorn Papers. Vol.3: 66-75. Johannesburg: Council for Black Education and Research Publication.

Muir, J. (1901): Our National Parks. Boston: Houghton Publishers.

Muir, R. and Paddison, R. (1981): Politics, Geography and Behaviour. London: Methuen and Co.

Natal Mercury Reporter, (1985): Beaches Open for Christmas. The Natal Mercury, October 4, 1985.

Natal Parks Board (1979): St Lucia (Brochure). Pietermaritzburg: Natal Parks Board.

Natal Parks Board (1981a): Umfolozi Game Reserve (Brochure). Pietermaritzburg: natal Parks Board.

Natal Parks Board (1981b) The Natal Bushveld: Landforms and Vegetation. Pietermaritzburg: Shuter and Shooter.

Natal Parks Board (1981c) The Natal Bushveld: Ecology and Mammals. Pietermaritzburg: Shuter and Shooter.

Natal Parks Board (1983): The Natal Bushveld: Birds, Reptiles, Amphibians and Insects. Pietermaritzburg: Shuter and Shooter.

Natal Parks Board (1984): The Natal Parks Board and You. (Brochure). Pietermaritzburg: Natal Parks Board.

Natal Wildlife (1983): Reservation of Bush Camps Natal Wildlife. Vol.24 24(2): 9-10.

Natal Wildlife (1985): The Kenneth Stainbank Nature Reserve Background Information. Natal Wildlife. Vol 26 (4):4-6.

National Tourist Bureau (cal979): Guide Map for the Tourist - Republic of South Africa. Pretoria: Department of Tourism.

Ndebele, N. (1972): Black Development. In Biko, B.S. (Ed.): Black Viewpoint. Durban: Spro-Cas Black Community Programmes.

Nelson, G. (1975): Man and his Environment. In Tybout, R.A. (Ed.): Environment Quality and Society. Ohio State University Press.

Neulinger, J. (1981): The Psychology of Leisure, (2nd.Ed.). Springfield, Illinois: Charles C. Thomas Publisher.

Neulinger, J. and Breit, M. (1971): Attitude Dimensions of Leisure: A Replication Study. Journal of Leisure Research, Vol.3: 108-115.

Neulinger, J. and Raps, C.I.S. (1972): Leisure Attitudes of an Intellectual Elite. Journal of Leisure Research, Vol.4: 196-207.

Neumeyer, M. and Neumeyer, E. (1958): Leisure and Recreation. New York: Ronald Press.

Ngcongwane, S.D. (1985): Personal Interview. Head of the Department of African Languages, University of Zululand.

Ngubane, J.K. (1980): Forty Years of Black Writing. In Mphahlele, E. and Couzens, T. (Eds.): The Voice of the Black Writer in Africa. Johannesburg: University of the Witwatersrand.

Nisbet, R. (1983): Reflection on Boredom. Dialogue, Vol.4(62): 36-38.

Nobles, W.W. (1980): African Philosophy: Foundations for Black Psychology. In Jones, R.L. (Ed.): Black Psychology, (2nd Ed.). New York: Harper and Row Publishers.

Noe, F.P. (1978): Identifying Attitudinal Predictors among Youth toward National Parks, Journal of Leisure Research, Vol. 10(3): 203-213.

NTRPC (1970): Draft Proposals for Designation of Beaches on the Natal Coast between the UMtamvuna and Tugela Rivers for the Four Population Groups. Pietermaritzburg: Natal Town and Regional Planning Commission.

NTRPC (1979): The Estuaries of Natal - Volume 41. Pietermaritzburg: Natal Town and Regional Planning Commission.

NTRPC - WLS (1984): Durban Metropolitan Open Space System: The Proceedings of a Seminar. Pietermaritzburg: Natal Town and Regional Planning Commission.

Ntuli, E. (1985): Personal Interview. Field Assistant, Hydrological Research Unit. University of Zululand.

Nyembezi, C.L. (1954): Zulu Proverbs. Johannesburg: Witwatersrand University Press.

O'Connor, C.A. (1970): A Study of Personality needs involved in the Selection of Specific Leisure Interest Groups. Unpublished Ph.D.Thesis. University of Southern California.

Olela, O. (1979): The African Foundations of Greek Philosophy. In Wright, R.A. (Ed.): African Philosophy: An Introduction. Washington, DC.: University Press of America.

O'Riordon, T. (1970): Public Opinion and Environmental Quality: A Reappraisal. Environment and Behaviour. Vol.3:191-214.

O'Riordan, T. (1981): Environmentalism. London: Pion Ltd.

O'Riordan, T. and Sewell, W.R.D. (1981): Project Appraisal and Policy Review. New York: John Wiley and Sons.

Orleans, P. (1973): Differential Cognition of Urban Residents: Effects of Social Scale on Mapping. In Downs, R.M. and Stea, D. (Eds.): Image and Environment. Chicago: Aldine Publishing Co.

Osgood, C.E. (1969): The Cross-cultural Generality of Visual-verbal Synesthetic Tendencies. In Snider, J.G. and Osgood, C.E. (Eds.): Semantic Differential Technique. Chicago: Aldine Publishing Co.

Osgood, C.E. and Suci, G.J. (1969): Factor Analysis of Meaning. In Snider, J.G. and Osgood, C.E. (Eds.): Semantic Differential Technique: A Sourcebook. Chicago: Aldine Publishing Co.

Osgood, C.E., Suci, G.J. and Tannenbaum, P.H. (1957): The Measurement of Meaning. Chicago: University of Illinois Press.

Our Living World No.2 (1985a): Leave the Wetlands Alone. Vol.2:1-8.

Our Living World No.2 (1985b): How the Individual Can Help. Vol.2:1-8.

Outdoor Recreation Resources Review Commission (1962a): Summary Report: Outdoor Recreation of America. Washington D.C.: U.S. Government Printing Office.

Outdoor Recreation Resources Review Commission. (1962b): Report 3: The Quality of Outdoor Recreation: As Evident by User Satisfaction. Washington D.C.: U.S.Government Printing Office.

Paden, J.N. and Soja, E.W. (1970): The African Experience, Vol.II. London: Heinemann Education Books.

Palmer, J.F. (1979): Perceptual Research as a Recreation Management Tool: Classifying and Describing National Scenic Trail Environments. Unpublished Ph.D.Thesis, University of Massachusetts: Department of Forestry and Wildlife Management.

Patmore, J.A. (1983): Recreation and Resources: Leisure Patterns and Leisure Places. Oxford: Basil Blackwell Publishers.

Pearson, K. (1977): Leisure in Australia. In Mercer, D. (Ed.): Leisure and Recreation in Australia. Malvern: Sorrett Publishing Co.

Peterson, G.L. (1967): A Model of Preference: Quantitative Analysis of the Perception of the Visual Appearance of Residential Neighbourhoods. Journal of Regional Science, Vol.7(1): 19-31.

Peterson, G.L. (1974): Evaluating the Quality of the Wilderness Environment: Congruence between Perception and Aspiration. Environment and Behaviour, Vol.6(2): 169-193.

Peterson, G.L. (1976): Perceived Quality of Scenic and Recreational Environments: Research Needs and Priorities. In Craik, K.H. and Zube, E.H. (Eds.): Perceiving Environmental Quality: Research and Application. Environmental Science Research. New York: Plenum Press.

Peterson, G.L. and Neumann, E.S. (1969): Modelling and Predicting Human Response to the Visual Recreation Environment. Journal of Leisure Research, Vol.1: 219-237.

Pick, A.D. (1980): Cognition: Psychological Perspectives. In Triandis, H.C. and Lonner, W. (Eds.): Handbook of Cross-cultural Psychology: Basic Processes, Vol.3.Boston: Allyn and Bacon inc.

Pierce, J.M. (1976): The sociological Dimensions of Perception and Attitude: Their Relationship to Outdoor Recreation and Tourism in a Regional Development Context. Unpublished Ph.D.Thesis, Columbus: The Ohio State University.

Pigram, J.J. (1972): Resource Reappraisal and Resistance to Change: An Australian Example. Professional Geographer, Vol.24: 132-136.

Pigram J. (1983): Outdoor Recreation and Resource Management. New York: St Martin's Press.

Piper, S. (1984): Discussion In, Proceedings: Durban Metropolitan Open Space System. Pietermaritzburg: Natal Town and Regional Planning Commission and Wildlife Society of South Africa.

Pocock, D.C.D. (1971): Urban Environmental Perception and Behaviour. Tijdschrift voor Economische en Sociale Geographie, Vol.63: 321-326.

Pocock, D.C.D. (1973): Environmental Perception. Tijdscrift voor Economische en Sociale Geographie, Vol.64: 421-426.

Pocock, D. and Hudson, R. (1978): Images of the Environment. London: The Macmillan Press.

Porteous, J.D. (1977): Environment and Behaviour. Reading, Mass.: Addison-Wesley Publishing Co.

Preston, M.G. (1983): Enhancement of the Awareness of Conservation Issues in Visitors to Three South African Nature Reserves. Unpublished M.A. Dissertation, Cape Town: University of Cape Town.

Price, C. (1979): Public Preference and the Management of Recreation Congestion. Regional Studies. Vol.13: 125-139.

Price-Williams, D.R. (1969): Cross-cultural Studies. Harmondsworth: Penguin Books.

Priddle, G.B. (1972): Driving for Pleasure: The Behavioural Pattern, Landscape Perceptions, and Consequent Implications of an Outdoor Recreational Activity. Unpublished Ph.D.Thesis, Department of Geography, Clark University, Worcester Massachusetts.

Rabie, A. (1976): South African Environmental Legislation. Pretoria: IFCOL Publications.

Rapoport, A. (1969): House Form and Culture. New Jersey: Prentice-Hall.

Rapoport, A (1976): Environmental Cognition in Cross-cultural Perspective. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross Inc.

Rapoport, A. (1980): Cross-cultural Aspects of Environmental Design. In Altman, I. Rapoport, A and Wohlwill, J.F. (Eds.): Human Behaviour and Environment: Advances in Theory and Research. Vol.4. Environment and Culture. New York: Plenum Press.

Ray, A.A. (Ed.) (1982): SAS User's Guide: Basics, 1982 Edition. Cary, NC.: SAS Institute Inc.

Ray, R.O. (1979): Life Satisfaction and Activity Involvement: Implications for Leisure Services. Journal of Leisure Research, Vol.11(2): 112-119.

Reader's Digest Illustrated Guide (1983): Game Parks and Nature Reserves of Southern Africa. Cape Town: The Reader's Digest Association of South AFrica.

Relph, E. (1970): An Inquiry into the Relations Between Phenomenology and Geography. Canadian Geographer, Vol.14: 193-201.

Relph, E. (1981a): Rational Landscape and Humanistic Geography. London: Croom Helm.

Relph, E. (1981b): Phenomenology. In Harvey, M.E. and Holy, B.P. (Eds.): Themes in Geographic Thought. Beckenham: Croom Helm.

Rich, P. (1975): The Cultural Preconditions for African Philosophy. In Georgiades, D.S. and Delvare, I.G. (Eds.): Philosophy in the African Context. Johannesburg: University of the Witwatersrand.

Ritchie, J.F. (1943): The African as Suckling and as Adult. The Rhodes-Livingstone Paper No.9. Livingstone: The Rhodes-Livingstone Inst.

Roberts, D. (1985): Personal Interview. Secretary - Moss Action Committee. Durban.

Roberts, K. (1981): Leisure. London: Longmans.

RSA (1980): Population Census 1980. Pretoria: Central Statistical Services.

Ruch, E.A. (1975): Towards a Theory of African Knowledge. In Georgiades, D.S. and Delvare, I.G. (Eds.): Philosophy in the African Context. Johannesburg: University of the Witwatersrand.

Ruch, E.A. and Anyanwu, K.C. (1984): African Philosophy: An Introduction to the Main Philosophical Trends in Contemporary Africa. Rome: Catholic Book Agency.

Rushton, G. (1981): The Scaling of Locational Preferences. In Cox, R. and Golledge, R.G. (Eds.): Behavioural Problems in Geography Revisited. New York: Methuen and Co.

Russell, J.A. and Mehrabian, A. (1976): Some Behavioural Effects of the Physical Environment. In Wapner, S., Cohen, S.B. and Kaplan, B. (Eds.): Experiencing the Environment. New York: Plenum Press.

Saarinen, T.F. (1969): Perception of Environment. Commission of College Geography Resource Paper No.5. Washington, D.C.: Association of American Geographers.

