

Social Science Research Projects in South African National Parks: Introductory Notes

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The relevance of human scientific research within conservation areas is assessed. Issues of importance to the National Parks Board are mentioned in order to stimulate interest and subsequent discussion. An overview of some of the social scientific projects presently undertaken in national parks (traditional and contractual) are presented. This includes the assessment of real needs and demands of visitors to the national parks. A viability study identified important concepts while the important role played by perception in environmental evaluation is stressed. A multi-disciplinary research approach and active participation by all parties concerned in deciding the future of natural areas is advocated.

Key words: Nature conservation, environmental perception, national parks, contractual national parks, social sciences, environmental education, community-psychology.

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Introduction

The topic to be addressed in this paper is to assess the relevance of results of sociological/psychological research endeavours undertaken within national parks on the quality of everyday life of people living in the Republic of South Africa. More specifically, it will focus on how such research may be designed, benefitting the ordinary visitor to a national park while enhancing the corporate image of the National Parks Board at the same time.

The official policy statement of the National Parks Board of Trustees, (itself based upon the definitions and spirit of recommendations of the World Conservation Strategy issued by the International Union for the Conservation of Nature) accepts the following principles as fundamental to the practice of nature conservation:

Firstly, conservation is a human activity performed for the benefit of humanity.

Secondly, conservation comprises a variety of management options, ranging from total protection to intensive multiple use of natural systems and resources, whether in different geographical regions or in different parts (zones) of one particular area.

Thirdly, conservation includes the protection of products of civilisation of cultural value (National Parks Board 1987).

The present authors accept the following points of view as being fundamental to this article:

- that the principles referred to above should be reflected in social research projects being undertaken in national parks;
- that these principles all reflect activities by man, implying that much more human scientific research will have to be incorporated into the National Parks Board's overall approach to research. This way of thinking is accentuated by Fuggle (1986) who states: "The most obvious weakness . . . is the almost complete lack of social science input to nature conservation research". Fuggle continues ". . . management, human use, human benefits, human needs and aspirations, and their change with time should all be an integral part of conservation research";
- that an increase in research concerning human activity and the concomitant utilisation of the environment implies that research efforts should not be focused specifically and only on areas comprising the national parks, but that such research should also incorporate the broader implications of geographical, ecological and sociological/psychological data beyond the boundaries of the national park. In order to do this, the social scientific research project(s) will have to be multi-disciplinary in nature, and the research will have to be coordinated with work being done by other scientists and organisations active in this particular field;
- that social scientific research should focus on both the traditional parks (such as the Kruger National Park) as well as the contractual national parks with diverse and different ontogenies.

It is to be expected that changing approaches to the concept of nature conservation and the way in which these apply to the National Parks Board, will place pressure on general management policy regarding human activities within the parks and the areas adjoining them. It could well be that public opinion concerning the National Parks Board and its activities could regress, if general management policies are not adapted to accommodate the needs, demands and aspirations of people who visit and utilise the traditional national parks and the newer contractual national parks. This statement, however, does not imply that nature conservation agencies must always cater blindly for the needs and demands of tourists. It is, however, important to note that contented tourists will retain fond memories (Odendal 1986).

In this paper we address some of the issues mentioned above in order to stimulate interest and subsequent discussion. Firstly, a brief overview of some of the social scientific research projects presently being undertaken in different national parks will be given, describing and accentuating issues that have surfaced following the research, and which may have potential benefits if certain aspects are to be included in the general policy of a park. Secondly, the authors will ensure a high degree of appropriateness and applicability of research results. Thirdly an overview of a project presently under way in the Wilderness- and Knysna-area will be presented. This latter project is intimately connected to the people living in the area, their perception of the environment and their interpretation of nature conservation issues. The empha-

sis will fall on the method which the authors believe such research should be structured and launched in order to benefit both the people living in and utilising the area and the general public image of the National Parks Board. Finally a number of recommendations will be made concerning the future of social scientific research in the field of nature conservation.

An overview of some social scientific projects presently undertaken in national parks.

Most of the social scientific research projects presently being undertaken in South African national parks are directed at assessing the needs and demands of the visitors to parks. These projects pursue issues such as satisfaction with basic facilities like camps, huts and similar amenities, how the visitor would prefer to experience the environment, and what the format of environmental education programs should be like. This approach is based upon research by Van Liere & Dunlap (1981).

