



A COMPARATIVE QUALITY OF LIFE SURVEY  
IN ELSIES RIVER AND BASUTO QWAQWA

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ABSTRACT

This thesis is concerned with developing a method for determining the Quality of Life of a group or community in quantitative terms.

The method devised is aimed at providing decision-makers with a useful tool when allocating public funds. The method involves setting critical values for indicators and then applying a mathematical formula, in order to standardise information gathered from several different sources. A value for the indicator of a particular group or community is thus calculated. This procedure made it possible to compare data from these different sources. Arising out of this the values for individual indicators were aggregated to produce indices evaluating the Quality of Life, which are in a form that may be readily used by decision-makers.

Surveys were run in Elsies River, a coloured suburb of Cape Town, and in Basuto QwaQwa, a homeland in the Orange Free State, using two questionnaires. The results were computed and the method developed here used to compare and aggregate the data. Other sources of data included opinions from experts and objective data concerning the two survey areas which were also standardised and aggregated.

The results show that the method is pragmatic and could be useful to decision-makers. The standardisation provided the means for arriving at the indices which show how different aspects of the Quality of Life may be assessed. The results, however, are not absolute and could change through a process of negotiation: in fact this is an essential qualification.

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CHAPTER 1: INTRODUCTION

In an earlier work, Ellis and Erlank (1983), a framework was laid out and indicators were devised to assess the Quality of Life of a group or community and to produce a quantitative evaluation of that Quality of Life. The indicators were tested in a survey done in Elsie's River in 1981. In this thesis the indicators have been refined and improved upon, a second survey has been done in Elsie's River in 1983, and a set of standards has been developed in order that comparisons may be made between indicators.

This thesis arose out of work done with Professor G.F.R.Ellis. The quantitative evaluation of the Quality of Life took place within the framework set out in Ellis (1980) which drew much of its inspiration from the work of Drewnowski J.: On Measuring and Planning the Quality of Life (1974). In the past an economic view of determining how well-off people are has held sway mainly because of its quantitative aspect, and because it was thought that other social conditions could not easily be measured. Drewnowski writes that economic factors alone are not sufficient in assessing conditions and general well-being of groups or communities, but that other factors or 'social conditions' also play a part in the Quality of Life. Drewnowski felt that it should be possible to develop a method of quantifying the non-economic phenomena which are as much part of life as are rands and cents. He also felt that such a comprehensive view could aid development programmes and be of use to decision-makers in future planning.

He suggested three steps to be taken once the social conditions and other conditions had been 'expressed in terms of social variables':

- (1) the application of the social variables to the measurement of past performance,
- (2) study of two-way relations between social and economic variables, and

(3) the introduction of social variables into planning (Drewnowski 1974, p 2). The model developed by Ellis (1980) takes these steps into consideration.

Some aspects of life quality are directly measurable eg life expectancy, but others, such as health, which are composites, are not. Drewnowski suggests that an indirect method of measurement should be used in this case. However, measurement should take place through the use of appropriate indicators. If an indicator is directly measured in terms of the units specific to it, it results in a cardinal number. If an indicator is measured in terms of graded states of welfare, it is an ordinal measure.

A further important distinction is that some aspects of the quality of life (eg infant mortality rates or life expectancy) are objectively measurable; some features (eg clean air or the quality of playgrounds) may be objective but evaluated in a subjective manner; and some (eg overall life satisfaction) may only be measured subjectively. Subjective measurements use an ordinal scale, in this case the Likert Scale discussed below. Some quality-of-life measurement schemes (eg that of Drewnowski, 1974) are essentially based on objective measures, while some (eg that of Moller and Schlemmer, 1982) are essentially based on subjective measures. There are objections to both these approaches (see for example Ellis and Erlank, 1983). On the one hand a purely objectively based scheme omits the subjective response of the people whose quality of life is at issue, and so may not reflect the way they view their own situation; on the other hand, a purely subjectively based scheme is vulnerable to depressed life expectations. Thus a quality of life scheme that incorporates both objective and subjective measures will provide a more satisfactory result.

This general guideline was used by Ellis (1980) and Ellis and Erlank (1983) in developing indicators to assess the Quality of Life. Ellis (1980) writes that a scheme for assessing the Quality of Life should include all major

measurable factors that affect the Quality of Life of either an individual, a group, or a community. This implies assessing both objective and subjective indicators and developing methods for comparing them both within and between the two categories.

### 1.1 Background

Many other researchers have studied aspects of measuring the Quality of Life. The starting point for most of them is poverty (see Morris 1979, Streeten 1981, Leipziger 1981). Various forms of poverty have been considered both from current status and future progress points of view. Crosswell (1981) (in Leipziger, 1981) defines a Basic Human Needs approach and argues that for purposes of economic planning and policy it is useful to determine minimum standards of living. Furthermore for Basic Human Needs to be met, there should be adequate supplies of goods and services, and incomes should be such that people may obtain these goods and services: in other words the objectives of a Basic Human Needs strategy depend on a minimum standard of living. Moller and Schlemmer (1980) write that Quality of Life studies presume a certain level of welfare and that only when Basic Needs are met will 'abstract and collective goals become realities' ie that Basic Needs have priority. A Basic Needs approach, in attempting to deal with poverty, seeks 'to provide the opportunities for the full physical, mental, and social development of the human personality and then derives the ways of achieving this objective' (Streeten, 1981 p 33).

Streeten (1981) writes that there may be a difference between available resources and the resources required to meet Basic Needs and that by identifying selected areas of need eg malnutrition and disease, resources can be used more constructively, thus minimizing the difference. A decrease in malnutrition prolongs life and improves its quality, therefore fewer resources

are needed for dealing with disease. Much has been written about who should decide where available money is best spent. Streeten (1981) shows that there is conflicting evidence on the choices made in the first case by the poor themselves and in the second case by doctors and nutritionists. Other authors note that only certain aspects of life are accounted for by the public sector eg provision of roads, collection of rubbish. Decisions regarding these aspects are taken almost without reference to the community. And yet one can argue that the condition of roads and the frequency of rubbish removal may affect the Quality of Life.

There are many features that can be taken into account in assessing 'basic needs', ranging from the simple PQLI measures (infant mortality, life expectancy and literacy rates) to measures of water supply, sanitation, housing, transport etc. (Streeten, 1981). However there are still aspects of the quality of life that are neglected, eg clothing, libraries, parks (cf Drewnowski, 1974). The attitude adopted here is that of Ellis (1980) and that of Ellis and Erlank (1983), that is, that all significant aspects of life affect its quality, so a quality of life measurement scheme should attempt to assign some measure to all those aspects of life where this can be done reasonably (there may well be some aspects where this cannot be done, and therefore although they may be significant, they cannot be taken into account).

An important and controversial part of any such quantification scheme is the setting up of standards for each Quality of Life variable introduced. Using the Quality of Life framework of Ellis (1980), this thesis chooses a set of Quality of Life variables, which forms a more complete set (in a sense to be made clear) than those used in other studies, and then sets up tentative standards for these variables by using information about other parts of the

region, the country, and the world. The rationale for the choice of the standards will be discussed in Chapter 2. Using the concept of causal levels affecting welfare, a proposal for aggregation of Quality of Life measures to obtain composite indices will be introduced. This is also potentially controversial, as is the choice of standards, but the proposal here is offered as a reasonably plausible first attempt. These suggestions may be altered and/or amended in the light of discussion and debate which one hopes will follow.

## 1.2 The Quality of Life Framework

The framework developed by Ellis (1980) covers major causal factors in the Quality of Life of groups or communities, and characterises links between the various factors, as well as a series of feedback loops that can operate to change a situation: 'the feedback control loops in society also act to enable and facilitate the normal functioning of the social system' (Ellis 1980 p 11). In practice decision-makers usually use some indicators as the basis for their decisions even if they give an imperfect representation of the system under review. These indicators are mostly economic ones such as the GNP and unemployment states, and decisions about the future are made on the basis of this information. Ellis (1980) suggests that better decisions may be made using a combination of both objective and subjective indicators of all the major causal factors influencing the Quality of Life of the group, as made explicit by the causal framework. The model proposed may be thought of as an ideal model of the causal links that should exist in order to provide an adequate quality of life, and the resultant state of welfare. The function of the indicators is to represent how well the causal links actually reflect the resultant state of welfare, in the situation considered, approximate the ideal.

The framework was made operational and tested by Ellis and Erlank (1983) and methods were evolved for identifying major factors within the Quality of Life model, for quantifying these factors and for collecting data to test the ideas formulated in Ellis (1980). A set of indicators was generated based on the Quality of Life model with the idea that these indicators would provide the means of pinpointing areas which were not satisfactory in the group studied, and so could aid decision-makers in directing grants, monies etc where they were most needed.

The indicators are defined in a schedule in Ellis and Erlank (1983) giving a name and number to each indicator as well as the concept measured, the actual wording of the questions, possible alternatives and comparisons, a distribution measure, and the location of the questions on the survey questionnaire. Survey questionnaires were designed for evaluating the indicators. These questionnaires are described in Chapter 2. A survey was conducted in Elsie's River in 1981 to test the indicators and analyses were made using the values obtained in the survey. The data was analysed using BMDP computer programmes.

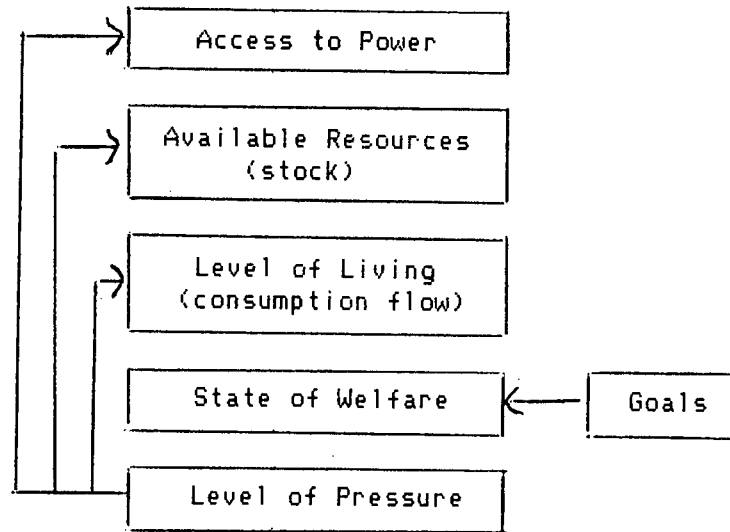
As a result of the 1981 survey, it was found that simple comparisons made between groups of objective data and subjective data as well as within each group of data (these groups, called levels, contain both objective and subjective data) were inadequate because of the different types of data involved. A better method of comparing and evaluating data would have to be evolved to allow meaningful comparisons to be made. Part of the work of this thesis is an attempt to solve this problem through the use of standards (cf Drewnowski and Chapter 2). The standardisation developed here may not be the ideal solution, but it does try to give a comparative method of evaluation. Section 2.6 and 2.7 of Chapter 2 give both the information used and the way in which it is used to set standards.

Another survey was done in Elsie's River in 1983 with an updated and improved set of questionnaires based on the experience of the 1981 survey. Also in 1983 a survey was carried out in Basuto QwaQwa using the same questionnaires. The Social Anthropology Department at UCT was doing some research in QwaQwa and the persons involved agreed to submit the Quality of Life questionnaires to about 30 respondents in QwaQwa. Included in this thesis are the results of the QwaQwa survey and although not statistically significant in terms of the number of respondents vis-a-vis the de facto population, the data does give an indication of conditions in QwaQwa.

The causal model set up by Ellis (1980) views society as a 'cybernetic system in which there are many feedback loops whose function is to correct errors and to solve problems that arise in the functioning of the system'. Insofar as these loops function inadequately or fail to exist in the real situation, errors will not be corrected and problems will remain unresolved or become aggravated. To make the description definite, boundaries of the social system are defined, as well as the environment influencing the welfare of the group or community within the society. Thus the system contains levels of control which represent how the group's ability to control its welfare at each level is determined by the conditions in the preceding level: see Figure 1.

Each level in the Quality of Life framework is represented by at least one indicator, which may be quantified by the methods described in this thesis.

FIGURE 1



Briefly the levels described by Ellis (1980) are as follows:

- Level 3 Access to Power: this represents the group's power, whether direct or indirect, which may lead to a greater or more equitable allocation of resources.
- Level 2 Available Resources: the resources both directly available and those generated by the group, the quantity and nature of which will determine limits for the group. The resources may be natural eg human resources; enabling resources eg information; or convertible resources eg money.
- Level 1 Level of Living: this is the level at which available resources are consumed in various ways eg money spent on food, or perhaps saved for a future project as in investments. However the use of resources is not confined to financial management but includes more intangible resources (Drewnowski's ordinal measures) such as clean air, playgrounds and leisure time.
- Level 0 State of Welfare: this measures the condition of the group or community at a specific time and includes physiological and psychological aspects.

Level -1 Level of Pressure: this measures the group's current state of welfare and manifests the results of a good state of welfare or otherwise. If in some way the process fails to operate in any of the three major feedback loops, then an error correction mechanism should come into operation via appeals, review boards or public pressure.

Within each level different components play a part and each component has several aspects to it as is shown in Figure 2 (Ellis 1980).

The significance of this scheme, for present purposes, is that it gives an overview of all the quantitative effects in determining the Quality of Life of a community and does so within a framework that organises these effects into causal levels. It is this latter feature that makes this framework an appropriate one in combining and comparing indices, as will be described later.

**FIGURE 2** Components and aspects of the various Levels. Also shown are the 'freedom' aspects which directly reflect important aspects of the functioning of the main feedback loops.

ERROR CORRECTION

- 
- 1) Administrative correction procedures
  - 2) Legal corrective procedures
  - 3) Correction of legal proceedings
  - 4) Legal freedom
- 

ACCESS TO POWER

---

Direct Political Power	Direct Economic Power	Indirect Power	Persuasive Power	Coercive Power	Political Freedom
National Government	Employer's Power	Influence on National Government	Legitimation	Local	Political Action
Local Government	Employee's Power	Influence on Local Government	Moral	National	To Organise
Specific Utilities and Organisations	Producer's Power	Indirect Economic Power	Standards	International	Expression
	Consumer's Power	Indirect International			

---

AVAILABLE RESOURCES

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Natural Resources	Human Resources	Economic Resources	Technological Resources	Enabling Resources	Economic Freedom
Land Resources	Population	Personal Income	Energy	Stability	Ownership
Non-renewable Resources	Labour	Group Income	Information	Information	Work Choice
Renewable Resources	Management	Capital	Transport	Assessment and Adaptability	Trade and Manufacture
	Recruitment	Borrowing Power	Coercive	Motivation	Training
	Skills	Goodwill	Production		Information
	Leadership		Technocrate		

---

LEVEL OF LIVING

---

Physical Welfare	Safety	Economic Investment	Political Investment
Nutrition	Police Protection	Education	Political Activity
Clothing	Unofficial Groups and Security Expenditure	Commodity Processing, Distribution and Maintenance	Coercion
Transport	Fire, Ambulance	Other Resource Processing and Distribution	Persuasion
Dwelling	Rescue, Emergency	Resource Investment	
Utilities	Environmental Control	Trade and Export	
Health		Persuasion	
Environment			

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LEVEL OF LIVING (continued)

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'Higher' Needs	Organization	Loss of resource flow	Social Freedom
Facilitating Resources	Community Organization	Resource Loss	Freedom of Action
Community Resources	Economic Organization	Resource Decay	Freedom of Association
Self Affirmation	Public Organization	Inefficiency	Freedom of Expression
Recreational and Cultural		Ineffectiveness	Freedom of Communion
Living Environment			Religious Freedom
Religious Resources			

---

STATE OF WELFARE

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Physiological Welfare	Safety	Belongingness	Esteem	Self-Actualisation
Nutritional Status	Environment	Family Life	Morale	N.I.
Health Status	Violence and Accidents	Community Life	Group Status	
Bodily State	Existence	National Acceptance		
Physical Fitness	War	International Acceptance		
	Vulnerability			

---

LEVEL OF PRESSURE

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Physiological Response	Social Pressure	Economic Pressure	Political Pressure
Death Rates	Social Action	Economic Action	Political Action
Disease	Social Protest	Work Pathology	Political Protest
Medical Action	Social Pathology	Market Pathology	Political Pathology
Surveys	Subjective Indicators	Subjective Indicators	Subjective Indicators

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## CHAPTER 2 : INDICATORS AND STANDARDS

### 2.1 The Indicators

The indicators were set up following the framework described in the previous chapter. For each level and each component an indicator was designed, with the provisos that the scheme should be as uncomplicated as possible and that the number of indicators should be kept to a minimum. The idea behind this philosophy is that any scheme presented for use by decision-makers should be uncluttered and easy to use. The Quality of Life indicators within the frame work of Figure 1 are an attempt to fulfill these conditions.

The indicators are measured in several ways:

- 1 **The Expert Panel Opinion, Form 1**, which polls opinions on various topics and were obtained from persons accepted as experts in their respective fields in the case of the 1981 and the 1983 Elsie's River surveys and the Basuto QwaQwa survey.
- 2 **The Survey Form, Form 2**, for which data was gathered from different sources, eg Government statistics, the Divisional Council data bank.
- 3 **Questionnaire 2a** was administered during the survey and collects information of an objective nature about the respondents in the survey areas.
- 4 **Questionnaire 2b** polls attitudes of the respondents in the survey and was administered at the same time as Q2a.

Each indicator is graded with a priority rating from 1 to 4. The depth of a survey will determine which Priority Levels are included; for example all surveys will include the indicators at Priority Level 1, and surveys at depth 4 will include all indicators at Priority Levels 1 to 4. The Priority Levels set are arbitrary and based on previous work eg Morris 1979, Streeten 1981, Leipziger 1981, Liu 1975, and discussions with Professor G.F.R.Ellis. They

are, however open to criticism and negotiation. A detailed account of the indicators may be found in the Schedule of Indicators in Ellis and Erlank (1983), and further information about indicators may be found in Hilhorst and Klatter (1985). The survey carried out for both Elsie's River and QwaQwa was done at Priority Level 3, thus excluding some indicators. An abbreviated form of the Priority Level 3 indicators appears in Figure 3.

Figure 3 indicates how the components shown in Figure 2 are made operational by transforming them into indicators. These indicators may then be measured as is demonstrated later in this chapter.

FIGURE 3:

<u>Number</u>	<u>Indicator</u>	<u>Location</u>	<u>Priority</u>
<u>Level 4 Legal Access</u>			
4.1.1/o	Police Powers	Form 1, no 1.	2
4.1.1/s	Legal Access	Q2b, no 41.	2
4.1.2/o	Habeas Corpus	Form 1, no 2.	1
<u>Level 3 Access to Power</u>			
3.1.1/o	Political Representation	Form 1, no 3.	1
3.1.1/s	Political Concern	Q2b, no 30.	2
3.1.2/o	Local Representation	Form 1, no 4.	3
3.1.2/s	Local Organisation	Q2b, no 14.	3
3.1.3/s	Political Responsivity	Q2b, no 40.	3
3.1.4/s	Political Satisfaction	Q2b, no 30.	2
3.2.1/o	Trade Union Membership	Form 2, no 1.	2
3.2.1/s	Union Adequacy	Q2b, no 5.	2
3.3.1/s	Media Access	Q2b, no 26.	2
3.5.1/o	Political Freedom	Form 1, no 5.	2
3.5.1/s	Political Atmosphere	Q2b, no 22.	2
<u>Level 2 Available Resources</u>			
2.1.1/s	Land Sufficiency	Q2b, no 18.	3
2.2.1/s	Environment	Q2b, no 15.	3
2.4.1/o	Gross Domestic Product	Form 2, no 11.	3/d
2.4.2/o	Steel Production	Form 2, no 12.	3/d
2.5.1/o	Personal Savings	Q2a, no 22.	3/d
2.5.1/s	Savings Possibility	Q2b, no 35.	3/d
2.5.2/o	Home Ownership	Q2a, no 11.	2/d
2.6.1/s	Infrastructure	Q2b, no 44.	3/d
2.7.1/o	Employment	Form 2, no 7.	3
2.7.2/o	Employment	Q2a, no 6.	2
2.7.2/s	Perceived Unemployment	Q2b, no 3.	3
2.7.3/o	Skilled Unemployed	Q2a, no 6 & 7.	2
2.7.4/s	Promotion Possibility	Q2b, no 8.	3
2.7.5/s	Job Satisfaction	Q2b, no 1.	2
2.8.1/o	Professional Workers	Form 2, no 9.	3/d
2.8.2/o	Professional Workers	Q2a, no 6	2/d
2.8.3/o	Educational Standard	Q2a, no 4.	2/d
2.8.4/o	Skills and Training	Q2a, no 5.	2/d
2.8.5/o	Literacy	Form 2, no 10.	1/d
2.8.6/s	Quality of Education	Q2b, no 46.	2/d

Figure 3 continued:

2.9.1/s	Work Attitude	Q2b, no 9.	2/d
2.9.2/s	Motivation	Q2b, no 24.	3/d
2.10.1/o	Economic Freedom	Form 1, no 6.	2
2.10.2/o	Economic Freedom	Form 1, no 7.	2
2.10.2/s	Economic Choice	Q2b, no 31.	2
<u>Level 1 Level of Living</u>			
1.1.1/o	Disposable Income	Form 2, no 5.	2
1.1.2/o	Income	Q2a, no 8.	2
1.1.2/s	Income Sufficiency	Q2b, no 47.	3
1.2.1/o	Protein Consumption	Q2a, no 21.	3
1.2.1/s	Nutrition	Q2b, no 25.	2
1.3.1/o	Emergency Services (Fire)	Form 2, no 14.	3
1.3.2/o	Emergency Services (Ambulance)	Form 2, no 14.	3
1.3.2/s	Emergency Medical Service	Q2b, no 28.	2
1.3.3/o	Emergency Services (Police)	Form 2, no 14.	3
1.3.3/s	Police Competence	Q2b, no 12.	3
1.3.4/o	Emergency Services (Telephone)	Form 2, no 15.	3
1.3.5/o	Emergency Services (Telephone)	Q2a, no 14.	3
1.4.1/o	Medical Expenditure	Form 2, no 17.	3
1.4.2/o	Medical Care	Form 2, no 16.	2
1.4.2/s	Access to Medical Care	Q2b, no 38.	2
1.5.1/o	Housing Density	Q2a, no 8 & 10	2
1.5.2/o	Housing Shortage	F2, no 18.	3
1.5.2/s	Housing Availability	Q2b, no 34.	3
1.5.3/o	Rent	Q2a, no 12.	2
1.6.1/o	Household Services (Water)	F2, no 19.	1
1.6.2/o	Household Services (Water)	Q2a, no 9.	2
1.6.3/o	Sanitation Facilities	Q2a, no 10.	2
1.6.4/o	Electricity	Q2a, no 13.	2/d
1.6.5/o	Cooking Sources	Q2a, no 13.	3
1.6.6/s	Service Adequacy	Q2b, no 20.	3
1.7.1/o	Transport Time	Q2a, no 17.	2
1.7.1/s	Transport Difficulty	Q2b, no 32.	3
1.7.2/s	Local Transport	Q2b, no 48.	3
1.7.3/o	Transport Cost	Q2a, no 18.	3
1.8.1/o	Educational Investment	F2, no 2.	3/d
1.8.1/s	Teaching Facilities	Q2b, no 29.	2/d
1.8.2/o	Student/Staff Ratio	F2, no 23.	3/d
1.8.2/s	Educational Quality	Q2b, no 23.	2/d
1.9.1/s	Sickness Protection	Q2b, no 27.	2
1.9.2/s	Pensions	Q2b, no 49.	2

Figure 3 continued:

1.10.1/o	Information Flow	Q2a, no 15.	3
1.10.2/o	Information Flow	Q2a, no 16.	3
1.10.3/s	Local Shops	Q2b, no 50.	3
1.11.1/o	Recreational Facilities	F2, no 13.	3
1.11.2/s	Recreation (Children)	Q2b, no 10.	3
1.11.3/s	Recreation (Family)	Q2b, no 43.	3
1.11.4/s	Library	Q2b, no 13	2
1.12.1/o	Freedom to Act	F1, no 8.	2
1.12.1/s	Perceived Freedom	Q2b, no 16.	2
1.12.2/o	Freedom of Belief	F1, no 9.	3

Level 0 State of Welfare

0.1.1/s	Perceived Health	Q2b, no 36.	2
0.2.1/s	Perceived Safety	Q2b, no 2.	2
0.3.1/s	Community Cohesion	Q2b, no 6.	2
0.3.2/s	Family Life	Q2b, no 11.	2
0.3.3/s	Perceived Friendliness	Q2b, no 19.	3
0.3.4/s	Community Pride	Q2b, no 37.	2
0.4.1/s	Alienation	Q2b, no 17.	3
0.4.2/s	Anomie	Q2b, no 39.	3
0.4.3/s	Self-Actualisation	Q2b, no 7.	3
0.4.4/s	Leisure Time	Q2b, no 42.	3
0.4.5/s	Overall Happiness	Q2b, no 4.	2

Level -1 Level of Pressure

-1.1.1/o	Life Expectancy	Form 2, no 20.	1
-1.1.2/o	Infant Mortality	Form 2, no 21.	1
-1.1.3/o	Child Mortality	Q2a, no 20.	2
-1.1.4/o	Freedom from Disease	Q2a, no 19.	3
-1.2.1/o	Crime Rate	Form 2, no 8.	2
-1.2.2/o	Prison Population	Form 2, no 4.	3
-1.2.3/o	Absenteeism	Form 2, no 2.	3
-1.2.4/o	Alcoholism	Form 2, no 3.	3

Overall

-1.3.1/s	Dissatisfaction	Q2b, no 21.	2
-1.3.2/s	Satisfaction	Q2b, no 45.	2
-1.3.3/s	Relative Deprivation	Q2b, no 51.	3

The numbers in Figure 3 refer to the level, the component, the indicator and whether the indicator is a subjective or objective measure. Some of the indicators are development indicators and these have a 'd' following the Priority number. There are some changes from the Schedule in Ellis and Erlank (1983) as some of the indicators were updated and several were added.

The Priority Level 1 is distributed over 6 indicators, measured as follows: two by Expert Opinion, and four from the Survey Form data, and is intended to give the simplest Quality of Life measure that will suffice to give a broad indication of the situation given severe time and financial constraints. Following tradition (see for example the PQLI, Morris 1979, and the major Basic Needs Indicators used by the World Bank) the Priority 1 indicators are all indicators of objective conditions. The prime reason for this is that it is easier to alter objective conditions than subjective ones through policy decisions; thus in the first instance, measures of objective conditions are probably more useful, at this time, to a decision-maker than measures of subjective conditions. Alternatives, including more subjective measures at Priority Level 1 can certainly be proposed, but their usefulness to planners in the first stages of planning is open to debate. The following table shows the difference between the Priority Level 1 indices and the aggregated Priority Level 3 indices from data gathered for this thesis.

		Priority Level 1	Priority Level 3
LEVEL 4	Habeas Corpus	-1.5	-1.4
LEVEL 3	Political Representation	-1.4	-1.3
LEVEL 2	Literacy	-0.37	-1.35
LEVEL 1	Water	+1.00	-1.17
LEVEL 0	"	-	
LEVEL -1	Life Expectancy	-0.71	-1.23
	Infant Mortality	-0.70	

This table shows that although one can extract a Quality of Life measure using Priority Level 1 indicators, this may neglect important features represented by Priority Level 3 indices, which give a more satisfactory result in terms of overall coverage.

## 2.2 The Changes

There are no changes in the Expert Opinion Survey (Form 1). The Survey Form (Form 2) was revised as a result of the experience gained in the 1981 survey. It was found that some of the information on the Survey Form was extremely difficult to obtain and thus it was decided to exclude it. The decision was based on the ease of access to information in keeping with the philosophy expressed at the beginning of the chapter. The data excluded concerned school enrolment figures and other statistics about schools, the number of unemployed persons with any skill or training, and work absenteeism. The education data was replaced with the expenditure on education, but this information is only available for the Cape Province and not for Elsie's River in particular; and the student/staff ratio, also a general figure. The other two indicators were not replaced.

Questionnaire 2a was enlarged as the information obtained in the 1981 survey as regards capital was too crude. The questions on employment (numbers 6 and 7) were expanded as was the question on income. Several new questions were added; one on the source of fuel for cooking and one about sanitation facilities (both aimed largely at a rural group or population). A short section was added for rural populations only and concerns gardens and livestock. The changes made the questionnaire longer but this did not affect the Elsie's River 1983 survey.

Questionnaire 2b was also changed and expanded and some statements reworded to make them general rather than particular; eg question 1 originally read 'I

would like to change my working conditions' and now reads 'I would like to see changes in the working conditions of our community'. In other cases complete changes were made, once again based on the experience of the 1981 Elsie's River survey. Five new statements were added covering areas concerning money management, public transport, pensions, local shops and relative deprivation. One of the changes involved question 25: 'food prices are so high that our people cannot feed their children'. This statement was found to be value orientated and did not elicit a good response. The statement was formulated in the negative and seemed to challenge the ability of the parents to look after their children. The change was made to 'our children get enough to eat' but even this change did not make the improvement that was hoped for. This is a question which should be reconsidered in future.

### 2.3 The Measurement

The Schedule was tested in a survey in 1981 and the updated version was used in the 1983 survey done for this thesis. Each indicator was measured through one of the methods mentioned earlier and in some cases there is an overlap between objective and subjective measures. This makes possible a comparison between such indicators. In other cases the indicator has been measured from two different objective sources (eg 1.3.4/o and 1.3.5/o) as a method of checking. This worked reasonably well.

