CROSSING OVER

INTERACTIVE VIDEO AS A TOOL TO ENABLE THE INCREASED PARTICIPATION OF ILLITERATE AND SEMI-LITERATE COMMUNITIES IN ENVIRONMENTAL MANAGEMENT

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"Ukungazi kufana nokungaboni"

If you do not understand Zulu, what you have just experienced for a few moments is part of the daily experience of hundreds of thousands of South Africans.

"Ukungazi kufana nokungaboni"

- Not knowing is like not seeing -

translation of the Zulu proverb

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GLOSSARY OF TERMS

Cinema Verite	A method of documentary filming, often dependent upon elements of chance that do not interfere with the way events take place in reality. These films are made with the minimum of equipment, usually a *hand-held* camera and portable sound recorders. Also known as Direct Cinema.
edit	The joining of one shot (strip of film or individual *take*) with another.
foreground	To draw attention to the techniques used in presenting images in a film or video. For example, unsteady, *hand-held* camera work.
form	Form constitutes a part of *style*, but relates to the manner in which the content is presented.
hand-held	Camera operating free of a *tripod*.
interactive video	The screening of a video in an environment which facilitates discussion and debate both during and after the screening
image	The smallest unit of film. The information contained within one frame of the film.
langage	A component of de Saussure's tripartite structure of language with *langage* being the ability to perceive.
langue	A component of de Saussure's tripartite structure of language with *langue* being the ability to make sense of visual configurations.
location/s	A setting or place in which filming occurs.
montage	The juxtaposing of visual images, so that meaning is created by both the particular image used, and by its placement in context with the image that appears before and after it.
parole	A component of de Saussure's tripartite structure of language with *parole* being acquired through education and varying according to cultural and individual constraints.
Part 1	The first part of the video produced for screening to the residents of eMhlwazini. It simplifies and visually presents the main issues identified in the *PEIA*.
Part 2	The second half of the video produced for the purposes of this dissertation. This part of the documentary presents responses from eMhlwazini residents to ***Part 1*** of the video, and is used in the dissertation to discuss the feedback process in the community.
production	The making of a video - including considerations of style, intention and cost. Also refers to the stage in making a video in which the actual filming takes place.

reader	The person who is deciphering or making sense of the images before him/herself.
realism	A style of filmmaking which attempts to duplicate the look of reality as it is commonly perceived.
reflexive	Reflexive film looks in onto itself as a form of self critique or analysis.
rough edit	Like a rough draft of written work, the rough edit operates as a base from which decisions regarding the final visual product are made. The rough edit is usually done on rudimentary equipment, without any special effects, which are added later during the final edit.
screened	In the context of film or video, to screen means to show the visual production or video to an audience.
Semiotics	A theory of cinematic communication which studies signs or symbolic codes as units of signification. The theory was influenced by the methodology and theory of structural linguistics.
shot	The images that are recorded continuously from the time the camera starts to the time it stops. A *shot* is an unedited piece of film, or a *take*.
sign	A minimal unit of recognition - an eye, a dog or a tree.
signified	An idea signified by the signifier is called the signified. Although we may look at the signifier and signified as separate entities, they exist only as components of the sign.
signifier	A sign is the union of a form which signifies. de Saussure call this sign the signifier.
style	The choice of a visual or ideological approach to the entire visual product. This might include consideration of camera style, particular approaches to lighting, set design, or sound track. For example, a director might choose to film something in an historical style - necessitating specific costumes, lighting or architecture.
system	This concerns the processes, transmissions and messages involved in communication and influence the nature of the communication.
take	A variation of a specific shot. Begins when the camera starts and ends when it stops. Several takes of the same content might be filmed from which the best take is then selected.
tripod	A three-legged piece of equipment, used to steady the camera, and allow for fluid movements so as not to draw attention to the process of filming itself.
voice over	The narration written and presented over visual images, to give necessary information regarding the text.

LIST OF ACRONYMS

ANC	African National Congress
EIA	Environmental Impact Assessment
GEM	Group for Environmental Monitoring
I&APs	Interested and Affected parties
IEM	Integrated Environmental Management
IUCN	International Union for the Conservation of Nature and Natural Resources, (now the World Conservaton Union).
KDNC	KwaZulu Department of Nature Conservation
NPB	Natal Parks Board
PEIA	Preliminary Environmental Impact Assessment. This refers to the report produced by the Masters Group on *NPB*'s development proposal for Cathedral Peak
RDP	Reconstruction and Development Programme
Saldru	Southern Africa Labour and Development Research Unit
WCS	World Conservation Strategy

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CHAPTER 1

INTRODUCTION

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INTRODUCTION

1.1 Context to this Dissertation

Democracy brings with it responsibilities - so the citizens of the newly democratic South Africa are discovering. Full page newspaper advertisements invite public comments and suggestions related to the constitutional court, population policy and the drawing up of the new constitution itself, and there are several other initiatives aimed to procure broad public participation.

The New Constitution advertisement says (Mail & Guardian, 1995a):

> You have got the ***power*** to play a ***central*** role.
>
> So ***WRITE.***

After decades of authoritarian decision-making in South Africa, this shift to a new social paradigm requires that people's voices be heard. However, it is not enough that people have a voice. Opinions need to be informed from various perspectives to allow for the public to make valuable contributions to decision-making. This is a difficult enough task if, as the newspaper advertisement correctly assumes, its readership is literate. However, reaching illiterate and semi-literate communities, and soliciting their informed opinions, adds a difficult dimension to public participation. Without widespread and accessible information the attainment of a true democracy is doubtful.

1.2 Background to the Study

In December 1994, the Natal Parks Board (NPB) commissioned the Masters Group of the Department of Environmental and Geographical Science at the University of Cape Town to undertake a Preliminary Environmental Impact Assessment (PEIA) of the Board's proposal to develop a 200 bed hutted camp in the Cathedral Peak node of the Natal Drakensberg Park (Masters Group, 1995). In its press release, publicly stating NPB's intention to commission such an assessment, the Board also affirmed its commitment to the principles of Integrated Environmental Management (IEM), an important component of which is the concept of public participation (DEA, 1992).

In the process of issue scoping, the Masters Group focused particular attention on involvement from rural communities living adjacent to the Natal Drakensberg Park as decisions made concerning the proposed development will directly affect their lives. Historically, the establishment of nature reserves in South Africa, and developments within those reserves, have not been pursued in consultation with the people who lived in or along their borders and seldom earned the consent or respect of local communities (Koch, 1995). The PEIA's emphasis on involving rural communities was effected in an attempt to redress this exclusion of local people in environmental decision-making.

The composite report, completed in April 1995, comprised three volumes and over 300 pages of information (Masters Group, 1995). This was submitted to NPB, and was to undergo independent review, prior to a sixty day period for public comment.

The process of soliciting public comment on the report highlighted an important concern related to the accessibility of the report's information to the rural communities who had been integrally involved in the research process. Thus, recommendations were made regarding a workshopped feedback process for rural Interested and Affected Parties (I&APs) that NPB should initiate to facilitate local communities responses to the PEIA. The recommendations included:

- the need to ensure the lodging of PEIA reports with Chief Hlongwane (the chief of the area), the residents of eMhlwazini and with adjacent rural communities. This would be in contrast to lodging the report in an urban library and then leaving the responsibility of accessing the report up to the public;

- the co-ordination of a feedback workshop, held in the eMhlwazini ward, and facilitated by an independent body;

- the distribution of at least 1000 copies of a simplified Zulu pamphlet reporting on the findings of the PEIA report to residents in the communities; and

- the lodging of Volumes 1, 2 and 3 of the PEIA report at the primary school in the eMhlwazini ward.

I was, however, concerned that these recommendations would not be fully implemented by the NPB, recognising:

- the restricted way in which NPB has historically addressed its community relations;

- the present state of uncertainty regarding the merging of NPB and the KwaZulu Department of Nature Conservation (KDNC), and concomitant financial limitations; and

- the lack of capacity within NPB to undertake such a feedback exercise.

Of my own initiative, I attempted to address this concern by undertaking a feedback exercise to the communities concerned using interactive video. It was intended that this medium would not only present the results of the PEIA, as it would to more organised and powerful urban groupings, but that the feedback process itself would contribute something to the rural communities involved. A multi-media approach, combining video images, narration, and interactive discussion during the video screening, was identified as a potentially wide-reaching and empowering format for conveying the information contained in the PEIA report to illiterate and semi-literate members of the rural I&APs. This, it was thought, would increase the ability of the rural communities to respond to the report in an informed and empowered way, and thus contribute positively to the decision-making process surrounding NPB's development proposal.

1.3 Rationale for the Study

It is fashionable to speak of the need for an holistic approach to environmental issues. This thesis, in combining public participation and visual literacy theories, attempts to stretch the boundaries of multi-disciplinary academic research - towards an integration of the visual arts with a discipline which has hitherto been dominated by technocratic paradigms (Cock, 1995; Quinlan, 1993a).

Integrated Environmental Management (IEM) is a tool that can facilitate consultative and environmentally sensitive decision-making. Section 29 of the Interim Constitution states that "Every person shall have the right to an environment which is not detrimental to his/her health or well-being (Government Gazette, 1994). Furthermore, the Reconstruction and Development Programme (RDP), suggests that environmental considerations be built into every decision regarding development projects in an attempt to ensure a balance between development and the sustainable use of natural resources in South Africa (ANC, 1994). Established guidelines exist in the form of the *Integrated Environmental Management Guideline Series* (DEA, 1992), to encourage an holistic approach to these issues, and IEM is recognised as playing an important role in balancing conflicting interests and contributing to sustainable development. The emphasis of IEM procedures on *public participation* throughout the various stages of the development process forms an significant part of the holistic approach. However, in practice, it has been questioned whether public participation in IEM is in fact achieving its broader aim of empowering communities to participate authentically in decision-making (Cock, 1995).

One of the legacies left to us by the Bantu Education system of the apartheid government is a more than 60% illiterate or semi-literate population. "In the population as a whole, it is believed that about 45% of blacks cannot read or write" (Fallon & Pereira de Silva, 1994). This figure matches the proportion of all blacks with less than four years of schooling (Fuller *et al.* 1995). Yet it is the individuals within this population who are now expected to make informed decisions, and to participate responsibly in the fledgling democracy for which South Africa has

struggled so long. However, democracy presupposes participation, and participation requires access to relevant information - information which for decades has been treated as the domain of the educated. Without such information, the much vaunted concept of "public participation" will be relegated to popular political jargon, and ordinary people will remain powerless.

Such powerlessness subjected people to a cycle of autocratic decision-making regarding environmental management in the past. During this time people were forced off their land, into over-crowded pockets of often poorly fertile land. The resulting land degradation maintained this cycle of poverty and powerlessness (Wilson & Ramphele, 1989). "In the bad old days, wild animals and plants were preserved by fencing off wilderness areas. People living around the reserves were seen as a nuisance or threat. Many lost land or access to grazing, protein, muthi plants, thatching or sand" (GEM, 1994). Clearly, South Africa's history of land dispossession and removals in order to establish nature reserves (GEM, 1993; Koch, 1995) has done little to engender favourable environmental consciousness on the part of those people whose land was alienated.

It was in this context, as well as that of several other initiatives aimed to facilitate equal partnerships between local communities and conservation agencies (eg the "People and Parks Programme of the Group for Environmental Monitoring), that I undertook to explore avenues to enable effective participation in environmental decision-making. It is intended that this investigation could serve as a case study for involving video in public participation. This could have broad application, both internationally and in the South African context, where tools are urgently needed to enable historically disadvantaged people to become full participants in decision-making.

1.4 Purpose of this Dissertation

This dissertation has four main aims:

1. To assess whether multi-media (particularly interactive video) can be used in illiterate and semi-literate communities as a tool for both increased environmental awareness and increased participation in various stages of the development process.

2. To assess whether interactive video as an approach in itself facilitates empowerment of target communities.

3. To create a visual communication experience which combines the rigours of academic research with the practical application of academic theories in the field.

4. To foster a sensitivity in the "reader" towards access to information.

The video produced for this dissertation and screened to eMhlwazini residents aimed to achieve the following goals:

1. To feed back the information contained in the PEIA report to the communities living in eMhlwazini ward, adjacent to the Cathedral Peak node of the Natal Drakensberg Park, and to facilitate the easy dissemination of such information.

2. To create an enabling environment for the open discussion of issues raised in the report and video, and to encourage participation in such discussions;

3. To excite people with the familiarity of seeing their friends, relatives, and images of their own living space on a television screen, and thereby draw them into a participative process;

4. To move people beyond their own boundaries and to expose them to new geographical locations, so broadening the context of the situation.

5. To entertain people watching the video so that the gaining of information would be an integrated process, operating across the various sensory modalities of sight, hearing and emotion[1]; and finally

6. To empower people by facilitating their access to information, and by focusing on the common abilities of perception that everyone possesses rather than highlighting the skills of some people to the exclusion of others.

1.5 Assumptions and Limitations

1.5.1 Assumptions

The following assumptions underlie this dissertation:

1. That the written and visual components of this dissertation are integrated within one another and cannot stand alone. It is assumed that they are "read" as such;

2. That all sighted people have certain visual competencies, and can therefore understand visual information if it is simply produced - even in the absence of previous exposure to television; and

3. That theoretical research is ultimately aimed at effecting change in the field, and should therefore be tested under every-day circumstances.

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[1] The more senses involved in obtaining information, the greater the unity of that information, and the easier it would be to process and retain in an holistic manner (Stern, 1985).