The present series of projects concerning the assessment of needs and demands of tourists was initially launched by a program undertaken by the University of Pretoria (Scheulen & Odendal 1984), which attempted to compare various research strategies in order to establish which one would be the most appropriate to assess the attitudes and perceptions of people towards the Kruger National Park (KNP). A group of students was used for the project and the following techniques were compared: questionnaires; mental maps; and essays.

The questionnaire was designed to determine how basic information (such as the type of accommodation preferred; preferences regarding environmental setting; dirt roads versus tar roads and knowledge about natural environment) could be utilised. Both the essays and the mental maps were put on paper, discussed with the students, and analysed through the method of content analysis. The reader is referred to Milgram (1977), Gould & White (1986) and Guy, Edgley, Arafat & Allen (1987) for details on the methods and procedures involved in such an analysis.

It appeared that the three methods used did not generate different results, apart from suggesting a shift in emphasis. The results emanating from the questionnaires were sound, could be analysed statistically and identified variables that were pertinent to the subject matter.

The mental maps worked well on younger people, especially children, and it was accepted that this method appears to be ideal for the evaluation of children within such a context.

The essays gave the best results. On the one hand, one could utilise them quantitatively by analysing the information statistically. On the other hand, in depth qualitative analyses could be applied to the descriptions given by the students of their perceptions, which were rich in texture and thematic content, of the Kruger National Park.

These results suggested that different methods could be employed leading to similar results and that the results of the various techniques could be utilised

for diverse purposes. We believe that various research methodologies should be applied in social scientific research in order to give a broadly based description of all the issues and themes involved in the research. This view is strengthened by Pearce (1982).

In a more recent study, Burger (1986) evaluated the needs of visitors to the Kruger National Park. In-depth interviews were done with 152 visitors to the park over a period of three months. The visitors were asked to describe the specific needs that they experienced in the near natural environment in the Kruger National Park. The most important theme identified was that the majority of visitors concentrated purely on their own and specific perception of nature. It appeared that their experience of nature had a very strong emotional influence on their behaviour and a number of respondents described feeling more relaxed and at peace than they felt at home. The interviewees expressed a need for a more primitive (less civilised) environment, roads that were built closer to riverbanks and open water surfaces and the need for more information concerning nature and the conservation of nature.

An important recommendation emanating from this study was that the authorities running the Kruger National Park and the National Parks Board should determine beforehand whether new physical developments would enhance the visitors' positive experience of nature. It is important to note that respondents felt very strongly that the environment in which they spend their time should enhance their experience of tranquility. It is understandable that this reaction from visitors will come to the fore in the Kruger National Park, because they are mostly on vacation. In other territories under control of the National Parks Board, especially the newer contractual parks and areas such as the Wilderness/Knysna National Lake Area, one accepts that developments such as roads, houses, hotels, and the like are already present. Future planning in such areas will be unable to revolve around a wilderness experience *per se*. However, the point still remains that planning of new national parks will have to be done so as to maintain a balance between conservation and development which will ensure the visitors of an imperturbable experience of nature.

A third project undertaken within the Kruger National Park involves the use of a questionnaire which will eventually (Odendal *in press*) attempt to evaluate differences in changing attitudes of visitors to the park over a period of time. Long-term comparison of attitude could in time lead to two important sets of results. On the one hand information could be generated which would enable management to plan new developments in such a way that the needs and demands of tourists are taken in consideration. Secondly, a quantitative data bank could be developed, facilitating the analysis of changes in attitudes.

