

**THE USE OF SURVEY METHODOLOGY TO DETERMINE
RESIDENTS' ENVIRONMENTAL ATTITUDES TOWARDS A
MODERN HIGH-RISE PUBLIC HOUSING COMPLEX**

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of Philosophy (Social Science Methods) at the University of Stellenbosch.**

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December 2000

DECLARATION

DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:

A handwritten signature in black ink, appearing to read 'J. Dutart', written in a cursive style.

Date: December 2000

Acknowledgement

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ABSTRACT

This is an applied methodological thesis about the attitudes of residents towards a modern high rise public housing complex. A definition and analysis of the theme show that this housing type is characterised by a distinctive design and style known as *modernist*. Therefore, modern and postmodern theory is used to formulate a general existential hypothesis as to residents attitudes towards this housing type. A cross-sectional survey research design was used to research the thesis. Data was collected by means of questionnaires and analysed in the form of a perceived environmental quality index. It was found that residents show a negative overall attitude towards the housing complex. However, there are also some indications of positive attitudes towards the complex, and significant differences were found between the attitudes of particular groups. The thesis is concluded with the suggestion that this housing type can be regarded as an option for certain groups in the context of South Africa's current housing situation.

OPSOMMING

Hierdie is 'n toegepaste metodologiese tesis oor inwoners se houdings teenoor 'n moderne toringblok openbare behuisingskompleks. 'n Definisie en analise van die tema wys dat hierdie behuisingstipe, deur 'n uitstaande ontwerp en styl wat as *modernisties* bekend staan, gekenmerk word. Moderne en postmoderne teorie word gebruik om 'n algemene eksistensiële hipotese betreffende inwoners se houdings teenoor dié behuisingstipe te formuleer. 'n Kruis-seksionele opname navorsingsontwerp is gebruik om die tesis te ondersoek. Data is deur middel van vraelyste ingesamel en in die formaat van 'n waargenome- omgewing- kwaliteitsindeks geanaliseer. Dit word bevind dat inwoners in geheel 'n negatiewe houding teenoor die kompleks huldig. Tog is daar ook bewyse van positiewe houdings en beduidende verskille tussen die houdings van sekere groepe. Die tesis volstaan met die gevolgtrekking dat hierdie behuisingstipe oorweeg kan word vir sekere groepe in die konteks van die huidige Suid Afrikaanse behuisingsituasie.

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SECTION A - INTRODUCTION AND THEME

CHAPTER 1 - INTRODUCTION

In this chapter, the thesis is stated, along with the background and questions formulated to research the thesis. The research for the thesis was empirical. Thus, this chapter also includes the assumptions, limitations, aims and type of reasoning of the research, as well as an explanation of its importance. An outline of the remainder of the thesis presents the focus of each chapter following this introduction.

1.1 The Thesis

This is an applied methodological thesis on a sociological and architectural theme. Thus, empirical research into the theme was done, and the thesis emphasizes the research design and methodology. The title of the thesis reads as follows:

The Use of a Cross-Sectional Survey Research Design to Determine Adult Residents' Environmental Attitudes Towards a Modern High-Rise Public Housing Complex.

The complex under discussion is called Schubart Park and is situated in central Pretoria. Therefore, this thesis is about whether residents like or dislike Schubart Park, which is a modern high-rise public housing complex. The idea for the thesis originates with prior research conducted at Schubart Park.

1.2 Background to the Thesis

In 1997 I conducted in-depth qualitative research at Schubart Park. The aim of this research was to give an explorative and descriptive account of residents' experiences of living in Schubart Park, a typical modern high-rise public housing complex. I found that most residents who were interviewed described some positive experiences of the complex, but they described negative experiences of social aspects. This finding contradicts the general view and experience of this housing type. Literature and theory, regarding complexes such as Schubart Park, argue mainly that people dislike this type of housing for several reasons.

Therefore, an interest arose in the attitudes the population of Schubart Park have towards this housing type. This interest developed into this thesis, and the following research questions were formulated to research it.

1.3 Research Questions

- Question 1: What is a *modern high-rise public housing complex*?
- Question 2: How does the process whereby people have attitudes towards buildings come about?
- Question 3: How do we *measure* such attitudes?
- Question 4: Which parts of the Schubart Park complex should be singled out for measurement of residents' attitudes towards them?
- Question 5: What type of *research design* should be used?
- Question 6: What are residents' *attitudes towards the different parts of the complex* that have been singled out?
- Question 7: What is the *overall attitude towards the complex*?
- Question 8: What are the differences in attitudes towards the complex between groups with:
 - *different demographic profiles*, in terms of factors such as sex, population group, age, marital status, whether or not children live in the unit, income, level of education and occupation,
 - *different life patterns*, in terms of factors such as length of tenancy, number of people living in the unit, unit size, preference for moving or staying, housing preference and preference for either ownership or rental schemes,

- *different use patterns of facilities inside the complex,*
- *different reasons for living in the complex,*
- *different perceptions of stigmatization and*
- *different general attitudes towards the complex.*

- Question 9: What are the differences between these different groups' attitudes towards the complex, in terms of their *housing preference*?
- Question 10: What are the differences between these different groups' attitudes towards the complex, in terms of their *preference for moving or staying*?
- Question 11: What are respondents' attitudes towards the complex, in terms of their *general attitudes* towards the complex?

1.4 Assumptions of the Research

- The research assumes that residents do have some kind of attitude towards the complex.
- The research assumes that residents' attitudes towards the complex represent a *dependent variable*.
- The research assumes the following as *independent* variables: sex, population group, age, marital status, whether or not children live in the unit, income, level of education, occupation, length of tenancy, number of people living in the unit, unit size, preference for moving or staying, housing preference, preference for either ownership or rental schemes, use patterns of facilities inside the complex, reasons for living in the complex, perceptions of stigmatization and general attitudes towards the complex.

1.5 Limitations of the Research

- The research is limited to the Schubart Park complex. Therefore, findings and conclusions about residents' attitudes cannot be generalised to residents of other complexes.
- Only residents above the age of 21 were included in the research.
- The research focusses on adult residents' *attitudes* towards the complex, and not on their perceptions or cognition of it.¹
- The research focusses on attitudes regarding design or architectural aspects of the complex, and not social or political aspects.
- The aim of the research is limited to a descriptive account of residents' attitudes towards the complex. The research does not aim to explore or explain such attitudes.
- The data from the research is largely limited to a *quantitative* format.

1.6 Aims of the Research

As stated, the aim of the research is to give a descriptive account of residents' attitudes towards the Schubart Park complex. Mouton and Marais (1990:46) describe *descriptive* research as: "...om **dit wat is** op een of ander wyse **akkuraat en noukeurig** te beskryf." They classify descriptive research into research with a focus on context, and research with a more *universal* focus. The latter would typically be regarded as research following a more quantitative methodology, (such as this research), and aiming to give highly structured statistical summaries. *Correlation* techniques are used to show relationships between

1

The differences between *attitudes*, *perceptions* and *cognition* are discussed in Chapter 4.

variables. Thus, the aim of this research is a *descriptive correlational* enquiry with a *universal* focus.

1.7 Type of Reasoning in the Research

In this research, I make use of two kinds of reasoning at different stages of the research process. Firstly, I use *deductive* reasoning when I use formal theory to formulate a general existential hypothesis² as to people's attitudes towards complexes such as Schubart Park. The aim is not to test such hypotheses, but to use them as a point of reference when drawing conclusions. Secondly, I use *inductive generalisation* to draw findings and conclusions about the population in Schubart Park from a sample. Mouton (1996:80) explains this type of reasoning as follows: "...once the researcher has collected data from the sample, she usually wishes to generalise her findings to the target population. This 'movement' from sample to population involves *inductive generalisation*." The framework of the thesis can be illustrated as follows:

Theory → (*Deduction*) → Existential Hypothesis → Sample and Measurement
→ Data (Sample) → (*Inductive Generalisation*) → Population Findings →
Conclusions → Existential Hypothesis

1.8 Importance of the Research

Research that can lead to a better understanding of people's attitudes towards this type of housing is important for issues such as housing:

- type and design,
- policy and
- research.

2

According to Mouton (1996:122), "An existential hypothesis is a provisional statement about a certain state of affairs..."

SECTION A - INTRODUCTION AND THEME

In terms of housing policy, for example, Hempel and Tucker (1979 in Holahan, 1982:114) state that research on attitudes towards housing types may serve as a valuable social indicator. Environmental psychologists, such as Brolin and Ziesel (1968) and Holahan (1982:114), explain that research on residents' attitudes towards housing types is important for the planning and design of housing projects.

Because of South Africa's low-cost urban housing shortage, it is assumed that development in this housing sector should receive priority. However, the *Development Facilitation Act*, for example, calls for development that is sustainable. The high-density housing type, such as modern high-rise public housing complexes like Schubart Park, can be considered to be a sustainable form of housing development in a *spatial* sense given the high residential density and mixed use. Therefore, this type of housing should in certain contexts, be considered as an option for housing development in South Africa. As a result of this line of reasoning, it is assumed that research into South Africans' attitudes towards this type of housing is important.

1.9 Outline of the Remainder of the Thesis

CHAPTER 2 - DEFINITION AND ANALYSIS OF THE THEME

The theme of this thesis is the modern high-rise public housing type. In this chapter, this theme is defined and analysed. The analysis focuses on the architecture of this housing type, in order to identify theoretical concepts that are related to it. These concepts are then used to formulate a theoretical orientation and two hypotheses regarding people's attitudes towards this housing type. After the definition and analysis, the Schubart Park complex is described.

SECTION B - RESEARCH STRATEGY

CHAPTER 3 - CONCEPTUAL FRAMEWORK

The aim of this chapter is to formulate a conceptual framework for the research. The field of study into which this research falls is first identified. This field is then defined and an important assumption of this field is made explicit. After a review of the type of literature and conceptual models of this field, a conceptual framework for the research is formulated.

CHAPTER 4 - MEASUREMENT OF ENVIRONMENTAL ATTITUDES

In this chapter, the term environmental attitudes is defined operationally. This is followed by a discussion of the technique used to measure attitudes towards the Schubart Park complex. Finally, the parts of the complex studied in the research are listed, and their selection is explained.

CHAPTER 5 - RESEARCH DESIGN AND METHODOLOGY

In this chapter, the research design is discussed as the broad framework in which the empirical research for the thesis was conducted. The methodology is discussed in terms of the steps followed in the execution of the research, from sampling through to the analysis and presentation of the data.

SECTION C - RESULTS FROM THE RESEARCH**CHAPTER 6 - RESULTS IN TERMS OF THE INDEX**

In this chapter, results regarding respondents' attitudes towards the complex, in terms of the index, are presented. Means are used as an indication of respondents' attitudes. General mean scores from the index are presented first, followed by the comparison of means from different groups.

CHAPTER 7 - RESULTS IN TERMS OF HOUSING PREFERENCES

In this chapter, the variable "housing preferences" is used to give a further indication of different groups' attitudes towards the complex. It is assumed that preferences for low density housing imply a more negative attitude towards this type of housing, while preferences for medium to high density housing imply a less negative attitude, as it has been shown in the index that all groups have a negative attitude towards the complex. The data is presented in the form of cross tabulations. Chi-square tests were run to test for significant differences between groups.

CHAPTER 8 - RESULTS IN TERMS OF PREFERENCES TO MOVE OR STAY

In this chapter, the variable "preference for moving or staying" is used to give a further indication of different groups' attitudes towards the complex. It is assumed that a preference for moving from Schubart Park implies a more negative attitude towards this type of housing, while a preference for staying implies a less negative attitude, as it has been shown in the index that all groups have a negative attitude towards the complex. The data is presented in the form of cross tabulations. Chi-square tests were run to test for significant differences between groups.

CHAPTER 9 - RESULTS IN TERMS OF GENERAL ATTITUDES TOWARDS THE COMPLEX

In this chapter, respondents' general attitudes towards the complex are presented. It is assumed that such perceptions will reveal aspects of living in the complex which may influence respondents' attitudes towards the complex. Therefore, positive perceptions will reveal aspects which may influence attitudes positively, whereas negative perceptions will reveal aspects which may influence attitudes negatively. Examples of general perceptions are presented as qualitative data in the form of textual quotations from questionnaires.

SECTION D - SYNTHESIS OF THE THESIS

CHAPTER 10 - CONCLUSIONS AND IMPLICATIONS

In this chapter, the main results are analysed again and conclusions are drawn about them. The existential hypotheses formulated in Chapter 2 are addressed in the conclusions. Some implications of the research for design disciplines, housing policy and further research are suggested.

CHAPTER 11 - METHODOLOGICAL PROBLEMS AND SUGGESTIONS

The aim of this chapter is to reflect on some of the problems experienced with the survey methodology used in the research. In this research the choice of a survey design had an impact on two stages of the research process, namely, sampling and data collection. Therefore, the discussion focusses on the sampling and data collection techniques used. In the light of the experience gained during this research project, some suggestions regarding the use of a survey methodology in public housing complexes are also made.

CHAPTER 2 - DEFINITION AND ANALYSIS OF THE THEME

The theme of this thesis is the modern high-rise public housing type. In this chapter, this theme is defined and analysed. The analysis focuses on the architecture of this housing type, in order to identify theoretical concepts that are related to it. These concepts are then used to formulate a theoretical orientation and two hypotheses regarding people's attitudes towards this housing type. After the definition and analysis, the Schubart Park complex is described.

2.1 Definition of the Theme

This section addresses Research Question 1: What is a modern high-rise public housing complex?

Modern high-rise public housing is defined by focussing on the four key terms in a reverse order, i.e.:

- housing,
- public,
- high-rise and
- modern.

According to Rapoport (1989:3), *housing* is a form of "built environment". Therefore, the term *housing* refers to a form of shelter that man makes for himself by transforming the environment. Housing can thus take on many forms, and it can serve as a physical and symbolic dwelling for people.

Public housing refers to various forms of housing units provided by a state or governmental authority. Thus, public housing is state or public property, that is not available on the housing or property market. The state as well as community organisations provide such housing because of a *social need*, rather than because of market forces such as supply and demand. Therefore, public housing is also called *social housing*. The rent for public housing is set

below market level, to make it affordable for households of lower socioeconomic status (Power, 1993:3).

The term *high-rise* pertains to a specific form of housing. According to Abramowitch (1972:5), buildings with more than five storeys are generally regarded as *high-rise* buildings. Words such as *multi-level* or *tower* buildings are also often used in the literature.

The term *modern* is an indication of the specific architectural aesthetics and principles of this particular form of housing. Thus, the term indicates that this form of housing embodies architectural aesthetics and principles known as *modern*. *Modern* architecture stems from a cultural movement in architecture known as *modernism*.

Thus, the theme *modern high-rise public housing* refers to a distinctive housing type as opposed to other distinctive housing types such as single dwellings, town houses or low-rise flats. It is a housing type provided because of social need, while its form is characterised by high-rise buildings and modern architectural aesthetics and principles. Because it is a *distinctive* type of housing, it is feasible to research people's attitudes towards it. Zito (1974:243 in Schutte, 1985:104) states: "The high-rise, high density, urban multi-building flat complex housing middle class dwellers may be described as a distinctive urban living space." Schutte (1985:104) continues: "The Schubart Park flat complex in central Pretoria, appears to be such a 'distinctive urban living space'."

2.2 Analysis of the Theme

The theme is analysed first by discussing the architecture of modern high-rise public housing. Following this discussion, a theoretical orientation towards the theme is formulated. An existential hypothesis regarding people's attitudes towards this housing type is derived from the theoretical orientation.

2.2.1 The Architecture of Modern High-Rise Public Housing

The architecture of modern high-rise public housing is discussed in terms of:

- the development of modern architecture and
- the aesthetics and principles of modern architecture.

2.2.1.1 The Development of Modern Architecture

As stated in the definition, the architecture of the housing type under discussion is known as *modern*, and stems from a cultural movement known as *modernism*. The basic philosophy behind modernism is that of *functionalism*. According to functionalism, architecture should express the *function* of a building, and the functioning of buildings should have priority over ornamental aesthetics and principles. Therefore, Louis Sullivan, who designed the first high-rise building in 1884, stated that “form should follow function”, and not arbitrary rules of what was considered beautiful. Sullivan and like-minded architects became known as the *Chicago School*, and are considered the forerunners of modern high-rise buildings (Newmark & Thompson, 1977:372-373).

The *Bauhaus School*, in Germany, became the primary institution where modern architecture was taught. Therefore, it became synonymous with modern design (Norberg-Schulz, 1974:370). The Bauhaus philosophy also stressed *simplicity*, and the *reduction* of architecture to basic forms and functions, free of ornamentation (Newmark & Thompson, 1977:376).

However, it is the architect, *Le Corbusier*³, who really encouraged the use of these principles in the design of public housing. He envisioned large public housing projects as *super blocks*, where people could be housed as urban communities. Therefore, the principle of *community* also became synonymous with this housing type. Communitarians, like Le Corbusier, claimed that such large-scale, comprehensively-planned, freestanding super block communities would have a positive impact on people and cities (Bauman, 1987:49). Le Corbusier

3

For an analysis of Le Corbusier's architecture, see Guiton and Guiton (1981).

simultaneously saw this housing type as a solution to the problem of rebuilding cities that had become “functionally obsolete” owing to rapid urbanization following the Industrial Revolution.

Increasing urbanization and the rebuilding of cities following the first world war did indeed create a great demand for housing. As society faced major changes, the rational philosophy of modern architecture and its standardized and inexpensive designs became a popular solution to housing problems. New construction techniques, such as the use of reinforced concrete, steel frames and lifts, also made the construction of modern high-rise buildings feasible. With this background, certain aesthetics and principles of modern architecture can be highlighted.