The objective indicators were measured in two ways. One way gives the indicators as a natural or cardinal number eg incomes, and the other, used only in Q2a, gives a coded result for a purposes of computerisation. This method was used where the respondents in the survey were asked to choose between several options which either gave a range of values eg ages were asked for in periods of 10 years, or definite alternatives eg are you the head of the household, the spouse or another adult? The coding of answers on Q2a made

it possible to compute results such as means and standard deviations in one set of statistics. The coding also allowed positive and negative results to be taken into account eg 'what is your standard of education?' was coded such that education is seen positively, that is, the more education, the better. The coding is described more fully in the section on Standards.

The subjective indicators measured on Form 1 (the Expert Panel Response), two indicators on the Survey Form, and those on Q2b were measured on a variation of the Likert Scale, suggested in Babbie (1973). This determines the degree to which respondents in the survey hold a particular attitude or perspective. Likert developed a method based on an intensity structure which in this case asks respondents to choose between the following options: (1) Strongly Disagree (2) Disagree (3) Uncertain (4) Agree (5) Strongly Agree, when presented with a particular statement. These options can then be coded both negatively and positively from -2.00 (for (1)) to +2.00 (for (5)). The options may be increased for a finer grading of opinion.

The idea behind this Likert-type scaling is that a relatively standardised response is obtained on an ordinal scale that is easy to handle. More elaborate versions of the scheme use sophisticated normalisation techniques, based on pilot studies, for each question. These complex techniques were not used in the present surveys. Provided the distribution of responses is not bimodal, the mean score to any statement will give a reasonable representation of the attitudes of the group being surveyed, assuming each statement has equal weight. This takes into account any small group which holds extreme views either way, which the median will not. Each of the statements in the case of Q2b, are treated as separate variables that reflect the attitudes involved. With a Likert-type scaling the administration of Q2b becomes a relatively easy task, especially where unsophisticated communities are concerned. The Likert-type scaling also allows comparisons to be made within

the Levels described above.

#### 2.4 Other Data Sources

Apart from the Indicators just discussed, another source of information was used. Various public and/or well-known persons were asked to help in assessing problem areas in the community. This is an open-ended survey conducted informally with several people in Elsie's River in 1981 as it was felt that such an inquiry would pinpoint matters for concern as well as giving further information about the Quality of Life in Elsie's River. A questionnaire, the **Informed Source Poll**, was administered, and the information collected was sorted into separately defined categories for purposes of quantifying the data. In the 1983 survey a further Informed Source Poll was not done. The reason for this was the difficulty of finding new informed sources to supply the information. Part of this was due to the small time interval between one survey and the next, so that most of the informed sources were the same. In addition most of the causes for concern had remained the same. A couple of other sources were tried but I encountered some hostility towards the principle of carrying out a Quality of Life survey, apparently for political reasons. So the Informed Sources information for the 1983 survey about problem areas is the same as for the 1981 survey in Elsie's River. In the case of Basuto QwaQwa, however, one of the Social Anthropologists, who was involved in the research done by the UCT Anthropology Dept in QwaQwa, acted as an informed source about problem areas in that community.

It was clear from the 1981 survey that the Informed Source Poll was a useful exercise. It identified dissatisfaction in the survey area, most of which was also identified by the other data sources but some of which was new, for instance the need for pre-schools in the area and the feeling that the people of Elsie's River were not in control of their own affairs.

## 2.5 The Standards

There are four different sources of data arising from the Quality of Life framework: the Expert Panel, the Survey Form, Questionnaire 2a for objective information and Questionnaire 2b for subjective (attitudinal) information. If comparisons are to be made between the various data sources, a method has to be developed which will enable all the data to be compared. The data source, on which the decision to use the Likert Scale was based, is Questionnaire 2b which posed statements to the respondents in the survey and asked for responses graded to the Likert Scale. This Scale offers a choice between five responses, as described in Section 2.3, with coded values from -2.00 to +2.00. The average response in the survey ranged from -1.64 to +0.82.

Drewnowski (1974) writes that indicators which are to serve as yardsticks for measuring the satisfaction of needs have to be given a scale to show the range of indicator values that is meaningful for that measurement. It may also be useful to have this range sub-divided according to degree to which the needs of the community are satisfied. The scale can be provided in the form of 'critical points' for each indicator. The critical points are supposed to represent characteristic levels of satisfaction of needs expressed by each indicator and should be based on objective facts as far as possible. On p 40 Drewnowski makes the point that in order to transform indicators expressed in physical units into indices, which can be compared and summed up, one needs a common scale on which indices for all indicators could be based. This common scale can be derived from the critical points. He also suggests separate definitions for ordinal and cardinal indicators.

Ordinal indicators are those which can only be expressed in terms of grades relative to each other, eg a subjective evaluation which is graded as being unsatisfactory or satisfactory. This would apply to people's attitudes about aspects of their lives eg the quality of schooling available. This information

is easily graded on the Likert-type scale of -2.00 to +2.00. Cardinal indicators are those which can be measured in terms of definite units and would be expressed as a natural number eg the number of people living in one household or the income of the wage earners in that household. Information can therefore be obtained in terms of both cardinal and ordinal indicators. The problem is to 'fit' the objective data onto the same scale of -2.00 to +2.00.

This operation will allow data to be aggregated and/or compared from both subjective and objective sources. For example, Morris (1979) writes that in the PQLI, for each indicator, the performance of individual countries is placed on a scale of 0 to 100, where 0 represents an explicitly defined 'worst' performance and 100 represents an explicit 'best' performance. Once performance for each indicator is scaled to this common measure, a composite index can be calculated by averaging the indicators, giving equal weight to each of them (Morris, 1979). The resulting PQLI is thus scaled automatically on an index of 0 to 100. For each indicator the 0 to 100 scale was constructed on the basis of reasonable assumptions about best and worst performances.

To accommodate the Likert Scale one could construct a scale thus:

-2.00	Situation unacceptable
-1.00	Situation inadequate
0	Situation acceptable
+1.00	Situation satisfactory
+2.00	Situation affluent

The problem is now defined. The objective data must be transformed onto a scale from -2.00 to +2.00, as detailed above, so that data may be compared both within and between data sources, as well as being able to aggregate data. Most of the objective data on Q2a has been numerically coded to conform with these ideas eg "Do you rent or own this house?" is coded 1 for renting, 2 for

owning. Only income, rent/bond repayments, number of rooms, travel time and cost, number of children and the number which survived have natural measures. An assumption has been made that to own one's home is better than renting it, and this is reflected in the coding. For other cases the numerical coding assigned reflects a Quality of Life ordering. This means that judgements have been made about 'best' and 'worst' cases in order to assign the coding.

How does one then 'fit' the objective data onto this scale? The system developed in this work attempted to meet two requirements: one, that the system should be fairly general and could apply to any group under study; two, that the system should be easy to apply in the interests of pragmatism. Given these conditions one could use informed opinion on a scale -2.00 to +2.00 for the Expert Panel Response. For Questionnaire 2b the responses are given in the required scale. For the Survey Form and Questionnaire 2a a method has been developed to fit the required scale.

One attempt to solve the problem of converting actual raw data into indices on the Likert Scale, involves using percentiles (Cowan, private communication). In this case an assumption was made that the responses from Q2a and the information collected for the Survey Form would follow a normal distribution. If so, then 'quasi-Likert' values can be obtained from non-normal distributions (like education) by finding the percentile cut-off points on a normal distribution and imposing these on the actual distribution. Thus for five equally spaced categories the relative frequencies would be: 3.59% of cases in category -2.00; 23.84% of cases in category -1.00; 45.15% of cases in the 0 category; 23.84% of cases in the +1.00 category and 3.59% of cases in the +2.00 category. This solution is not perfect as it supposes equally spaced category boundaries and in addition the distribution of responses in Q2a was not normally distributed. However an attempt was made to use this method of setting standards in order to convert raw data to indices.

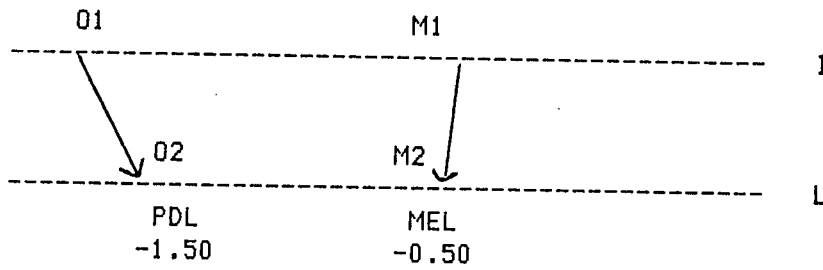
For example the information about incomes in Elsie's River was as follows:

R100-R199	4.1% of respondents
R200-R399	32.9%
R400-R599	25.4%
R600-R799	17.2%
R800-R1199	15.6%
Over R1200	4.6%

This does not correspond with the percentile figures given above and without considerable manipulation of the data, the facts do not 'fit'. The solution does not comply with the conditions set out previously, nor are Drewnowski's critical points taken into account, therefore this method was rejected.

Looking again at the indicators and the raw data, the object is to map objective data onto a Likert-type scale. There are both continuous indicators eg incomes, and discrete indicators eg owning or renting one's accommodation. With the continuous indicators, indicator values,  $I$ , will have individual units and ranges of  $I$  values, but the Likert or  $L$  value is constrained to the range  $-2.00$  to  $+2.00$ . If the critical points as described by Drewnowski are set at indicator points  $O$  and  $M$  (the PDL and MEL values) respectively and the indicator values  $O1$  and  $M1$  are set then the critical values of  $O2$  and  $M2$  may be chosen that correspond to these values and  $I$  may be mapped to  $L$  such that  $O1$  of  $I$  maps to  $O2$  of  $L$ , and the value  $M1$  of  $I$  maps to the value  $M2$  of  $L$ .

FIGURE 4



Thus a linear formula is chosen with these characteristics:

$$L = \frac{(O2 - M2)I + (O1M2 - O2M1)}{(O1 - M1)}$$

The values of O2 and M2 should be chosen such that O2 becomes the unacceptable case and M2 becomes the inadequate case. In this case O2 was given the value of -1.50 and M2 the value -0.50.

Now there is a way of transforming the indicator value to a Likert Scale number in the range -2.00 to +2.00.

Using the above formula,

$$\begin{aligned} L &= \frac{(O2 - M2)I + (O1M2 - O2M1)}{(O1 - M1)} \\ &= \frac{(-1.50 + 0.50)I + (-0.50)O1 - (-1.50)M1}{(O1 - M1)} \\ &= \frac{-I - 0.50 O1 + 1.50 M1}{(O1 - M1)} \end{aligned}$$

and if this gives a value  $L > +2.00$ , it is scaled down to +2.00; and if it gives a value  $L < -2.00$  it is scaled up to -2.00. This is done so as to keep the results within the scale -2.00 to +2.00. What is being used here is a straight-line approximation to a sigmoid (S-shaped) curve that should really be used for the transformation from indicator (I-) values to index (L-) values. The sigmoid curve theoretically gives a better description of the law of diminishing returns as extreme indicator values are approached. However, the straight-line approximation used here should give reasonable evaluations

of the indicator, and is much easier to use than the sigmoid curve. This may need further consideration if it is found that this 'rounding off' is unacceptable. In the case of discrete indicators eg homeownership, the procedure is similar and one converts indicator values to Likert Scale numbers using the same technique as before. Here the percentages in each category (viz rent or homeownership) would be used as the indicator value.

The raw data may now be 'fitted' onto the Likert Scale and data may be compared and aggregated. The system is not perhaps as general as one might have liked, nevertheless the principles used are general enough so that the same methods may be used by other researchers. The other condition of general ease of purpose is fulfilled in that the information used to set the values of O1 and M1 are available to most researchers.

The positive and negative aspect of the indicators are automatically handled in the following way: with the subjective or ordinal information the grading is -2.00 to +2.00 for positive responses, that is, the worst case has a value of -2.00 and the best case +2.00. For the negative responses the opposite applies. With the objective or cardinal information the same system is used for the coded information on Questionnaire 2a and the natural numbers were not converted in any way. The proposed standards are listed in Sections 2.6 and 2.7. The choice of critical values may in some cases be general but in other cases they will apply only to a particular group and would have to be re-evaluated for a different group. The values given to O1 and M1 are described in the section on assigning standards and comparisons are made with other groups both within South Africa and internationally. The major contribution of this thesis is in this set of proposals (a wider set than for example Drewowski, 1974).

How does one choose critical values? According to Morris (1979) one should define best and worst performances for countries considered, which he does by

looking at existing data and statistics for performances in infant mortality for example. By this method one would look at best and worst performances in education etc. This would not be as clear cut as the case for infant mortality but should be possible. With coded data one would use the implied scaling described above.

Drewnowski (1974) however writes that the critical points should not be based on figures derived from statistical data, such as the world average level for any indicator. Critical points are supposed to set standards for what is needed or what is acceptable. Determination of critical points must take into account social criteria and informed opinion about unacceptable levels of satisfaction of needs. This 'social' origin of critical points is closer to proper assessment of Quality of Life levels than any other and will vary according to changed or different circumstances. In this case the choice of the critical values is entirely pragmatic. The ease and access of information available for use directed the way in which the critical values were set. Information is not always available and in this case the choice of critical values is based loosely on general evidence and on what seemed reasonable. Thus in a sense these values are arbitrary. It is envisaged that the critical values will change (cf Drewnowski, 1974) if and when other data becomes available through a process of negotiation.

This is an important point. In this thesis, the standards have been set by the researcher without consultation with the community, the authorities, or employers etc. This must be seen in its envisaged context: that is, that the Quality of Life measurement scheme and standards presented here would eventually become a generally used scheme, and that planners, community groups, business men, and government would use it in their negotiations, in much the same way that the concept of a Poverty Datum Level is presently used

in assessing salaries and proposed minimum wages.

Thus, once the nature of the indicators is accepted and these groups are aware of the measurement scheme, the values of the standards becomes a critical issue. This should engender controversy and debate and, following a process of struggle and negotiation, agreement may be reached. The nature of the appropriate consultations between interested parties of how to settle this issue is not considered here; this in itself would need careful thought. What is presented here is a first go at setting such standards pragmatically, for this is a pre-requisite for such negotiations to begin. By seeing these standards in action, and the kind of assessments they produce, those involved in negotiations to set standards have a basis from which to start. This thesis is an initial proposal for such standards, and a trial run to see the results that occur from their use.

2.6 Standards and Indicator Values for the Survey FormBackground Information

## 1. Elsie's River

a) Population	officially	81 620	(1)
	unofficially	100 000	
b) Birth Rate		3.19%	
c) Area Urban		740Ha	

## 2. QwaQwa

a) Population	officially	169 500	(2) *
	unofficially	400-500 000	(3)
b) Birth Rate	a general figure for Blacks in SA	3.6%	(2)
c) Area Rural	48000 ha of which 7400 are arable (4)		

\* This figure is a 1980 estimate. Note that the population in 1970 was 24.8 thousand. The population has increased by a factor of 16, and the growth is a result of massive relocations.

Information sources:

1. Divisional Council Statistics, 1982/83.
2. Survey of Race Relations, 1983.
3. Sharp and Spiegel, 1983.
4. Benbo Economic Review, 1978.

Indicators

The basic indicator I is transformed onto the Likert Scale to give a general indicator L, using O2 and M2 as described in section 2.5 of this chapter and deriving O1 and M1 from the data given in each case. I, O1, M1 and L are described for each indicator.

1 TU Membership not available

---

2 Absenteeism

This variable is not directly measurable but information about Strikes and Work Stoppages are to be found in SAIRR Survey 1982, p184.

Area	Number Strikes	Workers Concerned		Man days lost	
		African	Other	African	Other
Western Province	10	991	1982	750	7074
OFS & N Cape	15	1370	196	1238	452
South Africa	342	84706	8136	206230	20324
World	25000	24 million		113 million	

Man days lost per worker:

	Non-African	African
Western Province	$7074/1982 = 3.57$	
South Africa	$20324/8136 = 2.50$	$206230/84706 = 2.43$
OFS	$1238/1370 = 0.90$	
South Africa Total	$226554/92842 = 2.44$	
World	$113 \text{ mil}/24 \text{ mil} = 4.71$	

---

	I	O1	M1	L
Elsies River	3.57	4.71	2.44	-1.00
QwaQwa	0.90	4.71	2.44	+0.18

---

**3 Alcoholism**

This was measured by asking an informed source to rate the extent to which alcoholism is a problem in both Elsie's River and QwaQwa.

Elsie's River                    L = -2.00

QwaQwa                            L = -2.00

---

**4 Prison Population**

This is measured by the prison rate, that is, prisoners/100 000 of population.

For the United States in 1982:                    170 (RD Almanac 1984)

South Africa                                        380 (Race Relations Survey,  
1980. p 237)

Coloureds    847.2                    "

	I	O1	M1	L
Elsie's River	847.2	380	170	-2.00
QwaQwa	No prison in QwaQwa			

---

**5 Income**

Income for Coloureds in Elsie's River	R172.12 pm	(Jansen et al, 1984)
Divco figure for Cape Town area	R183.00 pm	
Average	R177.56 pm	

In 1976 R172 482 was sent to QwaQwa by migrant workers and R437 747 was held back as a form of saving. The number of migrant workers was 4741 and the income per month R128.71 (Benbo, 1978)

	HSL	HEL
Elsies River	231.82	347.73
QwaQwa (hh=6) *	278.94	418.41
QwaQwa (hh=5)	242.45	363.67

\* hh = household

O1 and M1 set from values for HSL (household subsistence level) and HEL (household effective level) given by Potgieter Sept, 1981.

	I	O1	M1	L
Elsies River	177.56	231.82	347.73	-1.97
QwaQwa	128.71	278.94	418.41	-2.00

**6 Employment**

From Jansen et al, 1984:

	Male	Female	Total
Employed	24.96%	40.83%	32.9%
Ec. Inactive & Unemployed )	75.04%	59.17%	67.1%

QwaQwa Workseekers 26383; Employed 15291 = 57.96% (Benbo 1978)

	I	O1	M1	L
Elsies River	32.9	50.29	72.21	-2.00
QwaQwa	57.96	50.29	72.21	-1.15

## 7 Crime Rate

From the Cape Times 22.2.84 Crime Statistics for Elsie's River:

Murder 100  
Rape 147  
Robbery 742  
Assaults 790  
Total 1779

21.80 per 1000 population (violent crimes)

Elsie's River (all crimes) 65.19 per 1000 population (Jansen et al, 1984)

United States violent crime 5.55 per 1000 population (RD Almanac, 1984)

Highest Rate in US New York 9.90 per 1000 population (RD Almanac, 1984)

	I	O1	M1	L
Elsie's River	21.8	9.9	5.5	-2.00
QwaQwa		estimated by an informed source		-1.50

## 8 Managerial and Professional Workers

Elsie's River % Man and Prof workers 6.94%

QwaQwa 1.70%

	Prof	Man	Ec Active	% Man & Prof
SA Coloureds	51280	3000	927780	5.85%
Blacks	177180	4040	5577040	3.25%
South Africa				7.18%

	I	O1	M1	L
Elsie's River	6.94	5.53	7.18	-0.68
QwaQwa	1.70	3.25	7.18	-1.89

9 Literacy

Elsies River	75%	(estimated by an expert)
QwaQwa	57.8%	(Benbo, 1978) *

\* This is a generous estimate as working from figures given in the Race Relations Survey, 1983, a literacy rate of about 10% seems more realistic. However, the Benbo figure is used here as it is easily accessible.

	Literate persons age 15+	Population	% Literacy
White	3 257 820	4 528 100	71.94
Coloured	1 344 060	2 612 780	51.44
Asiatic	477 060	821 320	58.08
Black	6 771 020	16 923 760	40.00
Total	11 849 960	24 885 960	47.62

	I	O1	M1	L
Elsies River	75.00	47.62	71.94	-0.37
QwaQwa	57.80	47.62	71.94	-2.00

10 Gross Domestic Product

GDP for O1 Region and Kuilsriver R1650.58 per capita (SA Stats 1981)

QwaQwa	R182.46	(SAIRR 1982)
1982 Argentina	\$4160.00	(RD Almanac 1984)
Colombia	\$1396.00	"
Canada	\$12236.00	"
South Africa	\$2733.00	"

Take R1.00 = \$0.83 for the first quarter 1984, then

$$R1650.48 = \$1369.90 \text{ and } R182.46 = \$151.44$$

	I	O1	M1	L
Elsies River	1369.90	1396.00	2733.00	-1.52
QwaQwa	151.44	1396.00	2733.00	-2.00

One must be cautious in using this particular indicator, which acquires meaning in a regional context. For Elsie's River the figure used is a regional one as this is a better indicator of employment opportunities in the general metropolitan area. In the case of QwaQwa, the GDP for the whole area is used.

11 Steel Production

Figures from SA Stats 1982 pp 12.43-12.52

	Gross R1000 000	Net R1000 000	Population	R/person
<hr/>				
<u>01 Region</u>				
Total	2495.6	936.3	1 458 620	
Manufacturing				
Iron & Steel	24.2	9.6		16.61
Basic Industries				
<u>09 Region</u>				
Total	10114.1	4124.2	146 860	
Manufacturing				
Iron and Steel	351.8	179.9		2395.55
Basic Industries				
<u>10 Region</u>				
Total	650.8	274.4		
Manufacturing				
Iron and Steel	228.3	119.3	51 980	3857.52
Basic Industries				
<u>South Africa</u>				
Total	20353.0	7892.1		
Manufacturing				
Iron and Steel	1624.9	826.0	24 885 960	65.36
Basic Industries				
<hr/>				
	I	01	M1	L
Elsies River	16.61	65.36	1000	-1.55
QwaQwa		no production of steel		-2.00

This indicator also acquires meaning in a regional and national context. As before, the regional figure is used for Elsie's River while the 'homeland' figure for QwaQwa is the one to use.

## 12 Recreational Facilities

Elsies River has 5 parks: 0.61 parks per 1000 population (assume each park is one acre, and this is a generous assumption)

Chicago	4.70 acres per 1000	(Liu, 1975)
New York	7.60 acres per 1000	"

	I	O1	M1	L
Elsies River	0.61	4.70	7.60	-2.00
QwaQwa	no parks or recreational areas			-2.00

## 13 Police/Fire/Ambulance Adequacy

This was measured by asking an informed source to rate these services on a Likert Scale.

Elsies River	L = -1.00
QwaQwa	L = -2.00

## 14 Emergency Services

This is given by telephones per 1000 population.

Elsies River	0.36	(Cape Directory)
QwaQwa	0.70	(Benbo, 1978)
Colombia	6.00	(RD Almanac, 1984)
South Africa	12.10	"

	I	O1	M1	L
Elsies River	0.36	6.0	12.1	-2.00
QwaQwa	0.70	6.0	12.1	-2.00

15 Doctors

Pillay P.N. : The distribution of medical manpower and health care facilities in South Africa. Carnegie Conference Paper 167, 1984.

1980	No of Doctors	Population in 1000's	Doctor/PopIn Ratio	Doctors/10000
South Africa	15663	28849	1:1842	5.4
Canada			1:530	18.9
Durban				
all races			1:600	16.7
whites			1:190	
Rural Areas			1:20-100000	
QwaQwa 1982	2		1:116000	0.09
A Target Figure for SA			1:1600	6.25
Elsies River 1983				2.60
-----				
	No of Dentists		Dentist/PopIn	Dentists/10000
South Africa	2654		1:10870	0.90
Canada			1:2331	4.3
A Target Figure for SA			1:8000	1.25
Elsies River 1983				0.50
-----				
	I	O1	M1	L
Elsies River(Doctors)	2.6	5.4	10	-1.31
Elsies River(Dentists)	0.5	0.9	1.25	-2.00
			Aggregate	-1.66
QwaQwa	0.09	5.4	10	-2.00

16 Medical Expenditure

Figures from SA Stats, 1982. p 19.19 in Rands

1981	Education	Hospitals & Public Health	Total Expenditure	Population
Cape	247282	366724	956326	1290520
Natal	106725	134190	417142	1160820
TVL	352378	338815	1 240471	2424760
OFS	73710	76395	255050	1107820
Total	780095	796124	2 868989	

Rands per person per annum	Education	Health
Cape	191.61	284.17
Natal	91.94	115.60
TVL	145.32	139.73
OFS	66.54	68.96
QwaQwa		97.53

	I	01	M1	L
Elsies River	284.17	68.96	284.17	-0.50
QwaQwa	97.53	68.96	284.17	-1.36

The provincial figure for the Cape is used here (see the note after No 10), as the figure for Elsie's River was not obtainable. The figure for QwaQwa is the correct one.

17 Housing Shortage

Elsies River:	Total no of Dwellings	9838	Jansen et al, 1984.
	Divisional Council	7811	
	Private	2027	
	Housing Backlog	+/- 6000	
	Families on Waiting List	4813	(28000 people)

The population of Elsies River is 81620:  
 If family size = 5 this is 16324 families  
 If family size = 6 this is 13603 families

In theory 5.45 people per dwelling unit  
 In practice 8.30 people per dwelling unit

Elsies River 35.38% of families are unhoused (6 people per household)  
 QwaQwa 18.66% of families are unhoused

O1 and M1 are given values of 10% and 5% arbitrarily

	I	O1	M1	L
Elsies River	35.38	10	5	-2.00
QwaQwa	18.66	10	5	-2.00

18 Provision of Running Water

Elsies River 100% of houses have running water.

QwaQwa Tseki has no piped water (Salo, 1983)

Elsies River L = +1.00

QwaQwa L = -2.00

19 Life Expectancy

No specific figures for Elsie's River or QwaQwa available, so the general figures for South Africa are used

	Years			
White	70			
Coloured	59			
Indian	65			
African	57.5			
Africa	49			
Asia	60			
Latin America	64			
	I	01	M1	L
Elsie's River	59	49	64	-0.83
QwaQwa	57.5	49	64	-0.93

Race Relations Survey, 1984. p100.

20 Infant Mortality

Rip M.R. and Tibbit L. : The effect of birthweight on infant mortality in the Western Cape Metropolitan Area. Carnegie Conference Paper 176, 1984.

Infant Mortality Ratio per 1000 live births, 1982 for the Western Cape:

Whites	7.4
Coloured	32.2
Black	39.7
Overall	28.4

Deaths per 1000 live births:

South Africa	117.0	(RD Almanac 1984)
Argentina	40.8	
Colombia	39.5	
Canada	10.9	

African Infant Deaths 21605 (Race Relations Survey, 1984)  
 Births 699000  
 31.80 infant deaths per 1000 live births

	I	01	M1	L
Elsie's River	32.2	117	10.9	-0.70
QwaQwa	30.91	117	10.9	-0.70

## 21 Educational Investment

See Number 16 for details about educational expenditure

Cape	R191.61 per person per annum
Natal	91.94
TVL	145.32
OFS	66.54

Elsies River The general figure for the Cape is used.  
QwaQwa R67.26 (Benbo: budgeted expenditure per pupil)

USA 1980 R873.43 (\$170587.6 mil per 253.31 mil of population  
= \$724.95 per pupil, R1.00 = \$0.83)

	I	O1	M1	L
Elsies River	191.61	66.54	191.61	-0.50
QwaQwa	67.26	66.54	191.61	-1.49

## 22 Student/Staff Ratio

From SA Stats 1982, pp 5.6 - 5.10.

	Whites	Coloureds	Asiatics	Blacks
Total no of students	1268791	801220	246688	3690113
Total no of staff	70854	29597	10091	94130
Public Schools Only:				
No of students	931429	764804	224229	3603039
Teaching staff	50387	27924	9186	91994
Staff/Student Ratio	0.054	0.036	0.041	0.025
Student/Staff Ratio	18.48	27.39	24.41	39.16
QwaQwa Student/Staff Ratio				35.40

	I	O1	M1	L
Elsies River	27.39	39.16	27.39	-0.50
QwaQwa	35.40	39.16	27.39	-1.18

## 2.7 Standards for Questionnaire 2a

Included here are not only standards for Elsie's River and QwaQwa but also two other categories which are sub-areas of Elsie's River. These are Clarke's Estate, reputed to be the poorest and most depressed module in Elsie's River, and a figure for four of the five modules tested in the survey. The module excluded is Riverton, a well-established, entirely home-owned area. This is to show whether there is, in fact, a difference in the index when the affluent module is not included in the calculations. The results are discussed in Chapter 4. The format for the indicators is the same as the one described earlier in Section 2.6.

1 Education

The figures are from SA Statistics, 1982, and are given in percentages.

Race	UptoStd5	Std6-8	Std9	Std10	Higher	Total	NoEduc
Col	43.84	20.54	1.87	2.23	1.35	69.83	30.17
As	32.73	28.16	5.14	7.65	2.74	76.42	23.58
Bl	37.47	12.18	1.16	0.94	0.48	52.23	47.77
Wh	15.09	32.03	6.67	26.31	12.56	92.48	7.52
SA	33.91	17.20	2.35	5.92	2.45	61.83	38.17

## Survey data:

ER 83	48.90	41.30	2.00	3.30	4.60	100.00
QwaQwa	76.90	7.70		7.70	7.70	100.00

## Clarkes

ER minus Riverton	51.50	41.00	1.90	3.00	2.60	100.00
----------------------	-------	-------	------	------	------	--------

		I	O1	M1	L
Elsies River	Std 5	48.90	33.91	15.09	-2.00
	Std 10	3.30	5.92	26.31	-1.63
	Aggregate				-1.87
QwaQwa	Std 5	76.90	34.00	15.00	-2.00
	Std 10	7.70	5.92	26.31	-1.41
	Aggregate				-1.72
Clarkes	Std 5	46.67	33.91	15.09	-2.00
	Std 10	4.00	5.92	26.31	-1.59
	Aggregate				-1.79
ER minus Riverton	Std 5	51.50	33.91	15.09	-2.00
	Std 10	3.00	5.92	26.31	-1.64
	Aggregate				-1.82

2 Higher or Tertiary Education

Figures from SA Statistics, 1982.