Saarinen, T.F. (1976): Environmental Planning: Perception and Behaviour. Boston: Houghton Mifflin and Company.

Salter, C.L. and Lloyd, W.J. (1977): Landscape in Literature. Washington D.C.: Association of American Geographers, Resource Papers for College Geography No. 76-3.

Santanyana, G. (1896): The Sense of Beauty. New York: Dover Publications, Inc.

Sayer, R.A. (1981): Defensible Values in Geography: Can Values be Science-Free. In Herbert, D.T. and Johnston R.J. (Eds.): Geography and the Urban Environment: Progress in Resarch and Applications, Vol.IV. Chichester: John Wiley and Sons.

Schlemmer, L. (1977): Outdoor Recreation in Pietermaritzburg - 1966. Pietermaritzburg: Town and Regional Planning Commission, Natal.

Scott-Barnes, I. (1983): Personal Interview Owner - Nyala Game Ranch. Empangeni

Senghor, L.S. (1963): Negritude and African Socialism. African Affairs. Vol.2: 9-22.

Senghor, L.S. (1966): Negritude: A Humanism of the 20th Century. Optima. Vol 16(1): 1-8.

Sessoms, D.H., Meyer, H.D. and Brightbill, C.K. (1975): Leisure Services: The Organized Recreation and Park System. New Jersey: Prentice Hall.

Sewell, W.R.D. and Burton, I. (1971): Perceptions and Attitudes in Resources Management. Ottawa: Department of Energy, Mines and Resources.

Shafer, E.L., Hamilton, J.E. and Schmidt, E.A. (1969): Natural Landscape Preferences: a Predictive Model. Journal of Leisure Research, Vol.1: 1-19.

Shafer, E.L. and Tooby, M. (1973): Landscape Preferences: An International Replication. Journal of Leisure Research, Vol.5: 60-65.

Shepherd, J., Deregowski, J.B. and Ellis, H. (1974): A Cross-Cultural Study of Recognition Memory for Faces. International Journal of Psychology, Vol. 9(3): 205-211.

Shepherd-Smith, I. (1981): The Saviours. Sunday Tribune June 14, 1981; p.16.

Siegel, S. (1956): Nonparametric Statistics for the Behavioural Sciences. New York: McGraw-Hill Company.

Smith, E.W. (1950): African Idea of God. London: Edinburgh House Press.

Soyinka, W. (1976): Myth, Literature and the African World London: Cambridge University Press.

Spradley, J.P. (1972): Culture and Cognition: Rules, Maps and Plans. San Fransisco: Chandler Publishing Company.

Stankey, G.H. (1972): A Strategy for the Definition and Management of Wilderness Quality. In Krutilla, J.V. (Ed.): Natural Environments: Studies in Theoretical and Applied Analysis. Baltimore: John Hopkins University Press.

Stea, D. (1969): The Measurement of Mental Maps: An Experimental Model For Studying Conceptual Spaces. In Cox, K.R. and Golledge, R. (Eds.): Behavioural Problems in Geography: A Symposium. Evanston, III.: Northwestern University Press.

Steyn, J.N. (1972): Measuring Recreation Demand: A Case Study of the Cape South Coast. Unpublished Article. Stellenbosch: University of Stellenbosch.

Steyn, J.N. (1976): Die Geografie van ontspanning: 'n Jong Navorsingsveld. The South African Geographer, Vol.5(4): 332-341.

Steyn, J.N. (1978): Spatial Aspects of Recreation Behaviour of the Major Racial Groups in the Pretoria-Witwatersrand-Vereeniging Area. A Paper Presented at the Intrenational Symposium for Recreation, Stellenbosch. (Published in 1980).

Steyn, J.N. (1983): Public Recreational Space in South Africa's Urban Areas: Suggestions for Planning. S.A. Journal for Research in Sport, Physical Education and Recreation, Vol.6(2): 114-126.

Steyn J.N., Hattingh, P.S. and Booysen, J.J. (1982): The Identification of Recreation Pressure Areas and Potential Recreation Areas in Transvaal. Journal of Research in Sport, Physical Education and Recreation, Vol.5(2): 85-101.

Steyn, J.N.; Olivier, J.J. and Booysen, J.J. (1985): Sport- en Rekreasievoorsiening aan Swartes Besluitnemingsraamwerk en Ruimtelike Patrone. The South African Geographer, Vol.13(1):51-64.

Steyn, J.N. and Swart, P.E. (1983): The Provision and Utilization of Open Space for Sport and Recreation in Municipal Areas in S.A. The South African Geographical Journal Vol.65(1): 58-72.

Stokols, D. (1978): Environmental Behaviour. Annual Review of Psychology, Vol.28: 253-295.

Stringer, P. (1976): The Demands of Personal Construct Theory: A Commentary. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross Inc.

Subsidiary Committee for Outdoor Recreation of the Advisory Council to the Prime Minister (1978): Research Strategy: Methods and Techniques. National Outdoor Recreation Plan I. Pretoria: Department of Environmental Planning and Energy.

Subsidiary Committee for Outdoor Recreation of the Advisory Council to the Prime Minister (1979): Outdoor Recreation Glossary: National Outdoor Recreation Plan 2. Pretoria: Department of Environmental Planning and Energy.

Subsidiary Committee for Outdoor Recreation of the Advisory Council to the Prime Minister (1980): SATI: Terrain Capability Classification. National Outdoor Recreation Plan 3. Pretoria: Department of Environmental Planning and Energy.

Sunday Tribune (1981): The Saviours. June 14, 1981: p.16.

Sutcliffe, M.O. (1981): A Behavioural Study of Recreation in the Natal Drakensberg. Natal Town and Regional Planning Report, Vol.48. Pietermaritzburg: NTRPC.

Taylor, B.M.K. (1983): Cognitive Structuring of Residential Environments in Black Grahamstown: A Political View. Unpublished M.A. Dissertation. Durban: University of Natal.

Taylor, J. (1985): Personal Interview: ACE organiser for the Wildlife Society's Umgeni Valley Project School.

Taylor, V. (1974): Spatial Patterns of Tourism in the East London Area. Unpublished M.A. Dissertation, Stellenbosch: University of Stellenbosch, Department of Geography.

Taylor, V. (1984): Outdoor Recreation of Whites in the Cape Town Metropolitan Area: The Resource Base and Utilization Patterns. Publication No.13, Institute for Cartographic Analysis. University of Stellenbosch.

Teale, G. (1984): Lake St.Lucia Game Reserve Paradise to be Lost. African Wildlife. Vol.38(2): 62-63.

Tempels, P. (1959): Bantu Philosophy. Paris: Presence Africaine.

Ternowetsky, G.W. (1983): Holiday Taking and Socio-economic Status in Australia. Leisure Studies, Vol.2: 31-44.

Theodorson, G.A. and Theodorson, A.G. (1969): Modern Dictionary of Sociology. New York: Thomas Crowell Co.

Tinsley, H.E.A., Barrett, T.C. and Kass, R.A. (1977): Leisure Activities and Need Satisfaction. Journal of Leisure Research, Vol. 9(2): 110-120.

Tinsley, H.E.A. and Kass, R.A. (1978): Leisure Activities and Need Satisfaction: A Replication and Extension. Journal of Leisure Research, Vol.10(3): 191-202.

Tinsley, H.E.A. and Kass, R.A. (1979): The Latent Structure of the Need Satisfaction Properties of Leisure Activities. Journal of Leisure Research, Vol.11(4): 278-291.

Torkildsen, G. (1983): Leisure and Recreation Management. London: E. and F.N. Spon Ltd.

Trigonometrical Survey Office (1973): Cadastral Map 1:50 000. Pretoria: Government Printer.

Tranter, P. and Parkes, D. (1979): Time and Images in Urban Space. Area, Vol.11(2): 115-120.

Tuan, Yi-Fu. (1974a): Topophilia: A Study of Environmental Perception, Attitudes and Values. New Jersey: Prentice-Hall Inc.

Tuan, Yi-Fu. (1974b): Space and Place: Humanistic Perspectives. In Board, C., et al. (Eds.): Progress in Geography Vol.6. London: Edward Arnold.

Tuan, Yi-Fu. (1976a): Literature, Experience and Environmental Knowing. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross Inc.

Tuan, Yi-Fu. (1976b): Humanistic Geography. Annals, Association of American Geographers, Vol.66: 266-276.

Tybout, R.A. (1975): Environmental Quality and Society. Ohio State University Press.

University of Natal (1951): Archaeology and Natural Resources of Natal. Natal Regional Survey Vol.1. Cape Town: Oxford University Press.

University of Natal (1977): Anthology of Zulu Poetry. Durban: University of Natal Department of Zulu Language and Literature.

Van der Wal, R.W.E. (1981): Recreation in Metropolitan Areas: Patterns and Problems. Unpublished Paper Read at the International Symposium on Research in Sport and Recreation. Potchefstroom.

Van der Wal, R.W.E. and Steyn, J.N. (1981): Recreation in Metropolitan Areas: Patterns and Problems. South African Journal for Research in Sport, Physical Education and Recreation. Vol.4(2): 81-96.

Van Zyl, G.N. (1973): A Plan for the St.Lucia Estuary. Natal Town and Regional Planning Report, Vol.27. Pietermaritzburg: NTRPC.

Vilakazi, A. (1965): Zulu Transformations. Pietermaritzburg: University of Natal Press.

Vilakazi, B.W. (1945): Okomhlaba kuyandlula. In University of Natal (1977): Anthology of Zulu Poetry. Durban: University of Natal, Department of Zulu, Language and Literature.

Walmsley, H.M. (1879): Zululand: Its Wild Sports and Savage Life. London: Frederick Warne and Co.

Watson, J.W. and O'Riordan, T. (1976): Image and Reality in the American Scene. In Watson, J.W. and O'Riordan, T. (Eds.): The American Environment: Perceptions and Policies. London: John Wiley and Sons.

Weisberg, H.F. and Bowen, B.D. (1977): An Introduction to Survey Research and Data Analysis. San Francisco: W.H.Freeman and Co.

Weiskopf, D.C. (1975): A Guide to Recreation and Leisure. Boston: Allyn and Bacon Inc.

Weiskopf, D.C. (1982): Recreation and Leisure: Improving the Quality of Life. Boston: Allyn and Bacon Inc.

Weisser, P.J. (1978): Conservation Priorities in the Dune Area Between Richards Bay and Mfolozi Mouth Based on Vegetation Survey. Natal Town and Regional Planning Report, Vol.38. Pietermaritzburg: NTRPC.

White, G.F. (1963): Contributions of Geographical Analysis to River Basin Development. Geographical Journal Vol.129: 412-436.

Wildlife Society of South Africa (1983): Reservation of Bush Camps. Natal Wildlife Vol.24(2): 9.

Wildlife Society of South Africa (1985): The Kenneth Stainbank Nature Reserve. Natal Wildlife Vol.26(9): 4-7.

Wiredu, J.E. (1979): How Not to Compare African Thought With Western Thought. In Wright, R.A. (Ed.): African Philosophy: An Introduction. (2nd Ed.) Washington D.C.: University Press of America.

Wohlwill, J.F. (1976): Searching for the Environment in Environmental Cognition Research: A Commentary on Research Strategy. In Moore, G.T. and Golledge, R.G. (Eds.): Environmental Knowing. Stroundsburg: Dowden, Hutchinson and Ross, Inc.

Wohlwill, J.F. and Heft, H. (1977): A Comparative Study of User Attitudes Towards Development and Facilities in Two Contrasting Natural Recreation Areas. Journal of Leisure Research, Vol. 9(44): 264-280.

Wolfe, R.I. (1964): Perspectives on Outdoor Recreation. The Geographical Review, Vol.56: 203-238.

Woolmington, E. and Hart, D. (1977): Recreation, Urbanism and the Concept of Hinterland. In Mercer, D. (Ed.): Leisure and Recreation in Australia. Malvern: Sorrett Publishing Co.

Wright, J.K. (1947): Terrae Incognitae: The Place of Imagination in Geography. Annals of the Association of American Geographers Vol.(37): 1-15.

Wright, R.A. (1979): African Philosophy: An Introduction. Washington, D.C.: University Press of America.

Yeates, and Garner, (1980): The North American City. San Francisco: Harper and Row.

Young, R. (1808): The African Stranger: A Sermon. London: E Blackader Printers.

Zaborowski, R.M. (1976): Planning for Water Based Recreation on Lake Mzingazi: Richards Bay. Unpublished MSc Thesis, University of Natal-Durban, Department of Town and Regional Planning.