2.2.1.2 **Aesthetics and Principles of Modern Architecture**

Important texts on the aesthetics and principles of modern architecture include Brolin’s *The Failure of Modern Architecture* (1976) and Rowe’s *Modernity and Housing* (1993). Referring to these texts and the discussion in the previous section, it is possible to highlight some aesthetics and principles of modern architecture. This is done to gain a better understanding of the appearance of complexes such as Schubart Park. The aesthetics and principles of modern architecture include:

- functionalism, i.e. the function of the building is explicit,
- simplicity, i.e. other styles are excluded,
- reductionism, i.e. pure *platoníc* forms are visible,
- community, i.e. community living is facilitated,
- the present, i.e. there is no reference to past or future,
- permanence, i.e. timeless design,
- precision, i.e. standardized designs,
- conformity, i.e. absence of diversity,
- abstraction and
- distinctiveness, i.e. stands out in the context of the city.

2.2.2 Theoretical Orientation

There is no substantive theory regarding people's attitudes towards modern high-rise public housing. The previous section shows that the formal theoretical concept of *modernism* is central to the architectural aesthetics and principles of this type of housing. Therefore, in this section, I use the concepts of modernism to formulate a theoretical orientation towards the theme. The concept of *postmodernism* is used as the antithesis of *modernism* in the theoretical orientation. Two existential hypotheses, regarding people's attitudes towards this housing type, are proposed on the basis of the theoretical orientation..

2.2.2.1 Modernism

It has been explained in the previous section, that the architecture of the housing type under discussion springs from a movement known as *modernism*. According to Leroke (1994:370), the term *modernity* refers to specific socioeconomic and political transformations in society. The most noticeable of these transformations is probably the Industrial Revolution. However, fundamental changes in the organization of society brought about unprecedented social conditions such as urbanization, homelessness and the emergence of urban slums as well as wide spread poverty (Sarakinsky & Romm, 1994:1-2).

Modernism refers to a cultural movement that reacted to the socioeconomic conditions caused by modernity (Leroke, 1994:372). Thus, *modernism* represents a system of beliefs that were critical of modernity, but did not reject it. As Leroke (1994:372) explains, *modernism* tried to improve poor living conditions brought about by modernity. The principles of modernism are rooted in the *Enlightenment*. According to Sarakinsky and Romm (1994:4-5), the philosophy of the Enlightenment maintains that reason and rationality can be used to the benefit of the human condition. Therefore, modernism emphasises *reason* and *rationality* as a means for improving poor living conditions.

Also central to modernism is the notion of *Utopia*⁴. Utopia represents an ideal human condition, or living environment, which can be achieved by the application of reason and rationality. Therefore, it is assumed that modern architecture, because it is rational, can be used to create utopias in which living conditions can be ideal. This belief that the creation of an ideal living environment will result in improved socioeconomic conditions, is known as *environmental determinism*.

2.2.2.2 Postmodernism

Authors on postmodernism in architecture, such as Jencks (1992), Lyotard (1992) and Rose (1992), argue that there is no formal definition of postmodernism in architecture. I take Smart's view of postmodernism. According to him, postmodernism is a philosophy which points out the limitations of modernism (Smart, 1993 in Ritzer, 1996:608). Therefore, postmodernism is a *criticism* of modernism. Thus, in architecture, it criticises modern architecture by *rejecting* the ideas, such as reason, rationality, Utopia and environmental determinism, behind modernism.

Jencks (1992:11) states that postmodernism prefers architecture that is regional, local and particular. Therefore, the idea of Utopia will be rejected, because it represents an idealized environment that is unattainable, and therefore foreign to its inhabitants. Kirsten (1988:30) and Huyssen (1992:46) argue that the architecture of Le Corbusier became a symbol of alienation and dehumanisation. Hoistad (1991:24) explains that the idea of utopianism resulted in modern architecture being disconnected from reality, because the ideal world for which it plans, “does not exist and will never exist”. He continues:

...utopia was replaced by illusion, signs, and symbols of an idealised memory. It is the world of simulation, and as such, becomes a different kind of ideal world which also does not exist. It is a shallow, intellectualised world without real substance. (Hoistad, 1991:26)

4

For a discussion of the notion of *Utopia* in planning, see Sarakinsky (1993:111, 113-116) and Steyn and Van der Westhuizen (1995:34).

The rejection of utopianism implies the rejection of the idea of environmental determinism. Therefore, postmodernism points out that many modern high-rise public housing projects did not result in better socioeconomic conditions. An example of a postmodern attack on the utopian and environmental determinist ideas of modernism, is that of Jencks (1977 in Lemert, 1990:233 in Ritzer, 1996:608):

...the death of modernist architecture at 3:32 P.M., July 15, 1972 - the moment at which the Pruitt-Igoe housing project in St. Louis was destroyed... This massive housing project in St. Louis represented modernist architecture's arrogant belief that by building the biggest and best public housing planners and architects could eradicate poverty and human misery. To have recognized, and destroyed the symbol of that idea was to admit the failure of modernist architecture, and by implication, modernity itself.

Postmodern architecture aims to be more sensitive to people's tastes and values. Therefore, it proposes that inhabitants' culture be reflected in more complex designs and environments where people's *desires* are reflected. Thus, it does not suppose an ideal, formal and universal environment. For postmodernism, making architecture acceptable to people is aesthetic. In this regard, Harris and Lipman (1986:843) write: "architecture is about making architecture popular".

The aesthetics and principles of postmodern architecture are rooted in existing styles. As Giesen (1997:18) explains, it borrows elements from other styles, making itself an eclectic style. However, it also borrows values from the present. Thus, Harris and Lipman (1986:841) describe it as architecture that: "responds to what *is* and what has been rather than to some visionary evocation of what might be". Similarly, Hoistad (1991:26-27) describes it as an architecture of *reality*, because it tries to reflect society.

2.2.3 Formulation of Existential Hypotheses

I use the analysis of modern and postmodern theory to formulate two existential hypotheses about people's attitudes towards modern high-rise public housing complexes, such as Schubart Park. In this regard, my hypotheses rest on Barnett's (1991:30) assumption that architecture influences people's attitudes towards the built environment. I propose the following two hypotheses:

- Hypothesis A: *The complex represents a utopian environment which is, in absolute terms, ideal and good and where living conditions are improved (Premisses). Therefore, residents will have positive attitudes towards Schubart Park (Conclusion).*
- Hypothesis B: *The complex does not represent the desires, tastes and values of residents, i.e. it does not represent their community. It represents an idealized environment which is foreign to its residents (Premisses). Therefore residents will have negative attitudes towards Schubart Park (Conclusion).*

2.2.4 Review of Literature on the Theme

Literature on modern high-rise housing is based on a large amount of research on complexes such as Schubart Park. Most of this research came about because of growing social problems experienced in such complexes. Research was conducted in fields such as:

- anthropology,
- criminology,
- psychology,
- sociology etc.

Research regarding people's attitudes towards this housing type often falls under the title of *residential satisfaction*. The aim of this research is usually to determine the extent to which residents are satisfied with high rise housing units or complexes. Examples of such studies include those of Weidemann et al (1982) and Amérigo and Aragonés (1990).

Research on this housing type in the field of criminology has resulted in the formulation of two substantive theories regarding modern high-rise housing complexes. These theories are called *Defensible Space* (Newman, 1972) and *Design Disadvantage* (Coleman, 1985). Newman's theory proposes a direct connection between crime and the design of high rise housing. It hypothesises that the modern design of these complexes causes residents to have low social control and surveillance over some parts of the complex. This, in turn, causes the manifestation of crime in these parts.

Coleman's theory is much the same as Newman's. Her research, published in a book called *Utopia on Trial* (1985), found correlations between design features characteristic of modernist architecture, and indicators of antisocial behaviour. Therefore, she hypothesises that modern architecture facilitates antisocial behaviour.

After a review of the literature, it is probably safe to conclude that it expresses a definite negative perception of modern high-rise housing. Reference to the literature will assuredly result in the conclusion that people will show a negative attitude towards this housing type, owing to its design and the antisocial behaviour associated with it. However, some writers do contest this conclusion. Therefore, I quote Gans (1966:546-547) to summarise the negative perception of this housing type in the literature:

Newspaper reports reinforce the popular image of public housing projects as huge nests of crime and delinquency - despite clear evidence to the contrary - and as the domicile of unregenerate and undeserving families whose children urinate only in the elevators. The position of public housing, particularly among liberal intellectuals, has also been weakened by the slurs of the social and architectural aesthetes who condemn the projects' poor exterior designs as "sterile," "monotonous," and "dehumanizing," often in ignorance of the fact that the tightly restricted funds have been allocated mainly to make the apartments themselves as spacious and liveable as possible, and that the waiting lists among slum-dwellers who want these apartments remain long... suburban communities and urban neighborhoods with vacant land are as hostile to public housing as ever...

2.3 Description of Schubart Park

The Schubart Park complex was built in 1977, by the former Department of Community Development, as part of the Goedehoop urban renewal scheme for central Pretoria. The idea was that the complex should house middle-income white state employees. In this regard, Schutte (1984:14) states that: "Schubart Park was built in a dilapidated part of the city centre and one reason furnished originally for building the complex was the restoration of the residential function of the city centre."

The complex consists of four high-rise buildings known as blocks "A", "B", "C" and "D". Blocks "A" to "C" are twenty-one storeys high and block "D" is twenty-five storeys high. Each block

contains approximately 200 units, and there is a total of 813 units in the complex. The entire complex is isolated from the surrounding streets by a concrete facade. On top of this facade there is a large elevated concrete level, known as the play level or “P - level”, which serves as recreational space. Basic shopping facilities are provided in the centre of the complex. The complex also has two levels of parking bays and a community hall (Refer to Figure 1). In an interview with the architect of Schubart Park, the following information was given:

“The complex was designed according to criteria laid down by the City Council. The criteria included that the complex should consist of a certain number of units with sufficient open spaces between blocks. This resulted in the necessity of a design with a very high residential density. Therefore, modern architecture was the most rational design to keep with such criteria. The architectural ideas of Le Corbusier were indirectly used as a precedent. At the time, we were aware of the negative feedback from similar complexes abroad, but assumed that people were negative towards those complexes because they were forced to live there.”

Le Roux and Botes (1991:73), in an evaluation of prominent buildings in Pretoria, describe the complex as follows:

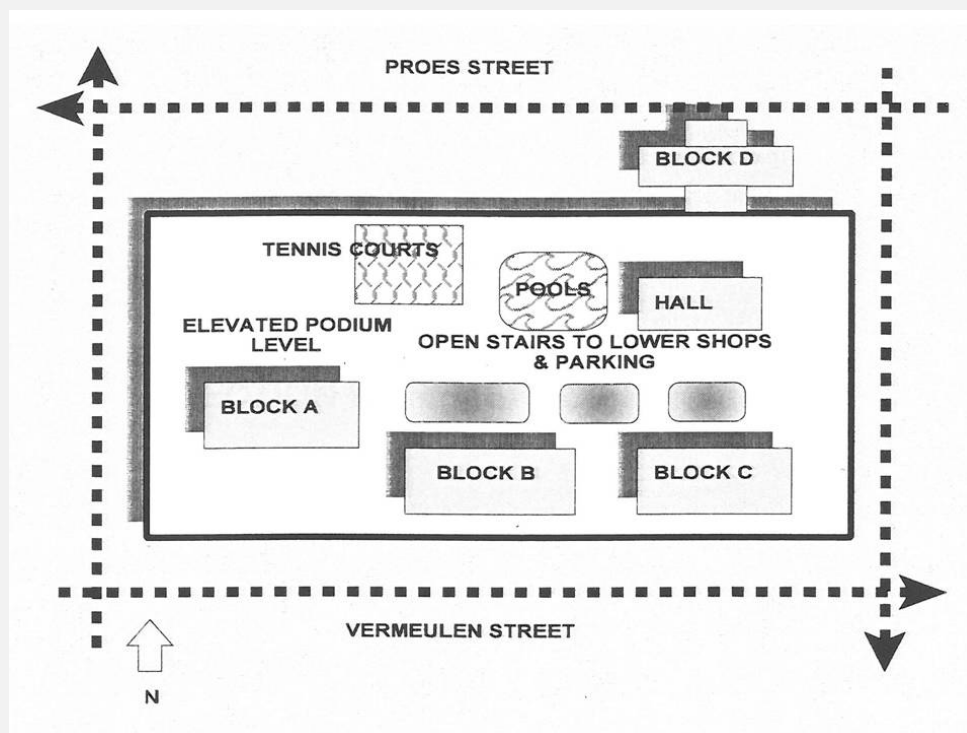
Schubart Park was die loodsprojek van die Goede hoop behuisingsontwikkeling, wat deur die Departement van Gemeenskapsbou inisieer is. Dit het gevolg op die opruiming van die woongebied, wat in sekere kringe as `n jammerlike deel van `n hoofstad beskou is. In vorm en beginsel herinner dit sterk aan Le Corbusier se 1922-plan vir `n eietydse stad vir driemiljoen inwoners. Hierdie beginsels het in onbruik verval, onder andere vanweë die tydsgees en sosio-maatskaplike oorwegings. Dit is eerstens as netjiese woonplek van belang, ook waar dit `n gemeenskap huisves én so funksioneer. Tweedens beeld dit die strewes van `n sekere tydsgees uit.

Given both my analysis of the theme and these descriptions, it is clear that the Schubart Park complex can be regarded as a modern high-rise public housing complex. The complex thus has modern aesthetics and principles.

Important to this description of the complex are references to significant changes that has taken place since its construction. The image of Schubart Park has deteriorated dramatically since the early nineties. The influx of households of lower socio-economic status have caused severe social and community problems inside the complex. This change in tenant mix

resulted in a negative stigmatisation of the complex. Conditions worsened as lack of funding as well as proper administration and maintenance led to the deterioration of structural components of the complex. The current appearance of the complex can be accepted to be notably different compared to its early years of existence.

FIGURE 1 - LAYOUT OF THE SCHUBART PARK COMPLEX



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CHAPTER 3 - CONCEPTUAL FRAMEWORK

The aim of this chapter is to formulate a conceptual framework for the research. The field of study into which this research falls is first identified. This field is then defined and an important assumption of this field is made explicit. After a review of the type of literature and conceptual models of this field, a conceptual framework for the research is formulated.

3.1 Defining *Man - Environment* Studies

This research deals with the interaction between people and the urban environment. It falls into a field of research that has been documented well by Amos Rapoport. Rapoport (1973:135) calls research that deals with the interaction between people and the environment *Man - Environment* Studies. This concept has three dimensions, which include:

- the people being studied,
- the type of manmade environment being studied and
- the type of interaction being studied.

The people being studied are a group of people who interact in some way with the environment being studied. Demographic variables come into consideration in this dimension. Among these, Lawrence (1993:38) includes variables such as sex, population group etc. - variables which are also included in this research.

Lawton (1970b in Rapoport, 1976:17), in his definition of *environment*, sees the *manmade* environment as part of what he terms the “physical environment”, which includes features that limit and facilitate behaviour. Rapoport (1976:18-19) further limits the notion of a *physical environment* to what he calls the “built environment”, which includes all forms of buildings. According to him, the built environment can be seen as:

- a spatial organisation,
- an organisation that portrays meaning and
- an organisation that facilitates communication.

The *specific form of interaction* includes any form of people's behaviour which is a result of some aspect of the built environment. As Rapoport (1977:28) states: "Any attempt to deal with the man-environment interaction must involve three areas - knowing something, feeling something about it and then doing something about it." Thus, such interaction involves three broad areas:

- cognitive - involving perceiving, knowing and thinking, the basic processes by which the individual knows his environment,
- affective - involving the individual's feelings and emotions about his environment, motivations, desires and values, and
- conative - involving acting, doing and striving, and thus affecting the environment in response to cognition and affect.

Since this research focusses on residents' attitudes towards Schubart Park, it therefore deals with interactions involving *affect* - feelings and emotions about the complex.

3.2 **Assumption of *Man - Environment* Studies**

This section addresses Research Question 2: How does the process whereby people have attitudes towards buildings come about?

Research into the interaction between people and the built environment rests on an important assumption. This assumption is that the built environment causes affect in people because it has *meaning* for them. Thus, people will either like or dislike a given building, because of what it *means* to them (Rapoport, 1982:14). The notion of *meaning* in the built environment can be divided into two categories: *perceptual* and *associational*. Designers of the built environment approach it perceptually. Therefore, the built environment has *perceptual*

meaning for them. Residents, however, *associate* certain meanings with the built environment, therefore giving it *associational meaning* (Rapoport, 1982:19-20).

The physical environment in itself, particularly through meanings attached to it, may affect people's perception of environmental quality and the good life... ...so that, in a way, this becomes a self-perpetuating system. People act in certain ways shaping their environment which then becomes a socializing medium giving children ideas about what are proper environments and affecting their perception of environments generally and the people with which they are associated; also important are the environmental elements seen and read about in mass media... (Rapoport, 1977:26).

Therefore, residents of Schubart Park will have attitudes towards the complex because they associate meanings with it. Meanings can be attached to the design and architecture of the complex, and they can either be positive or negative. Therefore, attitudes towards the complex can be either positive or negative.

3.3 **Review of *Man - Environment* Studies**

According to Francis (1983:130), literature on people and urban environments covers various themes and issues. The literature focussing on *urban perceptions* can be divided into two distinct strands, known as the *psychological* and *literary*. The *psychological* is concerned with how people *perceive* urban environments and the “images” of such environments. Lynch's book, *The Image of the City* (1960), serves as an example of an innovative theoretical text in this field.

The *literary*, on the other hand, focusses on the *meanings* that urban environments have for people. Research into this field is mostly done by sociologists. Important themes in such research are demographic aspects of the population being studied, since it is assumed that different groups will show different attitudes towards the built environment (Francis, 1983:130-133). Therefore, this research falls in the field known as the *literary*, where the focus is on the meanings that urban environments have for people of different demographic backgrounds.

3.4 Models for Conceptualizing *Man - Environment* Studies

The conceptualisation of man-environment studies involves three models. They are summarised below.