1.5.2 Limitations

In all research there are limitations which affect the final product. The following are the limitations applicable to this study:

1. In video production, financial limitations are always a consideration. In this case, such limitations have restricted equipment to the very basics of a camera and microphone.

2. An optimum crew size for a project of this nature would include a camera operator, sound person and director. This would allow various responsibilities to be distributed amongst the crew ensuring quality functioning in all spheres of production. In most cases, I have functioned in all the above capacities, and where assistance has been available with respect to camera or sound, it has not been from people familiar with film production in any way.

3. The author's initial participation in the Masters Group research restricted the amount of interviews that could be filmed, due to other responsibilities as part of a group. Thus, often pertinent and creative information obtained during the social survey has not been captured on video.

1.6 Dissertation Structure

The report is divided into two components:

- a written dissertation (**Chapters 1 - 5**); and
- the accompanying video dissertation (made up of ***Parts 1*** **&** 2).

It is important to emphasise that these two components should be "read" together as an integrated study. Neither can stand alone. The placement of one within the other follows a logical structure, which should be followed in the same way as any written piece would be read. Figure 1 (page 9) clarifies the structure of this dissertation, and the manner in which it should be read.

1.6.1 The Written Dissertation

The written document is divided into five chapters.

Chapter 1 introduces this dissertation and sets the context for the research that follows. It includes information related to the commissioning of the initial Masters Group report, the perspective from which this study has been approached, and the aims of the dissertation. The chapter details the assumptions and limitations which have influenced this work, and describes the structure of the dissertation, guiding the reader through its multi-media approach.

Chapter 2 describes the approach of the dissertation and the varied methodologies employed in this research. It lays out the process followed from the initial six week group research period, through the subsequent two day site visit, and ends with a discussion of the methodologies applied during the third and final site visit - at which time the feedback video was shown to the communities for responses. The chapter discusses the selection of information for inclusion into the video, issues related to the choice of narrator, the translation of the English script into colloquial Zulu, as well as the production process involved in creating the video.

❖ **CHAPTER 2 SHOULD BE FOLLOWED BY THE VIEWING OF THE ACCOMPANYING VIDEO MATERIAL.**

Chapter 3 focuses on issues of visual competence and the creation of meaning through visual images. The theoretical understanding of this process sheds light on how video could operate in illiterate and semi-literate communities to increase informed decision-making, and as a tool for empowerment of communities. The potential for video to operate as such a tool, is assessed in this chapter.

Chapter 4 examines the theories of public participation and the contribution which video could make to effecting such theories. The chapter draws out the underlying aims of public participation in order to question the extent to which conventional methods used in IEM have been successful within illiterate and semi-literate communities. The principles of sustainability and critical pedagogy are discussed within the framework of public participation in order to assess the role that such participation plays in promoting sustainable development. Having established the parallels between public participation, sustainability and critical pedagogy interactive video is appraised for its potential contribution to environmental management.

In the concluding chapter, Chapter 5, the use of interactive video as a tool for increasing access to information and facilitating empowerment, is summarised. Thereafter the strengths and weaknesses of interactive video are examined and recommendations, suggestions and approaches arising out of this study are explored. Cautions are included relating to the power of the medium as a tool for manipulation if irresponsibly employed. Finally, the potential for the utilisation of interactive multi-media, for environmental management in a democratic South Africa, is briefly discussed.

1.6.2 The Video Dissertation

The video consists of two distinct phases and methodologies. The first half of the video shows a subtitled version of the documentary produced specifically for the residents of eMhlwazini, the ward neighbouring Cathedral Peak. This is a simplified visual translation of the major points contained within the PEIA report. The footage was screened in eMhlwazini during the first week of June 1995 and is hereafter referred to as ***Part 1***.

The discussion and footage that follow in ***Part 2*** reflect the responses obtained from informal eMhlwazini groupings, during and after the feedback viewing of ***Part 1***. It captures some of the issues that arose from the information imparted in the report, and communicates people's responses both to the documentary and to the interactive use of video. An analysis of this process can be found in **Chapters 3, 4** and **5**.

❖ **THE ENTIRE VIDEO SHOULD BE VIEWED IN-BETWEEN CHAPTERS 2 AND 3 OF THE WRITTEN DISSERTATION.**

Chapter 1 has established the context for this dissertation. Chapter 2, which follows, will present and discuss the methodologies employed with regard to the theoretical and practical aspects of the dissertation.

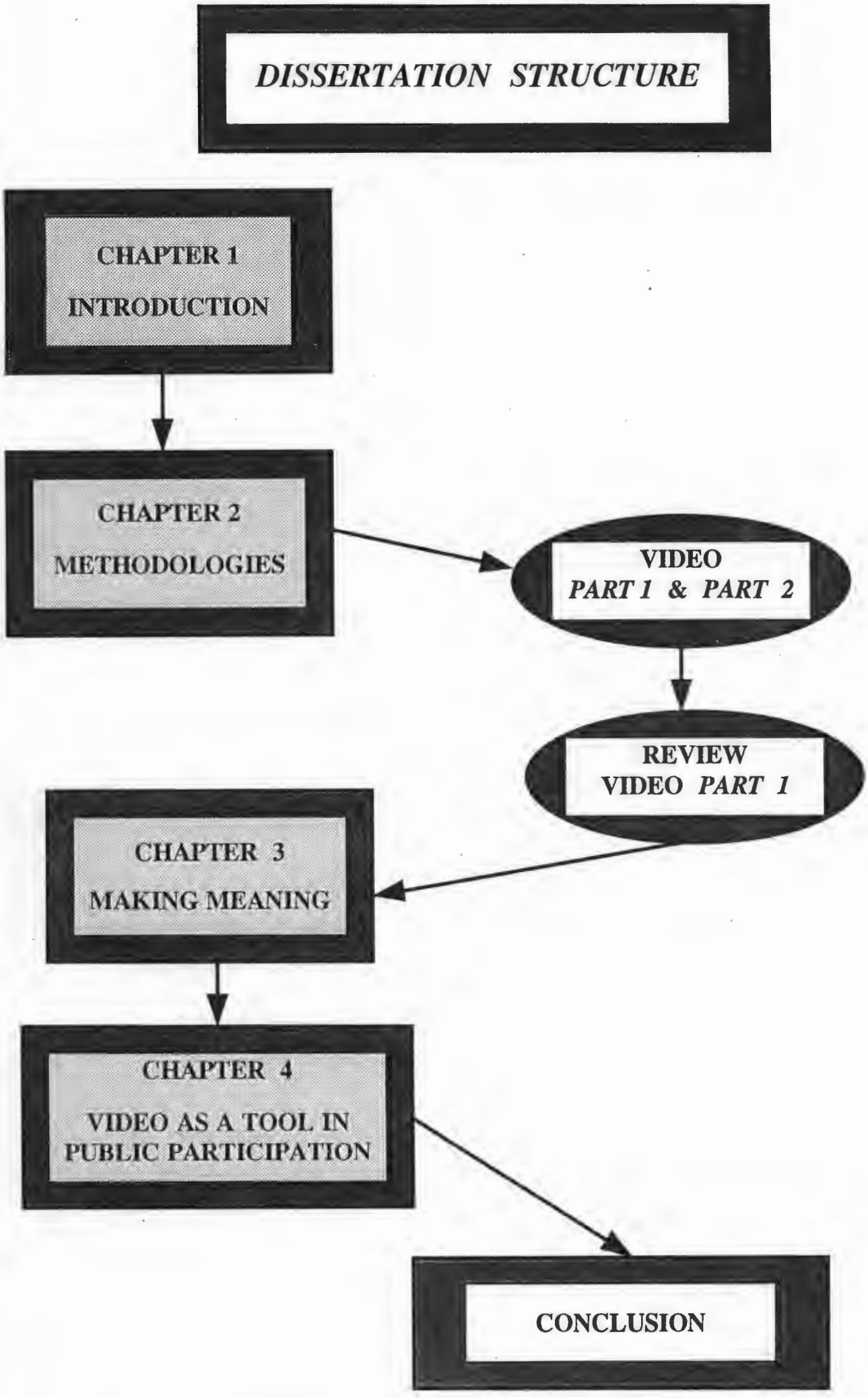

Figure 1. Dissertation Structure

CHAPTER 2

METHODOLOGIES

CHAPTER 2

METHODOLOGIES

> *"There can be a madness in methods. Methodologies cannot be allowed to become ends. They are means, tools to help construct models of how things work. In the hands of the crude or dogmatic, a methodology can be worse than nothing. It can become a rationale for banality, a justification for self-righteousness. But when used with care, methodologies can be of great value. A method can help shape thoughts into more than that kind of bourgeois subjectivism where the sheer intelligence of the writer becomes the only criterion of value."*
>
> (Nichols, 1976)

2.1 Approach

The use of the word *integrated* in the term Integrated Environmental Management[2] (IEM) in South Africa, suggests an approach to environment and development that is holistic - bringing together diverse aspects and issues, in much the same way as creating meaning in a film does. Film uses the grammar or language of single shots to generate a scene; and combines visual images, the pace at which they are edited together, and sound tracks of voice and music, to layer complex levels of meaning which the viewer is then asked to decipher. Such concepts of integration and holistic understanding have directed the approach of this dissertation.

Information operates on different levels, but in order for it to operate at all it must be widely accessible to people. Thus, this dissertation combines theoretical analysis with field-orientated video material - moving out of the university to test theories and hypotheses within the environments which the theories attempt to interpret. But, as Andreas Fuglesang writes:

> *"One practical problem with cross-cultural communication is that the writer from one culture is safe when he looks at another culture, but the moment he starts writing about it, he is in trouble."*
>
> (Fuglesang, A. 1982)

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[2] Integrated Environmental Management (IEM) is the procedure designed in South Africa to "ensure that environmental consequences of development are understood and adequately considered in the planning process" (Fuggle & Rabie, 1992). One of the principles underpinning IEM is the attempt to integrate the development needs of a developing country by recognising that the social costs of development must be outweighed by the social benefits.

What Fuglesang is articulating is that it is difficult to describe what one sees in one culture through the concepts of another. The relevance of this in the context of the present dissertation is that in attempting to produce a video for screening in eMhlwazini it would be arrogant and foolhardy to ignore or disregard the cultural frameworks which create meaning, and it is the complexity of this context which has necessitated multiple methodologies.

This chapter sets out the methodologies which have shaped this dissertation. In detailing the process involved in producing the video, the foundations are laid for the viewer or "reader" to watch the video material which follows this chapter with eyes that see, not only as a highly literate and well-educated person, but with an awareness of some of the socio-economic considerations which have influenced the form and style apparent in the video.

2.2 Methodologies

The methodologies adopted in this study included:

1. an initial six week site visit to eMhlwazini in February and March 1995 during which social survey interviews were recorded on video;

2. a review of relevant literature on visual literacy and public participation;

3. the identification and simplification of the major issues identified in the PEIA report;

4. the translation of this simplified version of the full report into Zulu and the subsequent development of a narrative structure to convey the meaning of the key issues contained in this report (see Appendix 1);

5. a further two day site visit to eMhlwazini, on the 13th and 14th of May 1995, to film additional visual footage of the affected area, to adapt the urban Zulu translation to colloquial Zulu, and to film the narrator, Phybia Dlamini, within the geographical context of Cathedral Peak;

6. the production of ***Part 1*** of the video bringing together the information extracted from the PEIA report. This documentary was then used for interactive feedback to the rural communities of eMhlwazini;

7. a three day site visit to eMhlwazini in June 1995, during which ***Part 1*** of the video was screened repeatedly to informal groupings within the ward. General questions were put to the audience at each of the viewings, and responses to these questions as well as other issues which arose were documented for inclusion into ***Part 2*** of the video; and

8. the development of a narrative to examine the achievements and short-comings of screening the video in the field. This was integrated into the second, more reflexive part of the video;

2.3 Producing the Video

The process of producing a video is an elaborate one following the steps of:

- **pre-production** - during which decisions regarding the content and style of the product are considered, arrangements for filming are made, and production equipment is organised;

- **production** - involving interviews and site visits during which the filming of relevant material takes place; and

- **post-production** - at which time the footage is assessed, and necessary adjustments in style and form are made. In other words, decisions made earlier about how the final product might look are re-examined in the light of the material available. Ultimately, the material is edited into the final product, and the audio track is merged to complement the visuals.

It should be clear from the production breakdown outlined above that video is the combination of elements of visual and audio tracks - merged so as to produce meaning. However, bearing in mind that the particular audience for ***Part 1*** of the video had had little exposure to television images there were very specific considerations throughout the production process.

2.3.1 Pre-production and production stages

2.3.1.1. Recording social survey interviews on video

The initial footage gathered for ***Part 1*** of the video dissertation formed part of the Masters Group's socio-economic survey. During this six week period, household information was collected, either in a written form or on video. During this time the video process was open-ended, with no preconceived notions of how a final product might emerge. Thus, video was used merely as another tool to document community concerns and issues. Throughout the group research, the effect that the video had on interviewees was continually monitored, so as not to jeopardise the survey results. Monitoring was relatively crude - merely noting any patterns of behaviour or major differences in survey responses between filmed and unfilmed interviews. My participation in both types of interviews facilitated easy comparison, and no differences were noted between interviews documented in writing and those filmed. However, time constraints, as well as the responsibilities of being part of a research team, allowed only six of the thirty interviews to be filmed.