	Std9 Diploma	Std10 Diploma	Degree	Total	% of group in population
Col	15900	15660	3760	35320	1.35
As	4060	10500	7920	22480	2.74
Bl	47620	26660	7720	82000	0.48
Wh	70740	307360	190760	568860	12.56
SA	138320	360180	210160	708660	2.85

## Survey Data:

	No of respondents with a higher education	Adult Population	%	
ER 83	13	939	1.38	
QwaQwa	3	89	3.37	
Clarkes	3	217	1.38	
ER minus Riverton	7	817	0.86	
	I	O1	M1	L
Elsies River	1.38	1.35	2.85	-1.48
QwaQwa	3.37	0.48	2.85	-0.28 *
Clarkes	1.38	1.35	2.85	-1.48
ER minus Riverton	0.86	1.35	2.85	-1.83

\* This index is inflated as the sample included two teachers and a parson.

3 Training

Figures from Bulletin of Statistics, March, 1984.

	White	Coloured	Asiatic	Black	Total
Technical	132320	17720	6760	70740	227540
Total	1905060	927780	255820	5577040	8665700
% of group	6.95	1.91	2.64	1.27	2.63
% for tech & related	8.11	2.06	3.00	1.35	2.96

## Survey Data:

ER 83	31 adults, population 939, 3.30% had some training							
QwaQwa	2	"	"	89,	2.25%	"	"	"
Clarkes	11	"	"	217,	5.07%	"	"	"
ER minus Riverton	24	"	"	817,	2.94%	"	"	"

	I	O1	M1	L
Elsies River	3.30	2.06	2.96	-0.12
QwaQwa	2.25	2.06	2.96	-1.29
Clarkes	5.07	2.06	2.96	+1.80
ER minus Riverton	2.94	2.06	2.96	-0.52

4 Employ

Figures from Bulletin of Statistics for 1st Quarter 1982, September 1982.

	White	Coloured	Asiatic	Black	Total
SA popln	1375550	598754	178001	2804942	4957247
Ec Ac *	1947000	916000	263000	5644000	8770000
% Ec Ac employed	70.65	65.37	67.68	49.70	56.52

	I	O1	M1	L
Elsies River	47.90	56.52	70.56	-2.00
QwaQwa	14.80	49.70	56.52	-2.00
Clarkes	45.30	56.52	70.65	-2.00
ER minus Riverton	47.40	52.52	70.65	-2.00

\* Ec Ac = Economically Active

5 Job

Major Occupational Groups 1980, Bulletin of Statistics, March 1984. Vol 18,1.

Job	White	Coloured	Indian	Black	Total
Professional	216880	32200	14840	101760	365680
Technical	132320	17720	6760	70740	227540
Related	22100	1360	920	4680	29060
Admin & Managerial	125820	3000	4280	4040	137140
Clerical	505220	69940	53000	200640	828800
Sales	195620	38300	37220	166200	437340
Service	155820	152840	16580	1102840	1428080
Farming etc	88900	154680	5900	1114340	1363820
Mining etc	434400	387280	103940	2143220	3068840
Unclassified	27980	70460	12380	668580	779400
<b>Total</b>	<b>1905060</b>	<b>927780</b>	<b>255820</b>	<b>5577040</b>	<b>8665700</b>
Prof. as % of the group	11.38	3.47	5.80	1.82	4.22

## Survey Data:

ER 83: 3.30% professionals

QwaQwa: 7.70% " (biased figure as there are 3 professional people in a small sample of 27 respondents)

Clarkes: 4.00% "

ER minus Riverton: 1.90% "

	I	O1	M1	L
Elsies River	3.30	3.47	4.22	-1.72
QwaQwa	7.70	1.82	4.22	+2.00 (meaningless)
Clarkes	4.00	3.47	4.22	-0.79
ER minus Riverton	1.90	3.47	4.22	-2.00

6 Income

Incomes for	Coloured in the Cape Town area	Bloemfontein Blacks (Potgieter March 1984)	
PHSL	R246.67	R246.94 (hh = 6)	
Rent	R 35.00	R 23.20	
Transport	R 20.68	R 8.80	
HSL	R302.35	R278.94 (hh = 6)	R242.45 (hh = 5)
=> HEL	R453.53	R418.41	R363.68

HSL = Household Subsistence Level: absolute minimum consumption of food, clothing, fuels, washing, cleaning, rent and transport on which a family can survive.

HEL = a more rigorous measure of minimum income necessary and is made up of the HSL + 50% of its value.

1. Total Income per Household (i.e. wages + pensions + grants) per month

2. Wage Income per Household.

		I	O1	M1	L
Elsies River	1.	466.33	302.35	453.53	-0.41
	2.	415.77	302.35	453.53	-0.75
				Aggregate	-0.58
QwaQwa	1.	136.65	278.94	418.41	-2.00
	2.	128.12*	278.94	418.41	-2.00
				Aggregate	-2.00
Clarkes	1.	514.66	302.53	453.53	-0.10
	2.	497.65	302.53	453.53	-0.21
				Aggregate	-0.16
ER minus Riverton	1.	451.78	302.53	453.53	-0.75
	2.	not available			
				Aggregate	-0.75

\* Not possible accurately

There was no easy way of assigning values to O1 and M1 in the case of the variables numbers 7, 8, 9, 10, 12, 13 as definite information about these indicators was not found. The values of O1 and M1 were arbitrarily assigned on the basis of (a) discussion with Professor G.F.R.Ellis (b) literature on basic needs and (c) other related information.

---

## 7 Water

### Urban Situation:

O1 = 80% of households have piped water inside the dwelling

M1 = 90% " " " " " " "

Rural Areas: Water related problems are key ones for most rural communities.

In the Umzimkulu district, 61% of households felt that water needs were difficult to fulfill. (Muller, 1984)

O1 = 25% of households have piped water either in the house or on the property, and M1 = 75%.

	I	O1	M1	L
Elsies River	99.30	80	90	+0.43
QwaQwa	18.50	25	75	-1.63
Clarkes	94.70	80	90	+0.50
ER minus Riverton	95.50	80	90	+0.05

## 8 Toilet

Urban Situation:

Elsies River with its high water table and comparatively small erf sizes is unsuited to septic tanks (Beneke 1978, p 25) and the Divisional Council decided that all new housing should be connected to a water-borne sewerage system.

O1 = 90% of dwellings have water-borne sewerage, M1 = 95%.

Rural Situation:

O1 and M1 were given different values, O1 = 30, M1 = 80.

	I	O1	M1	L
Elsies River	99	90	95	+0.30
QwaQwa	18.5	30	80	-1.73
Clarkes	96	90	95	-0.30
ER minus Riverton	98.8	90	95	+0.28

## 9 Waste Disposal

Urban Situation: O1 = 90 and M1 = 95 of households have waterborne sewerage

Rural Situation: O1 = 25 and M1 = 75 " " " " "

	I	O1	M1	L
Elsies River	94.80	90	95	-0.54
QwaQwa	18.50	25	75	-1.63
Clarkes	93.30	90	95	-0.84
ER minus Riverton	94.80	90	95	-0.54

### 10 Home Ownership

In 1971 there was 33% home ownership in Elsies River. For 1983 Jansen et al (1984) give 20.6% home ownership.

O1 = 20% home ownership, and M1 = 60%

	I	O1	M1	L
Elsies River	23	20	60	-1.43
Clarkes	16	20	60	-1.60
ER minus Riverton	16.1	20	60	-1.60

QwaQwa            The situation here is not clear cut as the houses in Tseki and Phutadijhaba are not owned in the formal sense.

L = 0.00

### 11 Rent

This indicator is used to determine a new variable RENTPI, rent per income for each household. Rentpi appears at the end of this section. The mean rent/bond payment in Elsies River is R61.52. Potgieter (March 1984) gives the rent paid by Coloured people in the Cape Town area as R35.00. Elsies River households are therefore paying higher rents than average for the area. From Questionnaire 2a data the median for ER 83 is R50.00, the mode R60.00, the maximum R300.00 and the minimum R8.00.

12 Electricity

Urban situation: O1 = 70% of households have electricity and M1 = 90%.

Rural Situation: O1 = 30% and M1 = 70%

	I	O1	M1	L
Elsies River	87.5	70	90	-0.63
QwaQwa	14.8	30	70	-2.00
Clarkes	90.7	70	90	-0.47
ER minus Riverton	86.6	70	90	-0.67

---

13 Cooking

Mean for Elsies River using both electricity and gas 91.5%

Mean for QwaQwa 8.0%

Urban situation: O1 = 70% cook with electricity/gas and M1 = 90%.

Rural situation: O1 = 30% and M1 = 70%.

	I	O1	M1	L
Elsies River	91.5	70	90	-0.43
QwaQwa	8.0	30	70	-2.00
Clarkes	93.3	70	90	-0.34
ER minus Riverton	90.7	70	90	-0.47

---

14 Phone

Country	Phones per 1000 of population	(RD Almanac 1984)
Argentina	103	
Colombia	60	These countries are in order of population size.
South Africa	121	
Canada	671	
Yugoslavia	96	
Roumania	51	

O1 set at 6.0% (Colombia figure) and M1 at 12.1% (SA figure).

## Survey Data:

Elsies River 94 phones per 1893 population = 4.97%

QwaQwa 2 phones per 181 population = 1.10%

	I	O1	M1	L
Elsies River	4.97	6.0	12.1	-1.67
QwaQwa	1.10	6.0	12.1	-2.00
Clarkes	3.15	6.0	12.1	-1.97
ER minus Riverton	3.58	6.0	12.1	-1.90

15 News

Country                      Daily newspapers per 1000 population                      (RD Almanac 1984)

---

Argentina	154
Colombia	48
South Africa	66
Canada	241
Yugoslavia	103
Roumania	181

O1 set at 6.6% (SA figure) and M1 at 15.4% (Argentine figure).

## Survey Data:

Elsies River 105 newspapers per 1893 population = 5.55%.

QwaQwa No newspapers read.

Clarkes 26 newspapers per 476 population = 5.46%.

ER minus Riverton 73 newspapers per 1706 population = 4.28%.

	I	O1	M1	L
Elsies River	5.55	6.60	15.40	-1.62
QwaQwa	0.0	6.60	15.40	-2.00
Clarkes	5.46	6.60	15.40	-1.63
ER minus Riverton	4.28	6.60	15.40	-1.76

---

16 Radio

Country	Radios per 1000	TV per 1000 population (RD Almanac 1984)
Argentina	838	176
Colombia	114	76
South Africa	96	69
Canada	1104	466
Yugoslavia	209	189
Roumania	145	163

Radio: Use O1 = 9.6 (SA figure) and M1 = 83.8 (Argentine figure).

	I	O1	M1	L
Elsies River	81.3	9.6	83.8	-0.53
QwaQwa	91.7	9.6	83.8	+0.19
Clarkes	81.3	9.6	83.8	-0.53
ER minus Riverton	79.9	9.6	83.8	-0.55

TV: Use O1 = 6.9 (SA figure) and M1 = 17.6 (Argentine figure).

	I	O1	M1	L
Elsies River	68.2	6.9	17.6	+2.00
QwaQwa	4.2	6.9	17.6	-1.75
Clarkes	68.0	6.9	17.6	+2.00
ER minus Riverton	65.7	6.9	17.6	+2.00
Aggregate figures:				
Elsies River				+0.74
QwaQwa				-0.78
Clarkes				+0.74
ER minus Riverton				+0.73

17 Travel Time

The travel time was measured as the total time taken to get to and from work.

O1 and M1 are set arbitrarily at O1 = 180 minutes, and M1 = 80 minutes.

	I	O1	M1	L
Elsies River	66.12	180	80	-0.36
Clarkes	61.70	180	80	-0.32
ER minus Riverton	65.67	180	80	-0.35

Most workers commute to Harrismith some distance from QwaQwa. There was no direct data for QwaQwa but Niehaus (1984) describes a one way trip from Tseki to Harrismith taking 4 hours and Ms J. Martiny told me that workers commute from QwaQwa to Harrismith leaving at 4.30 am.

QwaQwa				-1.50
--------	--	--	--	-------

---

18 Illness

Jansen et al (1984) gives the following information: For the year 1982/83 60160 TB treatments sessions were held in Elsie's River. This represents 57.84% of the total number of treatment sessions for the whole of the DivCo area. 100 people attend TB clinics for treatment daily.

O1 = 2% (US figures for 1970 & 1981 respectively from RD Almanac, 1984)

M1 = 1.2%

	I	O1	M1	L
Elsies River	1.6	2.0	1.2	-1.00
QwaQwa	16.7	2.0	1.2	-2.00
Clarkes	0.0	2.0	1.2	+1.00
ER minus Riverton	1.9	2.0	1.2	-1.38

19 Meat

O1 set at meat 3 times per month = 10.00%

M1 set at meat 2 times per week = 28.57%

	I	O1	M1	L
Elsies River	91.01	10.00	28.57	+2.00
QwaQwa	36.52	10.00	28.57	+0.06
Clarkes	90.93	10.00	28.57	+2.00
ER minus Riverton	90.00	10.00	28.57	+2.00

The figures for Elsie's River are high: the enumerators felt strongly that the question was not truthfully answered as it reflected the status of the household. This question should be rephrased so as not to give a loaded reply.

20 Car

O1 set at 7.1% (Beneke, 1978, p 31); M1 set arbitrarily 25%

## Survey Data

Elsies River out of a population of 1893, 3.70% own a car  
 QwaQwa population 181, 1.10% own a car  
 Clarkes population 476, 3.36% own a car  
 ER minus Riverton population 1706, 2.22% own a car

	I	O1	M1	L
Elsies River	17.05	7.1	25	-0.94
QwaQwa	3.80	7.1	25	-1.68
Clarkes	13.30	7.1	25	-1.15
ER minus Riverton	14.20	7.1	25	-1.10

---

21 Savings

Arbitrarily set O1 = 20% and M1 = 80% of repondents have some savings.

	I	O1	M1	L
Elsies River	65.25	20	80	-0.75
QwaQwa		No savings reported:		-2.00
Clarkes	68.67	20	80	-0.69
ER minus Riverton	65.25	20	80	-0.75

---

22 Insure

Arbitrarily set O1 = 20% and M1 = 80% have some form of insurance.

	I	O1	M1	L
Elsies River	73.50	20	80	-0.61
QwaQwa	29.60	20	80	-1.34
Clarkes	72.67	20	80	-0.62
ER minus Riverton	73.50	20	80	-0.61

---

23 Capital

Arbitrarily set O1 = R200 (the Quakers give R100 for a burnt shack in Cross Roads) and M1 = R5 000

	I	O1	M1	L
Elsies River	5000	200	5000	-0.50
QwaQwa		No information but assign		-1.50
Clarkes	5000	200	5000	-0.50
ER minus Riverton	5000	200	5000	-0.50

---

**24 Income per Person (INCP)**

O1 = R60.47 and M1 = R86.91 from Potgieter March 1984.

	I	O1	M1	L
Elsies River	84.55	60.47	86.91	-0.59
QwaQwa	19.69	46.49	69.74	-2.00
Clarkes	94.83	60.47	86.91	-0.20
ER minus Riverton	77.67	60.47	86.91	-0.85

Max: R 533.33 Min: R 5.40 Mean: R 84.55 Median: R 67.90 Mode: R 100.00

---

**25 Rent per Income (RENTPI)**

Urban O1 = 25% and M1 = 11.58% from Potgieter, March 1984.

Rural O1 = 8.32% and M1 = 5.54%

	I	O1	M1	L
Elsies River	17.9	25	11.58	-0.97
QwaQwa	11.12	8.32	5.54	-2.00
Clarkes	18.1	25	11.58	-0.98
ER minus Riverton	17.5	25	11.58	-0.94

Max: 0.75 Min: 0.009 Mean: 0.18 Median: 0.15 Mode: 0.02

---

26 Density

From the UN Statistical Yearbook 1978, p 899: O1 = 2.00 M1 = 0.60

The first index refers to the number of rooms in the dwelling without the kitchen or bathroom and the second index to the actual number of bedrooms.

	I	O1	M1	L
Elsies River	1.98	2.00	0.60	-1.49
	2.665	2.00	0.60	-1.98
			Aggregate	-1.74
QwaQwa	3.48	2.00	0.60	-2.00
	5.48	2.00	0.60	-2.00
			Aggregate	-2.00
Clarkes	2.18	2.00	0.60	-1.63
	2.83	2.00	0.60	-2.00
			Aggregate	-1.82
ER minus Riverton	2.06	2.00	0.60	-1.54
	2.75	2.00	0.60	-2.00
			Aggregate	-1.77

27 Travel Cost per Income (TCOSTPI)

From Potgieter, March 1984: O1 = 6.84 and M1 = 4.56

	I	O1	M1	L
Elsies River	5.70	6.84	4.56	-1.00
QwaQwa			estimated	-1.00
Clarkes	4.50	6.84	4.56	-1.52
ER minus Riverton	Not Available			

28 Child Mortality

This indicator measures the number of children up to age 5 who have died, compared with the total number of children.

O1 = 229 infant deaths per 1000 live births from Morris, 1979, p 43.

M1 = 117 " " " " " " from RD Almanac, 1984.

The world figure for this is 9.8 per 1000.

The result here is somewhat crude as I have used standards about infant deaths whereas the information from the questionnaire gives deaths of children up to age 5.

	I	O1	M1	L
Elsies River	77	229	117	-0.14
QwaQwa	98	229	117	-0.33
Clarkes	73	229	117	-0.11
ER minus Riverton	77	229	117	-0.14

The value for QwaQwa is an estimate as 9 households reported infant deaths but not how many and not all households were asked. The index therefore is a minimum value and the real value may well be higher.

---

## CHAPTER 3: THE SURVEY

### 3.1 Introduction

Elsies River was chosen as the area of study for several reasons. The original survey was done in Elsie's River in 1981, and as a result of that survey the Questionnaires 2a and 2b were updated and improved. The first survey high-lighted several inadequacies in the questionnaires, for example, with respect to the the estimation of capital in the households surveyed. The 1981 survey gave too crude a measure of capital and this was refined in the updated Questionnaire 2a. It was also felt that the opinions in Elsie's River should be polled once more and the objective data gathered again. The new questionnaires would be tested under similar conditions to the original.

In addition, the setting up of a sample framework and the collection of data was facilitated by the information available as a result of the urban renewal programme started in 1970 by the Divisional Council and from the data bank at the Divisional Council Offices in Cape Town. Elsie's River also provides a typical Western Cape Coloured community with households ranging from low to high incomes, from few to many members per household, with both rented accommodation and home ownership. Elsie's River presents a wide variety of households within a well defined geographical area.

A small survey was also carried out in Basuto QwaQwa, and the results compared with those from Elsie's River. Further comparisons may be made with the data in Ellis' article on Quality of Life evaluation with respect to the Ciskei given in Hilhorst and Klatter, 1985.

### 3.2 Elsie's River

Elsies River is a dormitory suburb lying about 15 km east of Cape Town. Since 1970 the local authority responsible for Elsie's River has been the Divisional Council of the Cape. In the 1870's the area was farming country and

private landowners held title to most of the land. Successive population movements to the city resulted in people setting up shacks in the bush around Elsie's River and subsequently arranging rents with the landowners. In 1942 Elsie's River was declared a 'black spot' by the Medical Officer of Health. The area was extremely depressed with poor hygienic conditions and overcrowding. The housing stock was mostly substandard with about 11 000 shanties in a total of 13 000 units (Beneke, 1978), up to 10 shanties on one plot. Basic services were totally inadequate and roads unsurfaced, making them unusable in winter. Drinking water was very scarce and sanitation arrangements primitive, resulting in a grave health hazard.

The Group Areas Act increased the population pressure on Elsie's River, turning 'a crowded township into an overfilled ghetto' (Pinnock, 1980). When the Divisional Council took over the administration of Elsie's River in 1970 the area of Elsie's River was 740ha with approximately 90 000 people (Pinnock 1980). In 1976 the population of Elsie's River was 80 428. The Council had removed all 'other races', Indians and foreign nationals. The Divisional Council population figure for 1982/83 is 81 620. Officially the population had decreased by 8 500 but unofficially the modern population of Elsie's River is about 100 000. The area, measured in hectares, has stayed the same.

The Divisional Council carried out various surveys during 1970 concerning land-use, income and expenditure, traffic surveys and so on. On the basis of the information collected the Divisional Council drew up plans for the redevelopment of Elsie's River; these included a sewerage system, roads, lighting, schools, recreational facilities, and the rehousing of 15 000 families by the end of 1980, but by 1978 only 5 783 families had been rehoused (Pinnock, 1980 p 9), from shanties into rented accommodation.

The urban renewal program designated 18 modules in Elsie's River:

- 1 Riverton
- 2 Valhalla
- 3 Avon
- 4 Louws Bush / Leonsdale
- 5 Salberau
- 6 Norwood
- 7 Avonwood
- 8 Cravenby
- 9 The Range
- 10 Epping Forest
- 11 Elnor
- 12 Balvennie
- 13 Connaught
- 14 Uitsig A
- 15 Clarkes
- 16 Adriaanse
- 17 Eureka (DivCo Plan TP ER88/1)
- 18 Uitsig B

Some modules are very poor, some affluent, and they differ in size as well as in infrastructure. Generally the streets defining the modules are in reasonable condition, but within the modules the condition of the streets is poor, often there are no street names. Elsie's River is exposed to a great deal of wind and wind is the dominating climatic factor from early summer to autumn, as rain is in winter. In summer loose sand blows about causing unpleasant living conditions. A resident in Leonsdale told me that the wind and sand were driving her mad. In winter serious drainage problems were caused by the flat natural ground in conjunction with the clearing of the natural

vegetation and the high water table.

Almost every winter the Elsieskraal River would flood. The canalization of the river has been discussed for over 20 years and the matter is now under way. Stark ugly blocks of flats, part of the redevelopment scheme, create a visually bad impression. 70% of the dwelling units are sub-economic or economic, the remaining 30% are better quality rented housing and privately owned homes. There are few structural differences between the two types of housing but the rents are different and in many cases the situation in the economic housing is worse than in the sub-economic, because of the higher rents. Since the Redevelopment Programme, 10 898 families have been rehoused, mostly in three story flats. Officially 4 813 families are waiting for housing (Jansen et al, 1984 p 6) but as the policy of the Council is only to rehouse those on the waiting list, the reality is that there are considerably more families waiting for accommodation.

### 3.3 QwaQwa

QwaQwa is a small homeland situated in the north eastern Orange Free State bordering on Natal and Lesotho. From 1970 to 1977 the population increased from 24 822 to 200 000 (Benbo, 1978), but estimates by local officials for 1982/83 are 400 000 to 500 000 (Sharp and Spiegel, 1983) and indicate the extent of relocations into this homeland. The de facto population and the de jure population figures differ considerably as the latter include absent wage earners and other persons or groups who have been officially designated as attached to QwaQwa.

The area is over-populated, poorly situated with regard to the industrial regions and markets of Southern Africa, and with no mineral resources and no infrastructure. With continued resettlement, economic failure is a strong possibility. QwaQwa occupies 48 234ha of which 7400ha is agricultural land,

but 30% of this is mountainous and not suitable for cultivation.

There is one town, Phuthaditjhaba. The 'countryside' is administered by two Tribal Authorities through chiefs and headmen. Tseki is a village about 7km from Phuthaditjhaba where a closer settlement was established in and around the original village. However the two areas are now indistinguishable due to the growth of intervening settlements. Phuthaditjhaba resembles other urban locations with 4 and 5 roomed houses, one industrial area (brickworks, gravel quarry, furniture factory, bakery), one shopping centre, schools, one teachers' training college, a clinic and a partly constructed hospital (Salo, 1983). Tseki is a planned area demarcated into blocks with 2310 sites. There is no electricity in Tseki and none of the sites have running water.

Migrant labour is the single most important source of income in QwaQwa. The migrants go to the NE Free State and the Witwatersrand. Migrant labourers can earn greater wages as migrants than in local employment, an uncertain proposition, so unemployed males wait at the Labour Bureau for work rather than taking local work, sometimes for as long as 6 months. Niehaus (1983) gives the following rates of local unemployment: males 63%, females 67%, together 65%. Harrismith, 50km from Tseki, and Bethlehem, 80km away, provide some work for commuters who travel by special buses taking up to 4 hours per trip.

The area is impoverished and the women are left by their migrant husbands to manage as best they can on irregular and fluctuating remittances. Lack of job opportunities and the insecurity of the physical existence of people in QwaQwa results in apathy, which does not encourage local income-generating activities (Niehaus, 1983).

The survey was conducted in 1983 in conjunction with work being done by the UCT Anthropology Department. Ms J. Martiny was instrumental in arranging the interviews, most of which were done through an interpreter. She administered

27 questionnaires, 16 in Tseki and 11 in Phuthaditjhaba. The data for Questionnaire 2a is not as complete as one would have liked as it was extracted from information obtained separately by Ms Martiny. Questionnaire 2b was administered as set out except for question 13: 'this community does not have adequate library facilities' as it was decided that it was inappropriate. The sample is small and as previously indicated, not statistically significant. Three respondents have a higher education, two are teachers and one a parson, and this tends to bias the sample.

### 3.4 The Questionnaires

The functions of the Expert Panel, the Survey Form and Questionnaires 2a and 2b are described in Chapter 2. The design and format are given here. The Schedule number and Priority Levels are shown in square brackets for each questionnaire.

#### Form 1: The Expert Panel Response

This has nine statements on it and the responses are given on the Likert Scale. Provision is made on the questionnaire for comments by the respondents and the results appear in Tables 1a to 7a for Elsie's River and 1b to 7b for QwaQwa in Chapter 4. Figure 5 shows the layout of Form 1.

**FIGURE 5**

## QOL Survey: Form 1 The Expert Panel Response

This section requires consultation with experts to poll their opinion with regard to the status of the concepts to be measured.

Name: .....

Position: .....

Contact Address: .....

.....

.....

..... Telephone No: .....

We wish to ask your assistance in a survey evaluating the Quality of Life of people living in Elsie's River. We should like your considered opinion as to how well the statements following describe the position of those people in general; in each case, please respond to the statement by marking one of the boxes, to indicate that you Strongly agree (SA), Agree (A), are Uncertain (U), Disagree (D), or Strongly Disagree (SD) with the statement. In addition, please could you in each case give a brief comment on why you have answered as you have.

-----

(1) "Officials exercising police powers relative to the group are generally held legally accountable for the way in which these powers are exercised" [+]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[4.1.1/o Pr2]

---

(2) "Habeas Corpus applies, and is effective, for the group concerned" [+]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[4.1.2/o Pr1]

---

(3) "The group concerned has no direct political representation in the central parliament which has legislative power significantly influencing their living conditions" [-]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[3.1.1/o Pr1]

---

(4) "There are local authorities elected by the survey group, for example municipalities or management committees, with real power to affect conditions where the members of the group live" [+]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[3.1.2/o Pr3]

---

(5) "The group has substantial freedom to express political views and engage in political action" [+]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[3.5.1/o Pr2]

(6) "The group has substantial freedom of economic action to engage in business enterprises and employ others as needed" [+]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[2.10.1/o Pr:2]

(7) "Members of the group have substantial freedom to choose the nature and place of their work" [+]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[2.10.2/o Pr2]

(8) "The group has substantial freedom of social action, e.g. to live where they wish and associate with whom they choose" [+]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[1.12.1/o Pr2]

(9) "The group has substantial freedom to express and practice their religious beliefs" [+]

SA [ ] A [ ] U [ ] D [ ] SD [ ]

Comment: .....  
.....

[1.12.2/o Pr:3]

-----  
Thank you for your help.

-----\*

Form 2: The Survey Form

This is in two parts, a general part concerning the survey as a whole, and a detailed part giving information about the area and the indicators. There are 22 indicators and the results are given in Tables 8a to 12a for Elsie's River and 8b to 12b for QwaQwa in Chapter 4. Figure 6 shows the Survey Form in detail.

**FIGURE 6**

QOL Survey: Form 2

General

- 1 Identification of the organization/authority doing the survey  
 Date of survey: Month..... Year .....
- Proposed length of time for survey .....
- Name of project manager .....
  
- 2 Identification of Group to be surveyed .....
- Population Group .....
  
- 3 Identification of the area: (tick appropriate category)  
 (a) Region  
 (b) Township  
 (c) Suburb  
 (d) Other Specify: .....
  
- 4 Comments on the situation of the community not covered by the questionnaires.  
 [When printing, leave space for answer]
  
- 5 Comments on the questionnaires and forms.  
 [When printing, leave space for answer]
  
- 6 Difficulties encountered in completing survey  
 [When printing, leave space for answer]

Detailed Information

Use any source of information that appears reliable (Local Authority, Census, etc). All sources of information should be recorded as fully as possible.