- The *hierarchical* model orders variables in terms of their perceived importance with regard to people's attitudes. Such variables would be expected to have primacy over other variables in the research on people's attitudes.
- A second model is the *atomistic-mechanistic* model. This model studies cause-effect interactions between two variables isolated from the context in which they occur.
- Thirdly, Lawrence (1993:34-35) calls for what is known as the *integrative* model in man-environment studies. This model applies a holistic, integrative conceptual framework for research on the built environment. According to Lawrence, this model emphasises the importance of context.

Altman and Chemers (1980) reject the hierarchical and atomistic-mechanistic frameworks and also call for the use of an integrative framework. They admit the possibility of causation in variables, but state that such causation is often difficult to prove. Furthermore, the complexity of the context is often more important than causation in single variables.

...although the physical environment is obviously important in relation to cultural practices, its exact cause/effect role is often hard to pinpoint. Rather, cultural practices in relation to the environment seem to involve a complex network of events, not a simple chain of causation that begins with one variable and ends at another (Altman & Chemers, 1980:9).

Research using the *integrated* conceptual framework, thus does not aim to prove causality in single variables, nor assume some variables to be more important than others. Rather, the integrated framework allows for the interpretation of the context of the site where the research was conducted. Therefore, qualitative data is also collected during the research, with the hope that it will give some results about the context relating to the site.

3.5 Summary of the Conceptual Framework of this Research

- This research forms part of a body of literature known as man-environment studies. Man-environment studies focusses on the relationship between people and the environment, including various types of interaction between people and the environment.
- This research focusses on *affective* interaction. Affective interaction includes feelings, emotions and attitudes. The research is limited to the attitudes of residents in Schubart Park.
- This research rests on the assumption that residents will have attitudes towards Schubart Park because the complex has *meaning* for them.
- This research uses the *integrative* model as a conceptual framework. The integrative model acknowledges cause and effect relationships between variables, but emphasises the importance of the context of the site where the research is conducted.

CHAPTER 4 - MEASUREMENT OF ENVIRONMENTAL ATTITUDES

In this chapter, the term environmental attitudes is defined operationally. This is followed by a discussion of the technique used to measure attitudes towards the Schubart Park complex. Finally, the parts of the complex studied in the research are listed, and their selection is explained.

4.1 ***Environmental Attitudes as an Operational Term***

In the previous chapter, the *affective* dimension was identified as the area of interaction on which this research focusses. People's *attitudes* towards the environment fall in this dimension. However, the term *perception* is often used interchangeably with the term *attitudes* in certain literature on the theme. Rapoport (1977:28 & 30-31) states that the use of the term *perceptions*, in applied sciences literature, often implies reference to people's attitudes. Therefore, the term *perceptions* is often used as a general term to refer to people's likes and dislikes with regard to the environment.

However, there is a clear distinction between the terms *perceptions* and *attitudes* in social science literature. Environmental psychology is a field of research where these terms have different operational definitions. In this field, the *affective* dimension includes three different forms of interaction, namely:

- perception,
- cognition and
- attitudes.

Textbooks on environmental psychology, such as Holahan's *Environmental Psychology* (1982), make clear distinctions between these forms:

Environmental perception involves the process of apprehending through sensory input the physical environment that is immediately present. *Environmental cognition* concerns the storage, organisation, reconstruction, and recall of images of environmental features that are not immediately

present. *Environmental attitudes* are the favorable or unfavorable feelings that people have toward features of the physical environment (Holahan, 1982:24).⁵

Therefore, according to Holahan, *environmental perception* is not a general term and is actually a different kind of interaction to *cognition* and *attitudes*. Holahan uses the term *environmental attitudes* to refer to the feelings and emotions people have towards the environment. As this research aims to determine whether residents have positive or negative feelings towards the Schubart Park complex, it is therefore necessary to use *attitudes* as an operational term.

4.2 Definition of Environmental Attitudes

The literature of environmental psychology provides an operational definition of *environmental attitudes*. Fisher et al (1984:45) and Bonnes and Secchiarioli (1995:114) state that people's *attitudes* involve affect or emotion which consists of feelings of pleasantness or unpleasantness. For this research, I use Holahan's definitions of attitudes and environmental attitudes, which state that:

...attitude(s)⁶ refers to the favourableness or unfavourableness of feelings toward some object or issue... Environmental attitudes are people's favourable feelings toward some feature of the physical environment or toward an issue that pertains to the physical environment (Holahan, 1982:91-92).

Thus, attitudes are people's evaluation of something as *positive* or *negative*. Therefore, research on residents' attitudes towards Schubart Park will involve the measurement of *positive* and *negative* attitudes towards the complex.

5

Italics in quotation my own.

6

Plural form my own.

4.3 Technique for Measuring Environmental Attitudes

This section addresses Research Question 3: How do we measure such attitudes?

The most common measurement technique used to measure environmental attitudes is called a *Perceived Environmental Quality Index* (PEQI) (Holahan, 1982:96). An environmental quality index is an aggregation of individual indicators or measurements which collectively convey information about the quality of some environmental phenomena (Craig & Zube, 1976:3). A PEQI affords a quantitative measure of the quality of a specific physical setting, as a particular group subjectively experiences it. Therefore, a perceived environmental quality index was used in the research at Schubart Park to assess positive and negative attitudes towards the complex. An example of research which uses a similar methodology to that of this research, is that of Marans and Spreckelmeyer (1982).

4.3.1 Media for Measuring Environmental Attitudes

According to Holahan (1982:99), semantic differential scales are used in the measure of environmental quality. Bechtel (1987:112) also states that semantic differential scales are the most widely used instruments in research on people's attitudes towards buildings. The semantic differential technique asks respondents to evaluate a building, for example, on a scale consisting of bipolar adjectives, such as good or bad, pleasant or unpleasant etc.

Questions about eight different parts of the complex were included in the questionnaire, and each question consisted of ten scales. Therefore, the environmental quality index for the Schubart Park complex was made up of eighty scales. The scales consist of seven points, with 4 serving as the midpoint. Responses on the scales were numbered from 1 to 7, with 1 on the positive side of the scale and 7 on the negative side. The positive and negative sides of some scales were shuffled in order to try avoid leading of respondents.

Kasmar (1970) developed a series of sixty-six bipolar adjectives, which she terms the *Environmental Description Scale*, that can be used on semantic differential scales. These adjectives were tested in pilot studies to determine their usefulness for measuring people's

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attitudes towards buildings. Therefore, I selected adjectives for this research from Kasmar's series. The specific adjectives I selected from the series were found to be useful for describing the aesthetics and principles of modern architecture, as discussed in Chapter 2. The following adjectives were taken from Kasmar's list and included in the questionnaire:

- | | |
|--|--|
| • attractive / unattractive
appealing / unappealing
beautiful / ugly | <i>aantreklik / onaantreklik
treffend / ontreffend
mooi / lelik</i> |
| • complex / simple
well-scaled / poorly-scaled
well-balanced / poorly-balanced | <i>kompleks / eenvoudig
goeie skaal / swak skaal
goeie balans / swak balans</i> |
| • convenient / inconvenient
useful / useless
comfortable / uncomfortable | <i>gerieflik / ongerieflik
bruikbaar / onbruikbaar
gemaklik / ongemaklik</i> |
| • expensive / cheap
stylish / unstylish
tasteful / tasteless | <i>duursaam / goedkoop
stylvol / styloos
smaakvol / smaakloos</i> |
| • functional / nonfunctional
efficient / inefficient
organized / disorganized | <i>funksioneel / onfunksioneel
doeltreffend / ondoeltreffend
georganiseerd / ongeorganiseerd</i> |
| • modern / old-fashioned
new / old
impressive / unimpressive | <i>modern / oudtyds
nuut / oud
indrukwekkend / onindrukwekkend</i> |
| • orderly / chaotic
well-planned / poorly-planned
uncluttered / cluttered | <i>ordelik / chaoties
goed beplan / swak beplan
onoorvloedig / oorvloedig</i> |
| • pleasant / unpleasant
cheerful / gloomy
warm / cold | <i>aangenaam / onaangenaam
vrolik / mistroostig
warm / koud</i> |
| • private / public
uncrowded / crowded
quiet / noisy | <i>privaat / openbaar
onoorlaai / oorlaai
stil / raserig</i> |
| • distinctive / ordinary
unusual / usual
ornate / plain | <i>uitstaande / normaal
ongewoon / gewoon
ornamenteel / algemeen</i> |

4.3.2 Media for Presenting Environmental Phenomena

According to Holahan (1982:97-98), a PEQI should have a medium for the presentation of an environmental phenomenon towards which people's attitudes are measured. Bechtel (1976:115) explains that the medium used to represent the environmental phenomenon must have *ecological validity*. Therefore, if people's attitudes towards a specific building are being measured, the medium used to represent the building in this measurement should represent the building accurately.

In the research at Schubart Park, I used *photographs* as a medium for representing the complex. A photograph of each part of the complex towards which residents' attitudes were measured, was included in the questionnaire. Through this medium, residents could see clearly to which parts of the complex the questions pertained. Therefore, the use of photographs ensured ecological validity.

4.4 Selection of Different Parts of the Complex

This section addresses Research Question 4: Which parts of the Schubart Park complex should be singled out for measurement of residents' attitudes towards them?

It was necessary to determine which parts of the Schubart Park complex should be included in the research to represent the architectural aesthetics and principles of a typical modern high-rise public housing complex. Various sources in the literature on modern architecture were useful for highlighting some design features typical of modern architecture. Lang (1992:16-19) highlights certain design features which best represent the aesthetics and principles of modern architecture. These features include:

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- building configurations,
- spatial configurations,
- materials,
- illumination and
- pigmentation.

Similarly, research on modern high-rise public housing by Elon and Tzmir (1971 in Rapoport, 1977:75), and Reynolds et al (1974 in Rapoport, 1977:78), highlights certain other features as important components of environmental quality in such complexes. Rapoport (1977:75&78) summarises these features as:

- aesthetic satisfaction,
- spatial enclosure,
- height of buildings,
- repetition,
- overall appearance of buildings,
- children's play spaces,
- gardens,
- cleanliness,
- spaciousness,
- density,
- view from dwellings and
- variety and complexity.

Finally, prior research at and visits to Schubart Park, assisted in the identification of the unique and distinctive parts of the complex. This facilitated an appreciation of the context of the site, in order for the important parts of the specific complex to be identified. On the basis of the outline of features summarised above, and the identification of the unique and distinctive parts of the Schubart Park complex specifically, questions on the following parts of the complex were included in the research:

- the flat blocks,
- the P-level,
- the internal shopping and parking facilities,
- the community hall,
- the main entrance to the complex,
- the street facade,
- the layout of the complex and
- the environment around the complex.

4.5 Summary of the Measurement of Environmental Attitudes

- Environmental attitudes are people's evaluation of some environmental phenomena as either *positive* or *negative*. Therefore, research on residents' attitudes towards Schubart Park implied the measurement of *positive* and *negative* attitudes towards the complex.
- A perceived environmental quality index was used as a technique to measure residents' attitudes towards the Schubart Park complex.
- The index consists of semantic differential scales with bipolar opposites, which measure attitudes as either positive or negative.
- The adjectives for the bipolar opposites used in the scales were selected from a series of adjectives that had been subjected to pilot studies. The specific adjectives that were chosen apply particularly to the aesthetics and principles of modern architecture.
- Photographs were used to represent parts of the Schubart Park complex in the index.

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- Theoretical literature, prior research on Schubart Park and visits to the site assisted in the selection of the parts of the complex studied in the research.

CHAPTER 5 - RESEARCH DESIGN AND METHODOLOGY

In this chapter, the research design is discussed as the broad framework in which the empirical research for the thesis was conducted. The methodology is discussed in terms of the steps followed in the execution of the research, from sampling through to the analysis and presentation of the data.

5.1 Research Design

This section addresses Research Question 5: What type of research design should be used?

Research design refers to the overall plan for empirical research, i.e. the specific design used to research a thesis. A cross-sectional survey design was chosen to research this thesis. According to Bless and Higson-Smith (1995:63-64), the choice of research design depends on the following:

- the focus of the research,
- the unit of analysis and
- the time dimension.

5.1.1 The Focus of the Research

According to Bless and Higson Smith (1995:63-67), the *focus of the research* depends on the type of social phenomenon being studied. Phenomena to be studied can include:

- conditions,
- orientations or
- actions.

Research focussing on *orientations* is concerned with people's attitudes and beliefs (Bless & Higson-Smith, 1995:64). Thus, the focus of this thesis is on *orientations*, because residents' *attitudes* towards Schubart Park were researched.

5.1.2 The Unit of Analysis

The *unit of analysis* refers to the type of unit from which variables are measured (Neuman, 1997:113), or the object from which data is collected (Bless & Higson-Smith, 1995:64). As I collected data on residents' attitudes towards Schubart Park, *individual residents inside Schubart Park* served as the units of analysis. Problems of ecological fallacy and reductionism⁷ are reduced because the research focusses on individual residents' attitudes, and the interpretations and conclusions are limited to the population inside Schubart Park.

5.1.3 The Time Dimension

As I conducted the research with limited resources and within a limited time frame, I used a *cross-sectional design*. In a cross-sectional design, empirical data is collected during a single period of time. All the data for this thesis was collected during August 1999.

5.1.4 The Use of a Survey Design

The focus, the unit of analysis and the time dimension of the research determined that a *survey* design would be used to collect empirical data for the thesis. This research design was appropriate because:

Data from cross-sectional surveys can be used to examine possible differences in the attitudes and behaviours among subgroups of a population. For example, Weidemann et al (1982) found significant differences in attitudes towards environmental attributes of a public housing project among youth, adults, and elderly residents. Findings reflect the sentiments of each subgroup at the time the survey was conducted (Bechtel et al, 1987:49).

7

See Neuman (1997:114 & 116) for definitions of *ecological fallacy* and *reductionism*.

According to Neuman (1997:228) and Huysamen (1993:132), surveys are the most common design used in the social sciences to research people's attitudes, although, as with other designs, they should be regarded as giving an approximation of knowledge or 'glimpse of reality'. Survey designs aim to collect data from a population or a sample of that population (Bechtel et al, 1987:48). Thus, a sample was used in this research.

5.1.5 Validity of the Research Design

The aim of the research design was to establish a relationship between independent variables (i.e. residents' demographic profiles, life patterns and general perceptions) and dependent variables (i.e. attitudes towards the complex). The potential of a design to achieve this aim is referred to as the *validity* of the design, and is determined in terms of two dimensions, namely *internal* and *external* validity (Bless & Higson-Smith, 1995:82).

Internal validity depends on whether changes in the dependent variable actually relate to changes in the independent variable. Therefore, the research design has to exclude all other possible factors which could explain the variation of the dependent variable. Clearly, a cross-sectional survey design is limited in this regard, as it cannot account for factors, such as history or social conditions, which might possibly influence residents' attitudes.

External validity depends on whether the results of the research actually apply to all subjects of the population. Thus, external validity depends on the representativeness of the sample used for the survey. As I followed a randomized sampling technique strictly, a high degree of external validity can be assumed for this study. Therefore, careful procedures during sampling were a crucial aspect of the methodology of the research.

5.2 Methodology

5.2.1 The Sample

According to Bless and Higson-Smith (1995:87), good sampling depends on:

- a well-defined population,
- an adequately chosen sample and
- an estimate of how representative the sample is.

As this research focusses on adult residents' attitudes towards Schubart Park, it is clear that all adult persons living in Schubart Park constitute the target *population* for the research. Persons above the age of twenty-one were considered to be adult residents. It should be noted that respondents in the sample were regarded as legitimate residents, whatever the circumstances under which they were living in Schubart Park. Therefore, the research does not account separately for respondents who may have been sub-letting. This is not, however, expected to have any impact on the validity of the results.

A *simple random sampling* technique was used to draw a *sample*. For this procedure, I obtained a sample frame of unit numbers from the administration offices of Schubart Park. As unit numbers on the sample frame were generic, all units were renumbered, starting with block "A" and ending with block "D" (N = 813). A table of random numbers was used to randomly select 25% of the units. During the survey, each adult living in one of the 204 units selected, was asked to complete a questionnaire. Finally, after refusals and vacant units had been omitted, questionnaires were given to the occupants of 169 units (n = 169), and the questionnaires completed totalled 254. Therefore, 254 adult residents were included in the survey in a sample size of 20.8%. The rate of completion was thus 82.8%, with refusals and vacant units making up 16.8%.⁸

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Refusals are discussed in Chapter 11.

The distribution of units among blocks was used as an indicator of the *representativeness* of the sample. The number of units in each of the four blocks was obtained from the sample frame and compared with the distribution of cases between the blocks. As there are no significant differences between the percentages of cases and percentages of units in each block, the sample is taken to be representative, at least in terms of the distribution of respondents in the complex. The distributions of units and cases are compared in the following table:

TABLE 1 - COMPARISON OF THE DISTRIBUTIONS OF UNITS AND CASES FOR EACH BLOCK					
	Block "A"	Block "B"	Block "C"	Block "D"	Totals
Total Number of Units in Complex	210 25.8%	189 23.3%	210 25.8%	204 25.1%	813 100%
Total Number of Cases in Sample	42 25%	48 28.6%	47 27.4%	32 19%	169 100%

5.2.2 Data Collection

All the data used for the purposes of the research was obtained from the survey. Therefore, only *primary* data is used in this research. As most of the data is expressed in numbers, the data is mostly *quantitative*. The following aspects of data collection are discussed:

- the use of questionnaires and
- ethical considerations during data collection.

5.2.2.1 The Use of Questionnaires

Questionnaires were used to collect the data. In the design of the questionnaire, the principles on which its construction is based are in line with those of methodologists such as Babbie (1992), Bless and Higson-Smith (1995) and Neuman (1997). The questionnaire consists of four sections, structured according to the types of data needed, which included residents' demographic profiles and life patterns, residents' attitudes towards the complex,

and general information about residents. To address possible problems regarding language efficiency, both Afrikaans and English were used in the questionnaire. During the survey, no complaints were received from respondents regarding the languages used. The questionnaire is reprinted in Appendix A.