There are definite constraints to working in a group whilst simultaneously concentrating on one's own research agenda. The group was concerned with collecting specific data within a limited amount of time. Therefore, after informal interviews had identified major areas of concern amongst the eMhlwazini residents, a questionnaire was drawn up for the formal household surveys (see Volume 2, Attachment 6 of the PEIA report). This involved questions of both a quantitative and qualitative nature. Ideally, for the purposes of making a video, all the questions should have been qualitative, thereby facilitating open-ended responses which could stand on their own. In other words, the interviewee would answer by incorporating the information of the question into his/her reply thereby eliminating the need for the viewer to hear the question in order to understand the answer.

However, in practice, questions were often asked in such a manner that responses would not be coherent for a viewer, unless accompanied by the question. For example: "Are NPB rangers friendly?" "No!" or "How often do you collect wood from inside the Park and how much does it cost?" "Twice a week; 30c". The need to include the question as a voice-over for every response, or group of similar responses, would have been time consuming in the video and would have disrupted the flow of information to the audience. Furthermore, people tend to speak in more natural and descriptive ways when they are not continually interrupted by questions. They also introduce their own frames of reference to explain concepts with which they are grappling. Thus, open-ended questions would introduce a sense of the real characters behind the answers and would encourage the audience to identify with them.

One final aspect of wishing to avoid the use of the interviewer's question in the video revolved around the many different voices of the group members used in the interviews. The choice of narrator is important and needs to take account of who is the presenter of information, and what that person represents. It was clear that the many different voices of the Masters Group would not serve the video best in this regard. This choice is discussed in more detail in section 2.3.1.4

At the end of the six week field trip undertaken for the PEIA, fifteen hours of footage had been filmed, including community interviews; NPB staff information meetings; and footage from the public meeting held for urban I&APs in Pietermaritzburg.

2.3.1.2 Literature review and personal communication

A literature review informed the making of ***Part 1*** of the video dissertation - taking into account theories of visual competence and the interaction between visual texts and society. This information was augmented by discussions with a number of professionals involved in film, communications, and adult and environmental education (see Appendix 2).

2.3.1.3 Simplification of the PEIA report

The preliminary environmental impact report compiled by the UCT Masters Group comprehensively assessed the major issues and concerns expressed by interested parties, in relation to Natal Parks Board's development proposal. In doing so, the group detailed issues related to NPB's proposal, the process followed by NPB, legal and development planning aspects, and the affected environment (biophysical, archaeological, visual and socio-economic); and evaluated the potential impacts which development might have (Masters Group, 1995).

The major issues presented in ***Part 1*** of the video were extracted from the written report so that they could be translated into visual images and verbal concepts. It seemed both impossible and inappropriate to convey the finer details of all 300 pages of information to eMhlwazini residents in a fifteen minute video, thus the impacts identified as the most significant for evaluation in the PEIA were extracted and included into the English script. Information had to be highly selective considering that most of the people likely to see this video had more than a full day's work to get through. The running time of the video thus needed to be kept to a minimum - while not sacrificing the quality of the information. Central themes of the report which were included in English video script (see Appendix 1) included:

- NPB's rationale for developing a hutted camp in Cathedral Peak;
- details of the development proposal;
- possible alternatives for development;
- the policy issues related to development on the Tryme Shelf, as well as the biophysical and financial considerations;
- socio-economic impacts and benefits related to the three options identified; and
- central concerns regarding land, grazing, schools and jobs, together with the recognition of the need for controlled utilisation of resources, as identified by some of the local residents.

2.3.1.4 The Zulu translation and narration

Following this simplification, the English script was translated into Zulu and an independent, non-local person sought to narrate the script. This decision was taken based on the following considerations

- the positive side of using a local person to narrate the video might have been undermined by specific relationships within the communities which could have questioned the authenticity of information presented; and
- the choice of one particular eMhlwazini resident as narrator rather than any other might have raised questions related to hidden agendas on the part of the

video producer. Limited knowledge of the dynamics between residents in the eMhlwazini ward, suggested that this risk was too high to take.

Thus Phybia Dlamini, an urban, Zulu-speaking woman was selected as the video presenter and translator. To ensure that the context of the translation was accurate, the narrator/translator familiarised herself with Volume 1 of the Masters Group report.

A further motivating factor in the particular choice of narrator revolved around questions of representation. In a highly patriarchal society it is necessary to consider exactly what the narrator represents, and to whom. Although the general target audience for the video was identified as the residents of eMhlwazini, a more specific aim was to reach the women in the ward. Results of the social survey undertaken for the PEIA had shown women to be the most disempowered group in the area - experiencing oppression related to poverty, migrant labour (Masters Group, 1995), and an entrenched system of patriarchy. The choice of a young, urban Zulu woman, as the competent presenter of information was thus intended to empower other women watching the video.

2.3.1.5 The second site visit

In a simultaneous process to the script translation, it was clear that there were insufficient visual images to convey all the information drawn from the report. The gaps identified were prioritised for inclusion into the visual material, which was to be shot in the follow-up step - a second site visit to Cathedral Peak. This second visit was further necessitated by the recognition of differences between urban and rural spoken Zulu. It was thus apparent that the scripted information needed to be translated into colloquial terminology - meaningful to residents of eMhlwazini.

A two day field-trip to Cathedral Peak in mid-May was arranged with the intention of involving a local resident in the translation of the video to colloquial terminology. Thomas Mdluli had assisted with the initial research interviews, and it was felt that his familiarity with the research aims and contents would enable him to translate the major issues into easily understandable concepts for residents living in his area.

The communities of eMhlwazini had been integrally involved in the initial research phase, which had resulted in written documentation representing a broad range of community concerns and suggestions. Up to this point, the video had used this information only as a base from which to draw some of its content. However, in order to maximise the effect of the video on its target audience, it was necessary to ensure that the contents and presentation of information was conceptually accessible to its viewers. Thomas's input at this stage was therefore crucial - rephrasing urban Zulu (street talk) into pure Zulu, and using references recognisable to the local communities. For example, the word "Gigi" is the colloquial term for NPB (and the apartheid government), and "Ndumeni" refers to the site identified as the Tryme Shelf.

The colloquial translation was filmed in various locations in the Cathedral Peak area - at the proposed development sites, as well as in places selected for aesthetic considerations. Other visual material, whose absence had been identified during the Zulu translation stage (section 2.3.1.4), was also obtained at this time. Thus, finally all the necessary visual and audio information was captured on video tape.

2.3.2 Post-production

2.3.2.1 Logging the footage

Fifteen hours of raw footage was *logged* - a procedure during which every shot is individually identified by its *time code* number, much like identifying a reprint of a photograph by the edge-number on the negative. Comments were made on the quality of each shot regarding focus, sound, aesthetic composition and particular content. This list was then refined to highlight the shots which, from my subjective perspective, had the potential to contribute to the meaning of the video. Images needed to be chosen for a particular reason - because they transmitted information. This was not a video of esoteric, artistic expression, although being a visual medium, finding pleasing images was obviously important. Symbolism also needed to be treated with caution considering the cross-cultural nature of the exercise.

2.3.2.2 Consideration of style

The consideration of visual style is an important component of the methodological approach to this dissertation. In his book, *Movies and Methods* (1976), Nichols suggests that methodologies are tools to be manipulated by the people who employ them. Furthermore, he says that methodological purity is a vacuous and idealist concept when compared to the requirements of relevance and consistency. What Nichols is implying is that the categorisation of a single approach or methodology within a film has a sense of arbitrariness in it, considering that most films cross over more than one style during their running time. In addition, the dogmatic adherence to identifiable rules and structures laid down in theoretical exchanges regarding style, diverts the focus of analysis away from the issues of pertinence, focusing merely on questions of form and style (*ibid*, 1976). Thus, it is important to consider both the content of ***Part 1*** of the video and the style through which it was conveyed.

The dominant documentary styles employed in ***Part*** 1 of the video dissertation combine *Cinema Verite* and elements of the "complex documentary" developed by James Blue (Lunenfeld, 1994). These styles best suited the conditions under which the video was produced, and seemed to be most appropriate to the aims of the production process.

Briefly, *Cinema Verite* or Direct Cinema has a tradition grounded in the social and political events or reflections surrounding the student uprising in France in May 1968 (Comolli & Narboni, 1969). *Verite*, at its most politically challenging,

captured the rawness and immediacy of events both in content and style. In other words, images on screen were not mediated by sophisticated filming and editing techniques, giving the impression of the film as a seamless reality itself. Rather, the camera work was hand-held, thereby subtly emphasising the production process involved in making the film. This foregrounding of process recognised the socio-economic and ideological conditions in which production was taking place, and thus the film operated simultaneously on another level as a political statement.

The "complex documentary" of James Blue seems to have some of its roots in *Cinema Verite*. However, Blue's work focused heavily on a process-orientated form of production involving high levels of "reflexivity, formal experimentation, and audience feedback" (Lunenfeld, 1994). What this means is that Blue's work operated on many levels, and should therefore be understood within its particular matrix of production, consumption and distribution. Blue introduced three levels of self-reflexivity into the documentary arena:

1. self-reflexivity within the work's formal construction of visual style and narrative coherency;

2. the foregrounding of the conditions of production; and

3. the encouragement and incorporation of subject and viewer feedback.

Part 1 of the video dissertation combines the two documentary styles outlined above and introduces the more formal style of conventional narration. The matrix of production and consumption took into account the limited exposure of the target audience to visual media. Therefore, while not attempting to appear seamless in construction, ***Part 1*** limited the foregrounding of the production process in order to reduce the number of elements which the audience needed for interpretation. In other words, while the entire video was filmed without a tripod, in editing the images there was a conscious choice to avoid particularly obvious camera movements or mid-shot focusing. These are all elements which Blue would have exploited to draw attention to the constructed nature of the work, but which, under the specific conditions of consumption applicable to this dissertation, would only serve to distract or confuse the audience. Instead, the choice of narration, which emphasised the process of research as well as the selectivity of issues documented in this video, offered the viewer the opportunity to recognise the constructed nature of the information, rather than it seeming to be "common sense". All the issues raised in the video were therefore open to critical debate.

Another element of style considered for ***Part 1*** of the video was the conscious avoidance of written symbols which could have disempowered sections of the audience. And to support this approach audience identification with the video was facilitated by using popular sound tracks, such as Mahlatini and the Mahotela Queens, Miriam Makeba, and Busi - specifically selected for their potential familiarity within the target communities. In fact, throughout the documentary, the focus was on parochial issues. While this programme for the communities of eMhlwazini could stand on its own, it might well be incoherent for national

distribution. However, as Blue said "I don't think the national documentaries teach us much of anything, because they're too general. They have to be too general" (Lunenfeld, 1994).

To summarise the stylistic methodology of ***Part 1*** of the video:

- Although not aiming to draw attention to the process of production itself, the video does not attempt to appear to be "common sense" or neutral.

- The presenter highlights the fact that information was gathered from various sources and that the Masters Group ("the students") used that information to make critical assessments of the development, or "no development", alternatives. The basis of these assessments are clearly explained, thereby emphasising their nature as constructs rather than their appearance as common sense and neutral.

- In attempting to involve the audience, the video encourages participation and interaction.

Several other stylistic elements were specifically incorporated into this video as part of the methodology used to convey meaning. Perhaps discussing all of them pre-empts the viewing of the video, and prejudices the "reader's" responses. The target audience was unaware of style when viewing ***Part 1*** and here too there was a specific methodology employed during the process of feedback. It is on this process that the dissertation will now focus.

2.3.2.3 The Feedback Process

During the first four days of June 1995, the completed Zulu video was taken back to eMhlwazini and screened to the residents of the ward and to employees of NPB. The intention was for as many screenings to be held as possible, in an environment that facilitated interaction and open discussion.

The video was shown in nine different locations, at places where people gathered informally outside shops or spazas; at the river where women did their washing; in a shebeen; at the craft-women's beehive hut; and inside a NPB's employee hostel. The groups were thus informal, but tended to cross categories of age and gender, thereby accessing a broad spectrum of the local residents. In total, approximately 400 of the 2700 residents (15%) of eMhlwazini watched the video over the three days in which it was screened.

The research undertaken by the Masters Group and the resulting PEIA report were introduced prior to each screening, and the broad parameters for an interactive feedback process were put forward at this time. Usually, at the request of the audience, the video was shown more than once to each group. Questions only arose after completion of the video, although throughout the screening people commented and talked amongst themselves. At the end of each group viewing, general questions

were asked of the audience relating to the use of video as a medium for conveying information. The questions were kept to a minimum, hoping to prompt open debate within the groups.

Many of the screenings were documented on video, with the intention of using visual queues to assess audience attitudes - based on interest, participation and non-verbal responses. The types of unsolicited questions arising out of the video, directly related to the development issues, were used to gauge any major changes in how people were thinking about the development, after watching the video, as compared to four months prior to this, when the social surveys were carried out, using only verbal information. It is worth noting that other factors - the successful conclusion of the land swop (Masters Group, 1995), the merging of NPB and the KwaZulu Department of Nature Conservation (KDNC), winter and its related grazing issues, amongst a number of other factors - could also have changed opinions and attitudes within the communities during this four month period.

At the end of the three days, three hours of footage had been taken, which, together with a reflexive narration, then needed to be incorporated into ***Part 2*** of the video dissertation.

2.3.2.4 ***Part 2***

The process of logging described in section 2.3.2.1 was repeated with the newly filmed feedback material. The difference in this case was the need to assess what the material showed, rather than merely considering how to develop it into ***Part 2*** of the video dissertation. After assembling a rough edit of ***Part 2***, a narration was thus developed to give context to the process which had taken place, and to examine what had come out of the community feedback process. This perspective laid the foundations for the assessment of the strengths and weaknesses of interactive video in the field in Chapters 3 and 4.