Zaloumis, E.A. (1984): President's Message. African Wildlife, Vol. 38(2): 39-40.

APPENDIX A

FIELDWORK SAMPLING AREAS BY DISTRICTS

FIELDWORK SAMPLING AREAS

What is listed here are all of the sampling districts and places that were covered by the research interviewing team. Also these are places mentioned by some of the respondents in confirming the places they were interviewed at. Some of these places are called by many names varying from official names, traditional names, popular and colloquial names.

1. UBOMBO-HLABISA DISTRICT

1.1 Rural Area

Mkuze, Nyakani, St Lucia, KwaHayizana, KwaHlabisa, Mpukunyoni, Nkodibe, Nkundusi, Hluhluwe, KwaThandanani.

1.2 Peri-urban Area

Mkuze, Mtubatuba, Nkatha, Mpukunyoni

1.3 Urban Area

KwaMsana

2. LOWER UMFOLOZI

2.1 Rural Area

Cwaka, Mabhuyeni, Bhekani, KwaMthethwa

2.2 Peri-urban Area

Mayeni, Mevamhlophe, Macekane, Matshana, Iniwe.

2.3 Urban Area

Nseleni, Ngwelezana

3. MTUNZINI-ESHOWE

3.1 Rural Area

KwaDlangezwa, Gingindlovu, Obanjeni, Eshowe, Inkanyezi, Enyoni.

3.2 Peri-urban Area

Gobandlovu, Mandlankala, Khandisa, Nkonjane, Mangezi.

3.3 Urban Area

Esikhawini, Vulindlela, Gezinsila.

4. DURBAN-INANDA

4.1 Rural Area

Emachobeni

4.2 Peri-urban Area

Inanda, KwaShembe, New Town, Glebb

4.3 Urban Area

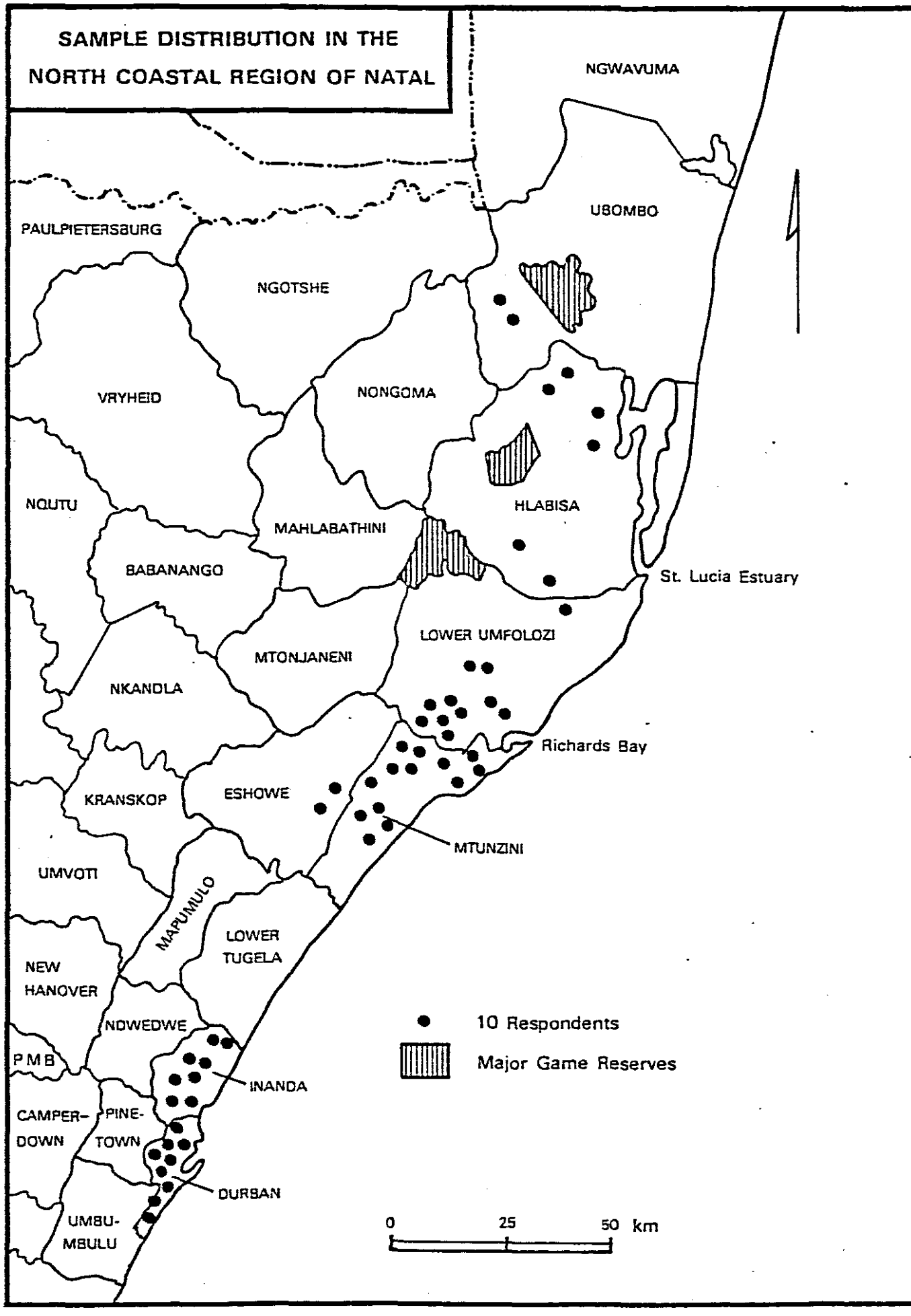
Umlazi, KwaMashu, Ntuzuma

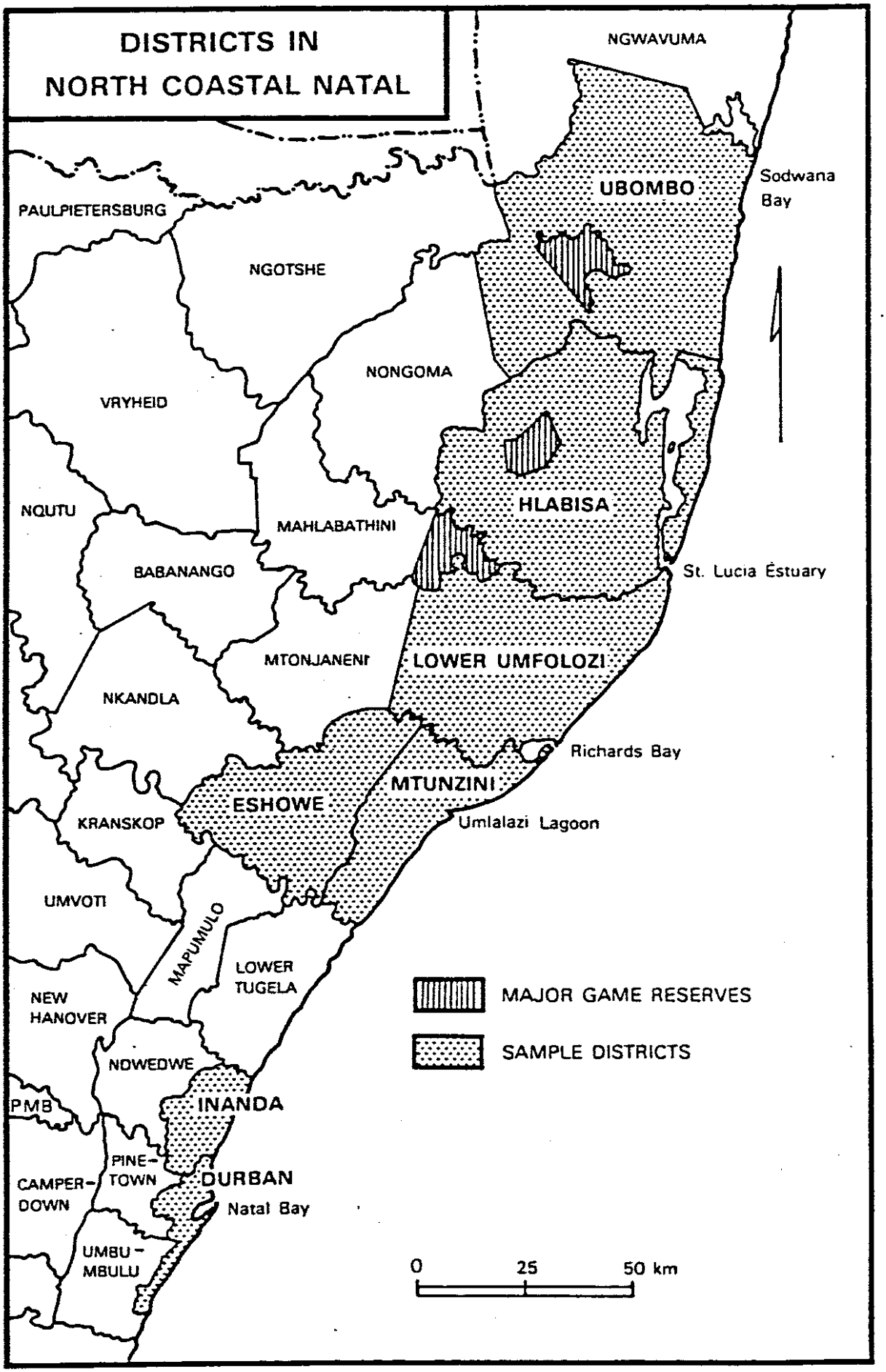
The sample size distribution figures are categorized into places of residence: urban (206), peri-urban (130) and rural (179). These show a bias for urban respondents as against rural respondents. Sample size

figures are also categorized into groups of four districts. Population distribution and density were important criteria for naming, grouping and selecting the sample districts. The figures per district were as follows: Ubombo-Hlabisa (81), Lower Umfolozi(111), Mtunzini-Eshowe (153), and Durban-Inanda (170).

SAMPLE SIZE DISTRIBUTION IN STUDY AREA

DISTRICT	URBAN		PERI-URBAN		RURAL		TOTAL
UBOMBO-HLABISA	Kwa Msana	15	Mtubatuba	19	Hluhluwe Mpukunyoni	28 19	81
LOWER UMFOLOZI	Ngwelezana Nseleni	24 26	Eniwe Mevamhlophe Matshana	15 18 10	Mabhuyeni Cwaka	10 8	111
MTUNZINI-ESHOWE	Esikhawini Vulindlela	22 18	Gobandlovu	12	Obanjeni KwaDlangezwa Gingindlovu	22 48 31	153
DURBAN	KwaMashu Umlazi Ntusuma	42 39 20	Inanda KwaShembe	30 26	Emachobeni	13	170
		206		130		179	515


SAMPLE DISTRIBUTION IN THE
NORTH COASTAL REGION OF NATAL
NGWAVUMA
UBOMBO
PAULPIETERSBURG
NGOTSHE
VRYHEID
NONGOMA
NQUTU
HLABISA
MAHLABATHINI
BABANANGO
St. Lucia Estuary
LOWER UMFOLOZI
MTONJANENI
NKANDLA
Richards Bay
KRANSKOP
ESHOWE
MTUNZINI
UMVOTI
MAPUMULO
LOWER
TUGELA
NEW
HANOVER
NDWEDWE
PMB
INANDA
CAMPER-
DOWN
PINE-
TOWN
DURBAN
UMBU-
MBULU
10 Respondents
Major Game Reserves
0
25
50 km



SOURCE: Trigonometrical Survey Office (1973)

APPENDIX B

MAIN SURVEY QUESTIONNAIRE

(English and Zulu)

DISTRICT.....

PLACE:.....

DATE OF INTERVIEW:.....

INTERVIEWER:.....

NATURAL RESOURCES

1. LAKE
2. RIVERS
3. BEACHES
4. GAME AREAS
5. FOREST AREAS
6. WILDERNESS AREAS

QUESTIONNAIRE

A. COGNITION OF RESOURCES

1. What do you do during your free time, when you are not working?

   (a) _____

   (b) _____

   (c) _____

2. What do your friends do when they are not working?

   (a) _____

   (b) _____

   (c) _____

3. Do you think White people do different things from what you do during your free time? YES to (5) / NO to (4)

4. If they do not do different things, what do they actually do?

   (a) _____

   (b) _____

   (c) _____

   (d) _____

5. If they do different things, would you like to do those things during your free time? YES to (5a) / NO to (5b)

   5(a) If yes, which ones?