Respondents filled in the questionnaires themselves after I had visited all the units selected in the sample. Babbie (1992:263) explains that the completion rate of this method of administration is higher than that of others. I explained the research to respondents personally, and kept a record of complaints about any matters regarding the research.⁹ Most questionnaires were collected after a few weeks, during repeated visits to the complex. The use of a questionnaire is deemed appropriate because:

- data needed to be standardized and
- personal interviews would have been time-consuming and costly.

5.2.2.2 Ethical Considerations During Data Collection

The following steps were taken during data collection in respect of ethical considerations:

- Respondents' participation in the research was completely voluntary.
- Respondents' privacy was considered at all times.
- Respondents' anonymity was guaranteed and no information that could identify respondents was collected.
- Questionnaires were printed with a cover letter which included the logo of the University of Stellenbosch, names and contact numbers for myself and my supervisor, and an explanation of the purpose of the research.

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See Chapter 11 for respondents' complaints regarding the research.

5.2.3 Analysis of the Data

Statistical procedures were used for the analysis of the data as primary quantitative data was collected for this research. The data was captured in the software programme - *Statistical Package for the Social Sciences* (SPSS), which was also used to analyse the data. Analysis of the data is discussed in terms of:

- levels of measurement,
- descriptive statistical procedures and
- inferential statistical procedures.

5.2.3.1 Levels of Measurement

SPSS allows for the measuring of variables on nominal, ordinal and scale levels. The following list shows the different levels of measurement, followed in brackets by the variables measured on those levels. Thus, these variables were defined as either nominal, ordinal or scale during data capturing:

- nominal (sex; population group; marital status; whether or not children live in the unit, presence of children living in the unit; occupation; unit size; use patterns of facilities inside the complex; reasons for living in the complex, preference for moving or staying; housing preference; preference for either ownership or rental schemes and general attitudes towards the complex),
- ordinal (income) and
- scale (age; length of tenancy; number of people living in the unit; attitudes towards the complex; perceptions of stigmatization).

Certain variables were regrouped into fewer categories during the analysis of the data. The following tables show which variables were regrouped into fewer categories.

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TABLE 2 - CATEGORIES OF REGROUPED DEMOGRAPHIC PROFILE VARIABLES

Variable	Categories in Questionnaire	Regrouped Categories in Data Analysis
Population Group	Asians Blacks Coloureds	Blacks and Coloureds
	Whites	Whites
Age	(Ungrouped Variable)	21 - 35 Years
		36 - 50 Years
		51 - 65 Years
		66 + Years
Marital Status	Married Living Together	Not Single
	Unmarried Divorced / Separated Widow Widower	Single
Income	Less than R 800 R 800 - R 2 000	Lower Income
	R 2 001 - R 3 000 R 3 001 - R 4 000	Middle Income
	R 4 001 - R 5 000 More than R 5 000	Higher Income
Education	None Primary School Secondary School	Non Tertiary
	College Technicon University	Tertiary
Occupation	Services Education Clerical Professional Production	Formally Employed
	Arts & Writing Domestic Tasks Student Retired Unemployed	Not Formally Employed

SECTION B - RESEARCH STRATEGY

TABLE 3 - CATEGORIES OF REGROUPED LIFE PATTERN VARIABLES

Variable	Categories in Questionnaire	Regrouped Categories in Data Analysis
Length of Tenancy	(Ungrouped Variable)	1 - 5 Years
		More than 5 Years
Number of People Living in Unit	(Ungrouped Variable)	1 - 2 Persons
		More than 2 Persons
Unit Size	Small Bachelor Large Bachelor One and a Half Bedroom	Smaller Flats
	Two and a Half Bedroom Three and a Half Bedroom	Larger Flats
Housing Preference	House in the Suburbs	Lower Density
	Ordinary Block of Flats Town House Complex like Schubart Park	Medium to High Density

5.2.3.2 Descriptive Statistics

Descriptive statistics were used to organise and summarise the data in a more comprehensible format. Mouton (1996:167) divides descriptive statistics into *univariate* analysis (analysis of properties of variables) and *bivariate* analysis (analysis of relationships between variables). The following descriptive statistics are used in the presentation of the results:

- frequencies (univariate analysis),
- modes (univariate analysis) (See Appendix D),
- medians (univariate analysis),
- means (univariate analysis),
- standard deviations (univariate analysis) and
- cross tabulations (bivariate analysis).

5.2.3.3 Inferential Statistics

According to Mouton (1996:163), inferential statistics are used when generalising from sample data to the entire population. In the introduction, I have said that *inductive generalisation* is used in this thesis to interpret and draw conclusions about research findings. As this research is based on a representative sample, findings are generalised to the population. Therefore, the following inferential statistical tests were also used in the presentation of the results:

- independent sample t - tests (comparison of means between two variables),
- one way ANOVA¹⁰ tests (comparison of means between more than two variables) and
- chi-square tests (significant differences between sets of variables).

5.2.3.4 Presentation of the Data

In the following chapters, the data is presented first, and followed by interpretations and discussions. In Chapter 6, the data from the index is presented in the form of figures. Other numerical data sets in the following chapters are presented in the form of tables. In Chapter 9, qualitative data is presented in the form of textual quotations taken from questionnaires. Conclusions are drawn in a separate chapter.

5.3 Summary of the Design and Methodology of the Research

Aim	→	Descriptive / Universal / Correlational
Reasoning	→	Deductive / Inductive Generalisation
Focus	→	Attitudes
Unit of Analysis	→	Individuals
Time Dimension	→	Cross-Sectional
Data Collection	→	Survey

¹⁰

Analysis of variance.

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Sampling Technique	→	Simple Random
Instrument	→	Questionnaires
Type of Data	→	Primary Quantitative
Analysis of Data	→	Descriptive and Inferential Statistics
Presentation	→	Figures / Tables / Textual Quotations

SECTION C - RESULTS FROM THE RESEARCH

CHAPTER 6 - RESULTS IN TERMS OF THE INDEX

In this chapter, results regarding respondents' attitudes towards the complex, in terms of the index, are presented. Means are used as an indication of respondents' attitudes. General mean scores from the index are presented first, followed by the comparison of means from different groups.

6.1 Mean Scores in the Index

This section addresses Research Questions 6 and 7: What are residents' attitudes towards the different parts of the complex that have been singled out; and what is the overall attitude towards the complex?

As discussed in Chapter 4, a *perceived environmental quality index* was used to measure respondents' attitudes towards the complex. This section contains this index, which uses means as an indication of attitudes. The means should be interpreted in the following way. Scales were numbered from 1 to 7, with 1 on the positive side, 7 on the negative side and 4 at the midpoint. Therefore, means lower than 4 indicate positive attitudes, and means above 4 indicate negative attitudes towards the complex. Figures 1 to 8 show the graphical locations of means for Questions 18 to 25.

The following results are obtained from Figures 1 to 8:

- Of the 80 scales used in the index, only 19 scales yielded a mean indicating positive attitudes, while all other scales have means of four or higher, indicating neutral or negative attitudes.
- Question 21 (community hall) has the mean indicating the most positive attitude (mean = 2.36), with the adjective "useful" as opposed to "useless". Therefore, usefulness seems to be a quality that is associated with this part of the complex and draws a positive attitude from respondents. Question 22 (main entrance of the complex) has the mean indicating the most negative attitude (mean = 5.99), with the

adjective “public” as opposed to “private”. Therefore, lack of territoriality, or access control, seems to be a quality that is associated with this part of the complex and draws a negative attitude from respondents.

- All eight combined means indicate negative attitudes, except the combined mean from Question 24 (layout of the complex), which is 4, thus indicating neither a positive nor a negative attitude towards the layout of the complex. Therefore, there are no combined means that indicate positive attitudes to any part of the complex.
- The mean calculated from the combined means of Questions 18 to 25 is 4.6. Thus, the total combined mean is 4.6, indicating a negative attitude overall towards the complex. It should be noted that this negative attitude is indicated only by a margin of 0.6 on a scale of 1 to 7.
- Question 25 (environment of Schubart Park) has the combined mean showing the most negative attitude (mean = 5.2).
- The scales that yielded means indicating positive attitudes use the following adjectives: “convenient” (for five different questions), “well-planned” (for two different questions), “useful” (for two different questions), “appealing” (for two different questions), “efficient” (for two different questions), “functional” (for two different questions), “orderly” (for one question), “well-balanced” (for one question), “organised” (for one question) and “impressive” (for one question). The analysis of modern architecture in Chapter 2, shows that certain of those qualities, such as convenience, efficiency, functionality, order, balance and organization, can be associated with typical modern architecture. Therefore, typical modern aesthetics such as these were evaluated by residents as positive aspects of the complex. Some adjectives used on scales with means showing negative attitudes included “unstylish”, “gloomy”, “crowded”, “public”, “plain”, “tasteless” and “simple”. If the difference between the adjectives of the positive and negative means is highlighted, it seems that positive attitudes may be the result of residents’ evaluating *structural* or *practical* qualities of the complex, i.e. “convenient”, “well-planned”, “useful” etc. Negative

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attitudes may be the result of residents' evaluating qualities such as the *appearance* and *accessibility* of the complex, i.e. "unstylish", "gloomy", "public" etc.

FIGURE 2 - GRAPHICAL LOCATION OF MEANS FOR QUESTION 18.

Question 18: What Is Your Attitude Towards the Flat Blocks of Schubart Park?



Positive	1	2	3	4	5	6	7	Negative
Attractive				● (4.04)				Unattractive
Well-scaled				● (4.31)				Poorly-scaled
Convenient			● (3.43)					Inconvenient
Stylish				● (4.19)				Unstylish
Organized				● (4.42)				Disorganized
Modern				● (4.76)				Old-fashioned
Well-planned			● (3.85)					Poorly-planned
Cheerful				● (4.71)				Gloomy
Uncrowded				● (5.1)				Crowded
Distinctive				● (5.15)				Ordinary
Combined Mean				● (4.4)				

FIGURE 3 - GRAPHICAL LOCATION OF MEANS FOR QUESTION 19.

Question 19: What Is Your Attitude Towards the P-level?



Positive	1	2	3	4	5	6	7	Negative
Beautiful					● (4.54)			Ugly
Well-balanced					● (4.2)			Poorly-balanced
Useful				● (3.57)				Useless
Stylish					● (4.87)			Unstylish
Organized					● (4.48)			Disorganized
Impressive					● (4.3)			Unimpressive
Well-planned				● (4.06)				Poorly-planned
Pleasant					● (4.96)			Unpleasant
Private						● (5.63)		Public
Ornate						● (5.45)		Plain
Combined Mean					● (4.6)			

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FIGURE 4 - GRAPHICAL LOCATION OF MEANS FOR QUESTION 20.

Question 20: What Is Your Attitude Towards the Internal Shopping Facilities?



Positive	1	2	3	4	5	6	7	Negative
Appealing				● (3.88)				Unappealing
Complex					● (4.86)			Simple
Convenient			● (2.8)					Inconvenient
Tasteful					● (4.36)			Tasteless
Efficient			● (3.41)					Inefficient
Modern					● (4.58)			Old-fashioned
Uncluttered				● (4.14)				Cluttered
Pleasant					● (4.34)			Unpleasant
Private						● (5.71)		Public
Unusual					● (5.05)			Usual
Combined Mean					● (4.3)			

FIGURE 5 - GRAPHICAL LOCATION OF MEANS FOR QUESTION 21

Question 21: What Is Your Attitude Towards the Community Hall?



Positive	1	2	3	4	5	6	7	Negative
Attractive					● (4.29)			Unattractive
Complex						● (5.59)		Simple
Useful			● (2.36)					Useless
Expensive					● (5.14)			Cheap
Functional			● (3.24)					Nonfunctional
Modern					● (5.21)			Old-fashioned
Orderly			● (3.44)					Chaotic
Warm					● (5.11)			Cold
Quiet					● (4.95)			Noisy
Ornate						● (5.44)		Plain
Combined Mean					● (4.5)			

FIGURE 6 - GRAPHICAL LOCATION OF MEANS FOR QUESTION 22.

Question 22: What Is Your Attitude Towards the Main Entrance of Schubart Park?



Positive	1	2	3	4	5	6	7	Negative
Attractive					● (5.2)			Unattractive
Complex						● (5.86)		Simple
Convenient			● (3.51)					Inconvenient
Stylish						● (5.28)		Unstylish
Efficient			● (3.67)					Inefficient
Modern						● (5.32)		Old-fashioned
Orderly				● (4.4)				Chaotic
Warm						● (5.43)		Cold
Private						● (5.99)		Public
Ornate						● (5.49)		Plain
Combined Mean					● (5.0)			

FIGURE 7 - GRAPHICAL LOCATION OF MEANS FOR QUESTION 23

Question 23: What Is Your Attitude Towards the Street Facade?



Positive	1	2	3	4	5	6	7	Negative
Beautiful					● (5.05)			Ugly
Well-scaled					● (4.7)			Poorly-scaled
Convenient				● (3.94)				Inconvenient
Expensive					● (5.31)			Cheap
Functional				● (3.66)				Nonfunctional
Modern					● (4.98)			Old-fashioned
Orderly				● (4.31)				Chaotic
Warm					● (5.33)			Cold
Private					● (5.77)			Public
Distinctive					● (5.4)			Ordinary
Combined Mean					● (4.9)			

FIGURE 8 - GRAPHICAL LOCATION OF MEANS FOR QUESTION 24

Question 24: What Is Your Attitude Towards the Layout of Schubart Park?



Positive	1	2	3	4	5	6	7	Negative
Appealing			● (3.12)					Unappealing
Well-balanced				● (3.68)				Poorly-balanced
Convenient			● (3.12)					Inconvenient
Stylish				● (4.13)				Unstylish
Organized				● (3.79)				Disorganized
Impressive				● (3.89)				Unimpressive
Well-planned			● (3.44)					Poorly-planned
Pleasant				● (4.08)				Unpleasant
Private					● (5.41)			Public
Distinctive					● (5.14)			Ordinary
Combined Mean				● (4.0)				

FIGURE 9 - GRAPHICAL LOCATION OF MEANS FOR QUESTION 25

Question 25: What Is Your Attitude Towards the Area Around Schubart Park?



Positive	1	2	3	4	5	6	7	Negative
Attractive					● (5.42)			Unattractive
Complex					● (5.4)			Simple
Convenient					● (4.66)			Inconvenient
Tasteful					● (5.5)			Tasteless
Organized					● (4.72)			Disorganized
New						● (5.91)		Old
Orderly					● (4.86)			Chaotic
Pleasant					● (5.29)			Unpleasant
Quiet					● (5.64)			Noisy
Unusual					● (4.37)			Usual
Combined Mean					● (5.2)			

6.2 Mean Comparisons Between Groups

This section addresses Research Question 8: What are the differences in attitudes towards the complex between groups with: different demographic profiles, different life patterns, different use patterns of facilities inside the complex, different reasons for living in the complex, different perceptions of stigmatization and different general attitudes towards the complex?

This section contains an analysis of the differences in attitudes towards the complex between different groups. Therefore, means highlighted in this section were calculated from the sum total of scales from Questions 18 to 25. Thus, the midpoint is 320 (midpoint 4 × 80 scales = 320). Means lower than 320 indicates positive attitudes and means above 320 indicate negative attitudes. If the corresponding p - value in the right column is smaller than 0.05, it indicates a significant difference between the means of groups. Following the structure of the questionnaire, the results are presented along the following outline:

- groups with different demographic profiles,
- groups with different life patterns,
- groups with different use patterns of facilities inside the complex,
- groups with different reasons for living in the complex,
- groups with different perceptions of stigmatization and
- groups with different general attitudes towards the complex.

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6.2.1 Groups with Different Demographic Profiles

TABLE 4 - COMPARISON OF MEANS BETWEEN GROUPS WITH DIFFERENT DEMOGRAPHIC PROFILES				
Variables	Groups	Means	Standard Deviations	Significant Differences
Sex	Male	361.7	74.1692	0.49
	Female	371.3	70.6026	
Population Group	Blacks and Coloureds	347.7	60.3679	0.03
	Whites	378.2	75.1978	
Age	21-35	369.9	77.7625	0.92
	36-50	372.4	63.4691	
	51-65	354.9	75.9874	
	66+	368.1	44.2660	
Marital Status	Single	361.3	78.9914	0.32
	Not Single	375.0	61.7735	
Children Living in the Unit	Yes	367.0	77.0537	0.88
	No	369.3	61.7763	
Income	Lower	367.8	74.6043	0.77
	Middle	379.7	64.5319	
	Higher	-	-	
Level of Education	Non Tertiary	366.1	72.6852	0.78
	Tertiary	370.1	69.0549	
Occupation	Formally Employed	373.8	71.8689	0.31
	Not Formally Employed	359.7	72.1221	

The following results are obtained from Table 4:

- All the groups in this table show negative attitudes towards the complex.
- Blacks and Coloureds show the least negative attitudes (mean = 347.7), and the middle income group shows the most negative attitude (mean = 379.7).
- There are no significant differences between any of these groups, except for the different population groups. Blacks and Coloureds show a significantly less negative

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attitude towards the complex (mean = 347.7) than Whites (mean = 378.2) (significant difference = 0.03).

6.2.2 Groups with Different Life Patterns

TABLE 5 - COMPARISON OF MEANS BETWEEN GROUPS WITH DIFFERENT LIFE PATTERNS

Variables	Groups	Means	Standard Deviations	Significant Differences
Length of Tenancy	1-5 Years More than 5 Years	356.5 400.3	70.5536 62.5933	0.00
Number of People living in Unit	1-2 Persons More than 2 Persons	373.3 368.1	73.3818 71.4280	0.75
Unit Size	Smaller Flats Bigger Flats	376.5 357.6	72.0873 70.5477	0.16
Preference for Moving or Staying	Yes No	374.2 349.9	68.0060 80.0803	0.11
Housing Preference	Ordinary Block of Flats Town House House in a Suburb Complex like S. Park	362.2 362.4 392.9 318.2	79.7494 52.3290 66.9408 79.5844	0.00
Housing Preferences (Regrouped)	Low Density Medium - High Density	392.9 346.7	66.9408 70.2419	0.00
Preference for Ownership or Rental Schemes	Ownership Rental	378.7 342.1	59.4149 91.9339	0.01

The following results were obtained from Table 5:

- All the groups in this table show negative attitudes towards the complex.