Once again, the stylistic methodology to convey the information in ***Part 2*** had to be considered. In order to maintain the visual flow between the different parts of the video (with their widely differing aims) the styles employed in ***Part 1*** were maintained for ***Part 2.*** However, the obvious foregrounding of process, to emphasise the constructed nature of editing disparate images together to produce meaning, was exploited. In other words, where camera work was shaky, but captured the essence of the interactions, it was included into the final product. Furthermore, the montage (cutting images and placing them side by side, so that meaning is created by the relationship between images) of people's expressions was visible as an obvious juxtaposition produced by the editor. These elements of style were used constantly to remind the viewer that the meaning created in the video was a subjective analysis of the situation, and not merely the unmediated depiction of reality.

2.4 Watching the Video

This chapter has discussed the approaches taken to this dissertation - for both the written and visual components. Its multiplicity of methodologies recognises the dangers of rigidly applying a single methodology without the flexibility demanded by different situations. It is hoped that this approach has contributed to a successful interactive video process which the reader is about to witness.

It must be stressed that ***Part 1*** of the video was produced for **viewing** in Zulu without the distraction of reading English subtitles. Therefore, it is strongly recommended that an English speaking "reader" of this dissertation watch the video twice - once to assess the information disseminated to the residents of eMhlwazini, and a second time, ignoring the subtitles and instead "reading" the images as they are supposed to be experienced. This is also suggested so that the viewer experiences the frustrations associated with a limited access to information.

The video "Crossing Over" should be viewed now, before proceeding with Chapters 3 and 4 of the written thesis.

CHAPTER 3

MAKING MEANING

CHAPTER 3

MAKING MEANING

3.1 Introduction

In his book *Metaphysica*, Aristotle wrote:

> *"All men by nature desire to know. An indication of this is the delight we take in our senses; for even apart from their usefulness they are loved for themselves; and above all others the sense of sight. For not only with a view to action, but even when we are not going to do anything, we prefer seeing (one might say) to everything else. The reason is that this, most of all these senses, makes us know and brings to light many differences between things."*
>
> (quoted in Ross, 1908)

This early notion of the eyes as humankind's primary and dominant instrument through which to experience the world has evolved to recognise the "seer" as potential "learner" (Debes, 1968). Debes argues that up to 90% of learning comes through the eyes. In other words, by merely being able to see things around us, we are able to learn about our environment. But in trying to understand how we make sense of these images, the question remains: How do we come to *know* the world?

This question is particularly pertinent to the assessment of video as a tool for disseminating information in illiterate and semi-literate communities, where access to information, via conventional routes such as written media, is extremely limited. Understanding the acquisition of knowledge through sight and the visual experiencing of images is thus important for the use of visual media in such situations.

3.2 Knowing the World

Two different philosophical approaches can be distinguished to the question of how individuals obtain knowledge of the world.

One approach, which might be called metaphysical, suggests that knowledge of the world is possible without relying on our sensory experiences. In other words, sufficient contemplation of the right kind can prompt contingent discoveries, such as identifying the number of planets, without having to experience this knowledge through the senses (Gregory, 1979). Developmental psychologists who emphasise

our innate responses support this metaphysical approach, by suggesting that knowledge is possible prior to experience.

An alternative philosophical approach, which might be labelled empiricist, emphasises that sensory perception is the basis of all knowledge. In other words, knowledge must be derived from observation and assessment (Gombrich, 1968). What we can see or otherwise perceive through our sense, we can come to know. This approach would be echoed by educational psychologists, who focus on learned responses, arguing that knowledge is developed from observation (Stern, 1985; Wright, 1991).

The most convincing explanation of how we come to know the world would clearly need to synthesise the above positions, with knowledge being formed out of the interplay between our sensory experiences and the mental categories that we use to organise, filter, and process those experiences (Habermas, 1972; Lyotard, 1984). Without these mental organising abilities, sensory experiences would be raw, unintelligible and even overwhelming. Conversely, without anchoring our mental functions in the things that we perceive, our knowledge would become detached from the world and untestable.

On a more concrete level, there are several visual theories which over a number of decades have been developed, asserted, and reassessed regarding the mechanisms by which individuals make meaning out of images of the world. The examples from which this dissertation draws its concepts include Semiotics (Eco, 1977; Culler, 1981; Eagleton, 1983a), Structuralism (Eagleton, 1983a), Post Structuralism (Culler, 1982), Discourse Theory (Macdonall, 1986; Laclau & Mouffe, 1985), Reception Theory (Eco, 1979; Fish, 1980; Eagleton, 1983b), Transactional Theory (Norberg, 1953; Toch & MacLean, 1962), Ethnographic Theory (Smith, 1990), Post Modernism (Harvey, 1989) and others. The focus of this dissertation on video as a tool in environmental management has necessitated a limited discussion of the various theories mentioned above - extracting only the principles and concepts which are of relevance to the present study.

Some visual theories give attention only to the meaning impregnated or generated in a text by the author or "auteur" (Nichols, 1976), others recognise the viewer as the primary site at which meaning is constructed (Eco, 1979; Eagleton, 1983b). A more holistic and contemporary perspective (Macdonall, 1986; Harvey, 1989), and that taken in this dissertation, looks at the discourse between author, text and viewer, and takes into account the unique context in which each viewing of a video takes place. Thus, in the emerging theoretical models, the economic, social and cultural spheres in which meaning is synthesised and produced become the focus of visual analysis.

Contemporary theory recognises that viewers and readers construct meaning dependent upon the cognitive fields in which they are situated - rather than meaning being located within objects (Hilterman, 1991). In other words, the theories recognise that particular world views are constructs rather than natural, common sense, real or objective, and are dependent upon the "lens" through which

the individual views images and creates meaning. This introduces an ethnographic perspective to visual literacy analysis.

"By ethnographic we mean descriptions that take into account the perspective of members of a social group, including the beliefs and values that underlie and organise their activities and utterances" (Smith, 1990). In other words, in understanding how people see and make sense of visual texts around them, we need to recognise the social and cultural contexts and the processes involved in the acquisition of those perspectives - how have people become visually competent? Paulo Freire argues that before we can learn to read the *word* we need to learn to read the *world* (Freire, 1971) - emphasising the need not to merely *see* the world but to actually *look* at it.

From the ethnographic perspective, culture is the primary heuristic, considering the roles of social practices, values and belief systems that influence the way specific communities are organised and think about the world, and in these contexts how meaning is produced. Thus there is the need to analyse the cognitive (intellectual and emotional) fields in which visual texts operate.

Taking account of the influence that the above elements have on the production of meaning in a visual text, it is helpful to sketch a socio-economic profile of the people of eMhlwazini. This establishes the ethnographic context for ***Part 1*** of the video. A more complete profile of the communities can be found in Volumes 1 & 2 of the PEIA report (Masters Group, 1995).

3.3 Living Conditions for Residents of the eMhlwazini Ward

The following figures have been extracted from the PEIA report and were extrapolated from information obtained from a survey of 13% of the population of eMhlwazini in February 1995 (Masters Group, 1995).

In February 1995, there were approximately 2700 people living in the ward. Only 24% of the economically active population had formal employment. Thus out of approximately 918 economically active people, only 220 had jobs, resulting in an unemployment figure of 76%. Migrant labour comprised 75% of these jobs, with labourers spending only a few weeks in eMhlwazini in the course of the year.

Consistent with the patterns of rural settlement, and as a consequence of migrancy, the number of women remaining in the rural area was far greater then the number of men, and the traditional female roles were entrenched within the eMhlwazini ward.

Primary activities for those remaining in eMhlwazini, and generally carried out by women, were subsistence farming, the collection of wood and water, the sale of thatching grass and herbs, self-employment activities, making mats and crafts for either domestic use or for sale, trade in marijuana, and generally, the maintenance of the well-being of the family. The majority of these activities relied heavily on the

utilisation of natural resources such as land for grazing and the collection of grass and wood. Such dependencies created areas of conflict between the existence of the Park and the needs of the neighbouring eMhlwazini residents.

Fifty seven per cent - or 876 children from eMhlwazini - attended school. However, there was only one primary school in the entire ward, and no high school at all. To attend a high school, children had to travel a minimum of 12 km to the nearest school in maGagangozi ward.

Figures compiled for the Project for Statistics on Living Standards and Development (Saldru, 1994) showed that only 37% of both adults and children in the Okahlamba district, had completed primary education - and only 7% had matric qualifications. eMhlwazini falls within the Okahlamba district and thus, these figures can be used as a broad indication of people's access to education and levels of linguistic literacy skills in the eMhlwazini ward (Masters Group, 1995).

Residents of eMhlwazini were poorly informed as to the reasons for the existence of the Park and Natal Parks Board. This could be explained by the historically limited extension activities between officers of the NPB and local residents. Furthermore, in conjunction with animosity towards the Park over issues such as grazing and access to resources, the people of eMhlwazini recognised little value in the Park and environmental conservation. In these communities human struggles were, of necessity, of greater importance and often seen as diametrically opposed to the aims of conservation.

A final factor to be discussed with regard to access to information is the lack of electricity in the settlements adjacent to the Park. Although power lines run through the ward, feeding electricity to Cathedral Peak Hotel and to the Park, no homesteads in eMhlwazini had electricity. There are no figures available, but comments from local residents suggest that only a small number of television sets existed in the ward, and these were operated off motorcar batteries. Thus, for most people in the ward exposure to electronic media was limited, and for some of the residents, the video screening in eMhlwazini in June was their first experience of television images.

This brief socio-economic background of eMhlwazini sketches a profile of communities experiencing:

- high unemployment, low monthly income and thus heavy reliance on natural resources for the supply of fuel and food to ensure people's survival;
- extremely low levels of formal education and limited access to educational institutions;
- historical distrust for the conservation authorities, with interaction between officers of the NPB and local residents generally restricted to conflict situations regarding access to resources;

- no access to electricity; and
- limited access to electronic media as a source of information.

All of the factors outlined above influence the way the individuals of eMhlwazini experience and interpret their world. Although the conditions are similar for most of the families living in the ward, issues of gender, class, ethnicity and age would all impact in unique ways on the individual's environment and context of seeing and thus on individual interpretations of visual media.

3.4 "Reading" Visual Images

Video is made up of a complex package of electronic information, operating on various levels, and having different meanings for different individuals. In order to understand the functioning of ***Part 1*** of the video in the eMhlwazini ward this section further explores the way in which meaning is created by different individuals. In elaborating on such theories, the potential use of visual images in illiterate and semi-literate communities as a tool for informed decision-making and empowerment in environmental management will be demonstrated. This approach should be seen in the context of the "community" profile outlined above.

There are different levels of visual literacy and formal training, as with any discipline, influences this process. It is, nevertheless, easier to make sense of and read visual images without formal training (if one is sighted) than it is for the untrained eye to access written linguistic codes (van Zyl, 1989).

Semiotics, which is the study of the science of signs, is a structuralist approach to understanding how meaning is created and comprehended through images or signs (Metz, 1974). It follows a process examining first the *sign* through to the *signifier* or *code*, then to the *system* and finally to the *signified* or *meaning* (*ibid*, 1974; Hawkes, 1983). Briefly, a *sign* is a visual image - a women in black and red traditional clothing with strings of beading in her hair. The *signifiers* or *codes* are the elements in that image which have specific connotations - the particular style of dress and the particular hair beading. These *signifiers* operate within a *system* of meaning. Thus, to an American tourist, "reading" images from his/her foreign *system*, this image might be exotic or terrifying, while for a resident of eMhlwazini the *system* of signification would definitively identify the women. It is this which constitutes the *signified* - that which is *signified* by the *signifier* from within the *system* of representation. And so for local people the *signified* is obvious - these women dressed in their black and red traditional clothing, with strings of beading in their hair are....sangomas.

Another example might clarify how the *sign*, *signifier*, *system* and *signified* help to explain how individuals, within specific systems, make sense of images. This example comes from a western paradigm.

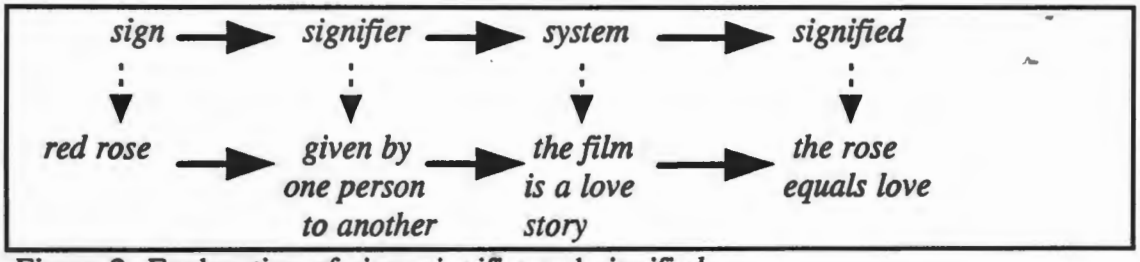

Figure 2: Explanation of *sign, signifier* and *signified*

When encoding visual images it is thus necessary to take into account the *system* in which the video is intended to operate.

The "auteur" or director plays an important role in engendering meaning into the visual text, bearing in mind the structure of meaning outlined above. However, it is important to remove some of that power, and to acknowledge its position in the eyes of the audience - the receivers of the visual images - recognising the transaction which constitutes the act of viewing (Macdonall, 1986). This perspective examines the *discourse* between text (iconic images) and audience (subject), and recognises the interplay or negotiation of meaning between the author, the video and the audience.