Background Information

a) Population size (number of people)

[B.2 Pr:2: if Pr4, give population numbers by age and sex;  
present as population pyramid]

Source:

---

b) Birth rate (% per annum)

Source:

[B.4 Pr3]

---

c) Area of land available (Hectares)

Source:

[2.1.3/o Pr4]

---

Indicators

1 Trade Union membership of economically active population (%)

(a) no of employees (b) trade union membership (c) result  $b/a \times 100$

Source:

[3.2.1/o Pr:2]

---

2 Strikes and Work Stoppages

Source:

[-1.2.3/o Pr:3]

---

3 Alcoholism

Question (Likert scale):

	SA	A	U	D	SD
"Alcoholism is a major problem in this community"	[ ]	[ ]	[ ]	[ ]	[ ]

Source:

[-1.2.4/o Pr:3]

---

4 Prison Population/1000 of total population

Source:

[-1.1.2/o Pr:3]

---

5 Average Income [if possible: distribution (No of people by R/annum/person), Presented as histogram]

Source:

[1.1.1/o Pr:2]

---

6 Unemployment Percentage

(a) No. of unemployed (b) Economically active population  
(c) Result  $a/b \times 100$

Source:

[2.7.1/o Pr:3]

---

7 Crime rate/1000

(a) No of crimes reported (b) population in thousands (c) Result  $a/b$

Source:

[-1.2.1/o Pr:2]

---

## 8 Managerial and professional workers

- (a) No. of managerial and professional workers  
 (b) Employees in survey area (c) Result  $a/b \times 100$

Source:

[2.8.1/o Pr:3/d]

## 9 Literacy rate (%)

Source:

[2.8.5/o Pr:1/d]

## 10 Gross Domestic Product (Rands per capita)

- (a) Total population of region (b) GDP for the region (c) Result  $b/a$

Source:

[2.4.1/o Pr:3/d]

## 11 Production of steel per capita

- (a) Total regional production of steel (b) total regional population  
 (c) Result  $a/b$

Source:

[2.4.2/o Pr:3/d Rural situation: agricultural productivity]

## 12 Recreation: facilities in sample area per 1000 people

- (a) No of parks/playgrounds:  
       sportsgrounds:  
       cinemas:  
       libraries:

Add: total no of facilities:

- (b) Total population in thousands (c) Result  $a/b$

Source:

[1.11.1/o Pr:3]

## 13 Police/Fire/Ambulance Adequacy Question (Likert scale)

	SA	A	U	D	SD
(a) "Our local police respond speedily and efficiently to emergency calls" [1.3.3/o Pr:3]	[ ]	[ ]	[ ]	[ ]	[ ]
(b) "Our local fire service responds speedily and efficiently to emergency calls" [1.3.1/o Pr:3]	[ ]	[ ]	[ ]	[ ]	[ ]
(c) "Our local Ambulance service responds speedily and efficiently to emergency calls"	[ ]	[ ]	[ ]	[ ]	[ ]

Source:

[1.3.2/o Pr:3]

## 14 Telephones per 1000 population

(a) No of telephones (b) Population in thousands (c) Result a/b

Source:

[1.3.4/o Pr:3]

## 15 No of doctors per 1000 population

(a) no of doctors in survey area (b) population in thousands (c) result a/b

Source:

[1.4.2/o Pr:2]

## 16 Total resources per year used for health care in area (rands/person)

(a) Health care expenditure (b) Population number (c) Result a/b

Source:

[1.4.1/o Pr:3]

## 17 Housing shortage: % of unhoused families

Source:

[1.5.2/o Pr:3]

## 18 Running water: % houses with piped water OR, taps per 100 houses

Source:

[1.6.1/o Pr:1] [Note: in rural areas: % population with access to piped water]

19 Life expectancy (Years at age 1)

Source:

[-1.1.1/o Pr:1]

---

20 Infant mortality

(a) No of infant deaths per year to age 1

(b) No of births per year (thousands) (c) Answer a/b

Source:

[-1.1.2/o Pr:1]

---

21 Educational Investment

(a) educational expenditure (b) population (c) result a/b

Source:

[1.8.1/o Pr:3/d]

---

22 Student/Staff Ratio

(a) no of teachers (b) no of pupils (c) result a/b

Source:

[1.8.2/o Pr:3/d]

---

Questionnaire 2a

This questionnaire has both general information regarding the age, sex etc of the respondent and detailed objective information about the household. For purposes of the Elsie's River survey, both Questionnaire 2a and 2b were translated into Afrikaans. In QwaQwa the English questionnaire was submitted through a translator. The results are to be found in Tables 13a to 17a for Elsie's River and 13b to 17b for QwaQwa in Chapter 4. Figure 7 shows the design and format.

**FIGURE 7**

## QOL Survey: Questionnaire 2a

(Objective Data)

(Enter a tick in the appropriate box in each case)

We would like to ask you some questions about you and your family

1. What is your name .....

Sex: M [ ] F [ ]

-----  
2. Are you the head of the house?

Status in household: Head [ ] Spouse [ ] Other adult [ ]

-----  
3. What is your age? (Indicate categories)

Age: &lt;20 [ ] 20-30 [ ] 31-40 [ ] 41-50 [ ] 51+ [ ]

-----  
4. What education level have you passed? (indicate categories)

Education: Less than Std 3 [ ] Std 3 to 5 [ ] Std 6 to 8 [ ]

Std 9 [ ] Std 10 [ ] Higher [ ]

If 'Higher', please specify: (e.g. University, College, Technikon, etc)

.....

[2.8.3/o Pr2/d]

-----  
5. Have you had any technical or artisan training? Yes [ ] No [ ]

If 'Yes', please specify: (e.g. carpentry, plumbing, typing, etc):

.....

[2.8.4/o Pr2/d]

-----  
6(a) . Are you (1) a student ? Yes [ ] No [ ]

(2) a housewife ? Yes [ ] No [ ]

(3) retired ? Yes [ ] No [ ]

(4) disabled ? Yes [ ] No [ ]

6(b) At this time, are you:

Self employed/running own business [ ]

Employed full time [ ]

Employed part time [ ]

Unemployed but looking for work [ ]

Unemployed but NOT looking for work [ ]

[2.7.2/o Pr2]

---

7. If employed or looking for work, what kind of work do you do?

Specify in detail.....

(DO NOT FILL THIS IN:

Labourer/unskilled [ ] Semi-skilled [ ] Skilled/Artisan [ ]

Clerical [ ] Professional [ ]

Other [ ]

[2.7.3/o Pr 2 and 2.8.2/o Pr 2]

---

8a. How many people usually live in this house/flat?

Adults: ..... Children: .....

[1.5.1/o Pr2]

8b. How many of them have (including yourself) ? a source of income.....

8c. Give details:

Name	Income (state whether per week or per month)	Nature:			
		Local work	Migrant wage	Pension or grant	Other
1 .....	R...../.....	[ ]	[ ]	[ ]	[ ]
2 .....	R...../.....	[ ]	[ ]	[ ]	[ ]
3 .....	R...../.....	[ ]	[ ]	[ ]	[ ]
4 .....	R...../.....	[ ]	[ ]	[ ]	[ ]
5 .....	R...../.....	[ ]	[ ]	[ ]	[ ]
6 .....	R...../.....	[ ]	[ ]	[ ]	[ ]

8d. Do you send money away to support other people? Yes  No   
If yes, please specify:

To whom sent	Amount sent (state whether per week or per month)
1 .....	R...../.....
2 .....	R...../.....
3 .....	R...../.....

**INSTRUCTION TO ENUMERATORS:**

Do not accept 'Don't Know' as an answer for 8a to 8d. If necessary, go back a second or third time and speak to someone who can give the information

DO NOT FILL THIS IN:

Income per household R...../month

[1.1.2/o Pr 2]

---

Now we would like to ask you about your house.

9. Do you have running water in your house, or on the property?

In house  On property (but not in house)  Neither

[1.6.2/o Pr2]

---

10a. How many rooms do you have, not counting the kitchen, bathroom, or toilet?

1  2  3  4  5  >5

10b. How many are bedrooms? .....

[1.5.1/o Pr2]

---

10c. Where is your toilet?

In the house  On the property  Nearby  None

10d. How does the toilet work?

Water  Chemical  Pit  Bucket  Bush

[1.6.3/o Pr2]

---

11. Do you rent or own this house?

Own  Rent  Other

[2.5.2/o Pr2/d]

---

12. If the house is owned, what are the bond repayments?  
If rented, what is the rent?

R...../..... (state whether per week or per month)

INSTRUCTION TO ENUMERATORS:

Do not accept 'Don't Know' as an answer for No 10 or 11. If necessary, go back a second or third time and speak to someone who can give the information. If the answer to Question 10 is 'other', there may be no rent.

[1.5.3/o Pr2]

---

13a. Do you have electricity in this house?

Yes [ ] No [ ]

[1.6.4/o Pr2/d] VISUAL CHECK: Yes [ ] No [ ]

---

13b. What do you use for cooking?

Electricity [ ] Gas [ ] Paraffin/meths [ ] Coal [ ]  
Wood [ ] Other [ ]

[1.6.5/o Pr3]

---

14. When at home, do you have access to a telephone?

Yes (own) [ ] Yes (friend) [ ] Yes (public) [ ] No [ ]

If Yes (own), what is the phone number? .....

[1.3.5/o Pr3]

---

15. Do you read a newspaper regularly?

Daily [ ] Weekly [ ] Monthly [ ]  
Seldom [ ] Never [ ] Dont Know [ ]

[1.10.1/o Pr3]

---

16. Does your household have a radio and/or TV?

Both [ ] Radio only [ ] Tv only [ ] Neither [ ]

[1.10.2/o Pr3] VISUAL CHECK For TV: Yes [ ] No [ ]

---

17. How long does it take the bread-winner to get to work each day?

State approx number of minutes ..... n/a [ ]

[1.7.1/o Pr2]

---

18. How much does the breadwinner pay for transport to work (per week)?

R..... n/a [ ]

[1.7.3/o Pr3]

---

We would like to ask you about the health of you and your family:

19. Have any of your family suffered from TB or other chronic (continuing) illnesses in the last 5 years?

TB [ ] Other [ ] None [ ]

[-1.1.4/o Pr3]

---

20. How many children have you had? .....

Did any of them die before the age of 20? Yes [ ] No [ ]  
If 'yes', how old were they when they died?

1: ..... 2: ..... 3: .....

[-1.1.3/o Pr2]

---

21. How often does your family eat meat?

each day [ ] several times a week [ ] several times a month [ ]

a few times a year [ ] never [ ]

[1.2.1/o Pr3]

---

22a. Do you own a car? Yes (paid for) [ ] Yes (still paying) [ ] No [ ]

If yes, how much is it worth? R .....

22b. If this house is owned (see Q10), how much is it worth? R.....

22c. What is the approximate value of any other property and possessions

belonging to you and your family? R.....

22d. Do you have any savings in a bank, building society, post office, shares,

etc? Yes [ ] No [ ]

If yes, approximately how much: R .....

22e. Do you have any insurances or annuities? Yes [ ] No [ ]

If yes, approximately what are they worth? R.....



Questionnaire 2b

Questionnaire 2b deals with attitudes and there are 51 questions covering several aspects of life in a community. The responses are on the Likert Scale and the results appear in Tables 18a to 24a for Elsie's River and 18b to 24b for QwaQwa in Chapter 4. Figure 8 shows the design and format. When printing Questionnaire 2a and 2b the location of the indicators on the schedule may be excluded and space should be left on the right hand margin for computer coding.

**FIGURE 8**

QOL Survey: Questionnaire 2b  
(Subjective Indicators)

Now I would like to ask you about your attitudes to various aspects of your life. We are concerned about how you feel about certain things and the following statements form part of the whole survey on quality of life. This will take a little time as I would like you to be able to express your attitude as clearly as possible. This may sound complicated but you will quickly understand how we fill in the form and I will help you as you go along. There are 5 possible reactions to each statement.

They are	SA	strongly agree	[perhaps one
	A	agree	should have
	U	uncertain	a card giving
	D	disagree	this code]
	SD	strongly disagree	

You choose the one which seems the best for you and we will mark that one. Shall we begin?

	SA	A	U	D	SD
1. I would like to see changes in the working conditions of our community [2.7.5/s Pr2]	[ ]	[ ]	[ ]	[ ]	[ ]
-----					
2. I feel it is safe living in this area [0.2.1/s Pr2]	[ ]	[ ]	[ ]	[ ]	[ ]
-----					
3. Many people in this community are unemployed [2.7.2/s Pr3]	[ ]	[ ]	[ ]	[ ]	[ ]
-----					
4. I feel that my life is quite happy at the moment [0.4.5/s Pr2]	[ ]	[ ]	[ ]	[ ]	[ ]
-----					
5. I feel our workers are adequately represented by their Trade Unions [3.2.1/s Pr2]	[ ]	[ ]	[ ]	[ ]	[ ]
-----					

	SA	A	U	D	SD
6. There are few dependable ties between people today	[ ]	[ ]	[ ]	[ ]	[ ]

[0.3.1/s Pr2]

7. People who live around here feel fulfilled	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[0.4.3/s Pr3]

8. Most of the workers of this community have little chance of job promotion, or of getting a better job	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[2.7.4/s Pr3]

9. The people of this community work hard	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[2.9.1/s Pr2/d]

10. There is nowhere in this area for children to play	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[1.11.2/s Pr3]

11. There is a strong, happy family life in this community	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[0.3.2/s Pr2]

12. If I were robbed the police would quickly catch the criminal.	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[1.3.2/s Pr3]

13. This community does not have adequate library facilities	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[1.11.4/s Pr2]

14. Our (local authority) handles local affairs satisfactorily.	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[3.1.2/s Pr3]

15. The area in which I live is clean and healthy	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[2.2.1/s Pr3]

	SA	A	U	D	SD
16. We are so ruled today that there is not much room for choice, even in personal matters.	[ ]	[ ]	[ ]	[ ]	[ ]

[1.12.1/s Pr2]

17. I often wonder what the meaning of life really is	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[0.4.1/s Pr3]

18. There is not enough land available	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[2.1.1/s Pr3]

19. The community in which we live is basically friendly	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[0.3.3/s Pr3]

20. The services (e.g. rubbish removal and road repairs) in this community are satisfactory	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[1.6.6/s Pr3]

21. I am not happy with my situation in life.	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[-1.3.1/s Pr2]

22. People are free to express their political opinions	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[3.5.1/s Pr2]

23. Our schools do a good job of preparing students for what lies ahead.	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[1.8.2/s Pr2/d]

24. People in my community are motivated to improve their lives	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[2.9.2/s Pr3/d]

25. Our children get enough to eat	[ ]	[ ]	[ ]	[ ]	[ ]
------------------------------------	-----	-----	-----	-----	-----

[1.2.1/s Pr2]

	SA	A	U	D	SD
26. Our community's view point is expressed in the public media.	[ ]	[ ]	[ ]	[ ]	[ ]

[3.3.1/s Pr2]

27. If the breadwinner is sick we will still be able to cope financially.	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[1.9.1/s Pr2]

28. In case of an emergency it takes too long to get medical attention in this community.	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[1.3.2/s Pr2]

29. The teaching at the schools here is good enough.	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[1.8.1/s Pr2/d]

30. I think the authorities have my community's interests at heart.	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[3.1.1/s Pr2]

31. I feel we do not have enough choice about what work we can do.	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[2.10.2/s Pr2]

32. It is difficult to get to work from here	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[1.7.1/s Pr3]

33. I would like to see major changes in the running of the country.	[ ]	[ ]	[ ]	[ ]	[ ]
--	-----	-----	-----	-----	-----

[3.1.4/s Pr2]

34. Finding a place to live is a major problem in this area	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[1.5.2/s Pr3]

35. These days it is almost impossible to save any money.	[ ]	[ ]	[ ]	[ ]	[ ]
---	-----	-----	-----	-----	-----

[2.5.1/s Pr3d]

	SA	A	U	D	SD
36. People in my neighbourhood are generally healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[0.1.1/s Pr2]

37. People in our community are proud to belong to it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[0.3.4/s Pr2]

38. In general my family receives good medical care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[1.4.2/s Pr2]

39. There are no definite rules to live by	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[0.4.2/s Pr3]

40. Attending public meetings is usually a waste of time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[3.1.3/s Pr3]

41. If injustice is done we can take action to correct the situation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[4.1.1/s Pr2]

42. I have enough leisure time to do the things I want to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[0.4.4/s Pr3]

43. There is sufficient entertainment for the family in this area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[1.11.3/s Pr3]

44. Our roads are in good repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[2.6.1/s Pr3/d]

45. Taking all things together my life is satisfactory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[-1.3.2/s Pr2]

46. The members of our community have sufficient training and skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

[2.8.6/s Pr2]

47. We struggle to come out on our money      SA    A    U    D    SD  
    [ ] [ ] [ ] [ ] [ ]

[1.1.2/s Pr3]

---

48. Local public transport here (trains,      [ ] [ ] [ ] [ ] [ ]  
       buses, taxis) is adequate

[1.7.2/s Pr3]

---

49. We have serious financial worries      [ ] [ ] [ ] [ ] [ ]  
       in our old age because of  
       inadequate pensions

[1.9.2/s Pr2]

---

50. There are good local shops where we      [ ] [ ] [ ] [ ] [ ]  
       can buy what we need

[1.10.3/s Pr3]

---

51. I feel there are members of our      [ ] [ ] [ ] [ ] [ ]  
       community who are much worse off  
       than me

[-1.3.3/s Pr:3]

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Informed Source Poll

The Informed Source Poll is the open-ended questionnaire asking about problem areas in the community. It was designed to show whether the other sources of information were complete. In this respect, for Elsies River, it highlighted the problem of alcoholism and lead to the subsequent inclusion of information about alcoholism on the Survey Form. The results are given in Tables 25a and 26a for Elsies River, and 25b and 26b for QwaQwa in Chapter 4. Figure 9 shows the design and format of this questionnaire.

FIGURE 9

## Informed Source Poll

We are conducting a survey for the [identify the implementing body] in order to determine the Quality of Life for people in this community; it is hoped this will help decision makers / authorities to plan more effectively in the future. We would like to have your opinion with regard to what you consider to be the problem areas in your community. This will not take long and we would value your co-operation.

Date: ..... Interviewer: .....

Respondent: Name .....  
 Community Position .....  
 Occupation .....  
 Education Level .....

We are conducting a survey amongst a random sample of people in ( give survey area) but particularly wished also to consult with people who are informed about the area and about what they consider to be the most significant problems facing the community.

(When printing leave enough space for the responses)

1. Firstly, could you tell me what single issue is causing you most concern with regard to social or other problems within this community at the moment?

---

2. What are the three most important problems or areas of concern within this community in general?

---

3. Which are the most deprived members of this community? What is the nature of, and the reasons for, their deprivation?

---

4. What is the best feature about this community and its living conditions?

---

5. Any other comments on what are the most significant problems and opportunities facing this community?

---

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### 3.5 The Survey

The survey methods used in this thesis are based on the techniques described in Babbie (1973). The object of the survey conducted in Elsie's River was to provide data for constructing indicators which in turn would provide information about the Quality of Life for people living in Elsie's River. The survey was carried out, using the household as the unit of analysis, by students employed from the University of the Western Cape. The decision to use student enumerators was based on the idea that they would establish a good rapport with the respondents as well as being able to speak the language of the majority of people in Elsie's River, that is, Afrikaans.

Several initial meetings were held with the students. The sampling technique and the questionnaires were explained and discussed. The survey took place in the September holidays of 1983. Further meetings with the student enumerators were held each day and any problems that arose were dealt with immediately. The enthusiasm of the enumerators made the survey relatively easy to run and they responded well to the challenge of obtaining information from the designated households.

### 3.6 Sample Framework and Sampling Procedure for Q2a and Q2b

The sample framework is the suburb of Elsie's River and the unit of analysis the household. The number of households to be interviewed was 300. This number of interviews would give a fair representation of ranges of both objective and subjective indicators. In each case the preferred respondent was the household head as it was found in the Elsie's River survey done in 1981 that far too many spouses were interviewed, giving a bias to the information obtained. In 1981 61% of respondents were spouses and in 1983 20% were.

Elsie's River consists of 18 modules. In 1981 5 modules were selected from a list of the 18 modules for survey purposes. In 1983 a further 5 modules were

selected for study. In the 1981 survey, Avon, Norwood, Cravenby, Epping Forest/Elnor and Uitsig A were selected. In 1983 Riverton, Louws Bush (now Leonsdale), Balvennie, Clarkes Estate and Eureka were selected. The map TP ER 88/1 shows how these modules relate to each other.

Riverton is an old established area, middle class with relatively high incomes and 100% home ownership. Leonsdale is almost entirely reconstructed with blocks of flats and row houses, all rented accommodation and low to middle incomes. Balvennie is partly reconstructed and partly old dwellings, all rented accommodation and a mixture of incomes. Clarkes Estate is also a mixture of new construction and older established row houses. There is both rented accommodation and home ownership and the area generally is considered to be a very poor and deprived one. Eureka is completely reconstructed row houses, detached houses and maisonettes and flats, all rented accommodation. The area is more well off and looks settled.

The unit of analysis being the household, each dwelling had to be listed. The listing had to be as complete as possible as the quality of the survey depends upon the random selection of the desired number of interviews. In order for this to be done a comprehensive list of the sample units was drawn up. Maps were obtained from the Divisional Council Housing Development Section and the Headquarters Map Section, see Figure 10. The maps showed all the individual erfs, sub-economic and economic housing, maisonettes, flats and row houses, as well as shopping areas, churches, health clinics, schools and so on. The latter group was excluded from the listing. Four visits to Elsie's River for field inspection were made in order to clarify certain points eg the names of blocks of flats, checking in Eureka precisely how far reconstruction had gone, looking at typical examples of maisonettes, row houses and 'landscaped areas' around blocks of flats.

**FIGURE 10**Map References for Sample Framework

Riverton: TP ER 48, TP ER 148, TP ER 88/1.

Leonsdale: HS 17/540, TP ER 8, TP ER 88/1 TP ER 148.

Balvennie: TP ER/53, TP ER 8, TP ER 148, HS 17/237, TP ER 88/1.

Eureka: HS 17/490, TP ER 8, HS 17/363, TP ER 88/1.

Clarkes: TP ER 72, HS 17/472, TP ER 48, TP ER 88/1.

-----

The listing was done within each module by naming the households in each block, and each flat within a block of flats, proceeding in a clockwise direction in all cases. As 300 interviews were scheduled, and the total number of households listed was 2742, an interval of 9 was chosen. A random number within the range 1 to 2742 was generated and used to designate the first household. Thereafter every 9th household was selected. From the original detailed maps smaller maps were made and the selected households were marked on each map, giving approximately 20 households per map, so each student enumerator did about 20 interviews.

Module	Households	%	Interviews	%	% Interviewed per module
Riverton	337	12.29	37	12.13	10.98
Leonsdale	709	25.85	79	25.90	11.14
Balvennie	536	19.55	60	19.67	11.19
Eureka	485	17.69	54	17.70	11.13
Clarkes	675	24.62	75	24.59	11.11
	2742	100	305	99.99	11.12

There is a difference between the number of dwelling units counted on the maps and the official Divisional Council figures given for each module, but

during the field inspections it was found that the maps were slightly more accurate and so the discrepancy was discounted. The differences ranged in both directions eg for Balvennie the official number of dwelling units is given as 252 while the map count gave a figure of 536; in Eureka the official figure is 590 and the map count 485. The figures for the map count are not perfect, but it was felt that the map count gave a truer reflection of the number of dwelling units. This was confirmed by the field inspections. Part of the problem lies in the great amount of reconstruction going on in Elsie's River in all the modules except for Riverton. Ideally the problem could be solved by mapping on foot, but this solution is not a practical one, and therefore a compromise was necessary.

The other parts of the survey, the Expert Panel and the Informed Source Poll were conducted by me on an informal basis. The information on Form 1, the Expert Panel, came from three sources in 1984 and the results were combined with the 1981 Expert Panel results. The Informed Source Poll was an open-ended discussion asking for opinions on what problems caused most concern in Elsie's River, and was not repeated in 1983 (see Chapter 2: Section 2.4, Other Data Sources).

### 3.7 Aggregation

The raw data from each data source is transformed, as shown in Chapter 2, to an indicator *I*. Each indicator belongs in a Level within the overall framework given in Chapter 1. Within each Level indicators are grouped together to form indices for each component of welfare which in turn are grouped to give composite indices for each Level (see Figure 11). This method of aggregation has been used because firstly, it follows the conceptual framework on which this thesis is based, and secondly, it seems reasonable in view of the light it can throw on the cause-effect relationship determining welfare.

Aggregation has been carried out in two ways. Firstly, a simple mean has been taken of the indicators and indices; secondly, a maximum and minimum value has been recorded. For example, data from Level 1, Questionnaire 2a is presented as follows:

Level	Component	Indicator	Index	Average	Maximum	Minimum
1	Basic Services	Water	+0.43			
		Toilet	+0.30			
		Disposal	-0.54			
		Electricity	-0.63	-0.14	+0.43	-0.63

This shows clearly the indices for each of the aspects of Basic Services (for more details of what they each represent, see Questionnaire 2a). The simple average then gives an overview of the trend of the indicators for this component of welfare. The maximum value gives an idea of the degree of satisfaction expected from the best aspect of that component, while the minimum value gives an idea of the dissatisfaction attendant on the worst aspect of that component. When combining the component indices to determine the composite indices for each Level, the mean, maximum and minimum values presented are respectively the mean of the means, the maximum of the maxima and the minimum of the minima. thus one has, in the first instance, an overall

impression of the Quality of Life, represented by an average of the respected values, and in the and in the second instance the best and worst aspects recorded in that component or level of welfare. The importance of the latter is that it highlights immediately, for the decision-maker, where distress is recorded and this information is not lost in the aggregation process. This aggregation procedure therefore calls attention to those areas where the worst deprivation is to be found.

One can criticise the use of the mean as a method of aggregation on several grounds. Firstly, in effect, use is made of a linear aggregation process to represent interactions which are almost certainly not linear. This is done for simplicity, as is the case of virtually all causal modelling in the social sciences. Secondly, as weighting functions have not been introduced, an implicit weighting of unity is assigned to each factor, that is, each factor is of equal importance in the aggregation process. A real weighting is, in fact, introduced through (a) the choice of variables (specifically the number of variables used to represent each component of welfare), and (b) the choice of critical levels for these different variables. Again this has been done for simplicity; a more advanced version of the scheme used here might well introduce weighting factors and use experimental data to determine values for these factors. This would be a far more elaborate investigation than undertaken here, but may be attempted in the future. For both aggregation and weighting, the defence for this method is that in this first attempt to choose variables, set critical levels, and use this set of variables in the context of the overall causal framework, the simplest scheme should be used and greater complexity introduced only if and when this proves necessary.

Finally one might claim that any attempt at aggregation is mistaken, because of the complexity of the causal relations one is trying to represent. However, while the attempt may not work, it is worth trying because of the

simplification achieved if it can be done satisfactorily. But a stronger reason is that aggregation is a necessity in any real attempt to meet the needs of decision-makers. Decisions will continue to be made on the basis of explicit or implicit aggregation of data; indeed the essence of decision support systems is that they selectively discard detailed information from the vast mass of data available, and replace it with summary data which is the only basis, in practice, on which decisions can be taken. The philosophy followed here is that one should try to produce summary data in a systematic manner but without introducing unnecessary complexity, that is, to do it in the simplest way that produces satisfactory results. This method is aimed at practical decision-making systems rather than necessarily making a contribution to social theory. Given this approach, the aggregation presented here, as a first attempt, seems reasonable. The procedure may be re-assessed once the data has been analysed to see if it still appears to be so, or if some other method of aggregation (or no aggregation at all) seems more appropriate.

To sum up, given that the Quality of Life measurement scheme proposed should be uncomplicated and easy to use, the method of linear aggregation with equal weighting for each indicator has been adopted. This procedure has 'face validity' (Babbie, 1973) and is a reasonable one to use, until it is demonstrated that greater complexity is called for, or that the procedure cannot be useful to decision-makers.

The following figure shows the aggregation of indicators into components and is otherwise similar to Figure 3, Chapter 2.