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- The group with a housing preference for complexes such as Schubart Park shows the least negative attitude (mean = 318.2) and the group which has been living in Schubart Park for more than five years shows the most negative attitude (mean = 400.3).
- There are no significant differences in attitudes between groups with different numbers of people living in the units, unit sizes and preferences for moving or staying. It is unexpected that there is no significant difference between the attitudes of respondents who show a preference for moving from the complex and respondents who prefer not to move. However, respondents who show a preference for moving do show a more negative attitude (mean = 374.2) than respondents who prefer not to move (mean = 349.9).
- Respondents who have been living in the complex for 1 to 5 years show a significantly less negative attitude towards the complex (mean = 356.5) than respondents who have been living in the complex for more than five years (mean = 400.3). It can be expected that respondents who have been living in the complex for more than five years will show a more negative attitude, as these residents may recall times when the complex was relatively new, and in a better structural condition. This reasoning may be supported by the fact that 89% of respondents think that the complex has deteriorated over the last five years. Therefore, variations in attitudes may be explained by *length of tenancy*, rather than *population group*.
- Significant differences were found between groups with different housing preferences. Respondents with a housing preference for a house in the suburbs show a significantly more negative attitude (mean = 392.9) than respondents who show preferences for town houses (mean = 362.4), ordinary flat blocks (mean = 362.2) and complexes like Schubart Park (mean = 318.2) (significant difference = 0.00). Therefore, it seems that preferences for various *housing densities* may influence respondents' attitudes towards the complex, since *density* serves as the distinguishing factor between these housing types. Therefore, this variable was regrouped into *low density* (house in suburbs) and *medium to high density* (town houses, flat blocks and complexes like Schubart Park). After regrouping, respondents with preferences for low density housing also show a significantly more negative attitude (mean = 392.9) than respondents with preferences

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for medium to high density housing (mean = 346.7) (significant difference = 0.00). As Schubart Park is a housing type with a high residential density, it is to be expected that respondents with preferences for low density housing will show a more negative attitude.

- Respondents who show preferences for ownership have a significantly more negative attitude (mean = 378.7) than respondents with preferences for rental schemes (mean = 342) (significant difference = 0.01). As rental schemes are usually associated with state housing complexes such as Schubart Park, it is to be expected that this group shows a less negative attitude towards the complex. However, respondents may have interpreted the point of this question in two ways: as ownership preference in terms of their actual housing preference, or as ownership preference in terms of their present situation at Schubart Park.

Thus far, the results show that there are significant differences between the attitudes of respondents who have been living in the complex for 1 to 5 years and respondents who have been living in the complex for more than 5 years. Therefore, I would suggest the idea that these two groups were distinctive in terms of their demographic profiles and life patterns at the time of the research. The following table shows the cross tabulation between these two groups and some demographic and life pattern variables.

TABLE 6 - CROSS TABULATION BETWEEN LENGTH OF TENANCY AND SOME DEMOGRAPHIC AND LIFE PATTERN VARIABLES				
Variables	Groups	1 - 5 Years' Tenancy	More than 5 Years' Tenancy	Significant Differences
Population Group	Blacks and Coloureds	97.4%	2.6 %	0.00
	Whites	44.9 %	55.1 %	
Children Living in Unit	Yes	73.0 %	27.0 %	0.04
	No	60.0 %	40.0 %	
Income	Lower	74.0 %	26.0 %	0.00
	Middle	44.0 %	66.0 %	
Number of People living in Unit	1 - 2 Persons	56.8 %	43.2 %	0.02
	More than 2 Persons	72.7 %	27.3 %	

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According to Table 6, there are significantly greater percentages of:

- Blacks and Coloureds,
- respondents with children living in the unit,
- lower income respondents and
- respondents with more than two persons living in a unit,

who have been living in the complex for only 1 - 5 years. I refer to this group as *Group B* from now on. Similarly, there is a significantly greater percentage of:

- Whites,
- respondents with no children living in the unit,
- middle income respondents and
- respondents with only 1 or 2 persons living in a unit,

who have been living in the complex for more than five years. I refer to this group as *Group A* from now on. Therefore, there were two distinctive groups, in terms of length of tenancy, living in the complex at the time of the research:

- Group A, which has been living in the complex for more than 5 years, consists mainly of white residents, residents with no children living in their unit, middle income residents and residents who have only 1 or 2 persons living in their unit. This group shows a more negative attitude towards the complex.
- Group B, which has been living in the complex for only 1 to 5 years, consists mainly of black and coloured residents (including most of such residents), residents with children living in their unit, lower income residents and residents who have more than two persons living in their unit. This group shows a less negative attitude towards the complex.

6.2.3 Groups with Different Use Pattern of Facilities

The following table shows the numbers and percentages of respondents in the groups indicating use of different facilities. These groups' attitudes towards the complex are also expressed as means.

TABLE 7 - COMPARISON OF MEANS OF GROUPS WITH DIFFERENT USE PATTERN OF FACILITIES				
Facilities	Means	Standard Deviations	Frequencies	Percentages
P-level	347.2	82.0899	57	22.4
Swimming Pool	354.7	72.5970	60	23.5
Tennis Courts	350.5	80.0017	16	6.3
Shops	369.6	71.2361	231	90.6
Community Hall	343.0	69.6707	34	13.3
Parking & Storage	376.2	62.8075	90	35.3

The following results were obtained from Table 7:

- All the groups in this table show negative attitudes towards the complex.
- The group using the community hall shows the least negative attitude towards the complex (mean = 343.0). Informal conversations with respondents revealed that the community hall is used almost exclusively by blacks and coloureds for forums and religious meetings. This information is supported when the means of white and black and coloured respondents are compared for Question 21 (the community hall). Such a comparison shows that black and coloured respondents have a significantly less negative attitude (mean = 42.9) towards the community hall than white respondents (mean = 46.3) (significant difference = 0.04). Therefore, the less negative attitude shown by the group using the community hall can be explained by the fact that it is mostly blacks and coloureds who use this facility, and this group shows a significantly less negative attitude towards this facility in the index.

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- All the facilities are used by less than half of the respondents, except for the shopping facilities, which are used by 90.6% of respondents. In the previous section I suggest that respondents' positive attitudes can be ascribed to their evaluations of *structural* or *practical* qualities of the complex. An analysis of the scales for Question 20 (the internal shopping facilities) shows that scales yielding positive means had adjectives such as "convenient" and "efficient". Therefore, the shopping facilities are used by most residents because they are found to be convenient and useful, i.e. *practical*.

6.2.4 Groups with Different Reasons for Living in the Complex

The following table shows the numbers and percentages of respondents in the groups indicating various reasons for living in the complex. These groups' attitudes towards the complex are also expressed as means.

TABLE 8 - COMPARISON OF MEANS OF GROUPS WITH DIFFERENT REASONS FOR LIVING IN THE COMPLEX				
Reasons	Means	Standard Deviations	Frequencies	Percentages
Financial	377.9	67.7980	188	73.7
Location	356.1	47.8137	38	14.9
Social	362.3	18.7705	6	2.4
Housing Shortage	335.6	62.2847	54	21.2
Good Housing	344.9	42.5142	28	11.0
Dependent	302.8	84.6625	18	7.1

The following results are obtained from Table 8:

- All the groups in this table show negative attitudes towards the complex, except dependents. Respondents who identified themselves as dependents showed a positive attitude towards the complex (mean = 302.8).
- Respondents who live in the complex for financial reasons showed the most negative attitude (mean = 377.9). This result is unexpected, as respondents indicating financial reasons would probably represent the lower income group, but the lower income group showed a significantly less negative attitude than the middle income group.
- Finance was also the most common reason (73.7% of respondents) for respondents' living in the complex. The attitudes of these respondents may be influenced by feelings of stigmatization, as financial reasons for living there may lead to imply perceptions of Schubart Park as low income housing, or housing for those who have financial needs.

6.2.5 Groups with Different Feelings of Stigmatization

The following table compares the means of different groups' attitudes towards the complex in terms of different feelings of stigmatization. Stigmatization was measured in terms of the following items:

- social problems,
- housing type,
- sense of pride,
- sense of community and
- perception of deterioration.

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TABLE 9 - COMPARISON OF MEANS OF GROUPS WITH DIFFERENT FEELINGS OF STIGMATIZATION

Variables	Groups	Means	Standard Deviations	Significant Differences
Negative Perception Due to Social Problems	Agree Disagree	372.2 335.6	73.2548 55.9828	0.11
Negative Perception Due to Housing Type	Agree Disagree	380.6 356.9	77.3161 62.5792	0.09
Sense of Pride	Disagree Agree	384.0 328.1	68.0684 66.4535	0.00
Sense of Community	Disagree Agree	378.7 331.8	69.7411 68.6665	0.01
Perception of Deterioration	Yes No	372.1 334.6	72.4216 56.9038	0.12

The following results are obtained from Table 9:

- All the groups in this table show negative attitudes towards the complex.
- For all the items, respondents who have feelings of stigmatization show more negative attitudes towards the complex than respondents who do not have feelings of stigmatization. Therefore, feelings of stigmatization probably influence residents' attitudes towards the complex negatively.
- Attitudes of respondents who think that residents do not have a sense of pride living in the complex are significantly more negative (mean = 383.9) than attitudes of respondents who think that residents do have a sense of pride (mean = 328.0714) (significant difference = 0.00). Similarly, attitudes of respondents who think that residents do not have a sense of community are significantly more negative (mean = 331.8) than attitudes of respondents who think that residents do have a sense of community (mean = 328.1) (significant difference = 0.00). Therefore, residents who have a more negative attitude towards the complex also perceive a poor sense of community and pride among the residents of Schubart Park.

6.2.6 Groups with Different General Attitudes towards the Complex

The following table compares the means of groups' attitudes towards the complex in terms of different general perceptions. An open question was used to measure general perceptions. Seven categories were created and responses were grouped into these categories and coded as either positive or negative.¹² The following categories were created:

- housing type,
- structural aspects,
- social aspects,
- management and maintenance,
- security and safety,
- financial aspects and
- cleanliness and health.

TABLE 10 - COMPARISON OF MEANS OF GROUPS WITH DIFFERENT ATTITUDES TOWARDS THE COMPLEX

Categories	Orientations	Means	Frequencies	Percentages
Housing Type	Positive	337.2	74	29.1
	Negative	420.4	29	11.4
Structural Aspects	Positive	333.4	32	12.6
	Negative	409.1	46	18.1
Social Aspects	Positive	388.0	7	2.8
	Negative	374.9	117	46.1
Management & Maintenance	Positive	424.0	6	2.4
	Negative	374.8	52	20.5
Security & Safety	Positive	363.5	4	1.6
	Negative	380.1	52	20.5
Financial	Positive	356.9	23	9.1
	Negative	376.6	14	5.5
Cleanliness & Health	Positive	-	-	-
	Negative	391.3	82	32.3

¹²

It should be noted that the coding of responses was based on my personal interpretation of the responses. Chapter 9 focuses on the actual content of some of these responses.

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The following results are obtained from Table 10:

- All groups in this table show negative attitudes towards the complex.
- The group showing the least negative attitude consists of those people who expressed positive perceptions regarding structural aspects of the complex (mean = 333.4).
- The most negative attitudes are shown by those who expressed positive perceptions regarding management and maintenance (mean = 424.0). Informal conversations with respondents revealed that the recent privatization of the management of the complex during the time of the research was particularly strongly supported by white middle income residents, while black and coloured residents opposed the process. It has been shown that whites and middle income respondents show a significantly more negative attitude towards the complex.
- The category that has the most responses is “negative perceptions regarding social aspects” (frequency = 117), while no responses were coded for “positive perceptions regarding cleanliness and health”.
- All the groups expressing negative perceptions, showed more negative attitudes towards the complex than groups expressing positive perceptions, except with regard to “social aspects” and “management and maintenance”.
- Although most results in the index indicate a negative attitude towards the complex, 29.1% of respondents actually expressed positive attitudes towards the housing type, as opposed to 11.4% who expressed negative attitudes towards the housing type.

6.3 Summary of Results in Terms of the Index

- The overall mean from the scales is 4.6, indicating that residents have a negative attitude towards the housing complex, although only by a margin of 0.6 on a scale of 1 to 7.
- None of the questions gave a combined mean that shows positive attitudes towards any of the eight parts of the complex included in the questionnaire.
- The scales that had means showing positive attitudes have adjectives that would be associated with modern architecture, such as “efficient”, “functional”, “orderly” etc. From this it was concluded that positive attitudes may be the result of residents’ evaluating *structural* or *practical* qualities of the complex.
- When means of different groups were compared with regard to their attitudes towards the complex, all groups showed a negative attitude.
- Significant differences were found between the following groups: blacks and coloureds showed a significantly less negative attitude than whites; residents who had been living in Schubart Park for 1 to 5 years showed a significantly less negative attitude than those who had been living there for more than 5 years; residents with a housing preference for medium to high density housing showed a significantly less negative attitude than those with a preference for low density housing; and those who showed a preference for rental schemes showed a significantly less negative attitude than those who showed a preference for ownership.
- Analysis led to the conclusion that there were two distinctive groups living in the complex at the time of the research. Residents who had been living there for more than 5 years are mostly white residents (Group A) showing a more negative attitude than other whites and most blacks and coloureds, who have only moved into Schubart Park in the last five years (Group B).

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- The majority of residents live in Schubart Park for financial reasons, and this may influence their attitudes towards the complex because of feelings of stigmatization.
- The category “negative perceptions regarding social aspects of Schubart Park” drew the most responses in an open-ended question.
- Although the index shows an overall indication of negative attitudes towards the complex, more positive than negative perceptions regarding the housing type were received.

CHAPTER 7 - RESULTS IN TERMS OF HOUSING PREFERENCES

In this chapter, the variable “housing preferences” is used to give a further indication of different groups’ attitudes towards the complex. It is assumed that preferences for low density housing imply a more negative attitude towards this type of housing, while preferences for medium to high density housing imply a less negative attitude, as it has been shown in the index that all groups have a negative attitude towards the complex. The data is presented in the form of cross tabulations. Chi-square tests were run to test for significant differences between groups.

7.1 Descriptives of the Variable “Housing Preference”

TABLE 11 - DESCRIPTIVES OF THE VARIABLE “HOUSING PREFERENCE”		
Type of Housing	Frequencies	Percentages of Respondents
Ordinary Block of Flats	35	14.2
Town House	57	23.2
Complex like SchubartPark	55	22.4
House in the Suburbs	99	40.2
Total	246	100

The following data set is obtained when the variable is regrouped into “lower density housing” (house in the suburbs) and “medium to high density housing” (town house, ordinary block of flats and complex like Schubart Park).

TABLE 12 - DESCRIPTIVES OF THE REGROUPED VARIABLE - HOUSING PREFERENCE		
Type of Housing	Frequencies	Percentages of Respondents
Medium to High Density Housing	147	59.8
Low Density Housing	99	40.2
Total	246	100

The following results are obtained from Tables 11 and 12:

- A greater percentage of respondents (39%) showed a preference for a house in the suburbs than for any of the other housing types. This was followed in descending order of frequency of preferences for town houses (22.4%), complexes like Schubart Park (21.7%) and ordinary flat blocks (13.8%). Therefore, the largest category of respondents showed a preference for low density housing, which implies negative attitudes towards housing types such as Schubart Park.
- However, when the variable is regrouped, results show that 57.9% of respondents prefer a medium to high density form of housing, while only 39% prefer low density housing. Therefore, negative attitudes shown towards the complex in the index should not necessarily be ascribed to the *density* of the complex.
- More respondents prefer complexes such as Schubart Park than prefer ordinary flat blocks. This preference could be because of the facilities and low rent associated with Schubart Park, which make it seem preferable to ordinary flat complexes.

7.2 Comparison of Groups' Attitudes in Terms of the Variable "Housing Preference"

This section addresses Research Question 9: What are the differences between these different groups' attitudes towards the complex, in terms of their housing preferences?

In this section, attitudes in terms of the variable "housing preference" are compared for groups with:

- different demographic profiles and
- different life patterns.

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7.2.1 Groups with Different Demographic Profiles

TABLE 13 - CROSS TABULATION OF GROUPS WITH DIFFERENT DEMOGRAPHIC PROFILES AND HOUSING PREFERENCES				
Variables	Groups	Percentages Preferring Lower Density Housing	Percentages Preferring Medium - High Density Housing	Significant Differences
Sex	Male	45.2	54.8	0.27
	Female	38.0	62.0	
Population Group	Whites	46.9	53.1	0.01
	Blacks and Coloureds	28.9	71.1	
Age	21 - 35	46.9	53.1	0.16
	36 - 50	40.0	60.0	
	51 - 65	25.0	75.0	
	66 +	38.1	61.9	
Marital Status	Single	41.7	58.3	0.68
	Not Single	39.1	60.9	
Children Living in Unit	Yes	43.8	56.2	0.42
	No	38.5	61.5	
Income	Lower	35.7	64.3	0.01
	Middle	55.8	44.2	
	Higher	100.0	-	
Level of Education	Tertiary	38.2	61.8	0.58
	Non-tertiary	42.1	57.9	
Occupation	Formally Employed	38.5	61.5	0.30
	Not Formally Employed	45.2	54.8	

The following results are obtained from Table 13:

- A greater percentage of all the groups prefer medium to high density housing, except for middle and higher income groups, of which a greater percentage showed a preference for lower density housing. If all the other groups show preference for medium to high density housing, the negative attitudes shown by these groups in the indices should then be ascribed to some factor other than *density* or the *housing type*.