It is important to note that all three studies referred to above (Scheulen & Odendal 1984; Burger 1986; Odendal *in press*) emphasised the necessity of environmental education. Several projects related to environmental education have been launched in some national parks (Golden Gate Highland National Park, Tsitsikamma Coastal National Park). A course with an ecological bias, developed by the Information Section of the KNP, has been evaluated extensively (Odendal) and recommendations were made which would improve the effectiveness of the course. At present the authors are formulating

projects designed to evaluate the impact of the environmental education programs and exhibits in the KNP. An important finding is that many visitors felt that the information presented to them and the experiences experienced within the KNP could not really be projected or extrapolated to their home environments, especially those living in urban areas (Skolimowski 1984). It is clear that these environmental educative programs should be designed in such a way that they also enhance the individual's perception of environmental issues where he lives his everyday life. For this reason several aspects of human ecology *per se* are gradually being included in these courses. More information as to what human ecology (*sensu lato*) implies, can be found in Ehrlich, Ehrlich & Holdren (1973). It seems that scenarios experienced in natural surroundings (such as in the Kruger National Park) are not effectively transposed or implemented in everyday life in an urban setting. Therefore, a method should be developed through which one can actually extend the experience of, and insight into conservation issues to the visitors' everyday life situation.

In conclusion, it appears that various techniques can be applied with success to assess the needs and demands of tourists. It is important to note that in the national parks system of the RSA these aspects have hitherto been studied only in some depth in the Kruger National Park, geographically a rather isolated conservation area. Ordinary people of all population groups in this country are, whoever, confronted with basic environmental problems and issues in their everyday lives. It is opined that the information generated by assessment studies as discussed above are largely applicable to the KNP only and are not readily adapted to other (especially urban) areas. For this reason it is important that social scientific research be focussed on areas or issues which have a broad applicability within our heterogeneous society (Kantrowitz 1985).

Human perception pertinent to the conservation of the Wilderness/Knysna National Lakes Area (WKNLA).

- Within the RSA, the Kruger National Park is a prime example of a conservation area intensively managed by man. In future new conservation areas to be interpreted as national parks will have to be interpreted anew in order to fit in with development that has already taken place. The National Parks Board has already committed itself (since 1985) to this new approach by experimenting with the concept of contractual national parks, of which the conservation area around Wilderness and Knysna is a good example.

The Wilderness National Lakes area and the Knysna National Lake area on the Cape South Coast has in recent times been brought to the forefront of public awareness. It is understandable that issues concerning these areas are presently rather emotional and it is imperative that ways and means are to be found to integrate potentially conflicting issues in such a way so as to enhance the eventual meaningful conservation and development of the area. The emotional content of the environmental problems in the areas could have a potentially negative influence on both conservation and development in this area (Schroeder 1981). Robinson, Siegfried & Visser (1984) identified this area on

the Cape Garden Route coast as the top priority coastal zone for conservation in southern Africa.

A project has recently been launched by the authors to assess the conservation perceptions of the local population in the WKNLA with emphasis on environmental problems encountered in the area. A viability study was initially launched in order to evaluate the opinions and needs of a wide variety of professional people working in the area in equivalent localities. The vast majority of professional people who responded to the viability study reacted most positively (94%) and felt strongly that human or social scientific inputs were needed to solve potential areas of conflict. The viability study identified important concepts *viz.*

- 1 The opinion was expressed that the diverse perceptions of all of the user groups in the area (tourists, holiday-makers, business men, sportsmen, conservationists, local residents, developers, and the like) should be studied and taken in consideration in order to integrate their specific needs in a meaningful, coastal zone oriented management scheme.
- 2 The view was furthermore expressed that the various forms of utilisation of the environment envisaged should be clearly described and that a rank order of preferences and/or importance be available.
- 3 This basic information should be structured so as to enhance the spontaneous positive reaction of people towards the environment. This is a very important issue, for several other studies (such as Odendal 1987) have indicated that the application and implementation of laws, rules and regulations in conservation areas often leads to a negative reaction by the local inhabitants not only towards the conservation organisation itself, but also towards the conservation movement as a process.
- 4 A further view emanating from the viability study was that the interests of developers and conservationists (often conflicting) and the resultant publicity given to this conflict, could cause a situation where both the developers and the conservationists could lose in the long run. This situation is a poor reflection as perceived by the man in the street and normally results in a no-win situation for all parties concerned.

The majority of respondents with a professional background strongly emphasised the importance of perceptions of both the local inhabitants and utilisers of the area. It was felt that if perceptions of people could be studied in such a way so as to describe a correlation between such perceptions and resulting styles of behaviour, that eventual results would then contribute to a better understanding of the issues at hand.