   (1) _____

   (2) _____

   (3) _____

   (4) _____

   5(b) If not, why would you not like to do any of those things?

   (1) _____

   (2) _____

   (3) _____

   (4) _____

6. Think of a lake, river, beach, game area, forest and wilderness:

(a) What would you use a lake for?

(1) _____

(2) _____

(3) _____

(b) What would you use a river for?

(1) _____

(2) _____

(3) _____

(c) What would you use a beach for?

(1) _____

(2) _____

(3) _____

(d) What would you use a game area for?

(1) _____

(2) _____

(3) _____

(e) What would you use a forest for?

(1) _____

(2) _____

(3) _____

(f) What would you use a wilderness area for?

(1) _____

(2) _____

(3) _____

7. How do your friends view natural places where they enjoy themselves (Izindawo zemvelo zokuzijabulisa)? _____

_____

8. How do you view these places? _____

_____

9. What part of the natural areas (Izindawo zemvelo) form part of your sphere of recreation?

(1) _____

(2) _____

(3) _____

(4) _____

10. What do you think of natural places where people enjoy themselves in your local area? _____

_____

11. How long would it take you to reach some of the following recreation areas?

	1 0-30mins	2 30-60mins	3 1-2 hrs	4 2-9 hrs
(a) Nearest beach	☐	☐	☐	☐
(b) Nearest fishing area	☐	☐	☐	☐
(c) Nearest picnic site	☐	☐	☐	☐
(d) Nearest camping site	☐	☐	☐	☐
(e) Nearest wilderness	☐	☐	☐	☐
(f) Nearest game area	☐	☐	☐	☐
(g) Nearest river/lake	☐	☐	☐	☐

12. These are some of the recreation area people visit. How often do you go to:

	1 Not at all	2 Once a year	3 Once in ½ year	4 Once a month	5 Once a week
(a) the beach	☐	☐	☐	☐	☐
(b) fishing areas	☐	☐	☐	☐	☐
(c) picnic areas	☐	☐	☐	☐	☐
(d) camping areas	☐	☐	☐	☐	☐
(e) game parks	☐	☐	☐	☐	☐
(f) wilderness areas	☐	☐	☐	☐	☐
(g) water sport areas	☐	☐	☐	☐	☐

13. Considering the following recreation activities, how often do you:

	1 Not at all	2 Once a year	3 Once in ½ year	4 Once a month	5 Once a week
(a) go swimming	☐	☐	☐	☐	☐
(b) go fishing	☐	☐	☐	☐	☐
(c) go picnicking	☐	☐	☐	☐	☐
(d) go camping	☐	☐	☐	☐	☐
(e) go hunting	☐	☐	☐	☐	☐
(f) go boating	☐	☐	☐	☐	☐
(g) go wilderness appreciation	☐	☐	☐	☐	☐

14. What other areas and facilities do you visit?

Area or Facility	How many days per month or year?
(a) _____	_____
(b) _____	_____
(c) _____	_____

15. Are there any other areas and facilities that you do not visit but would like to?

	MAJOR REASONS FOR NOT VISITING				
	1	2	3	4	5
Area or Facility	Do not really know how	Facility not available	Cost	Restricted for Blacks	Others (specify)
(a) _____	☐	☐	☐	☐	_____
(b) _____	☐	☐	☐	☐	_____
(c) _____	☐	☐	☐	☐	_____
(d) _____	☐	☐	☐	☐	_____

16. To whom do you regard the natural recreation resources as belonging to? (Please rank your response).

(a) Myself	☐	1
(b) The Black community	☐	2
(c) The government	☐	3
(d) The White community	☐	4
(e) The Almighty	☐	5

17. On which areas or facilities do you think the authorities should spend more money on? (Please rank your responses).

(a) Agricultural areas	☐	1
(b) Natural recreation areas	☐	2
(c) Industrial areas	☐	3
(d) School facilities	☐	4
(e) Housing facilities	☐	5
(f) Church facilities	☐	6

18. The following statement of value can be associated with the natural recreation places. Please indicate on the ladder scale how you feel about each statement.

(a)	(b)	(c)	(d)	(e)	(f)
Good	Useful	Important	Holy	Rewarding	Valuable
Bad	Useless	Unimportant	Unholy	Unrewarding	Valueles

(g)	(h)	(i)	(j)	(k)	(l)
Beautiful	Adequate	Accessible	Overused	Open	Safe
Ugly	Inadequate	Inaccessible	Underused	Restricted	Dangerous

19. Using these statements of value indicate on the ladder scale what you feel about leisure time or recreation time.

(a)	(b)	(c)	(d)	(e)	(f)
Good	Useful	Important	Holy	Rewarding	Valuable
Bad	Useless	Unimportant	Unholy	Unrewarding	Valueles

(g)	(h)	(i)	(j)	(k)	(l)
Beautiful	Adequate	Accessible	Overused	Open	Safe
Ugly	Inadequate	Inaccessible	Underused	Restricted	Dangerous

B. COGNITION THROUGH PHOTOGRAPHS

(In this section a respondent will be given photographs to study and then asked some questions based on the photographs).

20. From the photographs given to you, select not more than six of those you like best and answer the question:

Why do you like the photographs you have selected?

(a) Photo:____: _____

(b) Photo:____: _____

(c) Photo:____: _____

(d) Photo:____: _____

(e) Photo:____: _____

21. Select at the most six of the remaining photographs you do not like at all and answer the question:

Why don't you like the photographs you have selected?

(a) Photo:____: _____

(b) Photo:____: _____

(c) Photo:____: _____

(d) Photo:____: _____

22. Select ONE or TWO or a SET of photographs that represent a natural area you like most.

PHOTOS: ____; ____; ____; ____; ____; ____.

23.(a) What does photograph number ____ make you think? _____

_____

(b) What is good about it? _____

_____

(c) What is bad about it? _____

_____

24.(a) What does photograph number ____ make you think? _____

_____

(b) What is good about it? _____

_____

(c) What is bad about it? _____

_____

25. (a) What does photograph number ____ make you think? _____

_____

(b) What is good about it? _____

_____

26. (a) What does photograph number ____ make you think? _____

_____

(b) What is good about it? _____

_____

(c) What is bad about it? _____

_____

27. (a) What does photograph number ____ make you think? _____

_____

(b) What is good about it? _____

_____

(c) What is bad about it? _____

_____

28. (a) What does photograph number ____ make you think? _____

_____

(b) What is good about it? _____

_____

(c) What is bad about it? _____

_____

29. From any two of the six photographs handed to you, indicate on the ladder (scale) how you feel about each one of them.

(The respondent will be given photographs numbers 2, 5, 8, 10, 13 and 18 showing images or scenes of a river, lake, forest, beach, game park and wilderness area).

(a) PHOTOGRAPH NUMBER: [ ]

(a)	(b)	(c)	(d)	(e)	(e)
Good	Useful	Important	Holy	Rewarding	Valuable
Bad	Useless	Unimportant	Unholy	Unrewarding	Valueles

(g)	(h)	(i)	(j)	(k)	(l)
Beautiful	Adequate	Accessible	Overused	Open	Safe
Ugly	Inadequate	Inaccessible	Underused	Restricted	Dangerous

(a) PHOTOGRAPH NUMBER: [ ]

(a)	(b)	(c)	(d)	(e)	(e)
Good	Useful	Important	Holy	Rewarding	Valuable
Bad	Useless	Unimportant	Unholy	Unrewarding	Valueles

(g)	(h)	(i)	(j)	(k)	(l)
Beautiful	Adequate	Accessible	Overused	Open	Safe
Ugly	Inadequate	Inaccessible	Underused	Restricted	Dangerous

C. PERSONAL BACKGROUND

30. Where is your family-home located?
(1) Urban _____ (2) Peri-urban _____ (3) Rural _____

31. Where is your occupational home located?
(1) Urban _____ (2) Peri-urban _____ (3) Rural _____
(4) Unemployed _____

32. How long have you been staying at your family-home place?
(1) 0 - 2 years ____ (3) 6 - 10 years ____
(2) 3 - 5 Years ____ (4) 11 - 60 years ____

33. How long have you been staying at your occupational-home?
(1) 0 - 2 years ____ (3) 6 - 10 years ____
(2) 3 - 5 years ____ (4) 11 - 60 years ____

34. Place of birth:
(1) Urban _____ (2) Peri-urban _____ (3) Rural _____

35. Sex: (1) Male _____ (2) Female _____

36. Age: (1) 18 - 29 ____ (2) 30 - 49 ____ (3) 50 - 75 ____

37. Religious affiliation:
(1) Christian ____ (3) Amadlozi _____ (Ancestral religion)
(2) Non-religious ____ (4) Others (specify) _____

38. Standard of education:
(1) Less than Std 2 ____ (5) Certificate without Std 10____
(2) Standard 2 ____ (6) Certificate with Std 10 ____
(3) Standard 6 ____ (7) Degree ____
(4) Standard 10 ____ (8) No formal education ____

39. Family-head's standard of education:
(1) Less than Std 2 ____ (5) Certificate without Std 10____
(2) Standard 2 ____ (6) Certificate with Std 10 ____
(3) Standard 6 ____ (7) Degree ____
(4) Standard 10 ____ (8) No formal education ____

40. Occupation:

(1) Unskilled ____ (3) Skilled ____

(2) Semi-skilled ____ (4) Professional ____

41. Family-head's occupation

(1) Unskilled ____ (3) Skilled ____

(2) Semi-skilled ____ (4) Professional ____

42. At what place (town) do you work?

(a) _____

43. Means of transport used to go to work?

(1) Walk ____ (5) Taxi ____

(2) Bicycle _____ (6) Train ____

(3) Bus ____ (7) Own car ____

(4) Motor-cycle ____ (8) Others (specify) _____

44. Size of family (including respondent)

(1) 1 - 5 ____ (3) 11 - 15 ____

(2) 6 - 10 ____ (4) 16 - 20 ____

oooooooooooooooooooooooooooooooooo

DISTRICT.....

PLACE:.....

DATE OF INTERVIEW:.....

INTERVIEWER:.....

NATURAL RESOURCES

1. LAKE
2. RIVER
3. BEACHES
4. GAME AREAS
5. FOREST AREAS
6. WILDERNESS AREAS

Q U E S T I O N N A I R E

A. UMQONDO WOMNOTHO WEMVELO

1. Yini ovamisa ukuyenza ngesikhathi sokukhululeka uma ungekho emsebenzini?

   (a) _____

   (b) _____

   (c) _____

2. Abangane bakho bavamisa ukwenzani ngesikhathi sokukhululeka bengekho emsebenzini?

   (a) _____

   (b) _____

   (c) _____

3. Ucabanga ukuthi abelungu benza izinto ezehlukile kulezo ozenzayo uma ukhululekile emsebenzini?

   YEBO to (5)
   CHA to (4)

4. Uma bengenzi izinto ezehlukile kwezakho, benzani?

   (a) _____

   (b) _____

   (c) _____

   (d) _____

5. Uma benza izinto ezehlukile, ungathanda ukuzenza lezo zinto abazenzayo uma bekhululekile emsebenzini?

   YEBO to (5a)
   CHA to (4a)

   5(a) Uma uvuma, shono lezo zinto?

   (1) _____

   (2) _____

   (3) _____

   (4) _____

   5(b) Uma ungavumi, kungani ungathandi ukwnza lezo zinto?

   (1) _____

   (2) _____

   (3) _____

   (4) _____

6.. Uma ucabanga ngechibi, umfula, ulwandle, isiqiwu, ihlathi kanye nendle:

(a) Ungalisebenziselani ichibi?

(1) _____

(2) _____

(3) _____

(b) Ungawusebenziselani umfula?

(1) _____

(2) _____

(3) _____

(c) Ungalisebenziselani ulwandle?

(1) _____

(2) _____

(3) _____

(d) Ungasisebenziselani isiqiwu?

(1) _____

(2) _____

(3) _____

(e) Ungalisebenziselani ihlathi?

(1) _____

(2) _____

(3) _____

(f) Ungayisebenziselani indle?