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- A significantly greater percentage of Blacks and Coloureds (71.1% as opposed to 28.9%) than Whites (53.1% as opposed to 46.9%), showed a preference for medium to high density housing (significant difference = 0.01).
- Similarly, a significantly greater percentage of lower income (64.3% as opposed to 35.7%) than middle and higher income respondents (44.2% as opposed to 55.8% and 0% as opposed to 100%), showed a preference for medium to high density housing (significant difference = 0.01).
- From the above groups, male, white and higher income respondents showed the greatest preference for low density housing (thus suggesting that more negative attitudes towards the complex can be expected from these groups); and blacks and coloureds, lower income respondents and respondents aged from 51 to 65 showed the greatest preference for medium to high density housing (thus suggesting that less negative attitude can be expected from these groups).

7.2.2 Groups with Different Life Patterns

TABLE 14 - CROSS TABULATION OF GROUPS WITH DIFFERENT LIFE PATTERNS AND THEIR HOUSING PREFERENCES				
Variables	Groups	Percentages Preferring Lower Density Housing	Percentages Preferring Medium - High Density Housing	Significant Differences
Number of Years Living in Schubart Park	1 - 5 Years More than 5 Years	40.4 43.2	59.6 56.8	0.68
Number of People Living in Flat	1 - 2 Persons More than 2 Persons	33.8 44.2	66.2 55.8	0.14
Flat Size	Smaller Flats Larger Flats	40.5 41.3	59.5 58.7	0.91
Preference for Moving or Staying	Yes No	52.2 17.5	47.8 82.5	0.00
Preference for Ownership or Rental	Ownership Rental	47.4 29.6	52.6 70.4	0.01

The following results are obtained from Table 14:

- In all the groups there are greater percentages of respondents who prefer medium to high density housing, except in the group of respondents who show a preference for moving from Schubart Park, of which a greater percentage showed a preference for lower density housing.
- A significantly greater percentage of respondents who do not want to move from Schubart Park (82.5% as opposed to 17.5%) than respondents who want to move (47.8% as opposed to 52.2%), showed a preference for medium to high density housing (significant difference = 0.00).
- Similarly, a significantly greater percentage of respondents who prefer rent showed a preference for medium to high density housing (70.4% as opposed to 29.6%) than respondents who prefer ownership (52.6% as opposed to 47.4%) (significant difference = 0.01).

7.3 Summary of Results in Terms of Housing Preference

- The greatest number of respondents show a preference for a house in the suburbs, followed by a town house, a complex like Schubart Park and an ordinary block of flats.
- All groups show a greater percentage of respondents preferring medium to high density housing, except middle and higher income groups and the group which shows a preference for moving from Schubart Park.
- A significantly greater percentage of black and coloured respondents, lower income respondents, respondents who prefer not to move from the complex and respondents who prefer rental schemes, show a preference for medium to high density housing. Therefore, these groups are expected to show a less negative attitude towards the complex in terms of their housing preferences.

CHAPTER 8 - RESULTS IN TERMS OF PREFERENCE FOR MOVING OR STAYING

In this chapter, the variable “preference for moving or staying” is used to give a further indication of different groups’ attitudes towards the complex. It is assumed that a preference for moving from Schubart Park implies a more negative attitude towards this type of housing, while a preference for staying implies a less negative attitude, as it has been shown in the index that all groups have a negative attitude towards the complex. The data is presented in the form of cross tabulations. Chi-square tests were run to test for significant differences between groups.

8.1 Descriptives of the Variable “Preference for Moving or Staying”

TABLE 15 - DESCRIPTIVES OF THE VARIABLE “PREFERENCE FOR MOVING OR STAYING”		
Preference for Moving or Staying	Frequencies	Percentages of Respondents
Move	167	66.7
Stay	82	33.3
Total	249	100.0

The following result is obtained from Table 15:

- A greater percentage of respondents showed a preference for moving from Schubart Park (65.7%), than respondents who prefer not to move (32.3%). Therefore, it can be assumed that a greater percentage of residents in Schubart Park will show a negative attitude towards the complex in terms of their preferences for moving or staying.

8.2 Comparison of Groups' Attitudes in Terms of the Variable "Preference for Moving or Staying"

This section addresses Research Question 10: What are the differences between these different groups' attitudes towards the complex, in terms of their preferences for moving or staying?

In this section, attitudes in terms of the variable "preference for moving or staying" are compared for groups with:

- different demographic profiles and
- different life patterns.

8.2.1 Groups with Different Demographic Profiles

TABLE 16 - CROSS TABULATION OF GROUPS WITH DIFFERENT DEMOGRAPHIC PROFILES AND PREFERENCES FOR MOVING OR STAYING				
Variables	Groups	Percentages Preferring to Move	Percentages Preferring to Stay	Significant Differences
Sex	Male	63.8	36.2	0.35
	Female	69.5	30.5	
Population Group	Whites	69.1	30.9	0.34
	Blacks and coloureds	63.1	36.9	
Age	21 - 35	70.8	29.2	0.18
	36 - 50	74.4	25.6	
	51 - 65	52.9	47.1	
	66 +	71.4	28.6	
Marital Status	Single	68.0	32.0	0.79
	Not Single	66.4	33.6	
Children Living in Flat	Yes	75.2	24.8	0.01
	No	59.1	40.9	
Income	Lower	61.9	38.1	0.12
	Middle	76.7	23.3	
	Higher	100.0	-	
Level of Education	Tertiary	70.6	29.4	0.54
	Non-tertiary	66.5	33.5	

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TABLE 16 - CROSS TABULATION OF GROUPS WITH DIFFERENT DEMOGRAPHIC PROFILES AND PREFERENCES FOR MOVING OR STAYING

Variables	Groups	Percentages Preferring to Move	Percentages Preferring to Stay	Significant Differences
Occupation	Formally Employed	66.9	33.1	0.75
	Not Formally Employed	68.9	31.1	

The following results are obtained from Table 16:

- A greater percentage of all the groups prefer to move from Schubart Park.
- A significantly greater percentage of respondents with children living in the unit, (75.2% as opposed to 24.8%), than respondents with no children living in the unit (59.1% as opposed to 40.9%), showed a preference for moving from Schubart Park (significant difference = 0.01). Therefore, it might be assumed that respondents with children living in the unit will show a more negative attitude towards the complex than respondents with no children living in the unit. However, results from the indices indicate that there is no significant difference between attitudes towards the complex of respondents with children living in the unit and those with no children living in the unit.
- The greatest percentages of respondents who prefer to move from Schubart Park are found among those of higher income (100%), of middle income (76.7%) and with children living in the unit (75.2%). Therefore, according to the variable “preference for moving or staying”, it can be assumed that these residents will show a more negative attitude towards the complex than other groups.
- The greatest percentages of respondents who prefer not to move from Schubart Park are those between the ages of 51 and 65 (47.1%), those with no children living in the unit (40.9%), and those with lower income (38.1%). Therefore, according to the

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variable “preference for moving or staying”, it can be assumed that these residents will show a less negative attitude towards the complex than other groups.

- Although a greater percentage of females prefer medium to high density housing than males, a greater percentage of females actually prefer to move from Schubart Park (69.5% as opposed to 63.8% of males).

8.2.2 Groups with Different Life Patterns

TABLE 17 - CROSS TABULATION OF GROUPS WITH DIFFERENT LIFE PATTERNS AND PREFERENCES FOR MOVING OR STAYING				
Variables	Groups	Percentages Preferring to Move	Percentages Preferring to Stay	Significant Differences
Number of Years Living in Schubart Park	1 - 5 Years More Than 5 Years	67.3 70.7	32.7 29.3	0.61
Number of People Living in Unit	1 - 2 Persons More Than 2 Persons	57.9 72.3	42.1 27.7	0.03
Unit Size	Smaller Units Larger Units	65.3 70.9	34.7 29.1	0.35
Housing Preference	Low Density Medium to High Density	85.9 54.2	14.1 45.8	0.00
Preference for Ownership or Rental	Ownership Rental	75.0 48.2	25.0 51.8	0.00

The following results are obtained from Table 17:

- In all the groups, there is a greater percentage of respondents who prefer to move from Schubart Park. Therefore, it is assumed that all the groups with various life patterns will show a negative attitude towards the complex. However, analysis of “housing preference” as an independent variable highlights the fact that all these groups actually prefer medium to high density housing. Therefore, it seems that

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respondents do prefer this type of housing, but do not like the specific complex Schubart Park, since they show a preference to move from it.

- A significantly greater percentage of the following groups prefer to move from Schubart Park: respondents with more than two people living in their unit (72.3% as opposed to 27.2%), than respondents with only 1 or 2 persons living in their unit (57.9% as opposed to 42.1%) (significant difference = 0.03); respondents who prefer low density housing (85.9% as opposed to 14.1%), than respondents who prefer medium to high density housing (54.2% as opposed to 45.8%) (significant difference = 0.00); and respondents who prefer ownership (75% as opposed to 25%), than respondents who prefer rental schemes (48.2% as opposed to 51.8%) (significant difference = 0.00). Therefore, it is assumed that residents with more than two people living in their unit, residents who prefer low density housing and residents who prefer ownership will show a more negative attitude towards the complex than groups with different life patterns.
- The greatest percentages of respondents who prefer to move from Schubart Park are found among those who prefer low density housing (85.9%), those who prefer ownership (75%), and those with more than two people living in their unit (72.3%). Therefore, according to the variable “preference for moving”, it can be assumed that these respondents will show a more negative attitude towards the complex than other groups.
- The greatest percentages of respondents who prefer not to move from Schubart Park are found among those who prefer rental schemes (51%), those who prefer medium to high density housing (45.8%) and those who have only 1 or 2 persons living in their unit (42.1%). Therefore, according to the variable “preference for moving”, it can be assumed that these residents will show a less negative attitude towards the complex than other groups.

8.3 Summary of Results in Terms of Preference to Moving or Staying

- Most respondents (65.7%) prefer to move from Schubart Park.
- A greater percentage of all groups with all the different demographic profiles and life patterns prefer to move from Schubart Park.
- A significantly greater percentage of respondents with children living in the unit, more than two persons living in the flat, a preference for low density housing or a preference for ownership, prefer to move from Schubart Park. However, looking at “housing preferences” as an independent variable, it appears that these groups actually prefer medium to high density housing. Therefore, they prefer to live in this housing type, but not in the Schubart Park complex specifically. It can thus also be suggested that the variable “preference for moving or staying” is an indicator of residents’ attitudes towards the Schubart Park complex specifically, and not towards this housing type in general.

CHAPTER 9 - RESULTS IN TERMS OF GENERAL ATTITUDES TOWARDS THE COMPLEX

In this chapter, respondents' general attitudes towards the complex are presented. It is assumed that such perceptions will reveal aspects of living in the complex which may influence respondents' attitudes towards the complex. Therefore, positive perceptions will reveal aspects which may influence attitudes positively, whereas negative perceptions will reveal aspects which may influence attitudes negatively. Examples of general perceptions are presented as qualitative data in the form of textual quotations from questionnaires.

9.1 Analysis of the Qualitative Data

The questionnaire used in the survey ended with the open-ended question: "What is your general perception of Schubart Park?" After the completed questionnaires had been studied, responses were categorised and coded as either positive or negative perceptions regarding their particular category. Results in the previous chapters show that there is, overall, a more negative than positive attitude towards the complex. Therefore, it is assumed that negative perceptions regarding any category may indicate why residents show this negative overall attitude towards the complex.

9.2 Descriptives of the Categories

This section addresses Research Question 11: What are respondents' attitudes towards the complex, in terms of their general attitudes towards the complex?

The following list shows the categories into which responses were coded. Included in brackets are examples of the types of responses considered for coding in each category. The categories are:

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- housing type (i.e. the complex, the overall concept, density etc.),
- structural aspects (i.e. building height, working of lifts, layout of units etc.),
- social aspects (i.e. relations, problems, dynamics etc.),
- management and maintenance (i.e. administration, services, policy etc.),
- security and safety (i.e. crime, accessibility, control etc.),
- financial aspects (i.e. rent, affordability etc.) and
- cleanliness and health (i.e. cleaning services, hygiene, refuse management etc.).

Table 18 shows the number of responses that were coded for each category.

TABLE 18 - DESCRIPTIVES OF CATEGORIES IN THE OPEN-ENDED QUESTION					
Categories	Orientations	Frequencies	Sum of Frequencies	Percentages of Total Sample	Sum of Percentages
Housing Type	Positive	74	103	29.1	40.5
	Negative	29		11.4	
Structural Aspects	Positive	32	78	12.6	30.7
	Negative	46		18.1	
Social Aspects	Positive	7	124	2.8	48.9
	Negative	117		46.1	
Management Maintenance	Positive	6	58	2.4	22.9
	Negative	52		20.5	
Security & Safety	Positive	4	56	1.6	22.1
	Negative	52		20.5	
Financial	Positive	23	37	9.1	14.6
	Negative	14		5.5	
Cleanliness & Health	Positive	0	82	0.0	32.3
	Negative	82		32.3	

The following results are obtained from Table 18:

- After respondents were asked about their general perceptions regarding the complex, only 103 of a total of 538 different responses (19.2%) actually expressed perceptions regarding the complex. The rest of the responses expressed perceptions regarding other aspects of living at Schubart Park.

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- A total of 146 responses express positive perceptions and a total of 392 responses express negative perceptions.
- The three categories with the most responses are social aspects (commented on by 48.9% of respondents), housing type (commented on by 40.5% of respondents) and cleanliness and health (32.3%). Therefore, it can be assumed that these aspects are more likely than others to influence respondents' attitudes towards the complex.
- The three largest numbers of either negative or positive responses are for negative responses regarding social aspects (117 responses), negative responses regarding cleanliness and health (82 responses) and positive responses regarding the housing type (74 responses). Therefore, it can be assumed that social aspects and aspects of cleanliness and health are more likely than others to influence respondents' attitudes towards the complex negatively. Thus, these aspects can be assumed to be modifying variables, as the indices show a negative overall attitude towards the complex, despite there being more positive than negative responses regarding the housing type (i.e. the complex, overall concept, density etc.) (74 positive as opposed to 29 negative responses).
- Only two categories drew more positive responses than negative ones: *housing type* and *financial aspects*. Therefore, respondents have negative overall perceptions regarding structural aspects, social aspects, management and maintenance, security and safety and cleanliness and health.
- The greatest differences between numbers of negative and positive responses were for social aspects (a difference of 110 responses), cleanliness and health (a difference of 82 responses) and security and safety (a difference of 48 responses).

9.3 Presentation of the Qualitative Data

The following qualitative data is taken directly from completed questionnaires. It serves to provide examples of the types of responses coded for each category.

POSITIVE PERCEPTIONS REGARDING THE HOUSING TYPE

Respondent Profile: Black Male

...I think there should be more places like Schubart Park, especially in the townships...

Respondent Profile: White Female

...sal `n baie goeie blyplek wees as dit meer vir `n sekere groep ouderdom gemaak word byvoorbeeld ouer as 45 jaar. Sonder klein kinders en troetel diere kan dit `n lekker blyplek wees...

Respondent Profile: White Female

...goed geleë naby aan stad, kosmopolitaanse atmosfeer...

NEGATIVE PERCEPTIONS REGARDING THE HOUSING TYPE

Respondent Profile: White Female

...the building is unsightly, feel ashamed to have other people know where you live...

Respondent Profile: White Male

...lae koste behuising bring altyd probleme waarmee jy moet saamleef as gevolg van jou eie tekortkominge, die geboue self is leefbaar...

Respondent Profile: White Male

...cheap and nasty...

POSITIVE PERCEPTIONS REGARDING STRUCTURAL ASPECTS OF THE COMPLEX

Respondent Profile: Coloured Male

...goed beplan - in die middestad geleë en vergemaklik die manier van inkope in die stad...

Respondent Profile: White Female

...die eenhede is gerieflik - geen klagtes daaroor nie, maar die kompleks buite baie vuil en onaangenaam...

Respondent Profile: White Female

...dit is baie gemaklik om hier te bly want dis naby alles...

NEGATIVE PERCEPTIONS REGARDING STRUCTURAL ASPECTS OF THE COMPLEX

Respondent Profile: White Female

...vervalle, chaoties, luidrigtig en vuil - ongerieflik as hysbakke stukkend is of die pype van die badkamer en kombuis verstop is...

Respondent Profile: Black Female

...poor services of lifts, expensive complex, insufficient playgrounds, poor parking area, main entrance of complex unattractive...

Respondent Profile: White Female

...hysbakke is morsig en meer onbruikbaar as heel - klagtes indien help niks...

POSITIVE PERCEPTIONS REGARDING SOCIAL ASPECTS

Respondent Profile: White Female

...mense is gemoedsaam en vriendelik...

Respondent Profile: White Female

...ek bly al vier jaar in Schubart Park en het nog nie probleme gekry nie. Ek is trots op Schubart Park en sal nog lank hier bly...

Respondent Profile: Black Female

...Schubart Park is a nice place, people who live here respect each other...

NEGATIVE PERCEPTIONS REGARDING SOCIAL ASPECTS

Respondent Profile: White Female

...die plek het baie agteruitgegaan die afgelope paar jaar. Schubart Park was `n netjiese skoon plek. Nou is dit vuil, drank misbruik, dagga, drugs en crack word vrylik gebruik...

Respondent Profile: Asian Female

...no sense of community living. A very fast, wild type of living. Social life of community is very poor. Very unorganised family situations...

Respondent Profile: White Female

...as hulle (die bestuur) net die leegleërs uit die ruim kan kry want dis juis hulle wat nie omgee vir Schubart Park nie - en ook die mors jorse. Hierdie plek was `n paar jaar terug smart...!

**POSITIVE PERCEPTIONS REGARDING ASPECTS OF MANAGEMENT AND
MAINTENANCE**

Respondent Profile: White Female

...tien jaar terug was dit lekker om hier te woon. Dit gaan `n bietjie beter maar hoop in die toekoms gaan dit nog beter...