The way in which the audience creates meaning is always situated, specific and value laden (Berger, 1972; Eagleton, 1983b). The emphasis on discourse or negotiation outlined above would suggest that it is impossible to generalise that the interaction between iconic text and the subject would be meaningful at all times. Rather, each iconic system would interact with a specific audience or individual at a specific time and place, and in a specific culture.

The residents of eMhlwazini have not only had little formal linguistic education, but have had no formal visual literacy training at all. Nevertheless, the way that people constructed meaning from ***Part 1*** of the video was dependent upon their individual contexts. Norberg (1953) commented that neither the individual nor the environment should be regarded as independent entities merely affecting or conditioning the other. In other words, Norberg saw perception as a creative process, an instantaneous act that allowed people, with their unique experiences of their environment, to learn about their world. Each perception was recognised as benefiting from all previous perceptions, and in turn every new perception left its mark on the communication store - the individual's mind.

For the women of eMhlwazini, who spent most of their time collecting wood and water, the potential NPB development raised, among other concerns, questions about skill requirements for employment. The experiences and needs of the youth put a different perspective on viewing the video. For some, the video's focus on balancing environmental conservation with job opportunities failed to demonstrate concrete benefits from Natal Parks Board - like the establishment of a high school in the ward. Considering that the PEIA had identified the lack of educational facilities as an area of major concern, it was not surprising that the youth would have been

looking to the development to alleviate this crisis, and would have assessed the video from that point of view.

The above two examples illustrate that in understanding visual literacy one must consider the relationship of the subject to the contents of the visual material itself, as well as the determinisms that affect the subject's construction of meaning.

3.5 Understanding and Defining Visual Competence

Generally, literacy refers to the knowledge and expertise necessary in the tasks of decoding and encoding written information or language. The opposite of literacy is illiteracy. However, there is no such equivalent for visual illiteracy. People who are sighted can make some sense of visual images. Thus a more useful term to employ than visual literacy would fall within Gross's broad category of symbolic competence - competence in any of the following modes: linguistic; iconic; social-gestural; musical and logico-mathematical (Gross, 1974).

Van Zyl (1989) demonstrates the link between Gross's emphasis on symbolic competence as the derivative of activity, developing with the individual's maturation where the basic rules of creating meaning become less explicit and more integrated as they are practised; and Piaget's theories of learning and intelligence. For Piaget (1970), the functions of intelligence consisted of understanding and imagining, in other words in building up structures by structuring reality. "Knowledge is derived from action....to know an object is to act upon it..."(*ibid*, 1970).

In attempting to further understand how images operate to create meaning, and what makes them accessible to communities with limited linguistic literacy skills, it is useful to briefly discuss de Saussure's (de Saussure, 1966) tripartite language structure, the acquisition of which Chomsky (1975) recognised to be universal - common to all human beings.

De Saussure identified language as having a dual origin - as the expression of certain natural inclinations; and as the product of a social system. He divided language structure into *langage*, *langue*, and *parole*.

- *langage* being the ability to perceive;
- *langue* being the ability to make sense of visual configurations of material reality and to reproduce and represent those configurations; and
- *parole* being acquired through education and varying according to cultural and individual constraints. Thus *parole* is the physical sound of a language and is not necessarily considered to be part of language (*langue*) itself.

Based on this system it is assumed that the ability to perceive (*langage*) is universal, as is the ability to make sense of and reproduce and represent the visual structuring of material reality (*langue*). The particular form which such representation might take may vary across individuals and cultures, but is learnable (*parole*). Thus, van

CHAPTER 4

VIDEO AS A TOOL IN PUBLIC PARTICIPATION

Zyl (1989) suggests that the first two stages occur during the maturation of the individual, and only the third stage is learned through education.

This perspective is borne out by the experience of screening ***Part 1*** of the video in eMhlwazini. Without being taught visual literacy skills, the local residents made sense of the video material before them, in ways which showed additional and more complex understanding when compared to the concerns raised during the socio-economic surveys carried out in February. After viewing the video, questions asked were more detailed regarding the types of jobs that might be offered, the size of the proposed camp, and discussions were initiated around the balance between development and environmental conservation. Furthermore, issues were raised regarding strategies through which to challenge the existing structures of power between eMhlwazini residents and NPB.

These, and other issues raised, will be looked at in greater detail in Chapter 4. However, it is interesting to note here, that prior to producing ***Part 1*** of the video for screening to residents of eMhlwazini, there were several warnings about the difficulty of accessing a so-called visually illiterate audience. The lack of exposure to television images seemed, to some, to preclude the use of video as a tool for informed decision-making in this area. Suggestions varied regarding the stylistic approach to making a video for this particular purpose - avoiding the use of close-up shots where the audience might struggle to comprehend that the hand or face in the frame was still attached to the rest of the body; using a linear narrative progression (in other words, the video should have a beginning, middle and end - in that order); and ensuring that each image chosen had a specific, directly relevant meaning. Some of the warnings were heeded. However, even where the narrative was complex (using the journey in the car from Johannesburg to talk about and show the environment of eMhlwazini and Cathedral Peak) the audience seemed to have little difficulty in understanding the information presented. Perhaps this is where the specific consideration of ethnographic visual literacies paid off. For example, the translation of information into colloquial Zulu; the use of familiar locations and the repeated appearance of local residents in the video; together with information that presented the needs and concerns of the eMhlwazini residents; all combined to create an environment in which meaning could be easily constituted. For an audience with different ethnographic visual literacies this might not have been the case.

3.6 The Ethnography of Visual Literacies

Using an ethnographic model (participant observation and a consideration of cultural determinisms) it is clear that there is no one visual literacy, but rather many - re-emphasising that people create meaning depending upon the experiences which they bring to bear on what they see. This would allow a rural herdboy to recognise his cattle by the markings on the hide, while simultaneously allowing a cinemagoer to understand the complex narrative structure of an Alfred Hitchock film like *Psycho* (Hilterman, 1991), or to respond to the cross-referencing of shower scenes in other horror films. Thus, again, the *subject* is recognised as an important component in

the visual discourse. Here, the text should be conceived of as a site of intersection for a complex interaction between signifying processes rather than as a self-sufficient independent 'thing' (Allen, 1989). In other words, ***Part 1*** of the video dissertation could not be "read" in a vacuum. It was neither produced nor presented to the audience in such a manner. Rather, each member of the audience was recognised as bringing with him/herself a framework of references which would facilitate understanding of the video on a specific level. Thus, meaning was created at the intersection between the video (style, form and content), the audience (with its common and unique systems of decoding and understanding) and the particular communication situation in which each viewing occurred (down at the river where women were doing their washing, or in the shebeen, or in the NPB employees hostel). Together all these elements discoursed to derive meaning.

Van Zyl suggests that "there are many visual 'literacies' not just one, and the end of the acquisition of visual competency is not the production of consistency of vision or even uniformity of interpretation. It is knowledge of the processes involved and awareness of the self. In Goodman's words:

> *The eye comes always ancient to its work, obsessed by its own past and by old and new insinuations of the ear...Not only HOW, but WHAT it sees is regulated by need and prejudice. It selects, rejects, organises, discriminates, associates, analyses and constructs."*
>
> (Goodman 1969, in van Zyl, 1991)

3.6 Video as a Tool

As has been demonstrated, video clearly has the potential to disseminate information to illiterate and semi-literate communities. This potential, of necessity, recognises the viewer's unique ethnography, which operates as a lens to focus his/her interpretation of the visual text. It is true that not all iconic systems will facilitate meaning in all situations - the red rose may signify nothing to the residents of eMhlwazini. However, environmental impact assessments are site specific, and thus the biophysical and socio-economic information contained within them is of a specific nature too. By deduction then, many of the images and concepts within EIA reports should be translatable into simple visual images, familiar and accessible to all interest groups.

Meaning is created at the intersection between the author, visual text, audience and communication situation - as has been discussed throughout this chapter. However, the need for informed decision-making in environmental management requires that certain information be understood in a specific way, focusing the viewer in a particular direction. It should furthermore be recognised that even from one's unique perspective or context, meaning can sometimes be difficult to construct. It is this need which necessitates that video operate in an interactive process, enabling discussion, clarification, participation and empowerment through access to information.

This chapter has established the potential of video as a medium for the dissemination of information in illiterate and semi-literate communities, which, in itself, is an important step towards informed decision-making. However, taking into account the often technical nature of the information contained in environmental reports, the conditions under which video information is disseminated must facilitate interactive discussion and clarification. Knowledge, shared in this manner, can move beyond merely enabling people to make decisions related to a specific project, but can empower communities on a broader scale. It would seem that the power of video as a tool for informed decision-making and empowerment in illiterate and semi-literate communities lies in an interactive and participatory approach.

It is to issues of participation that this dissertation now turns its attention. Chapter 4 examines what is meant by the popular term "public participation" and its role in environmental management. The chapter discusses criteria identified as important for sustainable development and measures the use of interactive video against these criteria.

CHAPTER 4

VIDEO AS A TOOL IN PUBLIC PARTICIPATION

4.1 Unpacking Public Participation

> *"Four Years, 1500 pages, R4 million and 23 specialist studies down the line, barely ten pages had been devoted to the views of the displaced communities involved in the St Lucia Environmental Impact Assessment controversy. Hein Marais, in the* "Work in Progress" *journal, suggested* - 'a distressing oversight' - *to say the least.*
>
> (Spitz & Urquhart, 1994)

Public participation in South Africa is still in its infancy and, in policy initiatives, in particular, is often still restricted to the elite (Orkin *et al.* 1994). It is a particularly fashionable concept at present, considering both the new democracy in South Africa; and available international funding, which is often conditional on public participation. In this chapter, the theory of public participation will be examined so that its facilitation through interactive video can be assessed, and conclusions drawn.

Arnstein's long-standing view of public participation (1969) articulates a "ladder of citizen participation" on which there are eight rungs. The rungs range from the levels of non-participation (Manipulation and Therapy) to three degrees of tokenism (Information, Consultation and Placation) and finally to three degrees of citizen control (Partnership, Delegated Power and Citizen Control) (Connor, 1988). Behind each approach lies a specific development agenda.

At the bottom of the ladder is "Manipulation", a form of non-participation which benefits powerholders only. Rahnema (1993) sees participation of this nature as "a deceptive myth or a dangerous tool for manipulation". Higher up on the ladder is "Consultation" which allows the public to express their views through methods such as surveys, neighbourhood gatherings and public meetings. There is, however, no guarantee that following "consultation" public opinion is be heeded. Without real power to affect decision-making "consultation" may be considered to be a tokenist approach, its proponents hiding behind the facade of genuine participation. Arnstein notes "There is a critical difference between going through the empty ritual of participation and having the real power needed to affect the outcome of process" (Arnstein, 1969). At the top rung of the ladder is "Citizen Control", where participants hold absolute decision-making power.

The rung of "Partnership", which is two below "Citizen Control" on the ladder, is perhaps more appropriate to the development process currently taking place in South Africa within the framework of the Reconstruction and Development Programme (RDP). Here, power is redistributed through negotiations between outsiders, who may consist of both the funders and "experts" connected with the development process, as well as community groups.

Complementing this position, Cock recognises four aspects involved in public participation (1995):

- firstly the dissemination of information or education;
- secondly, the involvement of the public in the research process of data collection;
- thirdly, the provision of opportunities for interaction between an informed public and the authorities; and
- finally, the participation of the involved public in decision-making.

Rahnema distinguishes between 'hard' and 'soft' versions of participation - 'soft' public participation implying access to information and data collection, and 'hard' participation suggesting "organised efforts to increase control over resources by movements of those hitherto excluded from such control" (Rahnema, 1993, in Cock, 1995). Under this definition of 'hard' participation the concept of empowerment to challenge the *status quo* is highlighted.

4.2 Arenas for Public Participation

4.2.1 Public participation in policy initiatives

South Africa does not have a history of participative decision-making - neither in its apartheid government structures, nor in decisions relating to environmental issues. "One of the major factors inhibiting a participatory approach .... has been the undemocratic, technocratic and secretive style of government ..." (Sowman, 1994). But with the shift to democracy this is changing. However, the democratic right to vote is not, in itself, assurance of participation on the higher rungs of the Arnstein's ladder. The opportunity to vote facilitates a level of participation, but without continuous grass-roots participation the right to vote would only make it to the rung of "Consultation", half way up the ladder. South Africa's emerging democracy is aiming higher.

Indeed, a flurry of new policy-making initiatives in the Government of National Unity are actively soliciting public involvement. Not only is input required into "white papers" which present to the public already drafted policy documents for comment, but participation is also being encouraged in the initial stages of planning.

paper" policies. Examples of such initiatives include the "green papers" concerning telecommunication (South Africa, 1995), and population policy (South Africa, Ministry of Welfare and Population Development, 1995) amongst a number of others.

The Constitutional Assembly, too, invites the public to comment on all aspects of the constitution. The constitution-making process is a sophisticated one, of which the executive director of the Constitutional Assembly, Hassein Ebrahim, said "No process in this country, including the Freedom Charter, has been as consultative and transparent as the drafting of our Constitution. We have never had a single closed meeting and our minutes can be read on the Internet" (Mail & Guardian, 1995b). However, he went on to admit that "we recognise that a significant proportion of our people don't have television and radio and cannot read" (*ibid.* 1995b). Therefore, the campaign is focusing on areas which are unmarked on the map - the many rural areas of South Africa - to involve people in informed decision-making.