Figure 11

Aggregation of Quality of Life Indicators into Components

Component	Indicators	Location
<u>LEVEL 4: Legal Access</u>		
Justice	Police Power Habeas Corpus Legal Aid	Expert Panel: 1 Expert Panel: 2 Ques 2b: 41
<u>LEVEL 3: Access to Power</u>		
Participation and Politics	Political Representation Local Authority Government Local Organisation Political Pressure Meetings	Expert Panel: 3 Expert Panel: 4 Ques 2b: 30 Ques 2b: 14 Ques 2b: 33 Ques 2b: 40
Economic Power	Trade Union Membership Trade Union Representation	Survey Form: 1 Ques 2b: 5
Persuasive Power	Media	Ques 2b: 26
Political Freedom	Political Freedom Politics	Expert Panel: 5 Ques 2b: 22
<u>LEVEL 2: Available Resources</u>		
Land	Land	Ques 2b: 18
Environment	Clean	Ques 2b: 15
Production	Gross Domestic Product Production of Steel	Survey Form: 10 Survey Form: 11
Capital	Car Homeownership Personal Savings Insurance Capital Savings	Ques 2a: 22a Ques 2a: 22b Ques 2a: 22d Ques 2a: 22e Ques 2a: 22 Ques 2b: 35
Infrastructure	Roads	Ques 2b: 44
Work	Employment Employment Skilled Unemployed Unemployment Economic Pressure Promotion	Survey Form: 6 Ques 2a: 6b Ques 2a: 7 Ques 2b: 3 Ques 2b: 1 Ques 2b: 8

Component	Indicators	Location
Training and Skills	Professional Workers	Survey Form: 8
	Literacy	Survey Form: 9
	Professionals	Ques 2a: 6,7
	Education Levels	Ques 2a: 4
	Training	Ques 2a: 5
	Higher Education Resource	Ques 2a: 4 Ques 2b: 46
Motivation	Motivation	Ques 2b: 24
	Work	Ques 2b: 9
Economic Freedom	Entrepreneurial Freedom	Expert Panel: 6
	Employee Freedom	Expert Panel: 7
	Economic Choice	Ques 2b: 31
<hr/>		
<u>LEVEL 1: Level of Living</u>		
Income	Average Income	Survey Form: 5
	Income	Ques 2a: 8
	Money	Ques 2b: 47
Nutrition	Meat per Week	Ques 2a: 21
	Nutrition	Ques 2b: 25
Emergency Services	Police/Fire/Ambulance	Survey Form: 13
	Telephones	Survey Form: 14
	Telephones	Ques 2a: 14
	Police	Ques 2b: 12
	Emergency	Ques 2b: 28
Health Services	Doctors	Survey Form: 15
	Medical Expenditure	Survey Form: 16
	Medical Care	Ques 2b: 38
Housing	Housing Shortage	Survey Form: 17
	Density	Ques 2a: 8,10
	Rent per Income	Ques 2a: 8,12
	Housing	Ques 2b: 34
Basic Services	Running Water	Survey Form: 18
	Water	Ques 2a: 9
	Sanitation	Ques 2a: 10
	Electricity	Ques 2a: 13a
	Cooking Method	Ques 2a: 13b
	Services	Ques 2b: 20
Transport	Travel Time	Ques 2a: 17
	Travel Cost per Income	Ques 2a: 18,8
	Travel	Ques 2b: 32
	Public Transport	Ques 2b: 48

Component	Indicators	Location
Education	Educational Investment Student/Staff Ratio Teaching Schools	Survey Form: 21 Survey Form: 22 Ques 2b: 29 Ques 2b: 23
Social Welfare	Disabled and Retired Grants Sickness Old Age	Ques 2a: 6 Ques 2a: 8 Ques 2b: 27 Ques 2b: 49
Consumer Services	Newspapers Radio/TV Shops	Ques 2a: 15 Ques 2a: 16 Ques 2b: 50
Community Facilities	Recreational Facilities Entertainment Recreation Library	Survey Form: 12 Ques 2b: 43 Ques 2b: 10 Ques 2b: 13
Freedom of Action	Social Action Belief Freedom	Expert Panel: 8 Expert Panel: 9 Ques 2b: 16

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LEVEL 0: State of Welfare

Health	Health	Ques 2b: 36
Safety	Safety	Ques 2b: 2
Social Cohesion	Cohesion Family Esteem Friendliness	Ques 2b: 6 Ques 2b: 11 Ques 2b: 37 Ques 2b: 19
Fulfillment	Alienation Self-Actualisation Freetime Anomie Happiness	Ques 2b: 17 Ques 2b: 7 Ques 2b: 42 Ques 2b: 39 Ques 2b: 4
Deprivation	Deprivation	Ques 2b: 51

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Component	Indicators	Location
<u>LEVEL -1: Level of Pressure</u>		
Physiological Response	Life Expectancy Infant Mortality Child Mortality Illness	Survey Form: 19 Survey Form: 20 Ques 2a: 20 Ques 2a: 19
Stress	Work Stoppages Alcoholism Prison Population Crime Rate	Survey Form: 2 Survey Form: 3 Survey Form: 4 Survey Form: 7
<u>OVERALL</u>		
Satisfaction	Satisfaction	Ques 2b: 45
Dissatisfaction	Dissatisfaction	Ques 2b: 21

## CHAPTER 4: SURVEY RESULTS

### 4.1 Elsie's River Results

The data from the Elsie's River survey were computed using BMDP programmes. Both Questionnaire 2a and Questionnaire 2b were designed for computerization. The data were checked for errors in the punching of data cards before computation. The BMDP programme used most was Histograms and Univariate Plots for both ungrouped and grouped data. This programme calculates frequencies, cumulative frequencies, means and standard deviations. Two-Way Frequency Tables were also computed which give both row and column totals, as well as the statistics Chi square, gamma, Tau B and Somers D. The Chi-square tests the independence between rows and columns, gives the degrees of freedom and the probability. In the 1981 survey the data was subjected to Factor Analysis within each Level to test for the independence of the variables. No common factor variances were found.

The results of the Elsie's River Survey are shown in the Tables in this section. The results are given in such a way as to show the method of aggregation of the indicators and indices and a rank ordering.

Tables 1a to 7a give the results of the Expert Panel

Tables 8a to 12a give the results of the Survey Form

Tables 13a to 17a give the results for Questionnaire 2a

Tables 18a to 24a give the results for Questionnaire 2b

Tables 25a to 26a give the results for the Informed Source Poll

Level 4: Legal AccessJustice

1. Officials exercising police powers relative to the group are generally held accountable for the way in which these powers are exercised.

Mean: -1.0

Comment: While in theory officials are legally accountable, the nature and scope of powers granted, the number of situations involved, and the lack of readily available legal services, make official protection of little practical value.

2. Habeus Corpus applies, and is effective, for the group.

Mean: -1.5

Comment: This is difficult to answer. The statement may well be true of 'ordinary' arrest for criminal offences (although even here there are difficulties) but the political offense and the security legislation would constitute a wholly different category. No habeus corpus is available in most cases.

Level 3: Access to PowerParticipation and Politics

3. The group concerned has no direct political representation in the central parliament which has legislative power significantly influencing their living conditions.

Mean: -1.80

Comment: Since the introduction of the 1983 Constitution this is no longer strictly correct.

4. There are local authorities elected by the survey group, for example municipal or management committees, with real power to affect conditions where they live.

Mean: -1.80

Comment: Residents of the area are not represented on the municipal council and management committees, as far as I am aware have no decision making power.

Political Freedom

5. The group has substantial freedom to express political views and engage in political action.

Mean: -1.00

Comment: The recent elections for the House of Representatives show that dissent can only operate within narrow limits.

Level 2: Available ResourcesEconomic Freedom

6. The group has substantial freedom of economic action to engage in business enterprises and employ others as needed.

Mean: -0.60

Comment: The Group Areas Act Prevents this.

7. Members of the group have substantial freedom to choose the nature and place of their work.

Mean: -0.80

Comment: The same as the previous comment.

Level 1: Level of LivingFreedom of Action

8. The group has substantial freedom of social action, eg to live where they wish and associate with whom they choose.

Mean: -2.00

Comment: The same as the previous comment.

9. The group has substantial freedom to express and practice their religious beliefs.

Mean: +0.08

Comment: As far as I know there are no legal restrictions on such freedom. However, once again, the Group Areas Act would in practice limit the places of worship normally attended.

**2a** Ranked-ordered Expert Panel Response by Indicator

<u>Rank</u>	<u>Indicator</u>	<u>Mean</u>
1	Freedom of Social Action	-2.00
2	Habeas Corpus	-1.80
3	Local Authority Accountability	-1.80
4	Political Representation	-1.40
5	Police Power Accountability	-1.00
6	Political Freedom	-1.00
7	Employee Freedom	-0.80
8	Entrepreneurial Freedom	-0.60
9	Freedom of Beliefs	+0.80

**3a** Grouped Expert Panel Response by Index and Indicator

<u>LEVEL 4</u>			<u>Average</u>	<u>Maximum</u>	<u>Minimum</u>
Justice	Police Power	-1.00			
	Habeas Corpus	-1.80	-1.40	-1.00	-1.80
<u>LEVEL 3</u>					
Participation & Politics	Political Representation)	-1.40			
	Local Authority	-1.80	-1.60	-1.40	-1.80
Political Freedom	Political Freedom	-1.00	-1.00	-1.00	-1.00
<u>LEVEL 2</u>					
Economic Freedom	Entrepreneurial	-0.60			
	Employee	-0.80	-0.70	-0.60	-0.80
<u>LEVEL 1</u>					
Freedom of Action	Social Action	-2.00			
	Belief	+0.80	-0.60	+0.80	-2.00

4a

Grouped Expert Panel Response by Level and Index

			Average	Maximum	Minimum
<u>LEVEL 4</u>	Justice	-1.40	-1.40	-1.00	-1.80
<u>LEVEL 3</u>	Participation & Politics	-1.60			
	Political Freedom	-1.00	-1.30	-1.00	-1.80
<u>LEVEL 2</u>	Economic Freedom	-0.70	-0.70	-0.60	-0.80
<u>LEVEL 1</u>	Freedom of Action	-0.60	-0.60	+0.80	-2.00

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5a

Rank-Ordered Grouped Expert Panel Response by Index

1	Participation & Politics	-1.60
2	Justice	-1.40
3	Political Freedom	-1.00
4	Economic Freedom	-0.70
5	Freedom of Action	-0.60

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6a

Rank-Ordered Minimum Expert Panel Response by Index

1	Freedom of Action	-2.00
2	Justice	-1.80
3	Participation & Politics	-1.80
4	Political Freedom	-1.00
5	Economic Freedom	-0.80

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7a

Grouped Expert Panel Response by Level

	Average	Maximum	Minimum
<u>LEVEL 4</u>	-1.40	-1.00	-1.80
<u>LEVEL 3</u>	-1.30	-1.00	-1.80
<u>LEVEL 2</u>	-0.70	-0.60	-0.80
<u>LEVEL 1</u>	-0.60	+0.80	-2.00

---

**Ba**      Rank-Ordered Objective Data from the Survey Form by Indicator

<u>Rank</u>	<u>Indicator</u>	<u>Mean</u>
1	Employment	-2.00
2	Phone	-2.00
3	Housing Shortage	-2.00
4	Recreation Facilities	-2.00
5	Crime Rate	-2.00
6	Prison Population	-2.00
7	Alcoholism	-2.00
8	Income	-1.97
9	Doctors/Dentists	-1.66
10	Steel	-1.55
11	GDP	-1.52
12	Police/Fire/Ambulance	-1.33
13	Work Stoppages	-1.00
14	Life Expectancy	-0.71
15	Infant Mortality	-0.70
16	Managerial/Prof People	-0.65
17	Health Expenditure	-0.50
18	Education Expenditure	-0.50
19	Student/Staff Ratio	-0.50
20	Literacy	-0.37
21	Water	+1.00
22	TU Membership	No Information

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9a Grouped Objective Data from Survey Form by Index and Indicator

<u>LEVEL 3</u>			Average	Maximum	Minimum
Economic Power	TU Membership	No Information			
<u>LEVEL 2</u>					
Production	GDP	-1.52			
	Steel	-1.55	-1.54	-1.52	-1.55
Work	Employment	-2.00	-2.00	-2.00	-2.00
Training and Skills	Prof/Managerial	-0.65			
	Literacy	-0.37	-0.51	-0.37	-0.65
<u>LEVEL 1</u>					
Income	Income	-1.97	-1.97	-1.97	-1.97
Emergency Services	Pol/Fire/Amb	-1.33			
	Phone	-2.00	-1.67	-1.33	-2.00
Health Services	Health Expenditure	-0.50			
	Doctors	-1.66	-1.08	-0.50	-1.66
Housing	Shortage	-2.00	-2.00	-2.00	-2.00
Basic Services	Water	+1.00	+1.00	+1.00	+1.00
Education	Educ Expenditure	-0.50			
	Staff/Student Ratio	-0.50	-0.50	0.00	-0.50
Community Facility	Recreation	-2.00	-2.00	-2.00	-2.00
<u>LEVEL -1</u>					
Physiological	Infant Mortality	-0.70			
	Life Expectency	-0.83	-0.77	-0.70	-0.83
Stress	Crime Rate	-2.00			
	Prison Population	-2.00			
	Absenteeism	-1.00			
	Alcoholism	-2.00	-1.75	-1.00	-2.00

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**10a**      Grouped Objective Data from Survey Form by Level and Index

			Average	Maximum	Minimum
<u>LEVEL 3</u>	Economic Power	No Information			
<u>LEVEL 2</u>	Production	-1.54			
	Work	-2.00			
	Training & Skills	-0.51	-1.35	-0.37	-2.00
<u>LEVEL 1</u>	Income	-1.97			
	Emerg Services	-1.67			
	Health "	-1.08			
	Housing	-2.00			
	Basic Services	+1.00			
	Education	-0.50			
	Comm Facilities	-2.00	-1.17	+1.00	-2.00
<u>LEVEL -1</u>	Physiological	-0.77			
	Stress	-1.75	-1.26	-0.70	-2.00

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**11a**      Rank-Ordered Grouped Survey Form Data by Index

1	Work	-2.00
2	Community Facilities	-2.00
3	Housing	-2.00
4	Income	-1.97
5	Stress	-1.75
6	Emergency Services	-1.67
7	Production	-1.54
8	Health Services	-1.08
9	Physiological	-0.77
10	Training and Skills	-0.51
11	Education	-0.25
12	Basic Services	+1.00
13	Economic Power	No Information

---

12a

Grouped Objective Data from Survey Form by Level

	Average	Maximum	Minimum
<u>LEVEL 3</u>	No Information		
<u>LEVEL 2</u>	-1.35	-0.37	-2.00
<u>LEVEL 1</u>	-1.17	+1.00	-2.00
<u>LEVEL -1</u>	-1.26	-0.77	-1.75

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13a	<u>Rank-Ordered Objective Data from Q2a by Indicator</u>	
1	Savings	-2.00
2	Employment	-2.00
3	Income	-2.00
4	Phone	-2.00
5	Rent per Income	-2.00
6	Density	-2.00
7	Electricity	-2.00
8	News	-2.00
9	Illness	-2.00
10	Skilled Unemployed	-2.00
11	Education	-1.72
12	Car	-1.68
13	Water	-1.63
14	Disposal	-1.63
15	Capital	-1.50
16	Travel Time	-1.50
17	Homeownership	-1.43
18	Insurance	-1.34
19	Training	-1.29
20	Travel Cost/Income	-1.00
21	TV, Radio	-0.78
22	Cooking	-0.43
23	Child Mortality	-0.33
24	Higher Education	-0.28
25	Toilet	-0.24
26	Meat	+0.06
27	Job	+2.00

14a

Grouped Objective Data from Q2a by Index and Indicator

<u>LEVEL 2</u>			Average	Maximum	Minimum
Capital	Homeownership	-1.43			
	Car	-0.94			
	Insurance	-0.61			
	Savings	-0.75			
	Capital	-0.50	-0.85	-0.61	-1.43
Work	Employment	-2.00			
	Skilled Unemployed	-2.00	-2.00	-2.00	-2.00
Training and Skills	Education	-1.82			
	Higher Education	-1.48			
	Training	-0.12			
	Job(Professional)	-1.72	-1.29	-0.12	-1.82
<u>LEVEL 1</u>					
Income	Income	-0.58	-0.58	-0.58	-0.58
Nutrition	Meat	+2.00	+2.00	+2.00	+2.00
Emergency Services	Phone	-1.67	-1.67	-1.67	-1.67
Housing	Rent/Income	-0.97			
	Density	-1.74	-1.36	-0.97	-1.74
Basic Services	Water	+0.43			
	Toilet	+0.30			
	Disposal	-0.54			
	Electricity	-0.63			
	Cooking	-0.27	-0.14	+0.43	-0.63
Transport	Travel Time	-0.36			
	Travel Cost/Income	-1.00	-0.68	-0.36	-1.00
Consumer Services	News	-1.62			
	TV, Radio	+2.00	+0.19	+2.00	-1.62
<u>LEVEL -1</u>					
Physiological	Child Mortality	-0.14			
	Illness	-1.00	-0.57	-0.14	-1.00

15a

Grouped Objective Data from Q2a by Level and Index

			Average	Maximum	Minimum
<u>LEVEL 2</u>	Capital	-0.85			
	Work	-2.00			
	Training & Skills	-1.29	-1.38	-0.12	-2.00
<u>LEVEL 1</u>	Income	-0.58			
	Nutrition	+2.00			
	Emerg Services	-1.67			
	Housing	-1.36			
	Basic Services	-0.14			
	Transport	-0.68			
	Consumer Services	+0.19	-0.32	+2.00	-1.74
<u>LEVEL -1</u>	Physiological Stress	-0.57	-0.57	-0.14	-1.00

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16a

Rank-Ordered Grouped Q2a Data by Index

	ER 83
1 Work	-2.00
2 Emergency Services	-1.67
3 Housing	-1.36
4 Training & Skills	-1.29
5 Capital	-0.85
6 Transport	-0.68
7 Income	-0.58
8 Stress	-0.57
9 Basic Services	-0.14
10 Consumer Services	+0.19
11 Nutrition	+2.00

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17a

Grouped objective Data from Q2a by Level

	Average	Maximum	Minimum
<u>LEVEL 2</u>	-1.38	-0.85	-1.29
<u>LEVEL 1</u>	-0.32	+2.00	-1.74
<u>LEVEL -1</u>	-0.57	-0.14	-1.00

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The Tables 18a, page 126, and 18b, page 151, give a score for the attitudes expressed in Questionnaire 2b. The percentage distribution over the five responses, -2.00 to +2.00 (see Chapter 2, 2.3) was used in the calculation. A non-linear weighting was adopted to highlight extreme scores as follows:

<u>Response</u>	<u>Score</u>
-2.00	% distribution * -3.00
-1.00	" * -1.00
0	" * 0
+1.00	" * +1.00
+2.00	" * +3.00

A positive score indicates satisfaction and vice versa. The Pos/Neg column in the tables indicates whether the question was posed in the positive or negative sense, and the last column gives the raw means for each indicator.

18a

Rank-Ordered Subjective Data from Q2b by Score

<u>Rank</u>	<u>Indicator</u>	<u>Pos/Neg</u>	<u>Score</u>	<u>Mean</u>
1	Housing	Neg	-199.50	-1.41
2	Ecpress	Neg	-194.40	-1.40
3	Savings	Neg	-193.40	-1.37
4	Polpress	Neg	-185.50	-1.30
5	Police	Pos	-165.20	-1.13
6	Unemploy	Neg	-156.40	-1.15
7	Recrea	Neg	-147.30	-1.06
8	Oldage	Neg	-141.00	-1.02
9	Money	Neg	-132.50	-0.97
10	Politics	Pos	-128.50	-0.90
11	Freedom	Neg	-120.60	-0.85
12	Promo	Neg	-108.70	-0.82
13	Alien	Neg	-105.60	-0.77
14	Cohesion	Neg	-105.00	-0.81
15	Library	Neg	-99.70	-0.67
16	Ecchoice	Neg	-93.30	-0.71
17	Safety	Pos	-85.20	-0.59
18	Land	Neg	-83.70	-0.60
19	Media	Pos	-71.50	-0.50
20	Localorg	Pos	-55.20	-0.37
21	Govt	Pos	-48.50	-0.33
22	Sick	Pos	-43.30	-0.11
23	Emerg	Neg	-38.60	-0.30
24	Resource	Pos	-22.60	-0.04
25	Clean	Pos	-20.20	-0.14
26	Roads	Pos	-16.10	-0.10
27	Enter	Pos	-4.20	+0.01
28	Travel	Neg	+2.50	+0.04
29	Meetings	Neg	+6.00	+0.03
30	Selfa	Pos	+10.40	+0.10
31	Anomie	Neg	+14.90	+0.09
32	Dissatis	Neg	+22.30	+0.20
33	Legal	Pos	+22.90	+0.22
34	Esteem	Pos	+29.70	+0.24
35	Motiv	Pos	+30.70	+0.27
36	Unions	Pos	+38.80	+0.32
37	Family	Pos	+44.90	+0.39
38	Services	Pos	+63.30	+0.47
39	Satis	Pos	+74.90	+0.64
40	Happines	Pos	+84.30	+0.67
41	Schools	Pos	+86.80	+0.70
42	Pubtrans	Pos	+88.00	+0.65
43	Health	Pos	+88.30	+0.73
44	Teach	Pos	+90.80	+0.74
45	Friend	Pos	+102.70	+0.82
46	Nutri	Pos	+106.20	+0.80
47	Freetime	Pos	+109.70	+0.85
48	Work	Pos	+112.50	+0.87
49	Medcare	Pos	+115.30	+0.96
50	Shops	Pos	+160.30	+1.21
51	Depriv	Pos	+186.20	+1.33

The raw means from Questionnaire 2b were corrected for a bias towards answering positive questions positively and negative question negatively. This was done by averaging the means of the positive questions, averaging the means of the negative questions, and calculating a correction factor from these averages.

Score for the positive questions = +8.78

Number of positive questions = 31

Average = +0.28

Score for the negative questions = -14.85

Number of negative questions = 20

Average = -0.74

Correction Factor:  $\frac{0.28 - (-0.74)}{2}$

= 0.51

Subtract 0.51 from the positive questions and add 0.51 to the negative ones, to give the corrected mean for each indicator.

In the following Tables only the corrected means are used.

19a

Rank-Ordered Subjective Data from Q2b by Indicator

<u>Rank</u>	<u>Indicator</u>	<u>Corrected Mean ER83</u>	<u>Corrected Mean ER81</u>
1	Police	-1.64	-1.64
2	Politics	-1.41	-1.27
3	Safety	-1.10	+0.16
4	Media	-1.01	-0.70
5	Housing	-0.90	-1.08
6	Ecpres	-0.89	+0.32
7	Localorg	-0.88	-0.93
8	Savings	-0.86	-1.11
9	Govt	-0.84	-0.94
10	Polpress	-0.79	-0.91
11	Clean	-0.65	-0.13
12	Unemploy	-0.64	-0.35
13	Sick	-0.62	-0.73
14	Roads	-0.61	
15	Recrea	-0.55	-0.93
16	Resource	-0.55	
17	Oldage	-0.51	
18	Enter	-0.50	-0.96
19	Money	-0.46	
20	Selfa	-0.41	-0.04
21	Freedom	-0.34	-0.40
22	Promo	-0.31	
23	Cohesion	-0.30	-0.35
24	Legal	-0.29	-0.56
25	Esteem	-0.27	+0.14
26	Alien	-0.26	-0.37
27	Motiv	-0.24	-0.31
28	Ecchoice	-0.20	+0.26
29	Unions	-0.19	-0.52
30	Library	-0.16	-0.12
31	Family	-0.12	
32	Land	-0.09	-0.50
33	Services	-0.04	-0.08
34	Satis	+0.13	+0.36
35	Pubtrans	+0.14	
36	Happines	+0.16	+0.54
37	Schools	+0.19	+0.01
38	Emerg	+0.21	+0.16
39	Health	+0.22	+0.27
40	Teach	+0.23	-0.19
41	Nutri	+0.29	
42	Friend	+0.31	+0.48
43	Freetime	+0.34	-0.01
44	Work	+0.36	+0.54
45	Medcare	+0.45	+0.51
46	Meetings	+0.54	+0.11
47	Travel	+0.55	+0.53
48	Anomie	+0.60	+0.21
49	Shops	+0.70	
50	Dissatis	+0.71	+0.47
51	Depriv	+0.82	

20a Grouped Subjective Data from Q2b by Index and Indicator

<u>LEVEL 4</u>			Average	Maximum	Minimum
Justice	Legal	-0.29	-0.29	-0.29	-0.29
<u>LEVEL 3</u>					
Participation & Politics	Govt	-0.84			
	Local Org	-0.88			
	Polpress	-0.79			
	Meetings	+0.54	-0.49	+0.54	-0.88
Economic Power	Unions	-0.19	-0.19	-0.19	-0.19
Persuasive Power	Media	-1.01	-1.01	-1.01	-1.01
Political Freedom	Politics	-1.41	-1.41	-1.41	-1.41
<u>LEVEL 2</u>					
Land	Land	-0.09	-0.09	-0.09	-0.09
Environment	Clean	-0.65	-0.65	-0.65	-0.65
Capital	Savings	-0.86	-0.86	-0.86	-0.86
Infrastructure	Roads	-0.61	-0.61	-0.61	-0.61
Work	Unemploy	-0.64			
	Ecpres	-0.89			
	Promo	-0.31	-0.61	-0.31	-0.89
Training & Skill	Resource	-0.55	-0.55	-0.55	-0.55
Motivation	Motiv	-0.24			
	Work	+0.36	+0.06	+0.36	-0.24
Economic Freedom	Ecchoice	-0.20	-0.20	-0.20	-0.20
<u>LEVEL 1</u>					
Income	Money	-0.46	-0.46	-0.46	-0.46
Nutrition	Nutri	+0.29	+0.29	+0.29	+0.29
Emergency Services	Police	-1.64			
	Emerg	+0.21	-0.72	+0.21	-1.62
Health Services	Medcare	+0.45	+0.45	+0.45	+0.45
Housing	Housing	-0.90	-0.90	-0.90	-0.90

Basic Services	Services	-0.04	-0.04	-0.04	-0.04
Transport	Travel	+0.55			
	Pubtrans	+0.14	+0.35	+0.55	+0.14
Education	Teach	+0.23			
	Schools	+0.19	+0.21	+0.23	+0.19
Social Welfare	Sick	-0.62			
	Old Age	-0.51	-0.57	-0.51	-0.62
Community Facilities	Enter	-0.50			
	Recrea	-0.55			
	Library	-0.16	-0.40	-0.16	-0.55
Consumer Services	Shops	+0.70	+0.70	+0.70	+0.70
Freedom of Action	Freedom	-0.34	-0.34	-0.34	-0.34
<u>LEVEL 0</u>					
Health	Health	+0.22	+0.22	+0.22	+0.22
Safety	Safety	-1.10	-1.10	-1.10	-1.10
Social Cohesion	Cohesion	-0.30			
	Family	-0.12			
	Esteem	-0.27			
	Friend	+0.31	-0.10	+0.31	-0.30
Fulfillment	Alien	-0.26			
	Selfa	-0.41			
	Freetime	+0.34			
	Anomie	+0.60			
	Happines	+0.16	+0.09	+0.60	-0.41
Deprivation	Depriv	+0.82	+0.82	+0.82	+0.82
OVERALL	Dissatis	+0.71			
	Satis	+0.13	+0.42	+0.71	+0.13

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21a

Grouped Subjective Data from Q2b by Level and Index

<u>LEVEL 4</u>		Average	Maximum	Minimum
Justice	-0.29	-0.29	-0.29	-0.29
<hr/>				
<u>LEVEL 3</u>				
Participation and Politics:	-0.49			
Economic Power:	-0.19			
Persuasive Power:	-1.01			
Political Freedom:	-1.41	-0.78	+0.54	-1.41
<hr/>				
<u>LEVEL 2</u>				
Land:	-0.09			
Environment:	-0.65			
Capital:	-0.86			
Infrastructure:	-0.61			
Work:	-0.61			
Training and Skills	-0.55			
Motivation:	+0.06			
Economic Freedom:	-0.20	-0.44	+0.36	-0.89
<hr/>				
<u>LEVEL 1</u>				
Income Level:	-0.46			
Nutrition:	+0.29			
Emergency Services:	-0.72			
Health Services:	+0.45			
Housing:	-0.90			
Basic Services:	-0.04			
Transport:	+0.35			
Education:	+0.21			
Social Welfare:	-0.57			
Consumer Services:	+0.70			
Community Facilities:	-0.40			
Freedom of Action:	-0.34	-0.12	+0.70	-1.64
<hr/>				
<u>LEVEL 0</u>				
Health:	+0.22			
Safety:	-1.10			
Social Cohesion:	-0.10			
Fulfilment:	+0.09			
Deprivation:	+0.82	-0.01	+0.82	-1.10
<hr/>				
Overall:	+0.42	+0.42	+0.71	+0.13
<hr/>				

22a

Rank-Ordered Grouped Q2b Data by Index

<u>Rank</u>	<u>Index</u>	<u>Mean ER83</u>	<u>Mean ER81</u>
1	Political Freedom	-1.41	-1.27 (1)
2	Safety	-1.10	+0.16 (21)
3	Persuasive Power	-1.01	-0.70 (7)
4	Housing	-0.90	-1.08 (4)
5	Capital	-0.86	-1.11 (2)
6	Emergency Services	-0.72	-0.74 (5)
7	Environment	-0.65	-0.13 (14)
8	Work	-0.61	+0.14 (20)
9	Infrastructure	-0.61	
10	Social Welfare	-0.57	-0.73 (6)
11	Skills and Training	-0.55	
12	Participation & Politics	-0.49	-0.67 (8)
13	Income	-0.46	
14	Community Facilities	-0.40	-0.67 (9)
15	Freedom of Action	-0.34	-0.40 (13)
16	Justice	-0.29	-0.56 (10)
17	Economic Freedom	-0.20	+0.26 (23)
18	Economic Power	-0.19	-0.52 (11)
19	Social Cohesion	-0.10	+0.03 (17)
20	Land	-0.09	-0.50 (12)
21	Basic Services	-0.04	-0.11 (15)
22	Motivation	+0.06	+0.21 (22)
23	Fulfillment	+0.09	+0.07 (19)
24	Educationn	+0.21	-0.10 (16)
25	Health	+0.22	+0.27 (24)
26	Nutrition	+0.29	-1.08 (3)
27	Transport	+0.35	+0.53 (26)
28	Overall	+0.42	+0.42 (25)
29	Health Services	+0.45	+0.03 (18)
30	Consumer Services	+0.70	
31	Deprivation	+0.82	

The figure in brackets refers to the rank order for ER 81

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23a Rank-Ordered Minimum Q2b Data by Index

<u>Rank</u>	<u>Index</u>	<u>Mean ER83</u>	<u>Mean ER81</u>
1	Emergency Services	-1.64	-1.64 (1)
2	Political Freedom	-1.41	-1.27 (2)
3	Safety	-1.10	+0.16 (22)
4	Persuasive Power	-1.01	-0.70 (9)
5	Housing	-0.90	-1.08 (5)
6	Work	-0.89	-0.35 (16)
7	Participation & Politics	-0.88	-0.94 (7)
8	Capital	-0.86	-1.11 (3)
9	Environment	-0.65	-0.13 (19)
10	Social Welfare	-0.62	-0.73 (8)
11	Infrastructure	-0.61	
12	Community Facilities	-0.55	-0.96 (6)
13	Skills and Training	-0.55	
14	Income	-0.46	
15	Fulfillment	-0.41	-0.37 (15)
16	Freedom of Action	-0.34	-0.40 (14)
17	Social Cohesion	-0.30	-0.35 (17)
18	Justice	-0.29	-0.56 (10)
19	Motivation	-0.24	-0.13 (20)
20	Economic Freedom	-0.20	+0.26 (23)
21	Economic Power	-0.19	-0.52 (11)
22	Land	-0.09	-0.50 (12)
23	Basic Services	-0.04	-0.08 (21)
24	Overall	+0.13	+0.36 (25)
25	Transport	+0.14	+0.53 (26)
26	Education	+0.19	-0.19 (18)
27	Health	+0.22	+0.27 (24)
28	Nutrition	+0.29	-1.08 (4)
29	Health Services	+0.45	-0.46 (13)
30	Consumer Services	+0.70	
31	Deprivation	+0.82	

The figures in brackets refers to the rank order for ER81

---

24a Grouped Subjective Data from Q2b by Level

	Average	Maximum	Minimum
<u>LEVEL 4</u>	-0.29	-0.29	-0.29
<u>LEVEL 3</u>	-0.78	-0.19	-1.41
<u>LEVEL 2</u>	-0.44	+0.06	-0.86
<u>LEVEL 1</u>	-0.12	+0.70	-0.90
<u>LEVEL 0</u>	-0.01	+0.82	-1.10
<u>OVERALL</u>	+0.42	+0.42	+0.42

---

Informed Source Poll

In Chapter 2, Section 2.4, the Informed Source Poll is described. As stated there, the results of the 1981 poll were used again in 1983. The open-ended nature of the questions is dealt with by classifying the problems by index. The questions were scored by assigning values on the Likert-type scale used in this work. An implied rating is given in that the questions are assigned values on a rank order as follows:

Question 1	-1.50
Question 2	-1.00
Question 3	-0.50
Question 4	+1.00

This is an arbitrary value system and could easily be adjusted. However as a first attempt to quantify the problem areas in a community, these values were assigned here. If a problem was mentioned more than once during the poll, a simple aggregation would not express the dissatisfaction competently as an average would tend to move the index assigned to the problem towards the mean, rather than emphasise its extreme nature.