Respondent Profile: Black Male

...due to the new management it is really improving, I'm impressed...

Respondent Profile: White Male

...daar is `n verbetering vandat City Property in beheer is - beter en strenger opsigters wat huurders vasvat wat nie saamwerk nie - moet summier uitgegooi word...

NEGATIVE PERCEPTIONS REGARDING ASPECTS OF MANAGEMENT AND MAINTENANCE

Respondent Profile: Black Male

...I think the government should have considered the tenants first rather than giving it to the private sector to manage. They should sell the flats to the tenants...

Respondent Profile: White Male

...Schubart Park was `n ordentlike woonplek wat verval het onder swak bestuur en misdaad. Baie pensionarisse woon in Schubart Park waar ongeruimdheid plaasvind ten opsigte van huur, werking van hysbakke en misdaad...

Respondent Profile: Coloured Female

...die plek is ongerieflik. Ek is een van die mense wat graag wil uittrek maar kan dit nie bekostig nie. Die plek is ongeorganiseerd as gevolg van plekke wat oorgeneem het byvoorbeeld City Property - wat nou maak dat mense meer betaal vir die woonstelle wat dit nie toekom nie...

POSITIVE PERCEPTIONS REGARDING ASPECTS OF SECURITY AND SAFETY

Respondent Profile: Black Male

...security is very good...

Respondent Profile: White Male

...die sekuriteit en toesig het verbeter...

NEGATIVE PERCEPTIONS REGARDING ASPECTS OF SECURITY AND SAFETY

Respondent Profile: Black Female

...Schubart Park is unsafe, especially for small children, the disabled and the old aged...

Respondent Profile: Coloured Male

...ek het `n motor maar kan dit nie hier bêre nie omdat daar soveel motor inbrake of diefstal hier betrokke is...

Respondent Profile: White Female

...ek is `n enkel ouer met `n baba, wat die enigste rede is dat ek nie hier wil bly nie as gevolg van vals alarms van brande. Ek bly op die vyftiende vloer en dis moeilik om so gou as moontlik by grondvlak uit te kom...

POSITIVE PERCEPTIONS REGARDING RENTAL ASPECTS

Respondent Profile: Black Female

...the thing is that it is so reasonable when it comes to finance, many people can afford it...

Respondent Profile: Black Male

...I must say it's better than nothing, more especially to the poor and pensioners...

Respondent Profile: Black Female

...it is reasonable for people who are earning less money just like me. We can survive here better than in other flats which is expensive...

NEGATIVE PERCEPTIONS REGARDING RENTAL ASPECTS

Respondent Profile: Black Male

...I would rather like to see government give us loans to buy the flats...

Respondent Profile: White Female

...ons sug net as dit te duur word want dan kan ons nie hier bly nie...

Respondent Profile: Black Female

...Schubart Park is a nice place. The problem is that it is now expensive...

NEGATIVE PERCEPTIONS REGARDING ASPECTS OF CLEANLINESS AND HEALTH

Respondent Profile: Black Female

...Schubart Park is unhealthy and very dirty...

Respondent Profile: Coloured Male

...die voorgang van alle vloere of meeste is vieslik, die gange en trappe is vieslik en stink. Die plek kon beter gewees het...

Respondent profile: white female

...dit het verander na Varkpark, dit word by die dag vuiler, net God kan hier 'n verandering aanbring...

9.4 Summary of Results in Terms of General Attitudes towards the Complex

- The open question regarding general attitudes towards the complex resulted in a majority of responses about attitudes towards aspects other than the complex or housing type.
- There are more responses expressing negative perceptions than responses expressing positive perceptions.
- The category with the most responses contains negative perceptions regarding social aspects in Schubart Park.

SECTION C - RESULTS OF THE RESEARCH

- The category with the most positive responses contains perceptions regarding the housing type or the complex itself.
- The presentation of qualitative data shows that respondents express perceptions regarding numerous aspects other than the complex itself when asked to give their general attitudes towards the complex.

SECTION D - SYNTHESIS OF THE THESIS

CHAPTER 10 - CONCLUSIONS AND IMPLICATIONS

In this chapter, the main results are analysed again and conclusions are drawn about them. The existential hypotheses formulated in Chapter 2 are addressed in the conclusions. Some implications of the research for design disciplines, housing policy and further research are suggested.

10.1 Conclusions

Brief analyses are made and conclusions are drawn regarding the following:

- the dual profile of the community,
- attitudes in terms of the index,
- attitudes in terms of housing preferences,
- attitudes in terms of preferences for moving or staying,
- attitudes in terms of general perceptions regarding the complex and
- the hypotheses.

10.1.1 Dual Profile of the Community

In Chapter 6, it is shown that the community of Schubart Park consists of two distinctive groups. *Group A*, is shown to consist largely of white residents, who have no children living in their units, who have only 1 or 2 persons living in their units, and who have been living in the complex for more than five years. *Group B*, is shown to consist largely of black and coloured residents (including most of such residents), who have children living in their units, who have more than two persons living in their units, and who have been living in the complex for less than five years.

This profile may be explained by the following dynamic. During the decades of the seventies and eighties, units were allocated to white state employees only. A strict tenant selection policy was followed, whereby the profiles of prospective residents were evaluated before units were allocated to them. However, during the nineties, when a new office took over the

administration of the complex, the tenant selection policy was replaced by a new policy of allocating units to members of all population groups *according to financial and social need*. This may explain why residents who have been living in the complex for more than five years are mostly Whites and why residents who have been living in the complex for less than five years are mostly Black and Coloured. It seems that the new policy resulted in units being allocated to larger families and families with children. Cross tabulations also indicate that most middle income residents fall into Group A, and most lower income residents fall into Group B.

In terms of the variables *population group* and *length of tenancy*, significant differences were found between the attitudes towards the complex of the two groups.. Group A shows a significantly more negative attitude towards the complex than Group B. I have come to the following conclusions regarding this finding:

- Group B may perceive the Schubart Park complex as preferable to the housing which they had before moving to the complex. This suggestion is supported by the facts that black and coloured residents in this group may have come from informal settlements and townships, and that this group has a poorer socioeconomic profile than Group A.
- I believe that Group A shows a more negative attitude towards the complex *because it is reacting to the emergence of group B*. Analysis of the qualitative data reveals that some residents of Group A actually show positive perceptions regarding the housing type, but have strong negative perceptions regarding social aspects. Therefore, it may be concluded that Group A does not necessarily feel more negative about the housing type as such, but feels more negative about the profiles of new residents moving into the complex.

10.1.2 Attitudes in Terms of the Index

The index (Chapter 6) shows that there is a marginally more negative than positive overall attitude towards the Schubart Park complex. The negative attitude is indicated by a total combined mean of 4.6, which is negative by a margin of only 0.6 on a scale of 1 - 7. Therefore, I would suggest that it should not be concluded that residents have a *definite* negative attitude towards this housing type, for the following reasons:

- most scales in the index are marked by extreme checking, as indicated by the modes in Appendix D,
- most residents show a preference for medium to high density housing and
- there are more positive than negative general perceptions regarding the housing type.

An analysis of the adjectives on the scales which yielded positive means, shows that these adjectives can typically be associated with the qualities of modern architecture. Some of these scales included adjectives such as “functional”, “well-planned” and “orderly”. Therefore, it can be concluded that:

- it is possible for the general public to identify the aesthetics and principles which modern architecture aims to show,
- the aesthetics and principles of modern architecture can lead people to show positive attitudes towards modern buildings and
- the lack of aesthetics and principles which are not regarded as modern can also lead people to show negative attitudes towards modern buildings.

It is found that residents evaluated *structural* or *practical* qualities of the complex as positive (i.e: “functional” and “efficient”) and qualities of *accessibility* and *appearance* as negative (i.e: “public” and “unattractive”). Therefore, residents seem to find the overall *working* of this type of housing positive. However, the overall appearance and accessibility (i.e. control of access to the complex, or lack of it) are found to be negative. Therefore, residents’ attitudes towards this type of housing may be improved if some alterations are made to improve the

appearance of the complex and if residents are given greater control over the accessibility of the complex.

The means of different groups' attitudes towards the complex were also compared. Although all groups show negative attitudes towards the complex, the following groups show a significantly more negative attitude towards the complex:

- Whites,
- residents who have been living in the complex for more than five years,
- residents who prefer low density housing,
- residents who prefer to own their dwelling,
- residents who perceive no sense of pride among other residents and
- residents who perceive no sense of community among other residents.

Ignoring the cases of white residents and residents who have been living in the complex for more than five years (in light of the conclusions drawn about this group above), residents who want to own their own house in the suburbs quite reasonably show a more negative attitude towards this housing type. However, although there is a preference for owning houses in suburbs, this should not be considered the ideal type of residential situation, as most residents in Schubart Park actually show a preference for other housing types. Furthermore, residents perceive Schubart Park as being stigmatized owing to the lack of a sense of pride and community, and not because of the housing type or the presence of social problems. Therefore, negative attitudes in this regard may be ascribed to aspects of the community, and not of the housing type.

10.1.3 Attitudes in Terms of Housing Preferences

The variable *housing preference* was used as an independent variable to give a further indication of residents' attitudes towards the complex. It was assumed that a preference for low density housing would imply more negative attitudes towards the complex and that preferences for medium to high density housing would imply less negative attitudes towards the complex. Despite the finding in the index that all groups show a negative attitude towards the complex, *there is a greater percentage of residents who prefer medium to high density*

housing in all groups, except the middle and higher income groups and residents who show a preference for moving from Schubart Park. Therefore, in terms of housing preferences, most residents show a positive attitude towards the complex. Significantly greater percentages of the following groups prefer medium to high density housing:

- Blacks and Coloureds,
- lower income residents,
- residents who show a preference for not moving from Schubart Park and
- residents who show a preference for rental schemes.

Once again I ignore the difference between population groups because of the notion of a dual community. Rather, I conclude that residents who show a preference for rental schemes show preferences for medium to high density housing because of the association of rental schemes with this type of housing. Therefore, residents who prefer rental options, prefer medium to high density housing, because renting a unit in a block of flats is more affordable than renting a suburban house. Therefore, the preference for medium to high density housing among this group is probably the result of finance, rather than a preference for the housing type itself.

10.1.4 Attitudes in Terms of Preferences for Moving or Staying

The variable *preference for moving or staying* was used as an independent variable to give a further indication of residents' attitudes towards the complex. It was assumed that preferences for moving imply more negative attitudes towards the complex and that preferences for staying indicate less negative attitudes towards the complex. Despite the finding that most residents prefer medium to high density housing, most residents and the largest percentage of all groups would actually prefer to move from the complex. Therefore, in terms of their preferences for moving or staying, residents show a negative attitude towards the complex. Significantly greater percentages of the following groups show a preference for moving from the complex:

- residents with children living in their units,
- residents with more than two persons living in their units,
- residents who prefer low density housing and
- residents who prefer to own their dwellings.

Although these groups do prefer medium to high density housing (except the group who prefers low density housing), they would also prefer to move from the complex. Thus, they may prefer to live in complexes such as Schubart Park, but not in Schubart Park specifically. Therefore, it may be concluded that they prefer to move from the complex, *not because of the housing type, but owing to other reasons*. These reasons may include the following:

- residents may feel that the environment of Schubart Park is not appropriate for children,
- residents may feel that the units in Schubart Park are not suitable for bigger families and
- units in Schubart Park can only be rented, and not owned.

10.1.5 General Attitudes towards the Complex

Analysis of the qualitative data yields results which are different from the results yielded by the quantitative data. Results from the open question show that residents have more positive than negative perceptions regarding the housing type. Furthermore, the largest number of responses in any category were expressions of negative perceptions regarding social aspects of complex (i.e. relations, problems, dynamics etc.).

I conclude that *negative social aspects have a significant influence on residents' attitudes towards the Schubart Park complex*. Therefore, *negative* attitudes towards social aspects of the complex influence residents to show *negative* attitudes towards the complex, in terms of the assumption that they associate the complex itself with these negative social aspects. I argue this on the basis of the fact that respondents were asked to give perceptions regarding *the complex* only, and were in no way probed for perceptions regarding any other matter. However, more responses regarding negative social aspects than anything else were given by respondents. Therefore, the significant number of negative responses regarding social

aspects indicates that such aspects may have a significant influence on residents' attitudes. Given this, it can reasonably be expected that, *ceteris paribus*, residents may actually show a less negative, or even a positive, attitude towards this housing type.

10.1.6 Addressing the Hypotheses

The following two existential hypotheses were formulated in Chapter 2:

- Hypothesis A: *The complex represents a utopian environment which is, in absolute terms, ideal and good, and where living conditions are improved (Premisses). Therefore, residents will have positive attitudes towards Schubart Park (Conclusion).*
- Hypothesis B: *The complex does not represent the desires, tastes and values of residents, i.e. it does not represent their community. It represents an idealized environment which is foreign to its residents (Premisses). Therefore residents will have negative attitudes towards Schubart Park (Conclusion).*

The conclusion of the thesis is that residents have negative attitudes towards the complex. Therefore, the conclusion of hypothesis A cannot be accepted. However, since hypothesis A follows inductive reasoning¹³, its premisses are not necessarily also rejected. Therefore, the complex can still be regarded as a place where living conditions are improved.

The conclusion of hypothesis B is accepted, i.e. residents have negative attitudes towards Schubart Park. However, as hypothesis B also follows inductive reasoning, its premisses are not necessarily accepted with its conclusion. The thesis concludes that residents have negative attitudes because they are negatively influenced by their attitudes towards social aspects inside the complex, and not because the complex does not represent their desires, tastes and values.

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See Van Veuren (1991: 34-41) regarding inductive reasoning.

10.2 Implications

Implications for the following are discussed:

- design disciplines,
- housing policy and
- further research.

10.2.1 Implications for Design Disciplines

The findings that residents evaluate the *structural* and *practical* qualities of the complex positively, shows that some aesthetics and principles of modern architecture are useful in the design of public housing. Therefore, the philosophical principles behind modern architecture, such as functionalism, should still serve as design principles.

Community facilities (such as the shopping facilities at Schubart Park) are useful in communities where many people have special social needs, such as those of the poor, single mothers, the elderly and the disabled. However, designers should beware that the *principle* does not become the *aesthetic*. Therefore, public housing should not have such a purely *functional* appearance, but designers should balance the modern aesthetic with those of other styles.

10.2.2 Implications for Housing Policy

Housing policies should be in line with the *Development Facilitation Act*. This act calls for sustainable development. Therefore, housing policies should be geared towards the development of sustainable housing. Medium to high density housing types are considered to be sustainable in a spatial sense. Therefore housing types like the Schubart Park complex should be considered as an option in the development of housing. If such complexes are built with a lower residential density and on a smaller scale, they will be more feasible and manageable.

However, this research shows that social aspects of such complexes have a significant influence on residents' wellbeing and their attitudes towards the housing type. I propose that housing policy should reserve complexes such as Schubart Park for *homogeneous*¹⁴ communities with special social needs. An example of the profile of such a homogeneous community could be:

- people with no children,
- people with small families,
- people with lower to middle income and
- people who would benefit from communal facilities, such as the elderly, the disabled and people with limited mobility.

10.2.3 Implications for Further Research

- Large numbers of black migrants from the rural areas are housed in informal settlements in and around South African towns and cities. The delivery of housing is targeted largely towards this group. Therefore, research strategies should be developed which can be used to research the attitudes of this group towards medium to higher density housing types.

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Results in Chapter 9 show that people's attitudes may be influenced negatively by the dual or heterogeneous characteristics of the community of the complex.

SECTION D - SYNTHESIS OF THE THESIS

- Contemporary planning calls for the densification and integration of the South African city fabric, which implies the densification of housing. Therefore, further research should be backed by housing authorities, non governmental organizations and metropolitan councils.
- A research design and methodology should be developed which can research people's attitudes towards housing and control for respondents' attitudes concerning aspects other than the housing type.

CHAPTER 11 - METHODOLOGICAL PROBLEMS AND SUGGESTIONS

The aim of this chapter is to reflect on some of the problems experienced with the survey methodology used in the research. In this research the choice of a survey design had an impact on two stages of the research process, namely, sampling and data collection. Therefore, the discussion focusses on the sampling and data collection techniques used. In the light of the experience gained during this research project, some suggestions regarding the use of a survey methodology in public housing complexes are also made.

11.1 Methodological Problems

Methodological problems may have an impact on the validity of the research in terms of two dimensions, namely *representativeness* and *reliability*. Therefore, before proceeding with the discussion, it would be useful to illustrate how these dimensions of validity apply to two methodological stages, namely *sampling* and *data collection*. Mouton (1996:107-113) developed the following validity framework to show the relationship between the methodological stages of sampling and data collection and the validity dimension of representativeness and sampling. This validity framework is presented only in part.

TABLE 19 - THE VALIDITY FRAMEWORK				
Stage in Research Process	Sources of Error	Methodological 'Move' or 'Strategy' (Objective Research)	Outcome / Goal / End Product	Epistemic (Validity-related) Quality or Criterion
Sampling	Bias Heterogeneous Populations Incomplete Sampling Frame	Probability Sampling Stratification Optimal Sample Size	Sample	Representative-ness

SECTION D - SYNTHESIS OF THE THESIS

TABLE 19 - THE VALIDITY FRAMEWORK

Stage in Research Process	Sources of Error	Methodological 'Move' or 'Strategy' (Objective Research)	Outcome / Goal / End Product	Epistemic (Validity-related) Quality or Criterion
Data Collection	Observation Effects Interviewer Bias Respondent Bias Context Effects	Multi-method Proper Training of Field workers	Data Sets	Reliability

(Mouton, 1996:111)

The second column (sources of error) shows some of the methodological problems that can be experienced during sampling and data collection. In survey research, sampling and data collection are two critical stages in the research process. In this research, a random sampling technique and a complete sample frame limited methodological problems.¹⁵ However, several factors had an impact on the process of data collection, and I discuss these factors in the following section. Making use of the validity framework, and referring to sources such as Mouton and Marais (1990:91) and Mouton (1996:148-155), I discuss some of the methodological problems of this research under the following headings:

- context effects,
- researcher effects,
- respondent effects and
- measuring instrument effects.