A further difficulty of involving the public, and in particular the urban and rural poor, in policy formation lies in the perception that policies do not directly satisfy basic needs. During the processes of *agenda-setting*[3] and *policy formulation*[4] (Orkin *et al.* 1994) no concrete evidence exists to demonstrate the effects of policies on the quality of life of the poor, and policies are therefore seen to be too esoteric to be meaningful or to evoke participation. As a result of this perception, those who are highly literate and those with vested interests tend to shape policy. "Indeed, it can be argued that since people are generally ill-informed about policy issues and, hence, apathetic, both the political and bureaucratic elite actually fashion mass opinion...more than the masses shape leadership's views" (Sassa, 1985). This argument is confirmed by public submissions to the Constitutional Assembly. Out of approximately two million submissions, one million were from proponents of an Afrikaner homeland and a further 750 000 letters were from the "Keep-Parliament-in-Cape-Town" lobby. If these are deducted from the two million, "only 200 000 South Africans - or 0.5% of the total population - have been inspired to put pen to paper" (Mail & Guardian, 1995b). In this way, the elite-based interaction with policy makers would be maintained, "...planning *for* the people rather than *with* the people.." (Sowman, 1994). Even though some of these groups may well represent the interests of illiterate poor communities there is little direct representation by the communities themselves.

4.2.2 Participation in EIAs and environmental management

Public participation is one of the underlying principles of Integrated Environmental Management (DEA, 1992) and its emphasis is a key to avoiding the process of IEM from becoming a "shallow form of environmental managerialism" (Cock, 1995). However, the principle of participation in an open and transparent manner, in tandem with consultation with I&APs, has been largely absent in environmental

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[3] In the New Nation article "What is Policy?" (1992) *agenda-setting* is described as the stage during which problems and issues are identified for which policy positions are required.

[4] *Policy formulation* is defined in the same New Nation article as the stage in which actual policies are drawn up. Research is a significant aspect of this stage.

tandem with consultation with I&APs, has been largely absent in environmental management in this country, and where it has occurred it has often seemed to follow a fairly elitist approach (Weaver, cited in Cock, *op cit*).

It is not the focus of this chapter to address inadequacies in public participation in the planning and assessment stage of IEM, but rather to point out where limitations have been identified in the course of conventional EIA procedures. It should also be noted that public participation is meant to extend beyond Stage 1, the planning and assessment stages of the IEM procedure and during the decision stage (Stage 2), the public is supposed to be involved in the decision-making process. To achieve this, the information contained in an EIA report needs to be available to the authorities, the specialists and the public for response and comment, usually within a specified time frame. Sowman suggests that a key principle underpinning public participation is the distribution of information, resources and development skills to facilitate equitable participation of all affected parties (Sowman, 1994). Here too, IEM procedures in South Africa have experienced limitations.

It is relatively simple to ensure access to EIA reports by relevant authorities and specialists. Even literate, urban participants can be easily reached. However, the rural areas pose more of a problem, exacerbated by the low levels of linguistic literacy present in many communities. Access to reports is one thing, but access to the information contained in the reports is quite another. Not only do EIA reports presume literacy, but the often technical nature of the reports makes them unintelligible to non-specialists, necessitating community critiques of technical documents by volunteer "experts". "For the community groups the use of expertise by others was frequently a disempowering experience, a method of defining issues that effectively eliminates participation by those most affected by such decisions" (Gottlieb, 1993 in Cock, 1995). Involving illiterate and semi-literate communities in participation of this nature would be tokenist, with the necessary skills and capacity for true participation lacking, as "... only a few (people) would have the knowledge and skills to review the document and plans, and to be able to comment from an informed position" (Sowman, 1994).

Thus, despite the fact that the PEIA conducted in Cathedral Peak produced a report which attempted to integrate the scientific and social data in a user-friendly manner, a high level of literacy would still be a requirement for understanding the document. In this case, as in several others, the conventional channels of EIA report feedback can be seen as inappropriate in circumstances of illiteracy and poverty. This might explain some of the shortcomings experienced in IEM to date.

4.2.3 A brief track record of public participation in conservation projects

Participation in environmental conservation projects has, in the past, been no different to public participation in other spheres of social, cultural, economic and political life - particularly for the poor.

> *"until very recently the dominant understanding of environmental issues in South Africa was an authoritarian perspective. This focused exclusively on*

> *animals. Within this perspective 'overpopulation' was often identified as the main environmental problem. It was people who were perceived to be responsible for destroying trees and creating waste"*
>
> (Cock & Koch, 1991).

Examples of this perspective are prevalent in the historical removal of people in favour of the establishment of parks and reserves. This approach would not make it onto the first rung, "Manipulation", on Arnstein's ladder.

> *"On the 14th of December 1949 commissioner Kruger came with maps and told us that we must leave our land because they wanted it for animals..."*
>
> (Thomas Phelembe, oral historian for the Ngomanes people, in Moloi, 1993).

By 1983 little had changed. The families of thirty two homesteads were forcibly removed from within the boundaries of the newly established Tembe Elephant Park and dumped in an area where there was no water supply (Orkin *et al.* 1994).

It was only in 1991 that the first formal agreement involving community participation in the running of a National Park was signed between the National Parks Board and the people of the Richtersveld. This was only after years of struggle to ensure that the needs of the 'halfmens', a rare succulent, were not placed above the needs of the people who had been living in the Richtersveld for hundreds of years (GEM, 1993). The agreement exemplified the first true "partnership" in a conservation development in South Africa (GEM, 1993).

Unfortunately, the Richtersveld example has not set a precedent for all conservation agencies. In the present Cathedral Peak case study, the NPB will ultimately make the final decision regarding the proposed development, based on the information contained in the PEIA report and additional studies commissioned in response to the report. It has at no time seen itself as being bound by the recommendations of the report nor by public comments stemming from the public participation process. It would be fair, in this light, to question the NPB's commitment to principles of public participation.

4.3 Moving Up the Ladder

Sustainable development, as defined in the World Conservation Strategy (WCS) is "...the management of human use of the bio-sphere that it may yield the greatest

benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations" (IUCN, 1980). The definition recognises the interrelation between economic development and the conservation of natural resources. However, sustainability can only be achieved if people understand this interaction, which then presumes the necessity for broad environmental education. Connor (1988) supports this position, recognising the need for a mutual process of education. This is seen as the most fundamental rung of any ladder of participation.

Quinlan (1993b) suggests that an important principle of education for sustainability is the democratisation of the education process. He summarises the principles of sustainability of the WCS as implying:

- research as a combined effort between acknowledged professionals and other participants;
- research which is designed as much to educate the "experts" as it is to educate the people subjected to development projects, thus necessitating extensive participation; and
- project initiators who act as facilitators rather than project supervisors.

These principles have several parallels to the concept of critical pedagogy espoused by the Brazilian educationalist Paulo Friere (Friere, 1971; Allman, 1994). For Friere (1971), "learning is regarded as a collaborative task which builds upon the skills of both participants (teacher and student) and is an engagement through which both create knowledge". Furthermore, the process is dialectical, facilitating the awareness of knowledge as a socially constructed object - value laden and specific to its context. This perspective suggests that knowledge is uncertain, posing questions rather than merely supplying answers. A third principle of critical pedagogy is the intent to "link theory and practice, thought and action, with the teacher as facilitator rather than instructor" (Quinlan, 1993b). According to Arnstein's ladder, this approach would be on the highest rung of participation, with all parties having equal control of the pedagogic environment.

Quinlan (1993b) highlights three parallels between the principles of critical pedagogy and those of sustainable development. Figure 3 demonstrates the parallels graphically:

Sustainability		*Critical Pedagogy*
1. The principles of the pooling of skills and combining means in environmental research	⟷	The dialectical relationship between teacher and students
2. The principle of extensive participation	⟷	The assumption of education as a participatory experience
3. The principle of environmental research which integrates "expert" and indigenous knowledge	⟷	The desire to integrate theory and practice

Figure 3: Parallels between principles of sustainability and critical pedagogy.

Thus, the principles of critical pedagogy, when applied to projects aimed at sustainability, enhance the potential success of such developments through informed and extensive participation. Following this argument, if interactive video facilitates the dissemination of information contained in EIAs or environmental reports, along the lines of critical pedagogy, it has the potential to contribute to climbing the ladder of participative environmental management - both in South Africa, and internationally.

4.4 Can Video Help Us Up A Rung?

4.4.1 Guiding Principles to Public Participation

Cock lists fifteen key principles of a sociological approach to public participation. Not all are relevant to this dissertation, thus, only the pertinent ones have been summarised below:

- to recognise social differentiation;
- to educate or give information as a two-way process where both scientific and indigenous knowledge are valued;
- to include all interested and affected parties (I&APs);
- to be transparent and accountable;
- to recognise realistic limits - deadlines and finances;
- to establish an environment for active participation - involving engagement, free social organisation, co-operation, dissent, open debate, problem solving and negotiation;
- to extend formal procedures into less formal settings;
- to facilitate empowerment and capacity building; and
- to resolve conflict.

Several of these principles are echoed in the earlier discussions of sustainability and critical pedagogy (section 4.3). Together, these principles will be used as criteria

with which to assess video as a tool in environmental management, for the participation of illiterate and semi-literate communities.

4.4.2 Testing the medium

The conscious approach taken to setting up the environment for the video screening, together with processes inherent in creating meaning out of visual images, and further unconscious events which influenced residents' responses to the video, show remarkable similarities to the central principles outlined in all three discussions relating to sustainability, critical pedagogy and public participation discussed above (Figure 3 and sec 4.4.1).

The **disaggregated nature of communities** was recognised by screening the video to small, informal groups, at the locations where such groups tended to congregate. For example, women could most easily be accessed by taking equipment onto the rock at the river, where they were doing washing, or setting up the equipment at convenient places along the road where those carrying head-loads of wood could stop and rest. A small group of old men was found sitting next to the road in the middle of the morning, and so the video was shown to them. On occasions people asked for specific screenings where they would arrange a group of people - the importance of this approach was that in a group familiar with one another the opportunities for everyone to speak, without feeling intimidated, was increased. This was also seen in the groups of women, who had the opportunity to speak openly. In circumnstances such as public meetings, men tend to dominate.

Disaggregating groups also assists in recognising and addressing differences between practical and strategic needs[5] . Thus, in screening the video to different interest groups the focus on both practical and strategic needs could be highlighted.

Again, the groups of women served as useful examples to illustrate this point. Initial questions focused on the types of employment that might be created - what levels of skill and standards of education would be required - issues connected to practical gender needs for the maintenance of the family. Once these questions had been dealt with, the PEIA report was used to point out findings related to the particularly difficult position of women within eMhlwazini and the recommendations made to address this issue (Master Group, 1995). Suddenly debate turned to focus on how women could represent themselves to promote their interests as an under-represented group. The crafts-women, who had been waiting for several years for

[5] To illustrate this point, let us consider the difference between practical gender needs and strategic gender needs (Moser, 1993). Gender interests are those that women (or men) develop in relation to their social positioning through gender attributes. These interests should be translated into needs when assessing or planning interventions of development proposals. For example, strategic needs are the prioritised **concerns** of women resulting from their subordinate position to men in society. In other words, strategic needs recognise the importance for women to challenge the broader social structures through which they are oppressed. Practical needs emerge as perceived **necessity** within women's socially accepted roles. These practical needs are formulated from concrete conditions of experience, and do not challenge existing gender divisions within society.

the planned building of a craft centre, talked about organising a group to go and speak to NPB management.

The focus on job opportunities that the development proposal would offer was not a convincing angle for the youth of eMhlwazini, whose major practical need was identified as educational facilities. Thus, while the video was enjoyable for this group to watch, it showed little chance of solving the education crisis in eMhlwazini. It was also a difficult discussion to facilitate considering NPB's limited achievements in the Neighbour Relations Policy in this and surrounding wards. But perhaps the positive outcome of the discussion was to demonstrate the **transparency** of the process, in which no one person (including the facilitator) had all the answers, and that no false promises were being made.

NPB employees wanted access to the written PEIA, so that those who could read could go through the details of the proposal, and also get more information about the development/conservation debate. The group decided to send a representative to NPB to request a copy of the report. Furthermore, Mr. Zondo, a senior member of NPB's staff, and the induna for the eMhlwazini ward, requested a copy of the video-tape so that he could arrange screenings in the ward for residents who had not been able to see the video during the three day screening period. Both requests demonstrated a sense of entitlement to information - possibly as a result of **empowerment**.

The debate around conservation and development arose on two occasions, at both times illustrating the importance of using video as a tool in a broadly interactive process. A misinterpretation of the video information had given the impression that the "students" favoured "no development" to development that would impact on the environment. A further perception, due to the lack of detail in the video, was that building on two sites would create more jobs because this would create more accommodation. Both of these misconceptions were dealt with **interactively**, facilitating **debate**, **dissent**, **problem solving** and **negotiation** until the participants were satisfied with the combination of priorities expressed in the report, and until it was evident that the position arrived at by the "students" was partially as a result of the communities' information, experiences and knowledge shared during the research period. These discussions, together with the emphasis on the "student" status rather than establishing the Masters Group as "experts" played an important role in emphasising the **two-way process of learning** that had occurred. Furthermore, my status as a student returning to the ward, asking for further feedback on ideas and ways of disseminating information, re-emphasised the dialogical nature of the learning process.

All members of the audiences were excited by seeing their own environment and familiar people. However, the excitement was about more than just recognising faces. It was about hearing the opinions of friends and relatives taken seriously enough to be documented as part of a package of information and put onto a television screen. This process took cognisance of **indigenous knowledge**, and gave it the same platform (and therefore the same power) as the **scientific knowledge**.