The following procedure was chosen for this questionnaire only. Each time an indicator appeared more than once, the lower value would be decreased by 0.5, emphasising that this was a pressure point selected several times and therefore of severe importance. For example, housing is mentioned twice in the Elsie's River poll giving index values of -1.5 for Question 1 and -1.0 for Question 2. A simple average, -1.25, does not express the concern felt, thus the lower value of -1.5 is decreased to -2.0. The index obtained conforms to the scaling used for the other questionnaires.

However, another procedure of addition might be considered: the different values for any component could be added together, resulting in a score. The lowest value would indicate the area of most concern. In this thesis the first procedure described was used.

## Results of the Informed Source Poll:

	<u>Value</u>	<u>Component</u>
Question 1: Housing and Rent	-1.50	Housing
Participation & Politics	-1.50	Participation
Income	-1.50	Income
-----		
Question 2: Housing and Rent	-1.00	Housing
Homeownership	-1.00	Capital
Participation & Politics	-1.00	Participation
Alcohol & Drug Abuse	-1.00 )	
Crime	-1.00 )	Stress
Teenage Pregnancies	-1.00 )	
Pre-School Facilities	-1.00	Community Facilities
Income	-1.00	Income
-----		
Question 3: Homeownership	-0.50	Capital
Local Authority	-0.50 )	
Self-Help	-0.50 )	Participation
Complacency	-0.50 )	
Community Facilities	-0.50	Community Facilities
-----		

25a Informed Source Response by Level and Component

Level	Component	Question 1	Question 2	Question 3	Index
3	Participation and Politics	-1.50	-1.00	-0.50	-2.00
2	Capital		-1.00	-0.50	-1.50
1	Housing	-1.50	-1.00		-2.00
	Income	-1.50	-1.00		-2.00
	Community Facility		-1.00	-0.50	-1.50
-1	Stress		-1.00		-1.00

26a Pressure Points by Rank

1	Participation and Politics	-2.00
2	Housing	-2.00
3	Income	-2.00
4	Capital	-1.50
5	Community Facility	-1.50
6	Stress	-1.00

#### 4.2 QwaQwa Results

The data from the QwaQwa survey were processed in the same way as the Elsie River data except for the Factor Analysis. The sample size is small, as mentioned before, but nevertheless gives an idea of the Quality of Life conditions in QwaQwa.

The results of the QwaQwa data are shown in the Tables in this section. The results are given in such a way as to show the aggregation of indicators and indices and the rank ordering of data.

Tables 1b to 7b give the results of the Expert Panel,

Tables 8b to 12b give the results of the Survey Form,

Tables 13b to 17b give the results for Questionnaire 2a and

Tables 18b to 24b give the results for Questionnaire 2b.

Tables 25b to 26b give the results for the Informed Source Poll.

The numbering of the Tables is such that the Tables 1a to 26a correspond to Tables 1b to 26b for Elsie River and QwaQwa respectively.

1b

Expert Panel Response

Level 4: Legal Access

Justice

1. Officials exercising police powers relative to the group are generally held accountable for the way in which these powers are exercised.

Mean: -1.0

Comment: Held accountable by whom? People in closed settlements generally try to have as little to do with the police as possible which indicates a lack of trust on their part.

2. Habeus Corpus applies, and is effective, for the group.

Mean: -1.5

Comment: None

Level 3: Access to Power

Participation and Politics

3. The group concerned has no direct political representation in the central parliament which has legislative power significantly influencing their living conditions.

Mean: -2.0

Comment: None

4. There are local authorities elected by the survey group, for example municipal or management committees, with real power to affect conditions where they live.

Mean: -0.50

Comment: People in closed settlements in QwaQwa are subject to the local authority of chiefs and headmen whom they did not elect.

Political Freedom

5. The group has substantial freedom to express political views and engage in political action.

Mean: -1.00

Comment: People have the freedom to participate in official Bantustan politics, via recognised parties, along approved lines, but no freedom of political action beyond that.

Level 2: Available Resources

Economic Freedom

6. The group has substantial freedom of economic action to engage in business enterprises and employ others as needed.

Mean: -1.00

Comment: People who are acutely dependent on access to scarce migrant contracts do not have any freedom of economic action.

7. Members of the group have substantial freedom to choose the nature and place of their work.

Mean: -2.00

Comment: Those workers with mine re-employment guarantees subject to the call-in card system dare not jeopardise these resources; those without such guarantees must take whatever contracts or piece-jobs become available.

Level 1: Level of Living

Freedom of Action

8. The group has substantial freedom of social action, eg to live where they wish and associate with whom they choose.

Mean: -1.5

Comment: People in closed settlements are assigned to particular areas or dwelling sites.

9. The group has substantial freedom to express and practice their religious beliefs.

Mean: +1.5

Comment: No formal constraints exist regarding the presence of any denomination or sect.

**2b**            Ranked-ordered Expert Panel Response by Indicator

Rank	Indicator	Mean
1	Political representation	-2.00
2	Employee freedom	-2.00
3	Habeus Corpus	-1.50
4	Entrepreneurial freedom	-1.50
5	Freedom of social action	-1.50
6	Police powers accountability	-1.00
7	Political freedom	-1.00
8	Local authority accountability	-0.50
9	Freedom of beliefs	+1.50

---

**3b**            Grouped Expert Panel Response by Index and Indicator

<u>LEVEL 4</u>			Average	Maximum	Minimum
Justice	Police Power	-1.00	-1.25	-1.00	-1.50
	Habeus Corpus	-1.50			
<u>LEVEL 3</u>					
Participation & Politics	Political Representation	-2.00	-1.25	-0.50	-2.00
	Local Authority	-0.50			
Political Freedom	Political Freedom	-1.00	-1.00	-1.00	-1.00
<u>LEVEL 2</u>					
Economic Freedom	Entrepreneurial	-1.50	-1.75	-1.50	-2.00
	Employee	-2.00			
<u>LEVEL 1</u>					
Freedom of Action	Social Action	-1.50	0.00	+1.50	-1.50
	Belief	+1.50			

---

**4b** Grouped Expert Panel Response by Level and Index

			Average	Maximum	Minimum
<u>LEVEL 4</u>	Justice	-1.25	-1.25	-1.00	-1.50
<u>LEVEL 3</u>	Part.&Politics	-1.25			
	Pol.Freedom	-1.00	-1.13	-0.50	-2.00
<u>LEVEL 2</u>	Economic Freedom	-1.75	-1.75	-1.50	-2.00
<u>LEVEL 1</u>	Freedom of Action	0.00	0.00	+1.50	-1.50

---

**5b** Rank-Ordered Grouped Expert Panel Response by Index

1	Economic Freedom	-1.75
2	Participation & Politics	-1.25
3	Justice	-1.25
4	Political Freedom	-1.00
5	Freedom of Action	0.00

---

**6b** Rank-Ordered Minimum Expert Panel Response by Index

1	Economic Freedom	-2.00
2	Participation & Politics	-2.00
3	Political Freedom	-2.00
4	Justice	-1.50
5	Freedom of Action	-1.50

---

**7b** Grouped Expert Panel Response by Level

	Average	Maximum	Minimum
<u>LEVEL 4</u>	-1.25	-1.00	-1.50
<u>LEVEL 3</u>	-1.13	-0.50	-2.00
<u>LEVEL 2</u>	-1.75	-1.50	-2.00
<u>LEVEL 1</u>	0.00	+1.50	-1.50

8b Rank-Ordered Objective Data from the Survey Form by Indicator

<u>Rank</u>	<u>Indicator</u>	<u>Mean</u>
1	Income	-2.00
2	GDP	-2.00
3	Steel	-2.00
4	Police/Fire/Ambulance	-2.00
5	Phone	-2.00
6	Doctors	-2.00
7	Housing Shortage	-2.00
8	Water	-2.00
9	Recreational Facilities	-2.00
10	Literacy	-2.00
11	Alcoholism	-2.00
12	Managerial/Prof People	-1.89
13	Crime Rate	-1.50
14	Education Expenditure	-1.49
15	Health Expenditure	-1.36
16	Student/Staff Ratio	-1.18
17	Employment	-1.15
18	Life Expectancy	-0.93
19	Infant Mortality	-0.70
20	Work Stoppages	+0.18
21	Prison Population	No prison in QwaQwa
22	TU Membership	No Information

---

9b Grouped Objective Data from Survey Form by Index and Indicator

<u>LEVEL 3</u>			Average	Maximum	Minimum
Economic Power	TU Membership		No Information		
<u>LEVEL 2</u>					
Production	GDP	-2.00			
	Steel	-2.00	-2.00	-2.00	-2.00
Work	Employment	-1.15	-1.15	-1.15	-1.15
Training and Skills	Prof/Managerial Literacy	-1.89			
		-2.00	-1.95	-1.89	-2.00
<u>LEVEL 1</u>					
Income	Income	-2.00	-2.00	-2.00	-2.00
Emergency Services	Pol/Fire/Amb Phone	-2.00			
		-2.00	-2.00	-2.00	-2.00
Health Services	Health Expenditure	-1.36			
	Doctors	-2.00	-1.68	-1.36	-2.00
Housing	Shortage	-2.00	-2.00	-2.00	-2.00
Basic Services	Water	-2.00	-2.00	-2.00	-2.00
Education	Educ Expenditure	-1.49			
	Staff/Student Ratio	-1.18	-1.34	-1.18	-1.49
Community Facility	Recreation	-2.00	-2.00	-2.00	-2.00
<u>LEVEL -1</u>					
Physiological	Life Expectancy	-0.93			
	Infant Mortality	-0.70	-0.83	-0.70	-0.93
Stress	Crime Rate	-1.50			
	Absenteeism	+0.18			
	Alcoholism	-2.00	-1.11	+0.18	-2.00

10b Grouped Objective Data from Survey Form by Level and Index

			Average	Maximum	Minimum
<u>LEVEL 3</u>	Economic Power	No Information			
<u>LEVEL 2</u>	Production	-2.00			
	Work	-1.15			
	Training & Skills	-1.95	-1.70	-1.15	-2.00
<u>LEVEL 1</u>	Income	-2.00			
	Emerg Services	-2.00			
	Health "	-1.68			
	Housing	-2.00			
	Basic Services	-2.00			
	Education	-1.34			
	Comm Facilities	-2.00	-1.86	-1.18	-2.00
<u>LEVEL -1</u>	Physiological	-0.83			
	Stress	-1.11	-0.97	+0.18	-2.00

11b Rank-Ordered Grouped Survey Form Data by Index

1	Emergency Services	-2.00
2	Housing	-2.00
3	Income	-2.00
4	Basic Services	-2.00
5	Production	-2.00
6	Community Facilities	-2.00
7	Training & Skills	-1.95
8	Health Services	-1.68
9	Education	-1.34
10	Work	-1.15
11	Stress	-1.11
12	Physiological	-0.82
13	Economic Power	No Information

12b

Grouped Objective Data from Survey Form by Level

	Average	Maximum	Minimum
<u>LEVEL 3</u>		No Information	
<u>LEVEL 2</u>	-1.70	-1.15	-2.00
<u>LEVEL 1</u>	-1.86	-1.18	-2.00
<u>LEVEL -1</u>	-0.97	+0.18	-2.00

---

13b Rank-Ordered Objective Data from Q2a by Indicator

1	Savings	-2.00
2	Employment	-2.00
3	Income	-2.00
4	Phone	-2.00
5	Rent per Income	-2.00
6	Density	-2.00
7	News	-2.00
8	Illness	-2.00
9	Electricity	-1.88
10	Toilet	-1.73
11	Education	-1.72
12	Car	-1.68
13	Water	-1.63
14	Disposal	-1.63
15	Capital	-1.50
16	Travel Time	-1.50
17	Cooking	-1.40
18	Insurance	-1.34
19	Training	-1.29
20	Travel Cost/Income	-1.00
21	TV, Radio	-0.78
22	Child Mortality	-0.33
23	Higher Education	-0.28
24	Homeownership	0.00
25	Meat	+0.06
27	Job	+2.00

14b Grouped Objective Data from Q2a by Index and Indicator

<u>LEVEL 2</u>			Average	Maximum	Minimum
Capital	Homeownership	0.00			
	Car	-1.68			
	Insurance	-1.34			
	Savings	-2.00			
	Capital	-1.50	-1.30	0.00	-2.00
Work	Employment	-2.00	-2.00	-2.00	-2.00
Education and Training	Education	-1.72			
	Higher Education	-0.28			
	Training	-1.29			
	Job(Professional)	+2.00	-0.32	+2.00	-1.72

The figure for Job is distorted because 3 out of 27 respondents were professionals.

LEVEL 1

Income	Income	-2.00	-2.00	-2.00	-2.00
Nutrition	Meat	+0.06	+0.06	+0.06	+0.06
Emergency Services	Phone	-2.00	-2.00	-2.00	-2.00
Housing	Rent/Income	-2.00*			
	Density	-2.00	-2.00	-2.00	-2.00
Basic Services	Water	-1.63			
	Toilet	-1.73			
	Disposal	-1.63			
	Electricity	-1.88			
	Cooking	-2.00	-1.77	-1.40	-2.00
Transport	Travel Time	-1.50			
	Travel Cost/Income	-1.00*	-1.25	-1.00	-1.50
Consumer Services	News	-2.00			
	TV, Radio	-0.78	-1.39	-0.78	-2.00

LEVEL -1

Physiological	Child Mortality	-0.33*			
	Illness	-2.00	-1.17	-0.33	-2.00

\* Best estimation possible

**15b** Grouped Objective Data from Q2a by Level and Index

			Average	Maximum	Minimum
<u>LEVEL 2</u>	Capital	-1.30			
	Work	-2.00			
	Educ & Training	-0.32	-1.22	+2.00	-2.00
<u>LEVEL 1</u>	Income	-2.00			
	Nutrition	+0.06			
	Emerg Services	-2.00			
	Housing	-2.00			
	Basic Services	-1.77			
	Transport	-1.25			
	Consumer Services	-1.39	-1.43	+0.06	-2.00
<u>LEVEL -1</u>	Physiological	-1.17	-1.17	-0.33	-2.00

**16b** Rank-Ordered Grouped Q2a Data by Index

	QwaQwa	ER 83	ER 81
1 Work	-2.00	-2.00 (1)	-1.50 (1)
2 Emergency Services	-2.00	-1.67 (2)	+1.00 (9)
3 Housing	-2.00	-1.36 (3)	0.00 (6)
4 Income	-2.00	-0.58 (7)	-1.00 (2)
5 Basic Services	-1.77	-0.14 (9)	+1.30 (10)
6 Consumer Services	-1.39	+0.19 (10)	+1.30 (11)
7 Capital	-1.30	-1.00 (5)	-0.20 (4)
8 Transport	-1.25	-0.68 (6)	+0.50 (7)
9 Stress	-1.17	-0.57 (8)	-0.50 (3)
10 Training & Skills	-0.32	-1.29 (4)	0.00 (5)
11 Nutrition	+0.06	+2.00 (11)	+1.00 (8)

The figures in brackets refer to the rank order for ER 83 and ER 81.

17b

Grouped objective Data from Q2a by Level

	Average	Maximum	Minimum
<u>LEVEL 2</u>	-1.22	+2.00	-2.00
<u>LEVEL 1</u>	-1.42	+0.06	-2.00
<u>LEVEL -1</u>	-1.17	-0.33	-2.00

---

18b

Rank-Ordered Subjective Data from Q2b by Score

<u>Rank</u>	<u>Indicator</u>	<u>Pos/Neg</u>	<u>Score</u>	<u>Mean</u>
1	Depriv	Pos	188.7	+1.41
2	Work	Pos	173.9	+1.26
3	Schools	Pos	125.9	+1.00
4	Freetime	Pos	118.5	+1.04
5	Safety	Pos	114.7	+0.93
6	Teach	Pos	107.4	+0.89
7	Shops	Pos	96.3	+0.85
8	Friend	Pos	74.1	+0.70
9	Anomie	Neg	59.2	+0.48
10	Happines	Pos	48.1	+0.44
11	Medcare	Pos	44.4	+0.41
12	Family	Pos	33.3	+0.33
13	Localorg	Pos	14.8	+0.15
14	Unions	Pos	7.4	+0.11
15	Legal	Pos	3.7	+0.11
16	Services	Pos	-18.4	0.00
17	Resource	Pos	-18.5	-0.07
18	Motiv	Pos	-40.7	-0.19
19	Selfa	Pos	-40.7	-0.22
20	Media	Pos	-40.7	-0.26
21	Pubtrans	Pos	-44.4	-0.26
22	Meetings	Neg	-44.4	-0.26
23	Police	Pos	-48.1	-0.30
24	Esteem	Pos	-51.8	-0.30
25	Govt	Pos	-62.9	-0.41
26	Satis	Pos	-66.6	-0.33
27	Politics	Pos	-81.4	-0.63
28	Emerg	Neg	-96.2	-0.59
29	Clean	Pos	-107.3	-0.78
30	Oldage	Neg	-107.3	-0.78
31	Roads	Pos	-114.7	-0.82
32	Dissatis	Neg	-122.1	-0.85
33	Nutri	Pos	-136.9	-0.96
34	Health	Pos	-136.9	-1.00
35	Alien	Neg	-140.6	-1.04
36	Enter	Pos	-148.0	-1.04
37	Promo	Neg	-159.1	-1.11
38	Freedom	Neg	-159.1	-1.15
39	Ecchoice	Neg	-162.8	-1.15
40	Cohesion	Neg	-166.5	-1.22
41	Land	Neg	-166.5	-1.22
42	Sick	Pos	-174.2	-1.22
43	Savings	Neg	-181.3	-1.33
44	Polpress	Neg	-181.3	-1.33
45	Housing	Neg	-181.3	-1.33
46	Recrea	Neg	-181.3	-1.37
47	Travel	Neg	-181.6	-1.30
48	Money	Neg	-189.0	-1.37
49	Unemploy	Neg	-200.1	-1.48
50	Ecpres	Neg	-226.0	-1.63

Note:

As described on page 125, Table 18b gives a score for the attitudes expressed in Questionnaire 2b by using percentage distributions. The procedure is also given on page 125.

The raw means from Questionnaire 2b were corrected for a bias towards answering positive questions positively and negative questions negatively. This was done by averaging the means of the positive questions, averaging the means of the negative questions, and calculating a correction factor from these averages.

Score for the positive questions = +0.84

Number of positive questions = 31

Average = +0.03

Score for the negative questions = -20.03

Number of negative questions = 19

Average = -1.05

Correction Factor:  $\frac{0.03 - (-1.05)}{2}$

= 0.54

Subtract 0.54 from the positive questions and add 0.54 to the negative ones, to give the corrected mean for each indicator.

In the following Tables only the corrected means are used.

(This correction is remarkably similar to that found for Elsie's River, which supports the validity of the procedure used here)

19b

Rank-Ordered Subjective Data from Q2b by Indicator

<u>Rank</u>	<u>Indicator</u>	<u>Corrected Mean</u>
1	Anomie	+1.02
2	Depriv	+0.87
3	Work	+0.72
4	Freetime	+0.50
5	Schools	+0.46
6	Safety	+0.39
7	Teach	+0.35
8	Shops	+0.31
9	Meetings	+0.28
10	Friend	+0.16
11	Emerg	-0.05
12	Happines	-0.10
13	Medcare	-0.13
14	Family	-0.21
15	Oldage	-0.24
16	Dissatis	-0.31
17	Localorg	-0.39
18	Unions	-0.43
19	Legal	-0.43
20	Alien	-0.50
21	Services	-0.54
22	Promo	-0.57
23	Freedom	-0.61
24	Ecchoice	-0.61
25	Resource	-0.61
26	Cohesion	-0.68
27	Land	-0.68
28	Motiv	-0.73
29	Selfa	-0.76
30	Travel	-0.76
31	Polpress	-0.79
32	Savings	-0.79
33	Housing	-0.79
34	Pubtrans	-0.80
35	Media	-0.80
36	Money	-0.83
37	Recrea	-0.83
38	Police	-0.84
39	Esteem	-0.84
40	Satis	-0.87
41	Unemploy	-0.94
42	Govt	-0.95
43	Ecpres	-1.09
44	Politics	-1.17
45	Clean	-1.32
46	Roads	-1.36
47	Nutri	-1.50
48	Health	-1.54
49	Enter	-1.58
50	Sick	-1.76

20b Grouped Subjective Data from Q2b by Index and Indicator

<u>LEVEL 4</u>			Average	Maximum	Minimum
Justice	Legal	-0.43	-0.43	-0.43	-0.43
-----					
<u>LEVEL 3</u>					
Participation & Politics	Govt	-0.95			
	Local Org	-0.39			
	Polpress	-0.79			
	Meetings	+0.28	-0.46	+0.28	-0.95
Economic Power	Unions	-0.43	-0.43	-0.43	-0.43
Persuasive Power	Media	-0.80	-0.80	-0.80	-0.80
Political Freedom	Politics	-1.17	-1.17	-1.17	-1.17
-----					
<u>LEVEL 2</u>					
Land	Land	-0.68	-0.68	-0.68	-0.68
Environment	Clean	-1.32	-1.32	-1.32	-1.32
Capital	Savings	-0.79	-0.79	-0.79	-0.79
Infrastructure	Roads	-1.36	-1.36	-1.36	-1.36
Work	Unemploy	-0.94			
	Ecpres	-1.09			
	Promo	-0.57	-0.87	-0.57	-1.09
Training & Skill	Resource	-0.61	-0.61	-0.61	-0.61
Motivation	Motiv	-0.73			
	Work	+0.72	-0.01	+0.72	-0.73
Economic Freedom	Ecchoice	-0.61	-0.61	-0.61	-0.61
-----					
<u>LEVEL 1</u>					
Income	Money	-0.83	-0.83	-0.83	-0.83
Nutrition	Nutri	-1.50	-1.50	-1.50	-1.50
Emergency Services	Police	-0.84			
	Emerg	-0.05	-0.45	-0.05	-0.84
Health Services	Medcare	-0.13	-0.13	-0.13	-0.13

Housing	Housing	-0.79	-0.79	-0.79	-0.79
Basic Services	Services	-0.54	-0.54	-0.54	-0.54
Transport	Travel	-0.76			
	Pubtrans	-0.80	-0.78	-0.76	-0.80
Education	Teach	+0.35			
	Schools	+0.46	+0.41	+0.46	+0.36
Social Welfare	Sick	-1.76			
	Old Age	-0.24	-1.00	-0.24	-1.76
Community Facilities	Enter	-1.58			
	Recrea	-0.83	-1.21	-0.83	-1.58
Consumer Services	Shops	+0.31	+0.31	+0.31	+0.31
Freedom of Action	Freedom	-0.61	-0.61	-0.61	-0.61

---

**LEVEL 0**

Health	Health	-1.54	-1.54	-1.54	-1.54
Safety	Safety	+0.39	+0.39	+0.39	+0.39
Social Cohesion	Cohesion	-0.68			
	Family	-0.21			
	Esteem	-0.84			
	Friend	+0.16	-0.39	+0.16	-0.84
Fulfillment	Alien	-0.50			
	Selfa	-0.76			
	Freetime	+0.50			
	Anomie	+1.02			
	Happines	-0.10	+0.03	+1.20	-0.76
Deprivation	Depriv	+0.87	+0.87	+0.87	+0.87

---

Overall	Dissatis	-0.31			
	Satis	-0.87	-0.59	-0.31	-0.87

---

21b Grouped Subjective Data from Q2b by Level and Index

<u>LEVEL 4</u>		Average	Maximum	Minimum
Justice	-0.43	-0.43	-0.53	-0.43
<hr/>				
<u>LEVEL 3</u>				
Participation and Politics:	-0.46			
Economic Power:	-0.43			
Persuasive Power:	-0.80			
Political Freedom:	-1.17	-0.72	+0.28	-0.95
<hr/>				
<u>LEVEL 2</u>				
Land:	-0.68			
Environment:	-1.32			
Capital:	-0.79			
Infrastructure:	-1.36			
Work:	-0.87			
Skills and Training:	-0.61			
Motivation:	+0.01			
Economic Freedom:	-0.61	-0.78	+0.72	-1.36
<hr/>				
<u>LEVEL 1</u>				
Income Level:	-0.83			
Nutrition:	-1.50			
Emergency Services:	-0.45			
Health Services:	-0.13			
Housing:	-0.79			
Basic Services:	-0.54			
Transport:	-0.78			
Education:	+0.41			
Social Welfare:	-1.00			
Consumer Services:	+0.31			
Community Facilities:	-1.21			
Freedom of Action:	-0.61	-0.59	+0.41	-1.76
<hr/>				
<u>LEVEL 0</u>				
Health:	-1.54			
Safety:	+0.39			
Social Cohesion:	-0.39			
Fulfilment:	+0.03			
Deprivation:	+0.87	-0.13	+1.02	-1.54
<hr/>				
Overall:		-0.59	-0.31	-0.87
<hr/>				

22b

Rank-Ordered Grouped Q2b Data by Index

<u>Rank</u>	<u>Index</u>	<u>Mean</u>
1	Health	-1.54
2	Nutrition	-1.50
3	Infrastructure	-1.36
4	Environment	-1.32
5	Community Facility	-1.21
6	Political Freedom	-1.17
7	Social Welfare	-1.00
8	Work	-0.87
9	Income	-0.83
10	Persuasive Power	-0.80
11	Capital	-0.79
12	Housing	-0.79
13	Transport	-0.78
14	Land	-0.68
15	Training and Skills	-0.61
16	Freedom of Action	-0.61
17	Overall	-0.59
18	Basic Services	-0.54
19	Participation and Politics	-0.46
20	Economic Power	-0.43
21	Justice	-0.43
22	Social Cohesion	-0.39
23	Health Services	-0.13
24	Motivation	-0.01
25	Fulfillment	+0.03
26	Consumer Services	+0.31
27	Education	+0.41
28	Safety	+0.39
29	Emergency Services	+0.45
30	Economic Freedom	+0.61
31	Deprivation	+0.87

---

23b

Rank-Ordered Minimum Q2b Data by Index

<u>Rank</u>	<u>Index</u>	<u>Mean</u>
1	Social Welfare	-1.76
2	Community Facilities	-1.58
3	Health	-1.54
4	Nutrition	-1.50
5	Infrastructure	-1.36
6	Environment	-1.32
7	Political Freedom	-1.17
8	Work	-1.09
9	Participation and Politics	-0.95
10	Overall	-0.87
11	Social Cohesion	-0.84
12	Emergency Services	-0.84
13	Income Levels	-0.83
14	Persuasive Power	-0.80
15	Transport	-0.80
16	Housing	-0.79
17	Capital	-0.79
18	Fulfilment	-0.76
19	Motivation	-0.73
20	Land	-0.68
21	Freedom of Action	-0.61
22	Training and Skills	-0.61
23	Economic Freedom	-0.61
24	Basic Services	-0.54
25	Economic Power	-0.43
26	Legal Access	-0.43
27	Health Services	-0.13
28	Consumer Services	+0.13
29	Education	+0.36
30	Safety	+0.39
31	Deprivation	+0.87

---

24b

Grouped Subjective Data from Q2b by Level

	Average	Maximum	Minimum
<u>LEVEL 4</u>	-0.43	-0.43	-0.43
<u>LEVEL 3</u>	-0.72	+0.28	-1.17
<u>LEVEL 2</u>	-0.79	+0.72	-1.36
<u>LEVEL 1</u>	-0.57	+0.41	-1.76
<u>LEVEL 0</u>	-0.13	+1.02	-1.54
<u>OVERALL</u>	-0.59	-0.31	-0.87

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Informed Source Poll

The results for QwaQwa (see 24a, page 135, for a description of the method for evaluating the data) of the Informed Source Poll, highlighting the problem areas in the community.