(1) _____

(2) _____

(3) _____

7. Abangane bakho bathini ngezindawo zemvelo zokuzijabulisa?

_____

_____

8. Wena-ke uthini ngalezizindawo? _____

_____

9. Yiziphi izindawo zemvelo othintana nazo kakhulu ngesikhathi sokuzijabulisa? (1) _____

(2) _____

(3) _____

(4) _____

10. Ucabangani ngezindawo zemvelo ezingakini, lapho abantu bezijabulisa khona? _____

_____

11. Kungakuthatha isikhathi esingakanani ukufika kulezizindawo zemvelo zokuzijabulisa ezilandelayo?

	1 0-30 mzuzu	2 30-60 mzuzu	3 1-2 hora	4 2-5 hora
(a) Ulwandle oluseduze	☐	☐	☐	☐
(b) Indawo yokudoba eseduze	☐	☐	☐	☐
(c) Indawo yokudlela endle	☐	☐	☐	☐
(d) Indawo yokulala endle	☐	☐	☐	☐
(e) Indawo elihlane eseduze	☐	☐	☐	☐
(f) Isiqiwu esiseduze	☐	☐	☐	☐
(g) Umfula/Ichibi eliseduze	☐	☐	☐	☐

12. Okulandelayo izindawo zokuzijabulisa ezivakashelwa ngabantu. Uyakangaki kulezi zindawo?

	1 Nakanci	2 Kanye ngo nyaka	3 Kanye ku 6 zinyanga	4 Kanye nge nyanga	5 Kanye nge sonto
(a) Olwandle	☐	☐	☐	☐	☐
(b) Endaweni yokudoba	☐	☐	☐	☐	☐
(c) Endaweni yokudlela endle	☐	☐	☐	☐	☐
(d) Endaweni yokulala endle	☐	☐	☐	☐	☐
(e) Esiqiwini	☐	☐	☐	☐	☐
(f) Ehlanzeni/Ehlane	☐	☐	☐	☐	☐
(g) Ezindaweni zamanzi	☐	☐	☐	☐	☐

13. Uma ucabanga ngalezizindawo zokuzijabulisa zemvelo, uya kangaki:

	Nakanci	Kanye ngo nyaka	Kanye ku 6 zinyanga	Kanye ngo nyanga	Kanye nge sonto
(a) Ukuyobhukuda	☐	☐	☐	☐	☐
(b) Ukuyodoba	☐	☐	☐	☐	☐
(c) Ukuyodlela endle	☐	☐	☐	☐	☐
(d) Ukuyolala endle	☐	☐	☐	☐	☐
(e) Ukuyozingela	☐	☐	☐	☐	☐
(f) Ukuyogibela isikebhe	☐	☐	☐	☐	☐
(g) Ukuyobuka ubuhle bemvelo	☐	☐	☐	☐	☐

14. Yiziphi ezinye izindawo ojwayele ukuzivakashela?

	Indawo/Isakhiwo	Kangaki ngenyanga / ngonyaka
(a)	_____	_____
(b)	_____	_____
(c)	_____	_____

15. Zikhona yini ezinye izindawo ongazivakasheli neze, kodwa ongathanda ukuzivakashela?

		I Z I Z A T H U				
	Indawo	1 Anginalo ulwazi.	2 Izakhiwo azikho.	3 Kuyabiza.	4 Abansundu bavinjelwe	5 Ezinye izizathu
(a)	_____	☐	☐	☐	☐	_____
(b)	_____	☐	☐	☐	☐	_____
(c)	_____	☐	☐	☐	☐	_____
(d)	_____	☐	☐	☐	☐	_____

16. Ngokubona kwakho lezindawo zemvelo zokuzijabulisa ezikabani?

(a)	Ngezami	☐	1
(b)	Ngezomphakathi onsundu	☐	2
(c)	Ngezikahulumeni	☐	3
(d)	Ngezabelungu	☐	4
(e)	NgezikaNkulunkulu	☐	5

17. Yikuziphi izindawo ezilandelayo, lapho iziphathimandla zimele ukuchitha noma ukusebenzisa imali eningi? (landelisa ngokubaluleka).

(a)	Izndawo zokulima	☐	1
(b)	Izindawo zemvelo zokuzijabulisa	☐	2
(c)	Izindawo zemisebenzi	☐	3
(d)	Izindawo zokufundela	☐	4
(e)	Izindawo zokwakha imizi	☐	5
(f)	Izindawo zamasonto	☐	6

18. Lamgama alandelayo aphathelane nobugugu bezindawo zemvelo zokuzijabulisa. Veza umbono wakho ngalamagama ngokukhombisa lapha kwiladi (esitebhisini).

(a)	(b)	(c)	(d)	(e)	(f)
Zinhle	Zinosizo	Zibalulekile	Zingcwele	Zinomvuzo	Ziligugu
Zimbi	Azinasizo	Azibalulekile.	Azingcwele	Azinamvuzo	Azisiligugu

(g)	(h)	(i)	(j)	(k)	(l)
Ziyabukeka	Zilingene	Ziyatholakala	Zisetshenziswa kakhulu	Zivuliwe	Ziphephil
Azibukeki	Ziyingcosana	Azitholakali	Zisetshenziswa kancane	Azivuliwe	Aziphephile

19. Ngalamagama obugugu alandelayo, veza umbono wakho malungana nesikhathi noma ithuba lokuzijabulisa.

(a)	(b)	(c)	(d)	(e)	(f)
Lihle	Linosizo	Libalulekile	Lingcwele	Linomvuzo	Liyigugu
Libi	Alinasizo	Alibalulekile	Alingcwele	Alinamvuzo	Aliloniguqu

(g)	(h)	(i)	(j)	(k)	(l)
Liyabukeka	Lilingene	Lixhaphakile	Lisetshenziswa kakhulu	Livuliwe	Liphephile
Alibukeki	Liyingcosana	Liyindlala	Lisetshenziswa kancane	Livinjelwe	Aliphephile

B. UKUQONDA NGOKUSEBENZISA IZITHOMBE

(Kulesisigaba ophendulayo uzonikezwa izithombe azicwaninge, bese ephendula imibuzo esuselwa ezithombeni).

20. Kulezithombe ozinikiwe khetha ezingeqanga isithupha kulezo ozithanda kakhulu, bese uphendula umbuzo olandelayo:

Kungani uthanda lezithombe ozikhethileyo?

(a) Isithombe:_____: _____

(b) Isithombe:_____: _____

(c) Isithombe:_____: _____

(d) Isithombe:_____: _____

(e) Isithombe:_____: _____

21. Khetha izithombe ezingeqanga isithupha kulezo ongazithandi, bese uphendula umbuzo olandelayo:

Kungani ungazithandi lezithombe ozikhethileyo?

(a) Isithombe:_____: _____

(b) Isithombe:_____: _____

(c) Isithombe:_____: _____

(d) Isithombe:_____: _____

22. Khetha esisodwa noma ezimbili noma ezimbalwa kulezizithombe ezimele noma ezifanekisa indawo yemvelo oyithandayo ngokweqile.

ISITHOMBE: ____; ____; ____; ____; ____; ____.

23. (a) Sikucabangisani isithombe ____? :_____

_____

(b) Yini okuhle ngaso?_____

_____

(c) Yini okubi ngaso? _____

_____

24. (a) Sikucabangisani isithombe ____? :_____

_____

(b) Yini okuhle ngaso?_____

_____

(c) Yini okubi ngaso? _____

_____

25(a) Sikucabangisani isithombe ____? _____

_____

(b) Yini okuhle ngaso? _____

_____

(c) Yini okubi ngaso? _____

_____

26(a) Sikucabangisani isithombe ____? _____

_____

(b) Yini okuhle ngaso? _____

_____

(c) Yini okubi ngaso? _____

_____

27(a) Sikucabangisani isithombe ____? _____

_____

(b) Yini okuhle ngaso? _____

_____

(c) Yini okubi ngaso? _____

_____

28(a) Sikucabangisani isithombe ____? _____

_____

(b) Yini okuhle ngaso? _____

_____

(c) Yini okubi ngaso? _____

_____

29. Kwezimbili zalezizithombe eziyisithupha ozinikiwe, Khombisa ngokusebenzisa iladi ukuthi ucabangani ngazo.

(Ophendulayo uzonikezwa izithombe: 2, 5, 8, 10, 13, kanye no 18, lezizithombe zikhombisa umfula, ichibi, ihlathi, ugu (ibhishi), isiqiwu kanye nendle noma ihlanze).

(a) ISITHOMBE NO.: ____

(b)	(c)	(d)	(e)	(f)	(g)
Kuhle	Kunosizo	Kubalulekile	Kungcwele	Kunomvuzo	Kuligugu
Kubi	Akunasizo	Akubalulekile	Akungcwele	Akunamvuzo	Akusiligugu

(h)	(i)	(j)	(k)	(l)	(m)
Kuyabukeka	Kulingene	Kuyatholakala	Kusetshenziswa kakhulu	Kuvuliwe	Kuphephile
Akubukeki	Kuyingcosana	Akutholakali	Kusetshenziswa kancane	Kuvinjelwe	Akuphephile

(a) ISITHOMBE NO.: ___

(b)	(c)	(d)	(e)	(f)	(g)
Kuhle	Kunosizo	Kubalulekile	Kungcwele	Kunomvuzo	Kuligugu
Kubi	Akunasizo	Akubalulekile	Akungcwele	Akunamvuzo	Akusiligugu

(h)	(i)	(j)	(k)	(l)	(m)
Kuyabukeka	Kulingene	Kuyatholakala	Kusetshenziswa kakhulu	Kuvuliwe	Kuphephile
Akubukeki	Kuyingcosana	Akutholakáli	Kusetshenziswa kancane	Kuvinjelwe	Akuphephile

C. ISENOLALELO SOMPHENDULI-MIBUZO

30. Ikhaya lozalo lwakho likuphi?
(1) Emadolobheni____ (2) Eduze-dolobha____ (3) Emakhaya____

31. Likuphi ikhaya lakho lomsebenzi?
(1) Emadolobheni_____ (3) Emakhaya_____
(2) Eduze-dolobha_____ (4) Angisebenzi_____

32. Sekuyisikhathi esingakanani uhlala ekhaya lakho lozalo?
(1) 0 - 2 iminyaka_____ (3) 6 - 10 iminyaka_____
(2) 3 - 5 iminyaka_____ (4) 11 - 60 iminyaka_____

33. Sekuyisikhathi esingakanani uhlala ekhaya lakho lomsebenzi?
(1) 0 - 2 iminyaka_____ (3) 6 - 10 iminyaka_____
(2) 3 - 5 iminyaka_____ (4) 11 - 60 iminyaka_____

34. Indawo yokuzalwa kwakho?
(1) Emadolobheni____ (2) Eduze-dolobha____ (3) Emakhaya____

35. Isilili: (1) Isilisa_____ (2) Isifazane_____

36. Iminyaka yobudala:
(1) 18 - 29_____ (2) 30 - 49 _____ (3) 50 - 75 _____

37. Ukholo: (1) UmKrestu _____ (3) Amadlozi _____
(2) Akakholiwe _____ (4) Olunye ukholo _____
(caza)

38. Izinga lokufunda:
(1) Ngaphansi kwesigaba 2:____ (5) Isitifiketi (ngaphandle kuka 10)____
(2) Isigaba 2: _____ (6) Isitifiketi (no Std 10)____
(3) Isigaba 6: _____ (7) Iziqu _____
(4) Isigaba 10: _____ (8) Akafundile _____

39. Izinga lokufunda lenhloko yekhaya:
(1) Ngaphansi kwesigaba 2:____ (5) Isitifiketi (ngaphandle kuka 10)____
(2) Isigaba 2: _____ (6) Isitifiketi (no Std 10)____
(3) Isigaba 6: _____ (7) Iziqu: _____
(5) Isigaba 10: _____ (8) Akafundile _____

40. Umsebenzi owenzayo:
(1) Awufundelwe _____ (3) Ufundelwe (nginesitifiketi)____
(2) Ufundelwe kancane (asikho isitifiketi)____ (4) Profeshini (tisha, nesi,) _____

41. Umsebenzi owenziwa yinhloko yekhaya:

(1) Awufundelwe _____ (3) Ufundelwe (nginesitifiketi) _____

(2) Ufundelwe kancane (asikho isitifiketi)_____ (4) Profeshini (tisha, nesi,) _____

42. Usebenza kuyiphi indawo noma idolobha:

(a) _____

43. Uhamba ngani uma uya emsebenzini?

(1) Ngezinyawo _____ (5) Ithekisi _____

(2) Ibhayisikili _____ (6) Isitimela _____

(3) Ibhasi _____ (7) Imoto _____

(4) Isithuthuthu _____ (8) Okunye (caza) _____

44. Ubukhulu bomndeni (ngesibalo):

(1) 1 - 5 _____ (3) 11 - 15 _____

(2) 6 - 10 _____ (4) 16 - 20 _____

oooooooooooooooooo

APPENDIX C

QUESTIONNAIRE TO RECREATION AGENCIES

QUESTIONNAIRE

FOR OFFICE USE	
AUTHORITY:	(1)
H/QUARTERS:	(2)
RESPONSE DATE:	(3)