Several attempts have already been made internationally to study people's perceptions of the environment. The most used and well known methods are related to mental mapping (Gould & White 1986). Mental mapping has been discussed earlier in this article and as a method it can generate usable information. It is, however, important to note that mental maps normally do not work well on adults and that it is more applicable to younger people. The present authors are, however, disinclined to reject this method at this early stage of the project.

One has to bear in mind that man-made facilities have already been erected and that this will continue in the Wilderness/Knysna area. Wohlwill (1982), in

a study on the Californian Coast, stressed the importance of the evaluation of local inhabitants of the appropriateness of various man-made facilities in coastal areas and similar environments. As an example, the visual impact was assessed, using a method where subjects were asked to react to 35 mm colour slides, developed through the use of landscape models and experimental facilities, simulating buildings appearing in a landscape while systematically changing the visual relatedness between the two. Furthermore, the guidelines formulated by Californian Coastal Zone Conservation Commission (CCZCC) in 1975 for the management and regulation of development along the coastal areas of that state could also be considered as a possible guideline for our own areas in the RSA. The report by the CCZCC is devoted to the visual appearance which development creates and the following paraphrased statements apply:

Development shall be compatible with existing natural features and terrain. The visual intrusion of structures into scenic open spaces shall be minimised by clustering the structures near other existing natural and man-made vertical features.

Development shall be either visually compatible with the character of the surrounding attractive area or shall enhance the quality of areas that have been degraded by existing development. Materials and colours used in coastal construction will be selected for compatibility both with the structural system of the buildings and with appearance of the building's natural and man-made surroundings.

Information gathered by Wohlwill's study has shown that this method is effective in describing perceptions of people and which could then be transformed in an appropriate way to facilitate the planning of the infrastructure in a coastal zone.

The information generated by this project illustrated that not only the perceptions, but also the environmental preferences of the respondent could be clearly described and related to the broader environmental issues being studied.

The various research strategies referred to in this paper can be combined and a methodology is being developed in such a way that both conservation and development within the broader Wilderness/Knysna area will benefit from such a research approach.

It is important to note that the respondents to the viability study (referred to earlier on) found it well-nigh impossible to identify separate and important issues to be studied independently during this project. The respondents attached similar values to issues such as development, conservation, recreation, environmental education, legislation and management. The respondents did not react in terms of conservation only but felt that a balance had to be created between all the issues referred to above. It is therefore important that this type of social scientific project should attempt to search for contact areas between issues such as development, conservation, legislation and management. Only through a meaningful integration between these issues will truly useful information be generated.

Conclusion

It is clear that social scientific research implies a multi-disciplinary scientific interaction if the ideals of a community is to be determined. One would therefore formulate a research project that will not only be dealing with the natural sciences only but that it would also include sociological aspects evident within the community in order to correlate the objectives of the National Parks Board and that of the community it wants to serve.

Future research projects with a sociological impact, undertaken by or on behalf of the National Parks Board must preferably be run along the lines of research from a community-psychology point of view, especially where contractual parks (as in the Wilderness/Knysna area) are concerned. In the past social studies that were conducted for the National Parks Board focused on "conservation islands" such as the Kruger National Park and the reaction of the visitors to the area.

A stage has now been reached in the case of contractual national parks, where this multi-disciplinary scientific approach should be taken into account before any long-term decisions are to be taken by the National Parks Board. It must also be stressed that researchers conducting social studies for the National Parks Board must realise that they themselves are not isolated from the social forces that they study. "There has been increasing recognition that a value-free social science may be impossible to attain. The values, assumptions and world view of the researcher play an important role in what problems are chosen how they are studied and how findings are interpreted" (Heller, Price, Reinhartz, Riger, Wandersman & D'Aunno 1984).

A final plea would be that researchers should guard against the use of only one single research method. One should seek a model of research where consideration is given to the multi-disciplinary nature of the social aspects being studied which requires a variety of methods. Much innovation and creativity is needed in the development of appropriate methods. In an area such as the WKNLA the usual basic and applied research methods would seem to be inadequate to cope with the demands of environmental evaluation research needed for this area. In contrast, a method based on active participation by all parties concerned would contribute to a better quality of life of the community within the conservation guidelines of natural environment management undertaken under the auspices of the National Parks Board.

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