<u>Component</u>	<u>Value</u>
Question 1: Expansion of the population in a limited geographical area leading to deprivation of facilities and viable land.	
Infrastructure	-1.50
Land	-1.50
-----	
Question 2: Unemployment, health (large amounts of nutrition related diseases), housing.	
Employment	-1.00
Health	-1.00
Nutrition	-1.00
Housing	-1.00
-----	
Question 3: Rural unemployed. Political constraints lead to problems in terms of obtaining labour contracts in QwaQwa to work outside of QwaQwa which in turn leads to severe poverty, malnutrition and despondency.	
Income	-0.50
Employment	-0.50
Economic Power	-0.50
Nutrition	-0.50
Motivation	-0.50
-----	

25b Informed Source Response by Level and Component

Level	Component	Question 1	Question 2	Question 3	Index
3	Economic Power			-0.50	-0.50
2	Land	-1.50			-1.50
	Infrastructure	-1.50			-1.50
	Work		-1.00	-0.50	-1.50
	Motivation			-0.50	-0.50
1	Income			-0.50	-0.50
	Nutrition		-1.00	-0.50	-1.50
	Housing		-1.00		-1.00
0	Health		-1.00		-1.00

26b Pressure Points by Rank

1	Land	-1.50
2	Nutrition	-1.50
3	Work	-1.50
4	Infrastructure	-1.50
5	Health	-1.00
6	Housing	-1.00
7	Income	-0.50
8	Economic Power	-0.50
9	Motivation	-0.50

CHAPTER 5: ANALYSIS5.1 Analysis of the Expert Panel Opinion

The responses to the statements on Form 1, the Expert Panel assessment, were averaged and aggregated and the results may be seen in Tables 1a to 24a for Elsie's River and 1b to 24b for Basuto QwaQwa in Chapter 4. In the case of QwaQwa, Economic Freedom, Participation and Politics and Justice were the three lowest scoring indices. In the case of Elsie's River the three lowest were Participation and Politics, Justice and Political Freedom in that order. In Elsie's River Economic Freedom obtained a better score than in QwaQwa showing that in the opinion of the experts Elsie's River has a greater degree of employment, job satisfaction, and economic mobility.

<u>Component</u>	<u>ER 83</u>	<u>QwaQwa</u>	<u>ER 81</u>
1 Participation & Politics	-1.60	-1.25 (2)*	-2.00 (1)*
2 Justice	-1.40	-1.25 (3)	-1.33 (2)
3 Political Freedom	-1.00	-1.00 (4)	-1.00 (3)
4 Economic Freedom	-0.70	-1.75 (1)	-0.16 (4)
5 Freedom of Action	-0.60	0.00 (5)	-0.50 (5)

Interesting to note is the change through time between the ER 81 survey and the ER 83 survey. For Elsie's River the issue of Participation and Politics is considered less of a problem in 1983, while the opinions about Justice, Political Freedom and Freedom of Action have remained similar. However the experts see a greater problem with respect to Economic Freedom (presumably this reflects the general decline in the economic status of the country and the Western Cape in particular). The index Economic Freedom for QwaQwa shows that there is more concern about this factor than the lowest scoring index for Elsie's River and this is indicative of very poor working conditions and availability of jobs in QwaQwa.

\* The number in brackets refers to the ranking order for QwaQwa and ER 81.

## 5.2 Analysis of the Survey Form

The results of the Survey Form data, collected from a variety of sources, are shown for Elsie's River in Tables 8a to 12a, and those for QwaQwa in Tables 8b to 12b. Generally QwaQwa is worse off than Elsie's River, the index range being from -2.00 to 0 for QwaQwa and -2.00 to +1.00 for Elsie's River. For 10 out of 13 indices QwaQwa is extremely poor.

<u>Component</u>	<u>ER 83</u>	<u>QwaQwa</u>	<u>ER 81</u>
1 Work	-2.00	-0.95 (10)	-0.50 (7)
2 Community Facilities	-2.00	-2.00 (6)	-1.00 (4)
3 Housing	-2.00	-2.00 (2)	-1.50 (1)
4 Income	-1.97	-2.00 (3)	-1.00 (5)
5 Stress	-1.75	-1.11 (11)	-1.20 (2)
6 Emergency Services	-1.67	-2.00 (1)	-1.00 (3)
7 Production	-1.54	-2.00 (5)	-0.80 (6)
8 Health Services	-1.08	-1.68 (8)	+0.50 (10)
9 Physiological	-0.77	-0.83 (12)	+0.30 (8)
10 Training & Skills	-0.51	-1.95 (7)	+0.50 (9)
11 Education	-0.25	-1.34 (9)	no info
12 Basic Services	+1.00	-2.00 (4)	+1.50 (12)
13 Economic Power	N.I.	N.I. *	+0.50 (11)

\* No Information

The difference between ER 83 and ER 81 is mainly due to the setting of better standards for ER 83 and in addition the conversion of cardinal numbers to a Likert-type scale grading is more controlled. Nevertheless work, community facilities, housing, income, stress, and emergency services are sources of dissatisfaction in both Elsie's River surveys. The situation in QwaQwa is very poor with the highest index score being -0.58 for stress. The most dissatisfaction is shown in the indices emergency services, housing,

income, basic services, production and community facilities, which all show -2.00 values.

Index Value	Number of Indices	
	ER 83	QwaQwa
-2.00 to -1.01	8	11
-1.00 to 0.01	3	1
Equal to 0	-	-
0.01 to +1.00	1	-

The table above shows that QwaQwa is worse off than Elsie's River with regard to the indices on the Survey Form.

### 5.3 Analysis of Questionnaire 2a

The results for Questionnaire 2a from the survey done in Elsie's River are shown in Tables 13a to 17a and those for QwaQwa in Tables 13b to 17b. Once again the impression is that QwaQwa residents are worse off in almost every sense than Elsie's River. In all three surveys, ER 81, ER 83 and QwaQwa, the worst situation is with regard to work, that is, employment. Housing and income also cause much dissatisfaction. The results ranged from -2.00 to +2.00 in the case of Elsie's River; for QwaQwa the range is -2.00 to +0.06.

<u>Component</u>	<u>ER 83</u>	<u>QwaQwa</u>	<u>ER 81</u>
1 Work	-2.00	-2.00 (1)	-1.50 (1)
2 Emergency Services	-1.67	-2.00 (2)	+1.00 (9)
3 Housing	-1.36	-2.00 (3)	0.00 (6)
4 Training & Skills	-1.29	-0.32 (10)	0.00 (5)
5 Capital	-0.85	-1.30 (7)	-0.20 (4)
6 Transport	-0.68	-1.25 (8)	+0.50 (7)
7 Income	-0.58	-2.00 (4)	-1.00 (2)
8 Stress	-0.57	-1.17 (9)	-0.50 (3)
9 Basic Services	-0.14	-1.38 (6)	+1.30 (10)
10 Consumer Services	+0.19	-1.39 (5)	+1.30 (11)
11 Nutrition	+2.00	+0.06 (11)	+1.00 (8)

The discrepancy between ER 83 and ER 81 is as before; the new standards have produced better index results. However, in all three surveys, work (employment) is the worst situation, and in both ER 83 and QwaQwa, emergency services and housing are causing dissatisfaction. The best scoring index in ER 83 is in the case of nutrition; the enumerators suggested this high score was a false value, as they felt this was a status-loaded question. They thought that the respondents gave an inflated answer to the question "How often do you eat meat?" because they saw the question as having to do with status. This only reflects the opinion of the enumerators but they all agreed on this point.

The better value for training and skills shown by QwaQwa as opposed to Elsie's River, where one might expect the opposite, is because of the small sample size and the fact that two of the respondents are teachers and one a priest.

Index Value	Number of Indices	
	ER 83	QwaQwa
-2.00 to -1.01	4	9
-1.00 to 0.00	5	1
0.01 to +1.00	1	1
+1.01 to +2.00	1	-

It is clear from this table that QwaQwa is much worse off than Elsie's River with respect to the Quality of Life and that the degree of dissatisfaction may be much higher. It is also clear from these figures where public money would best be spent, and that more jobs would improve the Quality of Life.

#### 5.4 Analysis of Questionnaire 2b

The comparison between the three surveys done is more meaningful here as the Likert Scale applied in each case. The results of Questionnaire 2b are shown in Tables 18a to 24a for Elsie's River and 18b to 24b for QwaQwa. In Tables 18a and 18b the attitudinal variables are ranked by a score which was obtained by weighting the distribution of responses for each variable in a non-linear fashion. A response of +2.00 was given a score of +3.00; +1.00 a score of +1.00, and responses of 0, -1.00 and -2.00 were given scores of 0, -1.00 and -3.00 respectively. The scores thus awarded were totalled and normalised to percentage scores. The non-linear weighting was used to emphasize the extreme scores (see preamble to Tables 18a & 18b).

The lowest scores in ER 83 concerned housing: 'finding a place to live is a major problem in this area' (question 34) and with economic pressure (see above). The highest scores dealt with shops: 'there are good local shops where we can buy what we need' (question 50) and deprivation as in the case of QwaQwa. There are 24 variables with scores  $> 0$  and 27 with scores  $< 0$ . The range of scores is from -199.5 to +186.2.

The lowest scores in QwaQwa concerned economic pressure: 'I would like to see changes in the working conditions of our community' (question 1) and unemployment: 'many people in this community are unemployed' (question 3). The highest score was for work: 'people in this community work hard' (question 9) and for deprivation, a new question: 'I feel that there are members of our community who are much worse off than me' (question 51). There are 15 variables with a score  $> 0$ , and 35 with a score  $< 0$ . The scores range from -226.0 to +188.7.

The lowest scores in ER 81 concerned savings: "these days it is impossible to save any money" (question 35) and housing: "finding a place to live is a major problem in this area" (question 34). The highest scores concerned work

(question 9) as in the case of QwaQwa, and happiness: "I feel that my life is quite happy at the moment" (question 4). There are 17 indicators with scores  $> 0$  and 26 indicators with scores  $< 0$ . There are less indicators than in the case of ER 83 as Q2b was improved and added to between 1981 and 1983. The scores range from -223.3 to + 125.2.

	Scores $< 0$	Scores $> 0$	Total
ER 83	52.94%	47.06%	100%
QwaQwa	70.00%	30.00%	100%
ER 81	62.22%	37.78%	100%

In all three cases there were more negative scores than positive scores, the extreme case being QwaQwa, where 70 % of responses resulted in negative scores. The lowest and highest scores in each case are

ER 83	-199.5	+186.2
QwaQwa	-226.0	+188.7
ER 81	-223.3	+125.2

and show QwaQwa to be the most dissatisfied. From 1981 to 1983 the level of dissatisfaction as represented by the scores, shows that attitudes in Elsie's River improved slightly from 1981 to 1983, and the level of satisfaction also rose. This shows a change for the better over the two year time period as regards the people of Elsie's River. The crude analysis of scores " $> 0$ " and " $< 0$ " shows the same thing. As regards QwaQwa, once again the situation there is worse off than in Elsie's River.

The data from Questionnaire 2b was also analysed in terms of the corrected means (the means for each variable were adjusted for positive responses to positive statements and vice versa; for the details see the preamble to Tables 19a and 19b in Chapter 4. A good comparison is also possible here for the

three surveys. For ER 83 the lowest figures were for Political Freedom, Safety and Persuasive Power. For QwaQwa the lowest figures are for Health, Nutrition and Infrastructure; while for ER 81 the lowest figures are for Political Freedom, Capital and Nutrition. The highest figures in the three cases are for ER 83 Deprivation and Consumer Services; for QwaQwa they are Deprivation and Economic Freedom; and for ER 81 they are Transport and the Overall Index. The range for ER 83 is -1.41 to +0.82; for QwaQwa -1.54 to +0.87 and for ER 81 -1.27 to +0.53.

Comparative Corrected Means

<u>Component</u>	<u>ER 83</u>	<u>QwaQwa</u>	<u>ER 81</u>
1 Political Freedom	-1.41	-1.17 (6)	-1.27 (1)
2 Safety	-1.10	+0.39 (28)	+0.16 (21)
3 Persuasive Power	-1.01	-0.80 (10)	-0.70 (7)
4 Housing	-0.90	-0.79 (12)	-1.08 (4)
5 Capital	-0.86	-0.79 (11)	-1.11 (2)
6 Emergency Services	-0.72	+0.45 (29)	-0.74 (5)
7 Environment	-0.65	-1.32 (4)	-0.13 (14)
8 Work	-0.61	-0.87 (8)	+0.14 (20)
9 Infrastructure	-0.61	-1.36 (3)	
10 Social Welfare	-0.57	-1.00 (7)	-0.73 (6)
11 Training & Skills	-0.55	-0.61 (15)	
12 Participation & Politics	-0.49	-0.46 (19)	-0.67 (8)
13 Income	-0.46	-0.83 (9)	
14 Community Facilities	-0.40	-1.21 (5)	-0.67 (9)
15 Freedom of Action	-0.34	-0.61 (16)	-0.40 (13)
16 Justice	-0.29	-0.43 (21)	-0.56 (10)
17 Economic Freedom	-0.20	+0.61 (30)	+0.26 (23)
18 Economic Power	-0.19	-0.43 (20)	-0.52 (11)
19 Social Cohesion	-0.10	-0.39 (22)	+0.03 (17)
20 Land	-0.09	-0.68 (14)	-0.50 (12)
21 Basic Services	-0.04	-0.54 (18)	-0.11 (15)
22 Motivation	+0.06	-0.01 (24)	+0.21 (22)
23 Fulfillment	+0.09	+0.03 (25)	+0.07 (19)
24 Education	+0.21	+0.41 (27)	-0.10 (16)
25 Health	+0.22	-1.54 (1)	+0.27 (24)
26 Nutrition	+0.29	-1.50 (2)	-1.08 (3)
27 Transport	+0.35	-0.78 (13)	+0.53 (26)
28 Overall	+0.42	-0.59 (17)	+0.42 (25)
29 Health Services	+0.45	-0.13 (23)	+0.03 (18)
30 Consumer Services	+0.70	+0.13 (26)	
31 Deprivation	+0.82	+0.87 (31)	

From this Table one can see the change from the ER81 to the ER83 survey on attitudes. Comparing the values of ER83 to ER81 it is possible to make the following points:

- 1 The attitudes of the ER83 survey have deteriorated with respect to safety.
- 2 Attitudes are less satisfied with respect to work, environment and economic freedom.
- 3 Attitudes have slightly deteriorated concerning political freedom, persuasive power, social cohesion, motivation and transport.
- 4 Attitudes are about the same as regards emergency services, freedom of action, basic services, fulfillment and health.

- 5 The overall index has stayed exactly the same.
- 6 Slightly improved attitudes are shown in housing, social welfare and in participation and politics.
- 7 Improved attitudes concern capital, community facilities, justice, economic power, education, land and health services.
- 8 Attitudes have greatly improved with respect to nutrition.

A table showing the number of indices in each category follows:

Much Worse	Worse	Slightly Worse	Similar	Same	Slightly Better	Better	Much Better
1	3	5	5	1	3	7	1

Excluding the two middle categories, there is a slight improvement in attitudes from 1981 to 1983.

As far as the surveys in Elsie's River and QwaQwa go, a similar analysis is applied:

- 1 Elsie's River is much worse off than QwaQwa in the case of safety (cf the comparison between 1983 and 1981).
- 2 Elsie's River is worse off with respect to housing, political freedom, persuasive power, land, education and emergency services.
- 3 Elsie's River and QwaQwa are similar in the case of capital, training and skills, participation and politics, motivation, fulfillment and deprivation.
- 4 Elsie's River is better off with respect to environment, work, infrastructure, social welfare, income, freedom of action, economic power, social cohesion, basic services, health services, consumer services, justice and economic freedom.
- 5 Elsie's River is much better off in the case of community facility, health, nutrition, transport and the overall index.

A table showing the distribution of responses follows comparing Elsie's River with QwaQwa. Elsie's River is:

Much Worse Off	Worse Off	Similar	Better Off	Much Better Off
2	6	6	12	5

Excluding the middle category Elsie's River is generally in a better position than QwaQwa.

The best scoring index for both Elsie's River and QwaQwa concerned deprivation. 'I feel there are members of our community who are much worse off than me'. This question was designed to measure relative deprivation and it appears that in both cases respondents felt they were better off than a lot of the members of their community. The second best scoring index for Elsie's River concerned consumer services which polled opinion about local shops, while for QwaQwa education was the second best scoring index. The two lowest scoring indices for Elsie's River concern political freedom and safety, while those for QwaQwa concern health and nutrition.

Comparing the range of responses:

Index Value	Number of Indices		
	ER83	QwaQwa	ER81
-2.00 to -1.01	3	6	4
-1.00 to 0.00	18	18	12
0.00 to +1.00	10	7	10
	31	31	26
-2.00 to -1.01	9.68%	19.35%	15.38%
-1.00 to 0.00	58.06%	58.06%	46.15%
0.00 to +1.00	32.26%	22.58%	38.46%
	100%	100%	100%

This shows the same pattern as before, that is, the Quality of Life in QwaQwa is worse than in Elsie's River as measured by the attitudes of the respondents in the surveys. The comparison between ER83, ER81 and QwaQwa is good as the only change from 1981 to 1983 is in the number of questions put to respondents. A crude analysis of responses < 0 and > 0 shows:

	ER83	QwaQwa
< 0	67.74%	83.87%
> 0	32.26%	16.13%
	-----	-----
	100%	100%

A further breakdown of the range of responses shows the following

	ER83	QwaQwa	ER81
-2.00 to -0.50	35.48%	61.29%	46.15%
-0.50 to 0.00	32.26%	22.58%	15.39%
0.00 to +1.00	32.26%	16.13%	38.46%
	-----	-----	-----

This analysis shows that 61% of QwaQwa attitudes reflect extreme dissatisfaction, while 35% do so in Elsie's River 1983. 23% of QwaQwa attitudes lie above the MEL (as described in the section on Standards) and 32% in Elsie's River. Only 16% of attitudes reflect satisfaction in QwaQwa, while 32% do so in Elsie's River. This shows the same effect as the other Questionnaires, that is, QwaQwa is worse off than Elsie's River.

Comparing ER83 with ER81, 35% reflect great dissatisfaction in the ER83 survey and 46% in the ER81 survey. 32% for ER83 and 15% for ER81 lie above the MEL level, and 32% for ER83 and 38% for ER81 reflect satisfaction. So although there are less dissatisfied attitudes in ER83 as compared with ER81, there are also less satisfied attitudes.

### 5.5 Analysis of Informed Source Poll

For the Informed Source Poll, the results of which may be seen in Tables 25a to 26a for Elsie's River and 25b to 26b for QwaQwa, the analysis is not as straightforward. Political matters, Housing and Income are the areas for most concern in Elsie's River, while for QwaQwa Land, Nutrition, Employment and Infrastructure give cause for most concern.

<u>Component</u>	<u>ER83</u>
1 Participation & Politics	-2.00
2 Housing	-2.00
3 Income	-2.00
4 Capital	-1.50
5 Community Facility	-1.50
6 Stress	-1.00

<u>Component</u>	<u>QwaQwa</u>
1 Land	-1.50
2 Nutrition	-1.50
3 Work	-1.50
4 Infrastructure	-1.50
5 Health	-1.00
6 Housing	-1.00
7 Income	-0.50
8 Economic Power	-0.50
9 Motivation	-0.50

Informed Sources in Elsie's River mention six causes for concern, while nine are mentioned for QwaQwa. No comparison is made here as the urban and rural situations differ considerably. The difference lies partly in the way the informed sources articulated the problem areas. This difference will probably occur with every survey, but does not mean that the Poll is invalid.

5.6 An Overall View

A final overview of the indices at the various Levels shows a comparison between Elsie's River and QwaQwa.

Level	Expert Opinion	Survey Form	Ques 2a	Ques 2b	Composite Index
<u>Level 4</u>					
ER83	-1.40			-0.29	-0.85
QwaQwa	-1.25			-0.43	-0.84
<u>Level 3</u>					
ER83	-1.30	NI		-0.78	-1.04
QwaQwa	-1.13	NI		-0.72	-0.93
<u>Level 2</u>					
ER83	-0.70	-1.35	-1.38	-0.44	-0.97
QwaQwa	-1.75	-1.70	-1.22	-0.79	-1.37
<u>Level 1</u>					
ER83	-0.60	-1.17	-0.32	-0.12	-0.55
QwaQwa	0.00	-1.86	-1.42	-0.57	-0.96
<u>Level 0</u>					
ER83				-0.01	-0.01
QwaQwa				-0.13	-0.13
<u>Level -1</u>					
ER83		-1.26	-0.57	+0.42	-0.47
QwaQwa		-0.97	-1.17	-0.59	-0.91

At Level 4: Legal Access, which includes the principle of Habeas Corpus, as well as subjective attitudes about access to legal action, there is little difference between Elsie's River and QwaQwa.

At Level 3: Access to Power, concerning political representation, effective Trade Unions and local authorities, Elsie's River is slightly worse off than QwaQwa. This may be due to a greater political consciousness in Elsie's River.

At Level 2: Available Resources, is covered in all four data sources and includes both tangible and intangible resources, eg incomes, economic freedom, Elsie's River is much better off than QwaQwa. The fact that Elsie's River is an urban area and QwaQwa a rural one may have something to do with this, nevertheless QwaQwa is extremely poor with respect to resources.

At Level 1: Level of Living, the level where available resources are consumed, in one way or another, and again covered by all four data sources, Elsie's River is again better off than QwaQwa which is badly off at this Level.

At Level 0: The State of Welfare, which assesses the health of the group or community, Elsie's River is better off than QwaQwa.

At Level -1: The Level of Pressure, the state of the group's physical well-being at the present time is monitored and here QwaQwa is again worse off than Elsie's River, more so than in Level 2 or Level 1.

Generally QwaQwa is poorer in most aspects of the Quality of Life. The overall view shows that both survey areas are inadequate as far as their Quality of Life goes. The aggregation procedure used has proved useful in highlighting areas of deprivation and has also provided a way of comparing different sets of data. There is the added advantage that decision-makers can identify the Level with the worst inadequacies and direct their attention to that sphere of the Quality of Life. The aggregation may also be used to monitor change with time, both at a general and a specific area.

### 5.7 An assessment of Questionnaire 2b

Using the data from Questionnaire 2b with regard to the middle category response, that is, the response 'uncertain', it is possible to make some general deductions about the general applicability of each question. The following table gives a comparison, in percentages, between the responses from Elsie's River and QwaQwa.

Table 27 'Uncertain' Responses from Q2b

<u>Question</u>	<u>Variable</u>	<u>Elsies River</u>	<u>QwaQwa</u>
1	Ecpress	11.1	0.0
2	Safety	4.9	22.2
3	Uneemploy	11.1	3.7
4	Happines	10.5	0.0
5	Unions	51.8	33.3
6	Cohesion	15.4	7.4
7	Selfa	33.1	22.2
8	Promo	15.7	22.2
9	Work	21.0	7.4
10	Recrea	4.9	0.0
11	Family	31.5	44.4
12	Police	10.8	22.2
13	Library	11.1	-
14	Localorg	28.5	40.7
15	Clean	5.6	0.0
16	Freedom	25.9	7.4
17	Alien	19.3	11.1
18	Land	12.5	14.8
19	Friend	9.8	3.7
20	Services	5.9	0.0
21	Dissatis	12.8	0.0
22	Politics	24.6	40.7
23	Schools	10.5	3.7
24	Motiv	20.7	14.8
25	Nutri	8.9	7.4
26	Media	32.5	51.9
27	Sick	16.1	0.0
28	Emerg	7.2	3.7
29	Teach	11.8	14.8
30	Govt	31.1	22.2
31	Ecchoice	20.7	3.7
32	Travel	20.3	7.4
33	Polpress	16.7	7.4
34	Housing	4.9	0.0
35	Savings	3.0	0.0
36	Health	17.0	7.4
37	Esteem	23.6	18.5
38	Medcare	4.9	3.7
39	Anomie	19.7	3.7
40	Meetings	23.0	25.9
41	Legal	26.6	37.0
42	Freetime	4.3	3.7
43	Enter	14.4	3.7
44	Roads	5.2	0.0
45	Satis	9.8	3.7
46	Resource	30.2	29.6
47	Money	3.6	0.0
48	Pubtrans	3.6	3.7
49	Oldage	16.1	29.6
50	Shops	3.0	3.7
51	Depriv	4.9	7.4

**Table 28**      Comparison of 'Uncertains' at Given Intervals

<u>Interval</u>	<u>Elsies River</u>	<u>QwaQwa</u>
0 - 5%	19.61%	46%
5 - 10%	13.73%	16%
10 - 15%	19.61%	8%
15 - 20%	15.69%	2%
20 - 25%	13.73%	10%
25 - 30%	5.88%	6%
> 30%	11.76%	12%
	----- 100.01%	----- 100%

Elsies River:

The lowest values are for safety, recreation, housing, savings, medcare, freetime, money, public transport, shops, deprivation. The highest values occurred with unions, self-actualisation, family, media, government, resource.

QwaQwa:

The lowest values are for economic pressure, unemployment, happiness, recreation, clean, friendliness, services, dissatisfaction, schools, sickness, emergency, economic choice, housing, savings, medcare, anomie, freetime, entertainment, roads, satisfaction, money, public transport, shops. The highest values are for unions, family, local organisation, politics, media, legal.

There is a certain amount of agreement between the two survey areas with regard to both the lowest and the highest values.

Analysis:

The highest value in the 'uncertain' category for Elsie's River is 51.8% (the question regarding unions) and it seems that this is due partly to ignorance and partly to a failure to understand the question. Perhaps this

question should be rephrased. The highest value for QwaQwa dealt with the media, 51.9%, due mostly to ignorance. The lowest value for Elsie's River was 3%, the response about savings, and the lowest for QwaQwa was 0% in 11 cases; economic pressure, happiness, recreation, clean, services, dissatisfaction, sickness, housing, savings, roads and money.

The difference between Elsie's River and QwaQwa shown in Table 28 may be due to the administration of the survey in QwaQwa through an interpreter, as well as the difference between urban and rural attitudes. It would be difficult to assess this. The reasons for the high percentages of 'uncertains', ie those that are greater than 20%, are not entirely clear. Some of them relate to a difficulty in understanding, some due to a lack of knowledge, and some due to a lack of interest. Four categories seem to apply:

	<u>Elsie's River</u>	<u>QwaQwa</u>
Lack of Knowledge	5 Unions 14 Localong 26 Media 30 Govt 32 Travel 46 Resource	5 Unions 46 Resource 49 Oldage
Lack of Understanding	7 Selfa 16 Freedom 41 Legal	7 Selfa 8 Promo 26 Media 41 Legal
Reluctance to Commit Oneself	9 Work 11 Family 22 Politics	2 Safety 11 Family
Lack of Interest	24 Motiv 31 Ecchoice 37 Esteem 40 Meetings	14 Localong) 22 Politics) * 30 Govt ) 12 Police 40 Meetings

\* These matters are the business of the chief.

An improvement might be effected in the category 'Lack of Understanding' but some respondents will always fall into the other three categories.

### 5.8 A Comparison between the Elsie's River sample and that excluding Riverton

Riverton is the old, established module described in Chapter 3, 3.6. In Chapter 2 standards for Elsie's River excluding Riverton were set and indices for both Questionnaire 2a and 2b deduced. The results are shown here in the following tables.

Table 29

#### Analysis of Indices in Elsie's River and Elsie's River without Riverton

##### Objective Data from Q2a:

Indicator	Elsies River	Elsies River without Riverton	Difference (ERR-ER)*
Education	-1.82	-1.82	0.00
Higher	-1.48	-1.83	-0.35
Training	-0.12	-0.52	-0.40
Employment	-1.61	-2.00	-0.39
Job	-1.72	-2.00	-0.28
Income	-0.58	-1.09	-0.51
Water	+0.43	+0.05	-0.38
Toilet	+0.30	+0.28	-0.02
Disposal	-0.54	-0.54	0.00
Homeown	-1.43	-1.60	-0.17
Electricity	-0.63	-0.67	-0.04
Cooking	-0.27	-0.28	-0.01
Phone	-1.67	-1.90	-0.23
News	-1.62	-1.76	-0.14
Radio/TV	+0.74	+0.73	-0.01
Travel Time	-0.36	-0.35	+0.01
Illness	-1.00	-1.38	-0.38
Meat	+2.00	+2.00	0.00
Car etc	-1.02	-1.04	-0.02
Capital	-1.23	.1.01	+0.22
Income/Person	-0.59	-0.85	-0.26
Rent/Income	-0.97	-0.94	+0.03
Density	-1.74	-1.77	-0.03
TCost/Income	-1.00		
Child Mortality	-0.81	-0.81	0.00

\* ERR = Elsie's River without Riverton

ER = Elsie's River sample as a whole

Analysis

1. Elsie's River without Riverton is worse off than the whole of the survey area in 11 cases.
2. In 4 cases they are the same, and in 8 cases they are similar.
3. In one case only is Elsie's River without Riverton better off.
4. The maximum difference, 0.51, is in the case of income.
5. Next in order are training -0.40; employment -0.39; water, illness -0.38; and higher education -0.35.
6. In the next group is job -0.28; income/person -0.26; phone -0.23.
7. Then follows homeownership -0.17; and news -0.14.
8. Similar are electricity -0.04; density -0.03; car etc, toilet -0.02; cooking, radio/TV -0.01; travel time +0.01; rent/income +0.03.
9. Equal at 0 are education, disposal, meat, child mortality.
10. Elsie's River without Riverton is better off with respect to capital by +0.22.