1. NAME OF RECREATION RESOURCE: ..... (4)

2. SIZE OF RECREATION RESOURCE (HECTARES):

   (a) TOTAL AREA: ..... (5)

   (b) AREA AVAILABLE FOR RECREATION: ..... (6)

3. NAME MAIN FEATURES OF ATTRACTION (SPECIFY):

   FAUNA (e.g. elephants): ..... (7)

   FLORA (e.g. trees): ..... (8)

   LANDFORM (e.g. marches): ..... (9)

   WATERBODY (e.g. lake): ..... (10)

   OTHERS (specify): ..... (11)

4. NUMBER OF VISITORS PER ANNUM: ..... (12)

5. NUMBER OF VISITORS BY ETHNIC GROUP:

   WHITES: ..... (%) (13)

   INDIANS: ..... (%) (14)

   COLOUREDS: ..... (%) (15)

   BLACKS: ..... (%) (16)

6. VISITORS' PLACE OF ORIGIN:

   TRANSVAAL: ..... (%) (17)

   O.F.S.: ..... (%) (18)

   CAPE: ..... (%) (19)

   NATAL: ..... (%) (20)

   NEIGHBOURING COUNTRY: ..... (%) (21)

   OTHERS (SPECIFY): ..... (%) (22)

2/...PTO

7. TICK (✓) FACILITIES AVAILABLE:

HUTS/RONDAVELS	(23)	ACTIVITY PROGRAMMES	(33)
TOILETS	(24)	WATER ACTIVITIES	(34)
PICNIC SITES	(25)	OUTDOOR EDUCATION	(35)
CAMP SITES	(26)	SPORTING FACILITIES	(36)
FISHING	(27)	CHILD PLAY AREA	(37)
BRAAI-SPOTS	(28)	REFRESHMENT STAND	(38)
SWIMMING:	(29)	ELECTRICITY USED	(39)
TRAILS	(30)	TAP WATER	(40)
HUNTING	(31)	PUBLIC TRANSPORT	(41)
SHOWERING	(32)	CAR-PARKING	(42)

8. IS YOUR RECREATION RESOURCE OPEN TO ALL RACIAL GROUPS? YES: ..... (43)

NO: ..... (44)

9. IF NO, THE RECREATION RESOURCE IS OPEN ONLY TO (PLEASE TICK):

WHITES:	(45)	COLOUREDS:	(47)
INDIANS:	(46)	BLACKS:	(48)

10. OF THE FACILITIES LISTED BELOW TICK THOSE THAT ARE OPEN FOR USE BY BLACKS:

HUTS/RONDAVELS	(49)	ACTIVITY PROGRAMMES	(59)
TOILETS	(50)	WATER ACTIVITIES	(60)
PICNIC SITES	(51)	OUTDOOR EDUCATION	(61)
CAMP SITES	(52)	SPORTING FACILITIES	(62)
FISHING	(53)	CHILD PLAY AREA	(63)
BRAAI-SPOTS	(54)	REFRESHMENT STAND	(64)
SWIMMING	(55)	ELECTRICITY USE	(65)
TRAILS	(56)	TAP WATER	(66)
HUNTING	(57)	PUBLIC TRANSPORT	(67)
SHOWERING	(58)	CAR-PARKING	(68)

11. OWNERSHIP OF THE RESOURCE OR FACILITY (TICK):

STATE:	(69)	SEMI-STATE:	(72)
PROVINCIAL:	(70)	PRIVATE:	(73)
MUNICIPAL:	(71)	CORPORATE:	(74)

OTHERS (SPECIFY): ..... (75)

APPENDIX D

TRANSMISSION LETTERS

University of
Universiteit van
Zululand

Private Bag X1001
Privaatsak
KwaDlangezwa 3886
(0351) 93911
'Unizul'
6-28081 SA

Ref./Verw.

22 APRIL 1985

3.17.3.1

The Director
Natal Parks Board
P.O. Box 662
PIETERMARITZBURG
3200

Dear Sir

The undersigned writer in collaboration with the Department of Geography of the University of Zululand is undertaking a research project on Black peoples' cognitions of natural recreation resources in the North Coast Region of Natal. These resources include lakes, estuaries, rivers, beaches, game areas, forest areas, wilderness and natural areas. It is hoped that the information acquired in this survey will assist those concerned with and responsible for the protection of all forms of natural life and areas. In addition the research will also assist in designing activities and programmes as well as providing facilities and areas that will meet the needs of the present and future population of South Africa.

In order to assist us, we would appreciate it if your agency or reserve could answer the attached questionnaire, which will be used as background material in this research project.

The questionnaire has been designed so as to be completed in a short time. Your responses will be kept strictly confidential, as we are interested only in group results and not individual situations. Please complete the questionnaire and return it in the prepaid and addressed envelope provided within the next three or four days.

Your co-operation will be greatly appreciated.

Yours sincerely

L M MAGI
SENIOR LECTURER
DEPARTMENT OF GEOGRAPHY
LMM/hb

University of
Universiteit van
Zululand

Private Bag X1001
Privaatsak
KwaDlangezwa 3886
(0351) 93911
'Unizul'
6-28081 SA

Ref./Verw.
3.17.3.1

25 FEBRUARY 1985

Prof. M. Gule
Department of African Languages
University of the Witwatersrand
Jan Smuts Avenue
JOHANNESBURG
2000

Dear Sir

I am presently working on a research project relating to Black peoples' perception of natural recreation resources in north-coastal Natal. I would therefore be much obliged if you could kindly spare me some of your precious time and furnish me with the following:

Five analyses of the twelve words listed below.

1. The Zulu translated equivalent of each of the words below.

2. The Zulu etymology (meaning and formation) of each of the words.

3. The Zulu traditional versus modern interpretation of the words.

4. The cultural significance of the words in Zulu folklore.

5. Any specific Zulu literary/grammatical usage (izinkondlo, izibongo, izaga, izisho, etc) these words can be associated with.

The Words:

a. Recreation	e. Pastime	i. Refreshing
b. Leisure	f. Rest	j. Restoration
c. Play	g. Idleness	k. Entertainment
d. Free time	h. Relaxation	l. Amusement

Thanking you in anticipation
Yours truly

L M MAGI
SENIOR LECTURER
DEPARTMENT OF GEOGRAPHY
LMM/hb

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Zululand

Private Bag X1001
Privaatsak
KwaDlangezwa 3886
(0351) 93911
'Unizul'
6-28081 SA

Ref./Verw. 3.17.3.1

20 September 1985

Mr. Mangisi Gule
Department of African Languages
University of the Witwatersrand
Jan Smuts Avenue
JOHANNESBURG
2000

Dear Mr. Gule

Some time in February I wrote you a letter similar to the copy attached requesting some information about a subject I regard you to have extensive knowledge in. As indicated then the information requested is purely for research purposes and very important for me.

Perhaps, the letter I wrote did not reach you, in that case, I'm still appealing to you to help me. If perhaps the letter did reach and you could not immediately respond to it for whatever reason, please do still respond to it. Alternatively, simply let me know that you will not be able to accede to my request. You need not give reasons.