It is not possible to examine all the different responses given by members of the various audience groups. However, the examples outlined above serve to demonstrate the following:

- Video, used as part of an interactive process, can recognise and easily accommodate the heterogeneous nature of communities. In doing so, the process can address both practical and strategic needs.

- If responsibly produced and facilitated, video can ensure the transparency of information contained in technical, and specifically EIA reports; and it can increase the accountability of the decision-makers by reaching a broad range of often under-represented I&APs.

- By increasing access to information, and by demonstrating a commitment to extensive public participation, interactive video can empower communities. If followed through, this could enhance capacity within communities.

- Creating meaning out of visual images is an active process, which together with discussion, debate, dissent, problem solving and negotiation can establish an environment for extensive public participation.

- Interactive video can clearly demonstrate the dialogical process of learning by focusing on the sharing of ideas in discussion, and by documenting, on tape, the research process which has already integrated a discourse of information.

- Video establishes a platform for the integration of theory and practice, and of conventional scientific and indigenous knowledge. Both conventional Western and indigenous views can be portrayed on screen with equal value and respect.

There are undoubtedly limitations to using video for public participation in IEM and any other development strategies. These will be discussed in the next chapter, Chapter 5, which will discuss a way forward for video in environmental management and conclude this dissertation.

CHAPTER 5

CROSSING OVER - CONCLUSIONS

CHAPTER 5

CROSSING OVER - CONCLUSIONS

"Throughout Latin America the cultures of urban and rural masses are increasingly products of the mass media. The Latin American masses are entering modernity not through the printed word, but through the formats and genres of the culture industries of broadcasting. The masses now embrace modernity not by abandoning their oral culture, but rather by conforming it to the grammar and syntax of radio, film, and television..."
(Barbero, 1993)

5.1 Introduction

This dissertation has placed itself within the historical context that shaped and continues to shape present day South Africa. This context includes exclusion from decision-making; the conscious underdevelopment of the majority of the population resulting in low levels of literacy and stunted capacity for informed public participation; as well as a government which has behaved autocratically and technocratically in relation to environmental issues, resulting in hostility between rural communities and conservation authorities. It also includes present initiatives to bring participation to people at grass roots level so as to redress the inequalities of the past, and to move forward towards a truly participatory democracy in all spheres of society.

This, together with the need to feedback information from the Master Group PEIA to affected rural communities, prompted the present dissertation to look into unconventional methods through which public participation could be facilitated and enhanced. Particular attention was focused on participation in environmental management.

Two strategies were employed to assess the potential use of interactive video as a tool for informed decision-making and empowerment in illiterate and semi-literate communities. At a theoretical level, issues concerning visual competence, the creation of meaning through visual texts, and public participation, formed the base from which needs could be identified, understood and tackled. This was followed up, in practice, by the production of ***Part 1*** of the video, which aimed to address some of these needs.

5.2 Findings

5.2.1 Strengths

The video was screened to its target audiences and demonstrated several strengths as a tool for use in environmental management.

Firstly, interactive video drew eMhlwazini residents into active participation. People discussed, debated and re-evaluated issues. The disaggregated nature of the groups ensured that no one person dominated discussion, and that everyone had an equal opportunity to be heard. Residents exhibited a more complex understanding of NPB's development proposal and related issues after viewing the video than had been demonstrated during the social survey four months prior to the screening. Furthermore, the nature of video, which can be screened and re-screened several times, allowed people the opportunity to integrate knowledge at their own pace.

Secondly, while recognising the different groups within the eMhlwazini ward, the process of showing the video brought people together, as a 'community', in a social setting. Observation of this event revealed interesting structures implicit in eMhlwazini, and worth recognising as the basis for any further development activities. For example, screenings were not formally organised and yet, during screenings, children took up the front positions next to old women, while the younger members of the audience stood to the back, allowing elders to enter the group as they arrived. Another example of the social structure implicit in eMhlwazini stems from the NPB employees' screening. During this time it became clear that although this employee group was often seen to be distinct from the eMhlwazini residents, their interests and needs were not only similar, but were very much supportive of the needs of those without employment in the ward outside the Park. Thus, the process of interactive video, in itself, has the potential to unite people around issues of common importance, and thereby to empower communities.

A third strength of interactive video in environmental management is its enhancement of the principles of sustainability. By translating environmental information into an accessible form, video can reach a much wider audience than conventional procedures employed within IEM. And in reaching more people and facilitating their participative exposure to new perspectives, interactive video can play a role in critical pedagogy, which has been shown to enhance the aims of sustainability.

These are the main strengths of video identified by the dissertation. However, there are several which have been discussed or implied in earlier chapters which will not be repeated here.

5.2.2 Weaknesses

It would be simplistic to recognise only the benefits of using video in environmental management without recognising some of the difficult issues which video raises.

To begin with there are the uncomplicated issues related to time and money. Video is an expensive medium, which requires expertise in its production process (see Appendix 3). The video made for this dissertation used only one person trained in film work to operate the camera, sound and to edit. Although this was satisfactory, the interactive discussions in the field would have benefited from the presence of an additional facilitator. It is, nevertheless, an advantage to keep the crew as small as possible to reduce the intrusion of outsiders in the process.

My familiarity with the PEIA report contents was important during the production of ***Part 1*** of the video. For an outside filmmaker to enter the process at the stage of report translation could be problematic and time consuming, bearing in mind the often technical nature of EIA reports. Thus, it would be advisable to include a filmmaker into the research team, at various stages - depending on available finances. Familiarity with relevant ethnographic considerations, built into the filmmaker's approach from an early stage of the project would increase the value of the final product by ensuring its accessibility to the audience.

It is important to recognise that, while different audiences will read different meanings into a video, this does not suggest that the same video would be appropriate to all I&APs. If video is to achieve its potential as a tool for empowerment it needs to recognise the specific audience, and address that audience, not only in a mother tongue, but through identifiable images and styles. This is an obvious hurdle to using interactive video in environmental management in generalised ways. While producing videos for any or all I&APs is possible, and would have similar benefits to those highlighted in previous chapters, video, in the context of this dissertation, aimed to address the needs of those historically disadvantaged communities who are often affected, but under represented, parties.

Interactive video has the potential to climb Arnstein's ladder towards real "Partnership" in decision-making in disempowered communities. However, it also has the potential to eloquently facilitate the bottom rung of "Manipulation". Therefore, if it is to be employed in environmental management video would need to be carefully monitored, and any report translation into visual images would need to be subjected to the same procedures of independent review as the EIA report itself.

The introduction of video images into illiterate and semi-literate communities, the majority of whom have no electricity, is a responsibility, with potentially negative ramifications. However, if sensitively and openly employed, interactive video could facilitate extensive public participation, informed decision-making and empowerment in historically disadvantaged communities - within South Africa and internationally. Furthermore, interactive video's contribution to sustainable development, as a tool in the process of environmental management might influence, not only the way people look at and know their worlds now, but also the way future generations may come to look at and know their worlds.

APPENDIX 1

ENGLISH SCRIPT FOR PART 1

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The following is the English script used for subtitling ***Part 1*** of the video. It represents the narration translated for the video, and comments made by eMhlwazini residents are documented in *italics*, as they appear in the final edited version. Each paragraph represent a sequence, or *take*, in the video.

❋❋

Script:

My name is Phybia Dlamini and I live in Gauteng. A few months ago, five students from UCT came to study in your area. We are going to look at what they learned from NPB and from you, and what they wrote in their report.
We have to travel to see where you live and to see where NPB wants to build its new camp.

❋❋

While we're driving, let me tell you about NPB's wish to build a camp at Cathedral Peak. The area in which you live is very beautiful and quite, and NPB believes that visitors from our country and from overseas would like to visit Cathedral Peak, to walk in the mountains, and look at the birds and animals living in the Park. NPB has camps for visitors in other areas, but it has no visitor facilities in Cathedral Peak. It believes that the beauty of your area will encourage many tourists, and therefore NPB feels responsible for providing places for them to stay in.

❋❋

We leave the big city of Gauteng behind us and start our long journey to Cathedral Peak.

❋❋

NPB has seen the struggles that you and your neighbours have in getting jobs and enough money to live on.
The new South African government is concerned that the basic needs of all people should be met. These needs include food, housing, health and education, and the government is encouraging everyone to work towards these goals.
NPB believes that building a new camp in Cathedral Peak would help to achieve these aims. It would create jobs, bring tourists to the area and the tourists would spend money buying things like crafts from people in your communities.

****

While we've been talking about why NPB wants to build a new camp, we have been driving closer to where you live. Let me show you on this map.
A map is a drawing of the roads and towns that we drive through. It makes everything look small and close together. You can see our toy car on the map.
We're getting closer to Bergville.

****

Let us keep driving and in the mean time let me tell you what the Cape Town students were doing when they visited you and other groups in Pietermaritzburg in February.
With the new democracy in our country it is important that people like you and me have a say in decisions that affect our lives - like voting. If NPB wants to build its camp many people will be affected - like the residents of eMhlwazini, Magagangozi and nGobas wards as well as hikers and mountain climbers, and conservationists. So the students had to learn what you all thought about this project and they had to see how building a camp could affect the people and the natural environment in which the camp would be.
After talking to all these people the students wrote a report to tell Park Board about everyone's opinions, so that the Board could make an informed decision.

****

We have driven all along this road on the map. This is the route tourists would take if they were visiting Cathedral Peak. You can see that there are much fewer cars on the road and that the buildings are smaller than in Egoli. There are also more trees and mountains than in the city.
We have passed Emmaus and the school, but before we hear what the people of eMhlwazini has to say, let's go right into the Park to see where NPB proposes to build its new camp.

****

NPB's proposal; is to build the camp in two places. Up on top, and also down here next to the Park's Board offices. The buildings around the office area would have some visitor housing, reception, a restaurant and curio shop.

****

If you were in an aeroplane, looking down on the Park and eMhlwazini, this is what you'd see.
This is the bottom part where NPB wants to build, and this is the top part - you can see the sandstone cliffs behind it.

****

NPB proposes to build a road to the top site on the Tryme Shelf and would put some houses up there for tourists. Let's go and have a look.

❁❁

This is the Tryme Shelf. All of this area, up to those hills, would be used to house visitors.
NPB wants to build up here and further down, and the students thought it would be important to examine the proposal to see how the communities and the natural environment would be affected. They wanted to investigate the good and bad parts of NPB's plan, and to look at other options for the proposal.

❁❁

The students thought that one option would be to build everything on the bottom area and to leave the top site untouched.
The environment at the bottom had already been disturbed by existing buildings.
Another option would be to have no development at all.

❁❁

Park's Board and other organisations drew up a policy to protect the Drakensberg. The policy said that no visitor housing should be developed on this upper area.
It is possible that the policy needs to be revised.
However, it is important that Park's Board abide by the existing policies drawn up to protect the environment. If NPB is not bound by the policy that protects this place then other people won't feel bound by it either, and in this way, the Drakensberg will be unprotected.

❁❁

If NPB do build visitor housing on the Tryme Shelf the sensitive part of the natural environment could be negatively affected - more than if development happened at the bottom. It would also be more expensive to build up here than down there.

❁❁

NPB's job is to protect the trees, animals and water. That's why some people believe that it would be better if there was no development at all - to make sure that these things are not disturbed.
Many people believe that in the past NPB cared more for the plants, water and animals than it did for the people neighbouring the Park.
If those in charge of NPB want to continue managing this place they need to show how they and the Park can benefit people.

❁❁

Many people living in eMhlwazini had comments about the building of this camp. Let's hear some of them:

❁❁

Resident's Comments:

The land does not belong to Park's Board. It must be returned to the amaNgwane people.

The land belongs to the people.

I'm old, and this place has never done anything for me since I was small. The land belongs to the government...and to the people. Parks Board - they have done nothing with it.

We want the land inside the Park for grazing. We've told NPB we want that land.

We don't know who owns the land yet. They're still discussing it.

We are willing to accept NPB being here if they help to set up industry around here, create jobs and give us some land to graze our cattle on.

Parks Board is doing nothing with the land, so we need it to plant on and to graze our cattle.

They could help us by giving food to the school children and by bringing electricity to the area.

Parks Board must allow us to collect herbs inside the Park. They must help us to help those who are sick.

Outsiders who want to collect herbs must go through the office - and they must be allowed to take only small amounts of herbs.

The herbs will only run out if outside people are allowed to collect. People must only take small amounts - like a packet full. They mustn't be allowed to take big sacks to trade with.

❁❁

When the students spoke to people in the communities they heard that there was a shortage of work and schools, specifically high schools. But people also came up with suggestions on ways to work together with NPB for the benefit of all the residents of eMhlwazini.

****

The students found the following about the three development options that they examined:
If NPB build at the top and bottom sites local residents will get jobs, but NPB will be breaking the existing policy if they build on top. They will also be disturbing the natural environment up there, and it would be more expensive to build at the top.

****

The second option, of building only on the bottom site, would mean that residents would still get job opportunities, but that policy would not be broken and the environment would not be too affected.
If there was no development at all, the environment would not be affected and NPB wouldn't be breaking any policy, but the communities would not benefit from the development and related tourism.

****

This place is very beautiful and visitors would appreciate it greatly. If the development does go ahead then NPB and the people of eMhlwazini will have to negotiate ways of working together for the benefit of the entire area.

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APPENDIX 2

PERSONAL COMMUNICATIONS

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PERSONAL COMMUNICATIONS

Prior to making ***Part 1*** of the video several people, with different areas of expertise, were consulted.