Table 30

## Subjective Data from Q2b:

Indicator	Elsies River	Elsies River without Riverton	Difference (ERR-ER)
Ecpress	-1.40	-1.46	-0.06
Safety	-0.59	-0.80	-0.21
Employ	-1.15	-1.15	0.00
Happines	+0.67	+0.61	-0.06
Unions	+0.32	+0.24	-0.08
Cohesion	-0.81	-0.79	+0.02
Selfa	+0.10	-0.02	+0.12
Promo	-0.82	-0.81	+0.01
Work	+0.87	+0.86	-0.01
Recrea	-1.06	-1.08	-0.02
Family	+0.39	+0.33	-0.06
Police	-1.13	-1.31	-0.18
Library	-0.67	-0.64	+0.03
Localorg	-0.37	-0.52	-0.15
Clean	-0.14	-0.28	-0.14
Freedom	-0.85	-0.85	0.00
Alien	-0.77	-0.85	-0.08
Land	-0.60	-0.63	-0.03
Friend	+0.82	+0.77	-0.05
Services	+0.47	+0.43	-0.04
Dissatis	+0.20	+0.10	-0.10
Politics	-0.90	-1.01	-0.11
Schools	+0.70	+0.71	+0.01
Motiv	+0.27	+0.17	-0.10
Nutri	+0.80	+0.79	-0.01
Media	-0.50	-0.67	-0.17
Sick	-0.11	-0.19	-0.08
Emerg	-0.30	-0.33	-0.03
Teach	+0.74	+0.72	-0.02
Govt	-0.33	-0.48	-0.15
Ecchoice	-0.71	-0.69	+0.02
Travel	+0.04	+0.10	+0.06
Polpress	-1.30	-1.33	-0.03
Housing	-1.41	-1.43	-0.02
Savings	-1.37	-1.43	-0.06
Health	+0.73	+0.70	-0.03
Esteem	+0.24	+0.10	-0.14
Medcare	+0.96	+0.94	-0.02
Anomie	+0.09	+0.24	+0.15
Meetings	+0.03	+0.16	+0.13
Legal	+0.22	+0.13	-0.09
Freetime	+0.85	+0.85	0.00
Enter	+0.01	-0.06	-0.07
Roads	-0.10	-0.18	-0.08
Satis	+0.64	+0.58	-0.06
Resource	-0.04	-0.14	-0.10
Money	-0.97	-0.96	+0.01
Pubtrans	+0.65	+0.59	-0.06
Oldage	-1.02	-1.02	0.00
Shops	+1.21	+1.21	0.00
Depriv	+1.33	+1.33	0.00

Analysis

1. In 11 cases Elsie's River without Riverton is worse off than the whole of the survey area.
2. In 3 cases they are the same, in 12 cases the attitudes are close and in 18 cases they are similar.
3. In 3 cases Elsie's river without Riverton is better off.
4. The maximum difference is in the case of safety ie -0.21.
5. Next in order are police -0.18; media -0.17; local organisation, government -0.15; clean, esteem -0.14; politics -0.11.
6. Next group are dissatisfaction, motivation, resource at -0.10.
7. Next in order are legal -0.09; entertainment -0.07; roads, sick, alien, unions -0.08; satisfaction, savings, family, happiness, economic pressure -0.06; friend -0.05.
8. Similar are services -0.04; health, polpress, emergency, land -0.03; medcare, housing, teach, recreation -0.02; nutrition, work -0.01; money, schools, promo +0.01; cohesion, ecchoice +0.02; library +0.03; travel +0.06.
9. Equal are employ, freedom, freetime at 0.
10. Elsie's River without Riverton is better off with respect to selfa +0.12; meetings +0.13; and anomie +0.15.

Elsie's River without Riverton

	worse off	same	similar	better off	total
Q2a	45.83%	16.67%	33.33%	4.17%	100%
Q2b	23.40%	6.38%	63.83%	6.38%	99.99%

Comment

Riverton is financially more affluent than the other modules in the sample, and the data from Questionnaire 2a reflect this difference. The attitudes in

Elsies River seem similar whether Riverton is included or excluded. Just over 20% of the sample, excluding Riverton, have attitudes that reflect a feeling of being worse off. This would tend to support the idea that relative deprivation applies, and this is in line with the attitude expressed in the question on relative deprivation in Questionnaire 2b: I feel there are members of our community who are much worse off than me.

### 5.9 A Comparison between the Elsie's River sample and Clarkes Estate

Clarkes Estate is referred to by people in Elsie's River as the poorest and most deprived module in Elsie's River. Standards were set for Clarkes Estate in Chapter 2, 2.7, for Questionnaire 2a and the results are given here. The number of households interviewed in Clarkes Estate was 75.

**Table 31**      Objective Data from Questionnaire 2a

Indicator	Clarkes	Elsies River	Difference (Clarkes-ER)
Education	-1.79	-1.87	+0.08
Higher	-1.48	-1.48	0.00
Training	+1.80	-0.12	+1.92
Employ	-2.00	-2.00	0.00
Job	-0.79	-1.72	+0.93
Income	-0.16	-0.58	+0.42
Water	+0.50	+0.43	+0.07
Toilet	-0.54	-0.84	+0.30
Homeownership	-1.60	-1.43	-0.17
Electricity	-0.67	-0.63	-0.04
Cooking	-0.47	-0.43	-0.04
Phone	-1.97	-1.67	-0.30
News	-1.76	-1.62	-0.14
Radio	+0.74	+0.74	0.00
Travel Time	-0.32	-0.36	+0.04
Illness	+1.00	-1.00	+2.00
Meat	+2.00	+2.00	0.00
Car	-1.15	-0.94	-0.21
Savings	-0.69	-0.75	+0.06
Insurance	-0.62	-0.61	-0.01
Capital	-0.50	-0.50	0.00
Income/Person	-0.20	-0.59	+0.39
Rent/Income	-0.98	-0.97	-0.01
Density	-1.82	-1.74	-0.08
Child Mortality	-0.11	-0.14	+0.03

Analysis

1 Clarkes Estate is much better off with respect to training and illness	2
2 It is better off with respect to job, income, toilet, income/person	4
3 It is similar to education, water, electricity, cooking, travel time, savings, insurance, rent/income, child mortality, density	10
4 Clarkes and Elsie's River are the same with respect to higher education, employment, radio, meat, capital	5
5 Clarkes is worse off with respect to homeownership, phone, news, car	4
Total	25

This analysis shows that in some areas there is dissatisfaction, but generally the module is not much different from the Elsie's River sample as a whole.

Table 32 Subjective Data from Questionnaire 2b

Indicator	Clarkes	Elsies River	Difference (Clarkes-ER)
Ecpress	-1.55	-1.40	-0.15
Safety	-0.72	-0.59	-0.13
Unemploy	-1.32	-1.15	-0.17
Happiness	+0.65	+0.67	-0.02
Unions	+0.39	+0.32	+0.07
Cohesion	-0.53	-0.81	+0.28
Selfa	-0.33	+0.10	-0.43
Promotion	-0.75	-0.82	+0.07
Work	+0.80	+0.87	-0.07
Recreation	-1.20	-1.06	-0.14
Family	+0.17	+0.39	-0.22
Police	-1.47	-1.13	-0.34
Library	-0.88	-0.67	-0.21
Localong	-0.80	-0.37	-0.43
Clean	-0.41	-0.14	-0.27
Freedom	-1.05	-0.85	-0.20
Alienation	-0.67	-0.77	+0.10
Land	-0.81	-0.60	-0.21
Friend	+0.75	+0.82	-0.07
Services	+0.25	+0.47	-0.22
Dissatis	-0.08	+0.20	-0.28
Politics	-1.36	-0.90	-0.46
Schools	+0.61	+0.70	-0.09
Motivation	+0.08	+0.27	-0.19
Nutrition	+0.73	+0.80	-0.07
Media	-0.84	-0.50	-0.34
Sick	-0.43	-0.11	-0.32
Emergency	-0.53	-0.30	-0.23
Teach	+0.59	+0.74	-0.15
Government	-0.77	-0.33	-0.44
Ecchoice	-0.85	-0.71	-0.14
Travel	+0.03	+0.04	-0.01
Polpress	-1.49	-1/30	-0.19
Housing	-1.51	-1.41	-0.10
Savings	-1.39	-1.37	-0.02
Health	+0.65	+0.73	-0.08
Esteem	-0.09	+0.24	-0.33
Medcare	+0.91	+0.96	-0.05
Anomie	+0.44	+0.09	+0.35
Meetings	+0.08	+0.03	+0.05
Legal	-0.24	+0.22	-0.46
Freetime	+0.73	+0.85	-0.12
Enter	-0.48	+0.01	-0.49
Roads	-0.01	-0.10	+0.09
Satisfaction	+0.27	+0.64	-0.37
Resource	-0.16	-0.04	-0.12
Money	-0.60	-0.97	+0.37
Pubtrans	+0.80	+0.65	+0.15
Oldage	-1.29	-1.02	-0.27
Shops	+1.04	+1.21	-0.17
Deprivation	+1.48	+1.33	+0.15

Clarkes' attitudes reflect a greater dissatisfaction than the Elsie River sample as a whole:

1 Much more dissatisfaction is felt with regard to the variables legal, politics, government, local organisation, self-actualisation, and entertainment, satisfaction, media, police, esteem, and sickness.	11
2 More dissatisfaction is reflected in the attitudes towards old age, dissatisfaction, clean, emergency, family, services, land, library, freedom, polpress, motivation, shops, unemployment, epress, teach, recreation, ecchoice, safety, freetime, resource, and housing.	21
3 Similar in attitudes are schools, health, nutrition, work, friend, medcare, savings, happiness, travel, meetings, promotion, unions, and roads.	13
4 The attitudes in Clarkes are more satisfied with respect to alienation, pubtrans, deprivation, and cohesion.	4
5 The respondents in Clarkes are much more satisfied with respect to money and anomie.	2
	Total 51

To sum up: Clarkes Estate compared with the Elsie River sample is

	much worse off	worse off	same	similar	better off	much better off	
Q2a	-	20%	20%	36%	16%	8%	100%
Q2b	21.57%	41.18%	-	25.49%	7.84%	3.92%	100%

The data from Q2a show that Clarkes Estate on its own is similar to the Elsie River sample. Generally the attitudes expressed by the respondents in Clarkes Estate show that they perceive themselves to be worse off than the people in the remainder of the Elsie River sample. Interesting to note that the greatest differences with regard to attitude involves a political element.

The housing problem appears in both Questionnaire 2a and 2b. It seems that the attitudes in Clarkes Estate show that they are worse off than the Elsie's River sample, but the results from Questionnaire 2a do not support this attitude.

## CHAPTER 6: CONCLUSIONS

### 6.1 General

The Quality of Life concept of Ellis, 1980 provides an overall framework for assessing the state of a social group or community. The framework also provides the base on which the questionnaires depend and allows for the testing of both objective and subjective data whether measured in an ordinal or cardinal way. The questionnaires were designed (Ellis & Erlank, 1983) to obtain information which would be used to evaluate the Quality of Life for the group under consideration and thus aid decision-makers in planning. The evaluation within and between the Levels described in Chapter 1 was made possible by the medium of standards, described in Chapter 2, which were set up, in the first instance, in an arbitrary way (cf Drewnowski, 1974). The evaluation further involved aggregation of standardised data, described in Chapter 3, by a simple averaging scheme. The aggregation was performed, giving equal weights to each index. The results of the data processing are given in Chapter 4 and the analysis thereof in Chapter 5.

### 6.2 The Framework

The conceptual framework on which this work is based, involves all major quantifiable aspects in the life of a group or community and in particular includes both the material welfare and the attitudes of the community concerned. For decision-makers this means that the framework leads to the best possible assessment of the community's needs, both objective and subjective. A scheme which does not measure both these aspects will not provide as good judgments as this one.

### 6.3 The Questionnaires

These have been designed to cover all the Levels in the Quality of Life framework and to provide data for evaluating the Quality of Life at the different Levels for the community. The questionnaires elicit information from various sources, including the community, and there is an open-ended questionnaire in which areas of dissatisfaction may be pinpointed. In general, the results of this open-ended questionnaire, in a sense, duplicate the results from the other questionnaires but it does make coverage of the inadequacies of the community more complete. Weaknesses in Questionnaire 2b were discussed in Chapter 5, 5.3 and 5.7. The design of the questionnaires is functional and the administration was consequently easy. The collection of data for the Survey Form took rather more time than one might like, but the results justify that time taken.

### 6.4 The Standards

The standardisation of the data from the various sources forms an integral part of this thesis. The comparisons and subsequent aggregation of data depend upon this standardisation. The conceptual basis for the standardisation comes in part from Drewnowski (1976) as well as other literature. The linear formula developed, given the constraints mentioned in Chapter 2, is used to standardise the data. The formula included the idea of critical points (Drewnowski, 1976), the values given to the unacceptable (PDL) and inadequate (MEL) points (cf Morris, 1979). The values chosen for these points are negotiable and new values could be assigned in the light of further information and possible negotiation with other parties eg the community under review, the decision-makers, the experts. The critical values in the formula were also chosen, in a sense, arbitrarily. The choices were made partly on the basis of available information, and partly on the basis of discussions dealing

with the topic of indicators. However, given the philosophy of ease with which the scheme may be implemented (see Chapter 2), the information used in the setting of standards was that which was available and would be so to other researchers. Once again the critical values could be re-assessed, perhaps other information might become available or a process of negotiation might begin.

The value of the standardisation of the data is that comparisons may be made and since each index falls on the same scale, the inadequacies in the community, either through its attitudes or through the objective assessment, are apparent. The standardisation also allows the indicators and indices to be aggregated, which in turn gives broader comparisons and evaluations, as well as allowing comparisons to be made between communities.

#### 6.5 Weighting and Aggregation

The indices are given equal weights here as a first approximation. This seems a reasonable practical approach at this stage. It may be that differential weighting would evolve at a later stage, but at this time, equal weights for each index have been used. There is an implied weighting in the priority level set for any survey (see Chapter 2) but these priorities are not absolute.

The aggregation of data depends upon the standardisation discussed before. If a composite index is to be obtained, aggregation is necessary. The method used is an averaging one. Looking at the results given in Chapter 4, the aggregation of the data produces a composite index for each Level in the Quality of Life framework and the composite indices can assist decision-makers in a broad sense, in allocating public funds. Having decided in which Level a lack is experienced, the allocation of funds can be further directed by looking at individual indices within a Level. The indices also give a measure

of the degree of satisfaction or dissatisfaction in the community. Once public funds are spent, a new set of indices may be obtained to test the effect, if any, of the improvements. Subsequent decisions may be influenced by previous surveys and better decisions made on this basis.

#### 6.6 Other Methods

In Hilhorst and Klatter (1985) an article by Ellis uses the same framework as this thesis. The methods for measuring differ in that a panel of experts was used to assign values to the various components within each Level. A graded scale from 1 to 7 was used in the polling of the opinions of the panel. The index scale included MML and MEL points; the value 1 represented the destitute case and 7 the affluent. The values assigned to the indices is given for each component. The scale used is not the same as in this thesis so a comparison of actual indices is not possible. However, the method used works and it is a relatively easy way to arrive at Quality of Life indices. The panel discussions produced results and perhaps for remote areas, where running a survey may be extremely difficult, this method would apply.

Morris, 1979, introduced the Physical Quality of Life Index, with the aim of producing a useful measurement tool but writes that planners still tend to prefer the movements in the Gross National Product as a social indicator. Development policy must base its decisions on some information and Morris (page 4) suggests that the PQLI, although having some limits, does 'attempt to measure how well societies satisfy certain specific life serving characteristics'. The PQLI measures three universal concerns; infant mortality, life expectancy at age 1, and literacy. The PQLI should be used to focus the search for strategies that might lead to improvements in the Quality of Life more quickly and efficiently than the GNP for example. The PQLI as a composite index compares with the composite indices arrived at in this work

and described in Chapter 5, 5.6, page 175, but does not have the same scope as the method developed here. A better comparison would be between the PQLI and the Priority 1 indicators (Chapter 2, pp 13-18) where 6 indicators are used to describe the Quality of Life in Elsie's River.

The World Development Report, 1981, describes seven basic development indicators which are population, area, GNP per capita, average annual rate of inflation, adult literacy, life expectancy at birth, and an index of food production per capita. Here, as for the PQLI, the emphasis is on quantifiable, objective data as a means of assessing and comparing the performances of low, middle and high income countries. Streeten in Leipziger, 1981, writes that the 'basic human needs approach to development is to ensure that all human beings should have the opportunity to live full lives'. The BHN approach also argues that the GNP as an indicator fails to describe a community accurately, and the objective of this BHN approach is 'to enable individuals to attain on a sustainable basis a minimum standard of living defined in material terms,' that is food, water, clothing, shelter, health, education. The group at which BHN strategy is aimed is the poor, and targets and indicators may be set up within the BHN approach.

Crosswell in Leipziger, 1981, deals with the concepts involved in a BHN approach and writes (p 23) that the development process should provide improvements in the Quality of Life of those too poor to satisfy their basic human needs. Lewis, also in Leipziger, 1981, writes that nutrition considerations are the basis of efforts to improve welfare under a BHN strategy, and that health statistics eg life expectancy and mortality rates can determine the size of health problems in developing countries. Lewis sees health from a broad perspective; it includes education, fertility, nutrition and the environment. In the implementation of a BHN approach, a commitment to the basic needs objectives requires decisions on the economic and political

level which are directed at the poor.

Streeten, 1981, writes that basic needs may be interpreted in different ways: economic, sociological, structural, political and that decisions regarding basic needs will be different depending on how 'the poor' are identified. He too feels that the GNP is inadequate as an indicator if used on its own. Some indicators such as literacy, access to clean water, primary school enrolment can show up basic deficiencies. Other measures such as life expectancy, infant mortality and caloric consumption, if averaged across the population, neglect the worst cases.

Drewnowski, 1974, also criticises the 'national accounting' approach to development and suggests that other phenomena should be used in assessing the Quality of Life of a group. He proposed a practical method of measuring the Quality of Life based on social phenomena and using social variables. He writes that planning for social development, if this means planning for people's welfare, is the correct way to consider development planning as a whole.

There is a measure of agreement in the ideas of the writers described above, in particular there is agreement that the GNP is inadequate as an indicator of the Quality of Life of a group or community. Generally the writers favour, in the first instance, objective indices which are relatively easily obtained. However, as shown in Chapter 2, composite indices or a restricted number of indices do not always present a fair picture. The aim of this work was to move towards a measurement scheme for decision-makers which would direct public funds to the aspects where it was most needed.

The measurement scheme produced in this work uses several sources of data: a panel opinion, a survey form and three types of questionnaires. This should produce a better analysis of the Quality of Life of a group or community,

provided the inevitable problems of time and money can be resolved. This scheme provides for time and money constraints through the Priority Levels.

Other measurement schemes rely solely on subjective measures in order to produce evidence for improvements or evidence about the attitudes of a group, which may, taken on their own, not reflect the reality of that group. I would argue that any measurement scheme produced to aid decision-makers must take cognisance of both objective and subjective data, in order that the best decisions regarding the spending of public money may be taken. The aim of the measurement scheme is to allow the group or community to participate in setting its financial budget and to allow the shortcomings of the community to be expressed to the decision-makers. The community should participate in negotiations with the decision-makers to improve their Quality of Life and if public money is not well spent, the community should seek sources of redress. This scheme includes development indicators which should be noted and resources directed there if necessary.

#### 6.7 An Assessment

The best method of assessing the Quality of Life of a group or community must be one that covers all the most important aspects, both quantitative and qualitative. If a measurement scheme offers this criterion, it should be considered by decision-makers as a tool for the efficient allocation of public money. However, as mentioned earlier, time and money parameters may preclude a comprehensive measurement scheme. The alternative option offered here is the use of a Priority 2 or even a Priority 1 measure, knowing their shortcomings.

On a practical note, it is clear from the application of this scheme in assessing the Quality of Life of the people in Elsie's River that some indicators are difficult or impossible to obtain. This is true of the indicator concerning Trade Unions which appears on the Survey Form. It may be

that the information will become available at a later date and therefore this indicator should not be excluded from the scheme. The same applies to the information regarding a teacher/pupil ratio, which was not available for Elsie's River specifically. If anything is to be excluded in this measurement scheme, it should not be either Questionnaire 2a or 2b.

#### 6.8 Conclusion

There are schools of thought that will be critical of this measurement scheme for one reason or another. It may be said that the information is not strictly accurate or correct (for example, that income cannot be expressed in the way it is here, or that it is presented incorrectly), or that the questionnaires are too superficial. This thesis offers a pragmatic way of testing the Quality of Life of a group or community, and it is aimed at helping to develop practical systems for decision-makers who dispense public monies.

The method works as is shown by the Elsie's River survey and, to a lesser extent, the QwaQwa survey. The standardisation and aggregation of the data gives indices which indicate where there are deficiencies in the community and I would venture to suggest that a measurement scheme which works and produces results is better than no measurement scheme at all. It would be worth pursuing this proposal in more cases to test the robustness of the indicator levels in the Quality of Life framework used in this thesis.

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## APPENDIX I

Some of the data collected during the Elsie's River and QwaQwa surveys was not used in the computing of results for the Quality of Life indices. They are presented here as background data from Q2a, giving details about the distribution of sex, status in the household, age and so on.

Variable	Option	Elsies River	QwaQwa	Clarkes Estate	ER minus Riverton
3 Sex	Male	53.8%	33.3%	50.7%	54.5%
	Female	46.2%	66.7%	49.3%	45.5%
4 Status	Head	72.1%	55.6%	53.3%	73.1%
	Spouse	20.0%	29.6%	33.3%	20.5%
	Other	7.9%	14.8%	13.3%	6.3%
5 Age	Over 50	32.5%	38.5%	20.0%	31.0%
	41-50	27.5%	23.1%	30.7%	28.7%
	31-40	27.9%	19.2%	37.3%	29.5%
	20-30	11.8%	19.2%	10.7%	10.4%
	Under 20	0.3%	-	1.3%	0.4%
9 Skills	per popln	3.41%	2.25%	5.53%	3.06%
10 Student		2.3%	0%	4.0%	1.9%
11 H/Wife		37.7%	48.1%	41.3%	36.9%
12 Retired		7.5%	11.1%	1.3%	7.5%
13 Disabled		3.9%	7.4%	4.0%	4.5%
16 Adults	per h/h	3.08%	3.42%	2.89%	3.05%
17 Children	"	3.04%	3.41%	3.39%	3.28%
18 Total	people	1893	181	476	1706
	per h/h	6.12	6.70	6.27	6.33

19	Local Workers	per/hh %adults	1.61 52.59%	no info "	1.73 59.91%	1.59 52.26%
20	Maximum Wage earned	total pm no wages income pm	R326.49 32 h/h R291.31	" " "	no info 2 h/h R335.65	R311.8 28 h/ no info
21	Migrant Workers		3	no info	none	2
22	Pensioners	% adults % popln	11.40% 5.65%	no info "	5.99% 2.73%	11.51% 5.51%
23	Boarders	total	14	"	4	4
24	Support	% h/h per mth	5.57% R53.59	" no info	9.3% R34.00	5.97% R55.06
25	Rooms	per h/h	3.41	2.65	3.29	3.36
26	B/Rooms	"	2.44	1.19	2.28	2.43
32	Rent	per mth	R61.52	R15.25	R56.09	R58.37
39	Tcost	"	R18.32	R33.60	R15.36	-
41	Children	per respondent	5.09	5.35	4.49	5.12
42	Child deaths	per respondent	0.47	no info	0.44	0.51
44	Car	own paying none	17.0% 5.9% 77.0%	" " "	13.3% 8.0% 78.7%	14.2% 6.0% 79.9%
45	Save	some none	30.5% 69.5%		37.3% 62.7%	30.2% 69.8%
46	Insure	some none	46.9% 53.1%		45.3% 54.7%	47.0% 53.0%

APPENDIX II

A short description is given here of the conditions in Elsie's River and the impressions gained during field trips. I visited the area several times apart from the organisation and running of the survey. The people I spoke to were friendly and willingly answered all my questions.



One of the most common complaints I heard from the housewives I talked with, was the difficulty of coping with the wind and sand in summer, and the rain in winter. It made life that much more difficult with the weather playing such an important role.



Large unimaginative blocks of flats have been erected by Divco and the area between the blocks of flats is dirty Cape Flats sand which blows onto the clean washing as well as into the flats themselves. The children get very dirty playing in this sand, as in most areas there are no playing places for children. An exception is in Eureka.

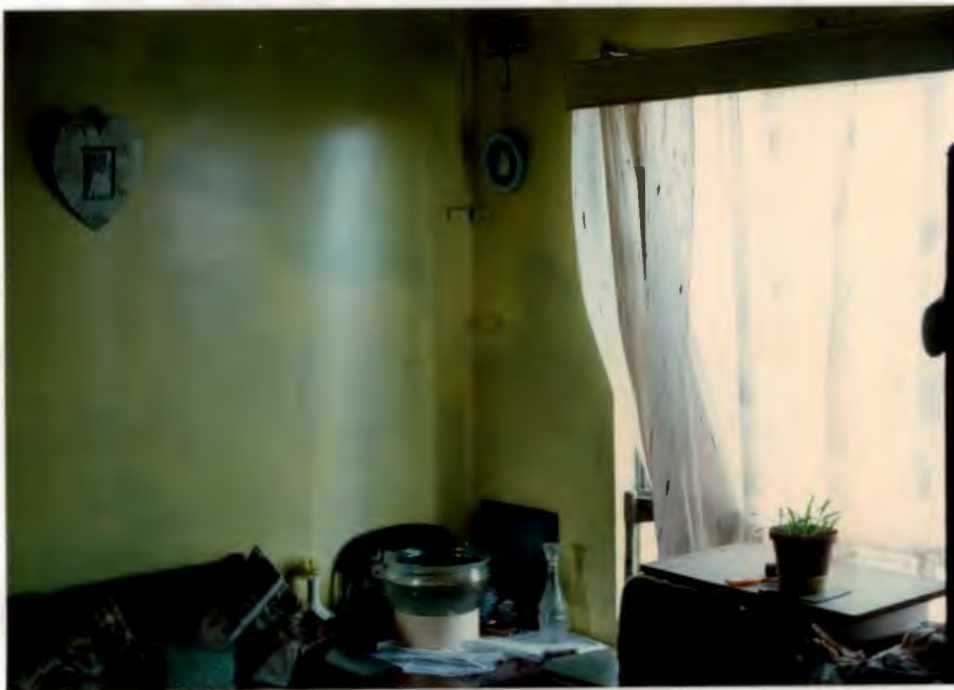


Rubbish removal is irregular and the people I spoke to said that rubbish is only removed if it is neatly placed in plastic bags at a collection point. This task proved difficult one woman in Avon told me, as very poor people as well as children and dogs interfere with the rubbish, often tipping it out onto the sandy wastes between the blocks of flats in search of food or other 'windfalls'. She indicated a huge pile of rubbish spread over a large area and said it would not be removed. The complaints voiced by the women with whom I spoke involved the practicalities of organising one's daily life.





Another woman in so-called 'landscaped' blocks of flats (the blocks were placed at right angles to each other and the area between tarred) invited me into her ground floor flat. The tenants themselves had put in a ceiling, electricity and a covering on the concrete floor. The flat was nicely furnished but small and awkwardly shaped. I asked the woman if she lived in a safe neighbourhood as I knew there was a shebeen on the corner nearby. She replied that it was safe provided one did not linger outside! A visiting neighbour volunteered the information that if one phoned the police for help, especially over the week-end, they would never come, so it was best to stay indoors.



I asked several women about rents: whether the rents they paid were fair and whether their flats were worth the rents paid. They agreed that the rents were too high and that they were constantly afraid about rents and about being evicted. Jansen et al, 1984, give the following figures: R32.34 is the minimum rent paid by households with the breadwinner earning up to R150.00 per month, and R65.74 by those with incomes of R151.00 to R250.00. This means that a normal COL increase in salary (say 10%, with the salary changing from R150.00 to R165.00 per month) more than doubles the rent. This has the effect of reducing the standard of living of a household despite the increase in salary. This does not provide an incentive to improve one's life by working harder and does not contribute to the Quality of Life in Elsie's River.



Other parts of Elsie's River have a pleasant aspect and people there seem better off with respect to the external conditions. There are row houses and semi-detached houses in Clarkes Estate which make the neighbourhood a better one, visually, than those described earlier.



In Eureka there are newly constructed small houses, while in Riverton detached houses are common.



There are shops, schools and churches in Elsie's River, which also has a large Muslim community.



Life is varied in Elsie's River: there are richer and poorer sections, some areas offer better living conditions than others, especially with regard to over-crowding, and some people have a great struggle to make ends meet and others do quite well.