Yours truly

LM Magi
DEPARTMENT OF GEOGRAPHY

LMM/acd

APPENDIX E

PHOTOGRAPHS FOR SEMANTIC ANALYSIS

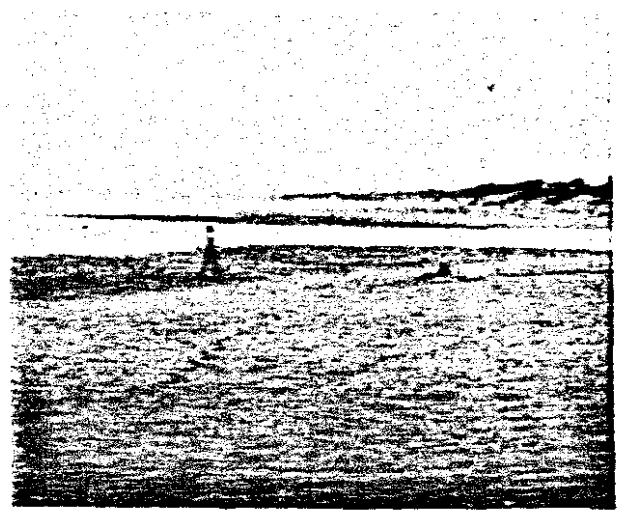
Photograph 1

Photograph 2

Photograph 3

Photograph 4

Photograph 5

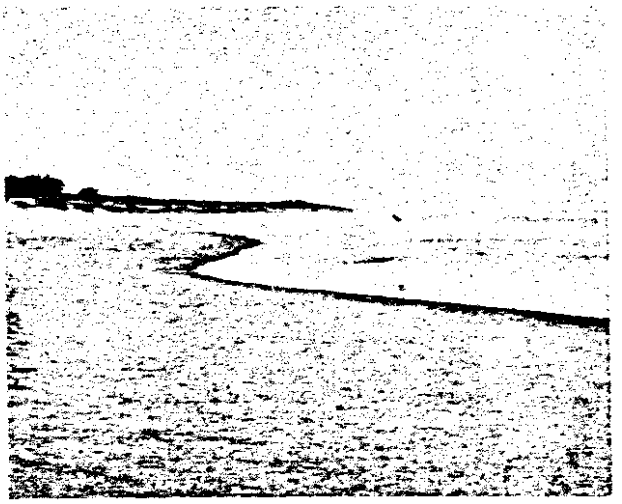


Photograph 6

Photograph 7

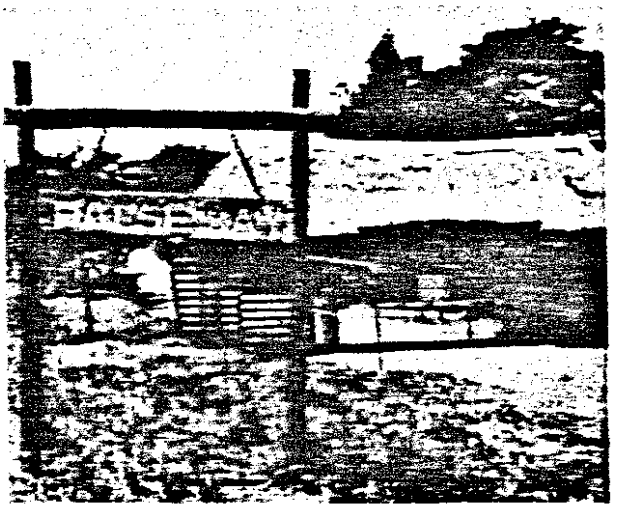
Photograph 8

Photograph 9



Photograph 10

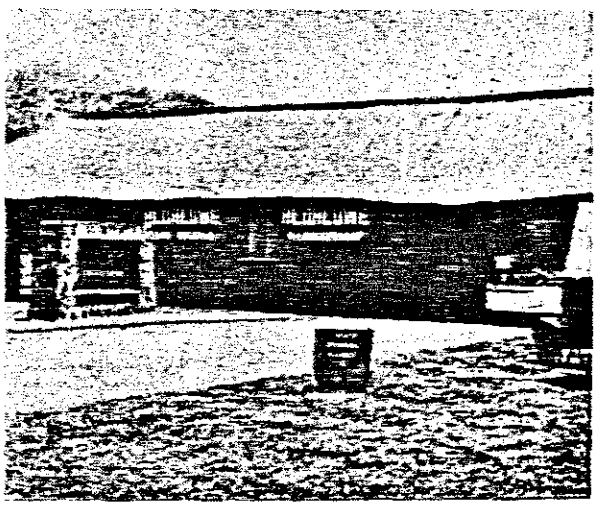
Photograph 11



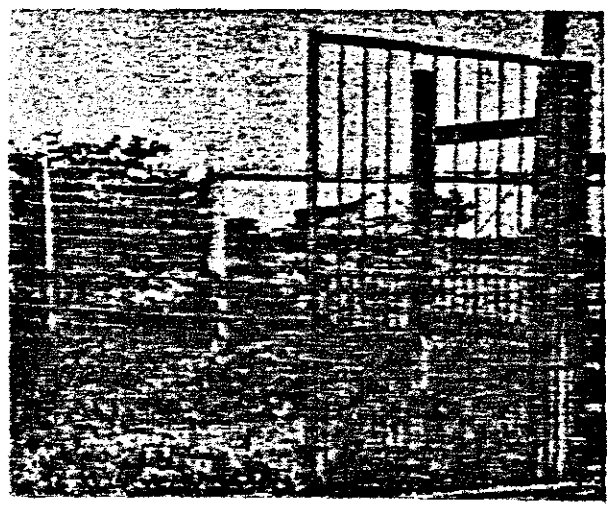
Photograph 12

Photograph 13

Photograph 14



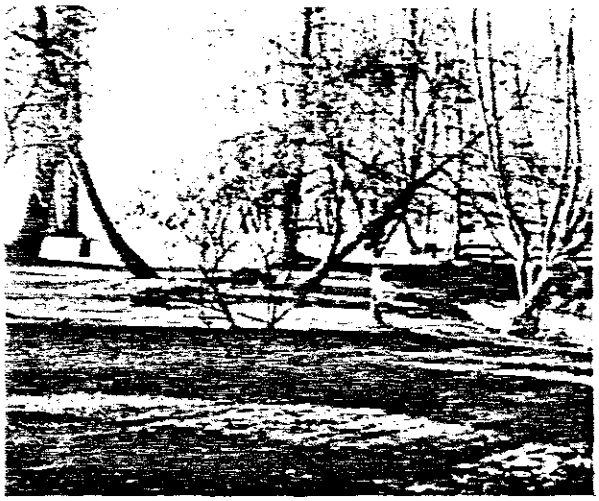
Photograph 15



Photograph 16

Photograph 17

Photograph 18

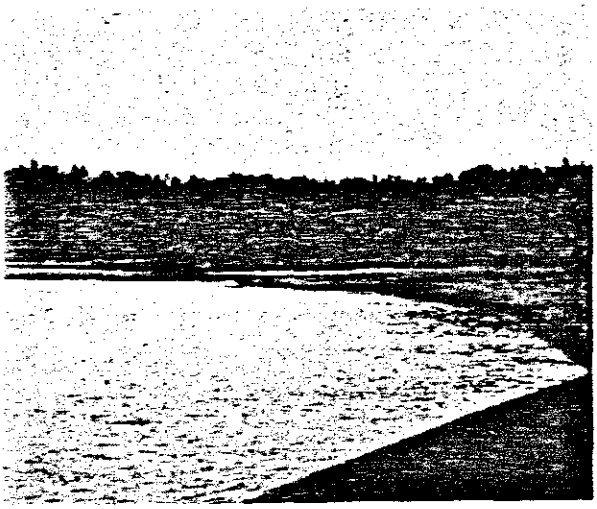


Photograph 19

Photograph 20

Photograph 21

Photograph 22



Photograph 23

Photograph 24

APPENDIX F

OSGOOD'S SEMANTIC DIFFERENTIALS

OSGOOD'S SEMANTIC DIFFERENTIALS

In this study cognitive meaning for natural recreation resources, time and places were determined with the use of the semantic differential technique. The direction of respondent answers to items and the degree of intensity were recorded on a five-point bipolar adjectival scale, deviating from the seven-point scale used by Osgood, et al (1957). Reasons for this deviation have been given in Chapter 5; par.5.2.2. Other deviations from Osgood include the matched pair of bipolar adjective listings and the use of a five-rung ladder as a rating scale (see Chapter 5; paragraph 5.2.2 and Appendix B).

The items were presented to the respondent in the form of a very strong, strong, no opinion format. Directionality was assigned to the scoring of each item; a positive evaluation (good) scored more than a negative evaluation (bad). Also, the placing of the five-rung ladder vertically instead of the usual horizontal placing (see Appendix B).

The bipolar adjectival scales of 12 different constructs were used to evaluate concepts or elements in the form of statements and photographic images that represented a variety of natural recreation resource situations. Some global frequency values, means and standard means in their varied proportions were worked out for different recreation and leisure time attributes or elements.

F.1 PROPORTIONAL EVALUATION OF ADJECTIVAL SCALES AND THEIR MEAN SCORES FOR NATURAL PLACES

(f = frequency; p = proportion)

BIPOLAR ADJECTIVES		FIVE-POINT SCALES 5	4	3	2	1	MEAN VALUE	STD MEAN
GOOD-	f	364	96	34	6	15	3,7	0,18
BAD	p	0,71	0,18	0,07	0,01	0,03		
USEFUL-	f	362	105	34	5	9	3,7	0,18
USELESS	p	0,70	0,20	0,06	0,01	0,02		
IMPORTANT-	f	363	97	36	10	9	3,9	0,26
UNIMPORTANT	p	0,70	0,19	0,07	0,02	0,02		
HOLY-	f	262	72	124	25	32	3,1	0,19
UNHOLY	p	0,51	0,14	0,24	0,05	0,06		
REWARDING-	f	321	94	6	20	20	3,5	0,18
UNREWARDING	p	0,62	0,18	0,12	0,04	0,04		
VALUABLE-	f	346	97	37	20	15	3,6	0,18
VALUELESS	p	0,67	0,19	0,07	0,04	0,03		
BEAUTIFUL-	f	365	90	44	9	7	3,7	0,18
UGLY	p	0,71	0,17	0,09	0,02	0,01		
ADEQUATE-	f	128	40	103	71	173	1,9	0,19
INADEQUATE	p	0.25	0,08	0,20	0,14	0,33		
ACCESSIBLE-	f	177	82	115	55	86	2,5	0,19
INACCESSIBLE	p	0,34	0,16	0,22	0,11	0,17		
OVERUSED-	f	212	67	163	30	43	2,9	0,19
UNDERUSED	p	0,41	0,13	0,32	0,06	0,08		
OPEN-	f	136	80	111	45	143	2,2	0,19
RESTRICTED	p	0,26	0,15	0,22	0,09	0,28		
SAFE-	f	219	92	113	47	44	2,9	0,19
DANGEROUS	p	0.43	0,18	0,22	0,09	0,08		

F.2 PROPORTIONAL EVALUATION OF ADJECTIVAL SCALES AND THEIR MEAN SCORES FOR LEISURE TIME

(f = frequency; p = proportion)

BIPOLAR ADJECTIVES		FIVE-POINT SCALES 5	4	3	2	1	MEAN VALUE	STD MEAN
GOOD-	f	355	108	26	14	12	3,8	0,26
BAD	p	0,69	0,21	0,05	0,03	0,02		
USEFUL-	f	356	103	31	13	12	3,8	0,26
USELESS	p	0,69	0,20	0,06	0,03	0,02		
IMPORTANT-	f	369	94	28	12	12	3,9	0,26
UNIMPORTANT	p	0,73	0,18	0,05	0,02	0,02		
HOLY-	f	391	80	26	11	7	4.9	0,26
UNHOLY	p	0,76	0,16	0,05	0,02	0,01		
REWARDING-	f	330	112	40	16	17	3,7	0,26
UNREWARDING	p	0,64	0,22	0,08	0,03	0,03		
VALUABLE-	f	337	102	40	16	20	3,9	0,32
VALUELESS	p	0,65	0,20	0,08	0,03	0,04		
BEAUTIFUL-	f	222	60	104	30	99	2,9	0,27
UGLY	p	0,43	0,12	0,20	0,06	0,19		
ADEQUATE-	f	138	66	111	53	147	2,3	0,27
INADEQUATE	p	0,27	0,13	0,22	0,10	0,28		
ACCESSIBLE-	f	173	87	148	42	65	2,8	0,26
INACCESSIBLE	p	0,34	0,17	0,29	0,08	0,12		
OVERUSED-	f	105	62	129	82	137	2,2	0,27
UNDERUSED	p	0,20	0,12	0,25	0,16	0,27		
OPEN-	f	342	92	53	10	18	3,7	0,26
RESTRICTED	p	0,66	0,18	0,10	0,02	0,04		
SAFE-	f	126	66	108	47	168	2,2	0,27
DANGEROUS	p	0,24	0,13	0,21	0,09	0,33		

F.3 PROPORTIONAL EVALUATION OF ADJECTIVAL SCALES AND THEIR MEAN SCORES FOR WATER-RELATED RESOURCES FROM PHOTOGRAPHIC IMAGES

(f = frequency; p = proportion)

BIPOLAR ADJECTIVES		FIVE-POINT SCALES 5	4	3	2	1	MEAN VALUE	STD MEAN
GOOD-	f	384	98	3	4	25	4,6	0,44
BAD	p	0,74	0,19	0,01	0,01	0,05		
USEFUL-	f	354	98	33	7	23	4,5	0,44
USELESS	p	0,69	0,19	0,07	0,01	0,04		
IMPORTANT-	f	355	105	21	11	23	4,5	0,44
UNIMPORTANT	p	0,69	0,21	0,04	0,02	0,04		
HOLY-	f	285	91	84	13	42	4,2	0,45
UNHOLY	p	0,55	0,18	0,16	0,03	0,08		
REWARDING-	f	302	117	56	17	23	4,3	0,45
UNREWARDING	p	0,59	0,23	0,11	0,03	0,04		
VALUABLE-	f	331	110	36	14	24	4,4	0,45
VALUELESS	p	0,64	0,21	0,07	0,03	0,05		
BEAUTIFUL-	f	381	80	22	7	25	4,6	0,44
UGLY	p	0,74	0,16	0,04	0,01	0,05		
ADEQUATE-	f	161	92	102	26	134	3,3	0,45
INADEQUATE	p	0,31	0,18	0,20	0,05	0,26		
ACCESSIBLE-	f	206	105	101	32	71	3,7	0,45
INACCESSIBLE	p	0,40	0,20	0,20	0,06	0,14		
OVERUSED-	f	229	63	144	37	42	3,8	0,45
UNDERUSED	p	0,45	0,12	0,28	0,07	0,08		
OPEN-	f	110	62	118	50	175	2,8	0,46
RESTRICTED	p	0,22	0,12	0,23	0,09	0,34		
SAFE-	f	197	59	102	55	102	3,4	0,45
DANGEROUS	p	0,38	0,11	0,20	0,11	0,20		

F.4 PROPORTIONAL EVALUATION OF ADJECTIVAL SCALES AND THEIR MEAN SCORES FOR GAME-RELATED RESOURCES FROM PHOTOGRAPHIC IMAGES

(f = frequency; p = proportion)

BIPOLAR ADJECTIVES		FIVE-POINT SCALES 5	4	3	2	1	MEAN VALUE	STD MEAN
GOOD-	f	275	106	5	24	105	4,6	0,44
BAD	p	0,54	0,20	0,01	0,05	0,20		
USEFUL-	f	260	103	35	23	96	4,5	0,44
USELESS	p	0,50	0,20	0,07	0,04	0,19		
IMPORTANT-	f	264	102	27	26	96	4,5	0,44
UNIMPORTANT	p	0,51	0,20	0,05	0,05	0,19		
HOLY-	f	205	93	82	28	107	4,2	0,45
UNHOLY	p	0,40	0,18	0,16	0,06	0,20		
REWARDING-	f	212	117	54	30	92	4,3	0,45
UNREWARDING	p	0,42	0,23	0,11	0,06	0,18		
VALUABLE-	f	245	117	31	29	93	4,4	0,45
VALUELESS	p	0,47	0,23	0,06	0,06	0,18		
BEAUTIFUL-	f	273	101	20	31	90	4,6	0,44
UGLY	p	0,53	0,20	0,04	0,06	0,17		
ADEQUATE-	f	169	96	112	45	93	4,3	0,45
INADEQUATE	p	0,33	0,19	0,22	0,08	0,18		
ACCESSIBLE-	f	199	97	114	42	63	4,7	0,45
INACCESSIBLE	p	0,39	0,19	0,22	0,08	0,12		
OVERUSED-	f	203	77	155	40	40	4,8	0,45
UNDERUSED	p	0,39	0,15	0,30	0,08	0,08		
OPEN-	f	101	75	112	66	161	4,8	0,46
RESTRICTED	p	0,20	0,14	0,22	0,13	0,31		
SAFE-	f	132	64	108	71	140	4,4	0,45
DANGEROUS	p	0,6	0,12	0,21	0,14	0,27		

APPENDIX G

AGENCIES, ORGANIZATIONS AND PLACES OF RECREATIONAL CONTACT AND ENVIRONMENTAL AWARENESS AND PROTECTION

NATURAL RECREATION RESERVE CONTROLLING AUTHORITY

KEY: S = State
P = Provincial
NPB = Natal Parks Board
WILS = Wildlife Society
BNR = Bureau of Natural Resources
RFD = Regional Forest Directorate
M = Municipality
C = Corporate/Private