Prof. John van Zyl (Film and Television Studies, Dramatic Art Dept. University of the Witwatersrand).
Mr Andre Van In (Belgian film director, from the Cinema Verite style of filmmaking).

Discussion centred around the difficulty of translating images across cultures, with particular concern for screening video to people with limited exposure to visual media. Suggestions ranged from avoiding the use of symbolic images and graphic representations, to ideas of developing skills within the affected communities to use basic film equipment, and in doing so, encouraging communities to document their own perspectives on their needs and community life. However, this was recognised as a longer term proposition. Other recommendations were to avoid using extreme close-ups, and to use wide establishing shots at the start of new sequences.

Mr Van In felt that this was far too complex an idea to be attempting in such a limited space of time. But he suggested following a linear narrative.

Robyn Hofmeyer and **Mark Newman** (the director and producer of the environmental video series *Living on the Land, Living in the City,* and *Living in South Africa*)

Documentation responding to the screening of this video series in schools throughout South Africa formed the basis of this communication. Discussions centred around what types of approaches had been recognised by students and teachers as successful way through which to convey information.
The videos had been screened in interactive environments, and are accompanied by an information and exercise booklet. The experiences of field-workers using the videos was discussed to gain an insight into the use of interactive video (even though this was in a formal education environment).

Brent Quinn (Filmmaker and educationalist)

Mr Quinn's involvement in education in rural areas helped to inform his suggestions relating to the introduction of television images into this context. One suggestion was to use a familiar radio voice as the narrator, thereby beginning to bridge the

gap between the familiarity of radio and the strangeness of television in rural communities.

Communications with **Ms Mary Anne Bah** (Centre for Continuing Education, University of the Witwatersrand) highlighted issues of Adult Basic Education, and focused on using visual images like maps in illiterate and semi-literate communities. Further suggestions were made about explaining aerial footage to people unfamiliar with a "bird's-eye-view".

APPENDIX 3

ROUGH BUDGET BREAKDOWN FOR PART 1 VIDEO

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ROUGH BUDGET BREAKDOWN FOR PART 1 VIDEO

The following are the basic requirements for producing a video to accompany a technical report. This refers to ***Part 1*** of the video dissertation, and accompanying costs are estimates of what professional services and equipment would be.

The video was shot on SVHS equipment and tape, and edited on SVHS before being copied onto VHS. Equipment costs are therefore applicable to this format. Shooting on Betacam would be a more expensive option, and the higher quality image would not necessarily be appropriate to the non-broadcast needs of a product of this nature.

As with all video productions budgets can, to some degree, be shaped around the needs and available funding of the producers. In this video many people reduced their charges because of the nature of the project. For non-governmental organisations this might be an available option. However, for corporate projects costs are likely to be less flexible, and crew are likely to charge full rates. It is with this in mind that the following estimated budget has been drawn up.

The shoot is estimated at five days, which would not include research, travelling time, pre-production related to interviews or contingency days. Furthermore, travel, accommodation and subsistence costs have not been budgeted. The shooting ratio (*ie* how much footage is shot as a ratio of the final length of the video) is estimated at 40:1. A smaller ratio would reduce both the cost of tapes as well as the amount of time needed to edit the product. However, documentary filming is extremely unpredictable and thus the ratio has been estimated as above.

Budget:

	RATE	QUANTITY/TIME	COST
Equipment			
SVHS Camera	R 400/day	5 days	R2000
Sound mixer	R 200/day	5 days	R 1000
Microphone	R 180/day	5 days	R 900
Video Tape (Shooting ratio of 40:1)	R 80/tape	15 tapes	R 1200
Tripod	R 190/day	5 days	R 950
Boom	R 120/day	5 days	R 600
Crew			
Camera person	R 700/day	5 days	R 3500
Sound person	R 450/day	5 days	R 2250
Editor	R 500/day	5 days	R 2500
Translator	R 300	1 day	R 300
Post-production			
Straight cuts editing facilities	R 50/hr	40 hrs	R 2000
On-line editing facilities	R 300/hr	10 hrs	R 3000
Voice-over artist	R 200	1 day	R 200
Master edit tape (30 mins)	R 150	1 tape	R 150
Copies from master tape	R 30/ copy	1 copy	R 30
Total			**R 20 580**

The video took approximately five days to film, and 50 hours to edit. The overall cost would amount to **R 20 580**.

REFERENCES

REFERENCES

ALLEN, R.C. (1989) *Channels of Discourse*, London: Routledge.

ALLMAN, P. (1994). *Studies in the Education of Adults: Paulo Friere's Contribution to Radical Adult Education*, England: National Institute for Adult Continuing Education.

ANC (1994). *The Reconstruction and Development Programme*, Cape Town: ABC Book Printers.

ARNSTEIN, S. (1969). "A Ladder of Citizen Participation" in *Journal of the American Institute of Planners*, Vol. 31 (1).

BARBERO, J-M. (1993). "Latin America: Cultures in the Communication Media" in *Journal of Communication*, Vol. 43 (2).

BERGER, J. (1972). *Ways of Seeing*, London: Penguin.

CHOMSKY, N. (1975). *Reflections on Language*, New York: Pantheon.

COCK, J. (1995). "Social Technology For A 'Hot Ideology': A Sociological Framework For Effective Public Participation In Integrated Environmental Management In South Africa", unpublished.

COCK, J. & KOCH, E. (eds.) (1991). *Going Green,* Cape Town: OxforUniversity Press.

COMOLLI, J & NARBONI, J. (1969). *Cahiers du Cinema*, editorial, no. 216.

CONNOR, D. M. (1988). "A New Ladder Of Citizen Participation" in *National Civic Review*, Vol. 77 (3).

CULLER, J. (1981). *The Pursuit of Signs*, Ithaca: Cornell University Press.

CULLER, J. (1982). *On Deconstruction*, Ithaca: Cornell University Press.

DEBES, J.L. (1968). "Some foundations for Visual Literacy," in *Audio-Visual Instruction*, Vol. 13.

DEPARTMENT OF ENVIRONMENT AFFAIRS (1992). *The integrated Environmental Management Guideline Series*, documents 1-6, Pretoria: DEA.

EAGLETON, T. (1983a). "Structuralism and Semiotics" in *Literary Theory: An Introduction*, Oxford: Blackwell.

EAGLETON, T. (1983b). "Phenomenology, Hermeneutics, Reception Theory" in *Literary Theory: An Introduction*, Oxford: Blackwell.

ECO, U. (1977). *A Theory of Semiotics*, London: Phaidon Press

ECO, U. (1979). *The Role of the Reader*, Illinois.

FALLON, P. & PEREIRA DE SILVA, L. (1994). *South Africa: Economic Performance and Policies*, Washington D.C: World Bank, Southern Africa Department.

FISH, S. (1980). *Is There A Text In This Class?* Mass: Cambridge.

FREIRE, P. (1971). *Pedagogy of the Oppressed*, New York: Herder & Herder.

FRENCH, E. (1988). "Adult Literacy Work in South Africa: a history to be made", in *Africa Insight*, Vol. 18 (1).

FUGGLE, R & RABIE, M. (1992). *Environmental Management In South Africa*, Cape Town: Juta & Co.

FUGLESANG, A. (1982). *About Understanding - ideas and observations about cross-cultural communication*, Sweden: Dag Hammarskjold Foundation.

FULLER, B. PILLAY, P. & SIRUR, N. (1995). *Literacy Trends in South Africa: Expanding Education while Reinforcing Unequal Achievement?*, Cape Town: Saldru.

GEM (1993). "Communities Speak Out" in *New Ground* supplement to the GEM conference on People and Parks, 21 - 23 May 1993.

GEM (1994). *People and Parks*, pilot newsletter.

GOMBRICH, E. (1968). *Art & Illusion*, London: Phaidon Press.

SOUTH AFRICA (1994). "Constitution of the Republic of South Africa" Act 200 of 1993, in *Government Gazette*, no. 15466, Cape Town: Government Publishers.

SOUTH AFRICA (1995). "Green Paper on Telecommunications" in *Government Gazette*, no. 16526, Cape Town: Government Publishers.

SOUTH AFRICA, Ministry for Welfare & Population Development. (1995). *A Green Paper for Public Discussion: Population Policy for South Africa*, Pretoria: The Ministry.

GREGORY, R.L. (1979). *Eye and Brain - the Psychology of Seeing*, London: Weidenfeld & Nicolson.

GROSS, L. (1974). "Modes of Communication and the Acquisition of Symbolic Competence" in *Media and Symbols: The Forms of Communication, Expression and Education,* Chicago: University of Chicago Press.

HABERMAS, J. (1971). *Knowledge and Human Interests*, Boston: Beacon Press.

HARVEY, D. (1989). *The Condition of Post Modernity*, Oxford: Blackwell.

HAWKES, T. (1983). *Semiotics and Structuralism*, London: Methuen.

HILTERMAN, T.V. (1991). *The Ethnography of Visual Literacy: A Theoretical Perspective for the Study of and Teaching of Visual Discourses*. (University of the Witwatersrand, thesis.)

IUCN. (1980). *International Union for the Conservation of Natural Resources, The World Conservation Strategy*, Gland: IUCN.

JORDAAN, W.J, JORDAAN J.J. & NIEWOUDT, J.M. (1975). *General Psychology: A psychobiological approach*, Johannesburg: McGraw-Hill.

KOCH, E. (1995). "Dead Cows, A Long Bicycle Ride, The Fence Of Fire, And A Man On The Run: Linking human livelihoods, transfrontier conservation and the protection of biological diversity in Southern Africa", a research report for the UN Research Institute for Social Development and the Group For Environmental Monitoring (draft for peer review only).

LACLAU, E & MOUFFE, C. (1985). *Hegemony and Socialist Strategy*, London:Verso.

LUNENFELD, P. (1994). "'There Are People In The Streets Who've Never Had A Chance To Speak': James Blue and the Complex Documentary" in *Journal of Film and Video*, Vol. 46 (1).

LYOTARD, J-F. (1984). *The Post Modern Condition: A Report on Knowledge*, Manchester: Manchester University Press.

MACDONNAL, D. (1986). *Theories of Discourse*, Oxford: Blackwell.

MAIL & GUARDIAN (1995a). March 17 to 23 (advertisement).

MAIL & GUARDIAN (1995b). "Writing the Future", in the supplement, June 30 to July 6.

MASTERS GROUP. (1995). Cathedral Peak Preliminary Environmental Impact Assessment, Vol. 1-3 (unpublished).

METZ, C. (1974). *Film Language*, New York: Oxford University Press.

MOLOI, D. (1993). "Ghosts of the Kruger" in *New Ground* supplement to the GEM conference on People and Parks, 21 - 23 May 1993.

MOSER, C. (1993).*Gender Planning and Development - theory, practice and training*, London: Routledge Press.

NICHOLS, B.(ed.) (1976). *Movies and Methods*, Los Angeles: UCLA Press.

NORBERG, K. (1953). "Perception Research and Audio-Visual Education" in *Audio-Visual Communication Review*, Vol. 1.

ORKIN, M. TSHANDU, Z. & DUGARD, J. (1994). "Research and Social Policy Formulation in a Contested Context: Two South African Case Studies", Braamfontein: CASE.

QUINLAN, T. (1993a). "South Africa's Integrated Environmental Management Policy at the Crossroads of Conservation Development" in *Development Southern Africa*, Vol. 10 (2).

QUINLAN, T. (1993b). "The Educational Agenda of Sustainable Development and the Potential of Video in Environmental Education" in *Perspectives in Education*, Vol. 14 (1).

RAHNEMA, M. (1993). "Participation", in *The development Dictionary: A guide to Knowledge as Power*. Sachs, W (ed.), London: Zed Books.

ROSS, W.D. (1908). *Metaphysica*, by Aristotle translated by Ross. London: Oxford University Press.

SALDRU (1994). *South Africans Rich And Poor: Baseline Household Statistics*, Cape Town: Saldru.

SASSA, O. (1985). "Public policy-making in developing countries: the utility of contemporary decision-making models" in *Public Administration and Development*, Vol. 5 (4).

SAUSSURE, F. de (1966). *Course in General Linguistics*, New York: McGraw-Hill.

SMITH, D.M. (1990). "The Anthropology of Literacy Acquisition" in *The Acquisition of Literacy: Ethnographic Perspectives*, Schiaffelin B.B. & Gilmore P. (eds.), New Jersey: Ablex Publishing Company.

SOWMAN, M. (1994). "Improving the Practice of Public Participation in Environmental Planning and Decision-making in South Africa" in *Town and Regional Planning*, No. 36.

SPITZ, A. & URQUHART, P. (1994). "Land Claims: Land Reform within a Sustainable Land Use Policy", Assignment for Masters in Environmental and Geographical Science, University of Cape Town.

STERN, D. (1985). *The Interpersonal World of the Infant: a View from Psychoanalysis and Developmental Psychology*, USA: Basic. Books.

TOCH, H & MACLEAN, M. (1962). "Perception, Communication and Educational Research: A Transactional View" in *Audio Visual Communication Review*, Vol. 10.

VAN ZYL, J. (1989). "Visual Literacy: Fact or Fiction?" in *English Academy Review,* Vol. 6.

VAN ZYL, J. (1991). "The Ethnography of Visual Literacy" in *SATJ* Vol. 5 (1).

WILSON, F & RAMPHELE, M (1989). *Uprooting Poverty: The South African Challenge*, Cape Town: David Philip.

WRIGHT, K. (1985). *Vision and Separation: Between Mother and Baby*, London: Free Association Books.