	NATURAL RESERVE	AUTHORITY	CONTROLLER
1.	Harold Johnson Nature Reserve	P	NPB
2.	Dukuduku State Forest	S	RFD
3.	Albert Falls Public Resort	P	NPB
4.	Umgeni Valley Nature Reserve	C	WILS
5.	Mihobi Nature Reserve	S	RFD
6.	Clive Cheesman Nature Reserve	C	WILS
7.	Nyala Game Ranch	C	Private
8.	Bona Manzi Game Park	C	Private
9.	Mhlopheni Nature Reserve	C	Private
10.	Palmiet Nature Reserve	M	Westville
11.	Springside Nature Reserve	M	Hillcrest
12.	Richards Bay Game Reserve	P	NPB
13.	Midmar-Orient Park Nature Reserve	P	NPB
14.	Cape Vidal Nature Reserve	P	NPB
15.	Ndumu Game Reserve	P	NPB
16.	Umfolozi Game Reserve	P	NPB
17.	Hluhluwe Game Reserve	P	NPB
18.	Umhlanga Lagoon Nature Reserve	P/C	NPB/WILS
19.	Enseleni Nature Reserve	p	NPB
20.	Sodwana Bay Park	p	NPB
21.	Umlalazi Nature Reserve	p	NPB
22.	False Bay Park	p	NPB
23.	Mkuzi Game Reserve	p	NPB
24.	St Lucia Park	p	NPB
25.	Charters Creek Hutted Camp (St Lucia)	p	NPB
26.	Fanies Island Hutted Camp (St Lucia)	p	NPB
27.	Mapelane Nature Reserve (St Lucia)	p	NPB
28.	St Lucia Game Reserve	p	NPB
29.	Ongoye Forest Reserve	S	BNR
30.	Inanda Game Park	C	Private
31.	Ubizane Game Ranch	C	Private
32.	Marionwood Nature Reserve	M	Pinetown
33.	Kenneth Stainbank Nature Reserve	P	NPB
34.	Itala Nature Reserve	P	NPB
35.	Krantzkloof Nature Reserve	P	NPB

ADDRESSES OF AGENCIES AND ORGANIZATIONS

1. HEAD-OFFICE ADDRESS

Natal Parks Board
P O Box 662
Pietermaritzburg
3200

Natal Forest Region
Private Bag 9029
Pietermaritzburg
3200

Bureau of Natural Resources
Private Bag X01
Ulundi
3838

Wildlife Society of South Africa
(Natal Branch)
P O Box 2985
DURBAN
4000

Zululand Forest Region
Private Bag 506
Eshowe
3815

Natal Town and Regional
Planning Commission
Private Bag 9038
Pietermaritzburg
3200

Umgeni Valley Project
P O Box 394
Howick
3290

Wilderness Leadership School
P O Box 15036
Bellair
4006

2. SOME LOCAL ADDRESSES

Most of these letters would be addressed to "The Officer-in-Charge".

Mkuzi Game Reserve
P O Mkuze
3965

Nyalazi Forest Reserve
Private Bag 7206
Mtubatuba
3935

Kozi Bay Nature Reserve
P O Box 1
Ngwanase
3973

Cape Vidal
Private Bag St Lucia
Estuary
3936

False Bay Park
P O Hluhluwe
3960

Sodwana Bay National Park
Private Bag 310
Mbazwana
3974

Nyala Game Ranch
P O Box 647
Empangeni
3880

Ubizane Game Ranch
P O Box 102
Hluhluwe
3960

Lalapansi Game Ranch
P O Box 51
Hluhluwe
3960

Bonamanzi Game Park
P O Box 48
Hluhluwe
3960

Harold Johnson Nature Reserve
P O Box 148
Darnall
4480

Inanda Game Park
P O Canelands
Canelands
4341

Albert Falls Public Resort
P O Box 31
Cramond
3420

Midmar Public Resort
Private Bag
Howick
3290

3. OTHER ENVIRONMENTAL AWARENESS ORGANIZATIONS

Institute of Natal Resources
University of Natal
P O Box 375
Pietermaritzburg
3200

Department of Environment Affairs
Private Bag X313
Pretoria
0001

Moss Steering Committee (NTRPC)
Private Bag 9038
Pietermaritzburg
3200

South African Council for Conservation and Anti-Pollution
P O Box 2744
Durban
4000

The Environmental Education Association of Southern Africa
P O Box 458
Mooiriver
3300

Zululand Society for the Protection and Care of the Environment
c/o Department of English
University of Zululand
Private Bag X1001
KwaDlangezwa
3886

APPENDIX H

RECREATION AS DEFINED BY BLACKS

1. INTRODUCTION

In this Appendix a few pages are devoted to the manner in which Black academics,* in particularly those whose business it is to study the origin and transformation of words and concepts in Zulu, view the term "recreation". The discussion and definition of recreation in this instance will follow three fundamental viewpoints: (a) the translation and meaning of the term; (b) the cultural associations of the terms with African folkways; and (c) the modern interpretations of recreation and leisure.

In considering the evolution of a concept such as recreation, it is inevitable that academics will differ in the way they interpret the traditional and the modern viewpoints of the term. As a result this analysis cannot be regarded as objective and there are no right or wrong answers.

2. TRANSLATION AND MEANING

It is fundamental truth that recreation as a modern concept is poorly related to African traditional life patterns. As a result it was thought best by the writer to make use of as many terms as possible in order to establish a wider relationship with the concept "recreation". These terms include: leisure, play time, pastime, rest, idleness, relaxation, refreshing, restoration, entertainment and amusement. When considering the equivalent Zulu translation of these terms on the one hand, most of the respondent academics indicated that only five terms could not be traced as having Zulu equivalents. These are: recreation, leisure,

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* Several individual academics in departments of African languages of universities and colleges such as Natal-Durban, Natal-Pietermaritzburg, South Africa, Witwatersrand, Zululand, Umlazi Campus, Esikhawini, Umlazi Further Education and Mbumbulu, were requested to respond to a letter of inquiry (see Appendix-D).

free time, refreshing and restoration. On the other hand, seven terms were thought to possess some Zulu equivalent, and include the following: play, rest, pastime, entertainment, amusement, relaxation and idleness.

EQUIVALENT TRANSLATION AND MEANING OF RECREATION RELATED TERMS (MODERN & TRADITIONAL)

TERM	ZULU EQUIVALENT	FREE TRANSLATION
Recreation (modern)	Ukudlala (ukuzithokozisa) Ukuqabula umzimba/ingqondo Ukungcebeleka (Ukuzijabulisa)	To engage in amusement To refresh one's body/mind To indulge in recreation or leisure or (enjoying holiday time)
Leisure (modern)	Isikhathi sokuhlaba ikhefu Isikhathi sokuphumula emsebenzini Ukuziphumulela/ ukuzihlalela Inhleleleko	A rest period A break from work To have a (leisurely) rest Leisureliness
Free time (modern)	Isikhathi sokukhululeka Isikhathi esingachithekanje	Time when one is free Time that is expendable
Refreshing (modern)	Okuqabulayo/ okuhlumelelisayo Okuhphumuzayo Okubuyisa undlandla Okuvuselelayo	That which replinishes/ refreshes and soothes That which gives some rest That which restores enthusiasm That which revitalizes
Restoration (modern)	Ukubuyiselwa Ukuqala kabusha Ukuvuselelwa	The act of being restored To start a new Recovery of bodily and mental strength
Play (traditional)	Ukudlala; ijadu Umdlalo Umsindo	To play, to amuse oneself A game or an amusement An amusement (e.g.Wedding feast)
Rest (traditional)	Ukuphumula Phumuza	To rest To give rest to someone

TERM	ZULU EQUIVALENT	FREE TRANSLATION
Pastime (traditional)	Okokuzilibazisa Ukuchitha isikhathi Ukuchitha isizungu	For passing time away To spend time away To kill boredom
Relaxation (tradition)	Ukuziphumuza	To give oneself rest
Entertainment (traditional)	Ukuzijabulisa Ukuzithokozisa	To make oneself happy To enjoy/to entertain oneself
	Ukungcebeleka(modern)	To have fun
Amusement (traditional)	Ukuzijabulisa Ukuzithokozisa Ukuzilibazisa	To make oneself happy To entertain oneself To while away time
Idleness (traditional)	Ukuzihlalela-nje Ukwenqena;ubuvilavoco Ubuvila/ukuvilapha	To have nothing to do Lazy to engage in work To show laziness

The translations above show that whereas the terms such as "recreation", "leisure" and others (modern concepts) did not seem to exist during traditional times, there appears to be several "traditional" terms that convey or can be associated with the "recreation" situation. The ultramodern term ukungcebeleka for example, is the "nearest" concept ever created to approximate the English equivalent of "recreation" and "leisure" in meaning. On the other hand, a traditional existence of the verbal-root -phumul- (rest or relax) is commonly found in Nguni orthography with its meaning derived from the idea of resting after extended activity. The most appropriate verbal-root is -phumuza which means to give rest to one's body-mind and therefore to recreate in some respect. It is important, however, to note that "rest", "relaxation", "leisure" and "recreation" in the African experience was not achieved as a reward for or as antithesis of work.

3. CULTURAL ASSOCIATION

In modern terms and experience "recreation" as a concept seems to be viewed and accepted as a typically Western way of life by many Blacks, in particular the urbanized Blacks in South Africa. However, despite this assumption it does seem evident from Zulu folklore and its symbolic references, proverbs, idioms, praise-songs and general philosophical thought, that "recreation" and "leisure" seem to have existed in completely different forms from what they are today. Some aspects of activity either during "leisure" or "rest" time or not, did have some typically traditional association through proverbs and expressions such as: Isihlala ndawonye sidla amajwabu aso (The stayer at home eats the skin covering) Indolence never earns one anything. Ukudlala umkhosi (to hold the first-fruit ceremony). This ceremony whilst being ritualistic, was also expressed or symbolized in play form, that is combining "work" and "leisure" at the same instance. In traditional times it was very important that each individual be seen to have something to do at all times, whether it be during "free time" or not. It was taboo to be idle, hence: Ivila lidla ubuvila (a lazy person eats laziness). In other words to get something one was expected to work.

Some observers argue that traditionally there was no cultural significance placed on time for relaxation. In fact, relaxation time was not encouraged. "Resting" as a concept and experience seems to have been more preferred to "relaxation" since it was casually done and the experience did not need justification. On the other hand, one would be entitled to relax only if one had undertaken a long journey, or had engaged in hard work or serious debate. This form of relaxation either came in the form

of smoking igudu (hemp-horn) or ukucambalala (lie down to rest) which helped in reorganizing one's thoughts and replenishing lost strength.

In general it may be argued that the culturally oriented activities such as hunting, playing and praise-singing were recreative in the sense that they provided for rest and relaxation, and prepared participants for effective involvement in the more serious (subsistence-oriented) facets of life.

4. MODERN INTERPRETATIONS

The concepts of "recreation" and "leisure" as they are known today, did not exist during traditional times. What is likely is that the notion of "recreation" did exist in various forms of rest, relaxation and play. With the passage of time and through the industrialization and urbanization of Blacks, the concepts seem to have been assimilated in some form into the African way of life. In other words, the understanding of recreation activities did not come out as entirely restricted to the work-ethic, but also reflected a holistic life-force based view of the world.

A dominant interpretation of recreation in modern African urban situations is the association of the experience with sports and games, indoor amusement and entertainment, and visiting friends. The concept is to a less extent associated with natural resources such as the beach, river, lake, forest, game and wilderness areas. Modern interpretations of "recreation" and its association with "rest" have resulted in new words that have spatial connotations such as amaphumulo (place of rest) being started. The

word in its diverse meaning related to places such as parks, gardens, verandas and graveyards. Another derivation of this word is iziphumulo which commonly refers to wayside inns, rest huts and road houses. In modern times the idea of recreation is also seen as being a way of restoring or putting back one's body and mind into their original energetic natural form.

5. CONCLUSION

To attempt an integrated "African" definition of the concept "recreation" in view of what has been said in the preceeding paragraphs, particularly within the table of translation and meaning, the following emerges. Recreation is seen as the engagement or enjoyment of activity or amusement for the purpose of passing time away, of working and the promotion of rest or recovery of bodily and mental strength.

THE END