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See Chapter 5 for a discussion of the sampling procedures.

11.1.1 Context Effects

According to Mouton (1996:155) context effects can be classified into broader spatio-temporal factors, such as historical, socio-political and economic factors, and the narrower research setting where the research is conducted. Spatio-temporal factors which may have affected the research at Schubart Park include:

- the time period during which the research was conducted,
- cultural factors, such as customs and institutions, and
- political factors, such as the existence of interests groups and intimidation.

Schubart Park used to house mostly white state employees during the previous decades. After completion, the complex was administered by the former Department of Community Development. A strict tenant selection policy was followed whereby only people of a certain profile were allocated units in Schubart Park. Administration and application of rules were rigid and frequent inspections of flats were conducted. However, during the nineties, the complex was administered by the Gauteng Provincial Housing Department. According to some informal accounts, the policy of tenant selection was replaced by a policy of allocating flats according to financial and social need. A period followed where an increasing number of white families of lower socioeconomic status, as well as black and coloured families, moved into Schubart Park. By the end of the nineties, Schubart Park had become infamous for its social problems. Qualitative research showed that the community was split between a middle income group that has been living in Schubart Park since the seventies and eighties, and a lower income group that has moved into the complex during the nineties.

At the end of the nineties, the City Council of Pretoria handed over the management and administration of the complex to City Property, a private company operating in Pretoria. City Property was asked to manage the complex on a more profitable basis, which resulted in new policies regarding rent and allocation of flats. Since then there has been strong reaction from lower income members of the community against rent increases and new rules and regulations. This resulted in the formation of a so-called “resident forum” at Schubart Park, that has been urging other residents to oppose payment of rent and evictions. This context had an impact on the data collection in the following ways:

- In some cases I was perceived as an informant for City Property, whereas in some other cases I was perceived as an informant for the so-called resident forum. Much time was wasted in explaining my affiliations and the true purpose of the research. This situation resulted in some refusals to complete questionnaires, while some residents took questionnaires but never handed them back when I revisited their units. However, some residents showed interest in the research, which led to informal conversations. Through these conversations I gained a greater appreciation of the context.
- I was informed by some residents that they had been instructed by the so-called resident forum not to complete the questionnaires and, in some cases intimidated, for fear that the information would be handed over to City Property, although anonymity had been guaranteed. Some black respondents, for example, reported that they were instructed not to complete the questionnaires during a meeting of the so-called resident forum. This also resulted in some refusals. However, of the 16.8% of the sample population who refused, most were Whites. Therefore, the impact on the representativeness of the sample is expected to be minimal.
- During informal conversations, I was informed that a fear existed among some residents, that City Property aimed to victimize residents of lower income, because of an expectation that they would experience problems regarding payment of rent from such residents. This may have resulted in some refusals to complete certain questions regarding income, employment status, reasons for living in Schubart Park and preference for moving from Schubart Park.¹⁶ Questions regarding these variables may also have been completed with false information, or respondents may have given responses in the indices that indicated a more positive attitude towards the complex. Similarly, this may also have resulted in more positive reports of general perceptions regarding aspects of management and maintenance, or a hesitance to express negative perceptions regarding this category.

¹⁶

Descriptives of these variables, including missing cases, can be seen in Appendix C.

- Where middle income and white residents showed more negative attitudes towards the complex, these attitudes may have been deliberately expressed as more negative than they were, with the hope of encouraging a sense of urgency about improving conditions at the complex.
- As was discussed in Chapter 9, social aspects of the complex may have served as a modifying variable. It was shown that residents' perceptions are, to a certain degree, influenced by socioeconomic conditions and sociological factors. Middle income white residents, who have been living in Schubart Park since a time of better socioeconomic conditions and greater stability, might have strong feelings regarding present conditions. Therefore, they may have expressed more negative attitudes, although these may not be valid reflections of their real attitudes towards the complex.

11.1.2 Researcher Effects

Researcher effects refer to the effects of the *characteristics* and *orientations* of the researcher. Researcher orientations affect qualitative studies where interviews are used as a method of data collection more. However, for survey research using of self-administered questionnaires as a method of data collection, researcher characteristics may still cause effects during data collection. Therefore, the effects of researcher characteristics are discussed in terms of the following:

- affiliations of the researcher,
- image of the researcher and
- distance between researcher and respondent.

Interaction with respondents in Schubart Park showed that one's *affiliation* to a particular organization could have a significant influence on the research. In the case of this research this did prove to be of great importance. Despite the problematic context discussed above, the ability to show my affiliation to a university made data collection much easier. The University of Stellenbosch was considered by many to be a neutral and credible organisation with no connections to City Property or the so-called "resident forum". My affiliation to the

university was demonstrated in three ways: I identified myself by means of a student card at all times, and had a printed university logo and contact details for my supervisor on the cover letter for the questionnaires. Several respondents wanted to confirm my affiliation to the university before completing the questionnaire.

The *image* of myself as a senior Master's degree student may have affected data collection in a positive way. Many respondents were more willing to co-operate when they saw that I could identify myself as a student. However, some respondents may have dismissed the research as irrelevant after discovering that it serves basically academic purposes.

As there is a fair number of people moving between the complex and the surrounding area, any image of myself as an outsider or intruder should have been minimised. However, most respondents seemed to follow an ordinary work pattern, in terms of which they would only be at home after 17h00. Thus, many respondents were initially reluctant as they were busy with domestic tasks.

Given differences in background, a fair *social distance* can be assumed between me and the respondents. However, I always presented myself in an ordinary way and tried to express sympathy and understanding during door-to-door visits and informal conversations. This methodological problem of distance between researcher and respondent was further minimised by the use of the more formal method of data collection of questionnaires, rather than a more informal method such as face-to-face interviewing.

11.1.3 Respondent Effects

Respondent effects refer to the alterations of behaviour or attitudes by the respondent due to awareness of the research. As completion of questionnaires created awareness of the research, this may have affected the attitudes of respondents in certain ways. Mouton (1996:152-155) states that this phenomenon is commonly referred to as the *Hawthorne Effect*. Respondent effects include:

- respondent characteristics and
- respondent attitudes.

11.1.3.1 Respondent Characteristics

Under *respondent characteristics*¹⁷, Mouton (1996:153) includes:

- memory decay,
- the omniscience syndrome and
- interview saturation.

Memory decay refers to the inability of respondents to recall the authenticity of events or conditions as they were in the past. For example, Question 27 asks respondents if the image of Schubart Park has deteriorated over the past five years. Thus, the effect of memory decay may have had an impact on the validity of the results. However, most respondents answered “yes” to this question, and evidence does seem to suggest that the image of the complex has deteriorated over the last five years.

The *omniscience syndrome* occurs when respondents answer questions which they do not really understand. It is not possible to determine whether all respondents actually understood

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Mouton (1996) actually uses the word *participant*, although the word *respondent* is better-suited for the context of this research.

the semantic differentials used in the questionnaires. However, only a few respondents required clarification during completion of the questionnaire.

Interview saturation may occur when respondents become conditioned to surveys. This results in refusals, or in questions being answered in a mechanical and superficial way. Two respondents refused to complete questionnaires saying that they had already been visited by students from another university.

11.1.3.2 Respondent Attitudes

Respondent attitudes are discussed in terms of:

- role selection,
- level of motivation of the respondent and
- response patterns.

Webb *et al* (in Mouton, 1996:153-154) explain that *role selection* could result in the respondents expressing more imaginary attitudes and opinions. In surveys, the respondent's role in a study is usually stated in a cover letter. Mouton (1996:153-154) explains as follows:

If for example, the instructions to the interviewee were to read: "You have been selected as part of a scientifically designed sample... It is important that you should answer all the questions...", the importance and uniqueness of the respondent are obviously emphasised. When instructions like these play an important role in the interview situation, it is not at all difficult to predict that fewer "don't know" responses will be found, and that more imaginary attitudes and opinions will be measured.

Some instructions on the questionnaire used at Schubart Park read as follows:

FOR PERSONS OLDER THAN 21 LIVING IN THE FLAT

This questionnaire is part of a Master's degree project on residents' perceptions of the Schubart Park housing complex. This flat was selected by chance to be included in the project. Each adult in the flat should please answer a questionnaire as accurately as possible. We appreciate your cooperation and we guarantee your anonymity.

In one incident, I was confronted by residents who were concerned that their neighbours had been asked to complete questionnaires and they had not. An attempt to explain the principle of sampling to them was unsuccessful. To resolve the situation, I gave them questionnaires to complete. To avoid an element of bias in the sample, these questionnaires were omitted from data capturing.

The *level of motivation* of the respondent to participate in the research is influenced by two factors, namely, the degree of interest that the topic has for the respondent, and the extent to which the respondent is likely to feel threatened by the questions. It is to be assumed that the respondents did show a certain degree of interest in the research, because they were asked to express their attitudes towards the complex in which they themselves actually live. Furthermore, the questionnaire did not contain any sensitive questions. As the refusal rate was only 16.8% despite difficult contextual effects, it can therefore be assumed that the level of motivation of respondents was high.

Respondent attitudes may lead to a systematic *response pattern*, called *response sets*. When the meaning of an item is obscure, response patterns may include a tendency to emphasise the extremes on scaled items (extreme checking style), or the midpoints of the scales (central tendency) (Mouton, 1996:154). The use of semantic differentials with adjectives in the form of bipolar opposites may well have caused both types of effects. Some of the adjectives used for the scales, such as “well-scaled - poorly-scaled” and “ornate - plain”, may have been too abstract for respondents. However, no respondents reported having found questions unclear, although numerous questionnaires were submitted with some scales left uncompleted. The modes of scales in Appendix D point out indications of extreme checking.

11.1.4 Measuring Instrument Effects

Measuring instrument effects include any effects that the content, structure, wording etc. of the questionnaire may have on the validity of results. Schuman and Presser (1981 in Mouton & Marais, 1990:91) and Sudman & Bradburn (1982 as cited by Mouton & Marais, 1990:91) include the following as measuring instrument effects:

- item and question order effects,
- open and closed question effects,
- 'don't know' effects,
- central tendency effects,
- questionnaire length effects,
- item sensitivity effects,
- leading question effects and
- false attitude effects.

The structure of the questionnaire used at Schubart Park is similar to the structure used in most social-demographic surveys. The first section of the questionnaire included simple questions on demographic variables. The second section included fewer straightforward questions, and dealt with life patterns, while the third and fourth sections dealt with attitudes. All the questions in the questionnaire (except Question 28) were closed. Following Neuman (1997:241), I assume that these questions may have had the following disadvantages:

- they could have suggested ideas that the respondent would not otherwise had expressed,
- respondents with no opinion could have answered anyway,
- respondents could have been frustrated because the answer they wanted to give was not an option,
- having many options, it could have been confusing,
- misinterpretations of questions could go unnoticed and
- they could have forced respondents to give opinions they would not have had expressed otherwise.

Some respondents reported that the questionnaire was too lengthy. Although all the demographic and life pattern questions were essential, fewer scales could have been used. Fortunately, only the last question was open, otherwise the average completion time of the questionnaire would have been longer. I assume that the open question may have had the following disadvantages:

- different respondents could have given different degrees of detail in answers,
- responses may have been irrelevant or buried in useless detail,
- comparisons and statistical analyses became difficult,
- coding responses was difficult,
- articulate and highly literate respondents were at an advantage,
- the question may have been too general for the respondents,
- a greater amount of the respondents' time, thought and effort was necessary,
- respondents could have been intimidated by the question, and
- the question took up a lot of answering space in the questionnaire.

11.2 Suggestions

As a result of the survey conducted at Schubart Park, I have formulated some suggestions regarding survey research in public housing complexes:

- The researcher should be well aware of the context of the site where the survey will be conducted. This includes an understanding of the history and background of the site, and of cultural and political factors in operation at the site. Therefore, an understanding of the site should be gained before questionnaire design, so that the researcher can control for any modifying variable that might be anticipated. If field workers are to be used, they should also be aware of the context. In cases with difficult contexts, the use of field workers is not advised. Lastly, the purpose of the research should be stated explicitly in a cover letter.

SECTION D - SYNTHESIS OF THE THESIS

- Sites with difficult contexts should be researched using a qualitative methodology before a survey is designed. Alternatively, a single project should employ the strategies of *triangulation* or *multiple operationalism*.¹⁸
- In informal conversations with people on the site, the researcher should take field notes, as these may help to provide greater accuracy and clarity during interpretation of the results.
- If the researcher is affiliated with a neutral and credible organisation, he or she should be able to produce proof of this affiliation upon request. Otherwise, the researcher should present him or herself in an ordinary manner to avoid social distancing between the researcher and respondents. Sites should be visited on weekends.
- A pilot study should be conducted to test the questionnaire for effects such as memory decay, omniscience syndrome and interview saturation.
- Avoid complex and lengthy questionnaires, or use methods such as face to face interviewing to obtain in-depth information.

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These strategies include using multiple sources of data collection to increase the reliability of observations. The concept of *triangulation* was developed by Denzin (1978) and that of *multiple operationalism* by Campbell and Fiske (1959).

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APPENDICES

APPENDIX A - THE QUESTIONNAIRE



VIR PERSONE OUER AS 21 JAAR WOONAGTIG IN DIE WOONSTEL

Hierdie vraelys is deel van 'n Meestersgraad projek oor inwoners binne Schubart Park se persepsies van die behuisingskompleks. Hierdie woonstel is per toeval gekies om ingesluit te word in die projek. Elke volwassene in die woonstel moet asseblief 'n vraelys so akkuraat as moontlik beantwoord. U samewerking word waardeur en u anonimiteit word gewaarborg.

FOR PERSONS OLDER THAN 21 LIVING IN THE FLAT

This questionnaire is part of a Master's degree project on residents' perceptions of the Schubart Park housing complex. This flat was selected by chance to be included in the project. Each adult in the flat should please answer a questionnaire as accurately as possible. We appreciate your cooperation and we guarantee your anonymity.

Baie dankie, die uwe / *Thank you, yours sincerely*

Mnr. J.L. Du Toit (Student)
Tel. (012) 420 2026

Prof. S. Bekker (Studie leier / *Supervisor*)
Tel. (021) 808 2099

	Vir latere gebruik. <i>For later use.</i>	
	Vraelys no.	V1
	Woonstel no.	V2

APPENDICES

AFDELING A: DEMOGRAFIESE DATA / SECTION A: DEMOGRAPHIC DATA					
BEANTWOORD ASSEBLIEF AL DIE VRAE MERK ASSEBLIEF SLEGS MET 'N KRUISIE GEBRUIK ASSEBLIEF SLEGS DONKER BLOKKIES			PLEASE ANSWER ALL THE QUESTIONS PLEASE MARK WITH A CROSS ONLY PLEASE USE SHADED BLOCKS ONLY		
VRAAG 1: Wat is u geslag?			QUESTION 1: What is your sex?		V3
Manlik <i>Male</i>	<input type="checkbox"/>	Vroulik <i>Female</i>	<input type="checkbox"/>		
VRAAG 2: Wat is u bevolkingsgroep?			QUESTION 2: What is your population group?		V4
Asiër <i>Asian</i>	<input type="checkbox"/>	Swart <i>Black</i>	<input type="checkbox"/>		
Kleurling <i>Coloured</i>	<input type="checkbox"/>	Wit <i>White</i>	<input type="checkbox"/>		
VRAAG 3: Wat is u ouderdom in jare?			QUESTION 3: What is your age in years?		V5
VRAAG 4: Wat is u taal?			QUESTION 4: What is your language?		V6
VRAAG 5: Wat is u huwelikstatus?			QUESTION 5: What is your marital status?		V7
Ongetroud <i>Not married</i>	<input type="checkbox"/>	Geskei <i>Divorced / Separated</i>		<input type="checkbox"/>	
Getroud <i>Married</i>	<input type="checkbox"/>	Weduwee <i>Widow</i>		<input type="checkbox"/>	
Woon saam <i>Living together</i>	<input type="checkbox"/>	Wewenaar <i>Widower</i>		<input type="checkbox"/>	
VRAAG 6: Woon kinders in die woonstel? QUESTION 6: Are children living in the flat?		Ja Yes	<input type="checkbox"/>	Nee No	<input type="checkbox"/>
VRAAG 7: Wat is u totale inkome/pensioen per maand? QUESTION 7: What is your total income/pension per month?					V9
Minder as R 800 <i>Less than R 800</i>		<input type="checkbox"/>	R 3 001 - R 4000		<input type="checkbox"/>
R 800 - R 2 000		<input type="checkbox"/>	R 4 001 - R 5 000		<input type="checkbox"/>
R 2 001 - R 3000		<input type="checkbox"/>	Meer as R 5 000 <i>More than R 5 000</i>		<input type="checkbox"/>
VRAAG 8: Watter opvoedkundige instansie het u laaste bygewoon? QUESTION 8: Which educational institution did you last attend?					V10
Primêre skool <i>Primary school</i>		<input type="checkbox"/>	Technikon <i>Technikon</i>		<input type="checkbox"/>
Sekondêre skool <i>Secondary school</i>		<input type="checkbox"/>	Universiteit <i>University</i>		<input type="checkbox"/>
Kollege <i>College</i>		<input type="checkbox"/>	Geen <i>None</i>		<input type="checkbox"/>
VRAAG 9: Waaruit bestaan u beroep/daaglikse werksaamhede? QUESTION 9: What does your occupation/daily activities consist of?					V11
Dienste <i>Services</i>		<input type="checkbox"/>	Kunste & Skryf <i>Arts & Writing</i>		<input type="checkbox"/>
Opvoedkundig <i>Educational</i>		<input type="checkbox"/>	Huislike take <i>Domestic tasks</i>		<input type="checkbox"/>
Klerklik <i>Clerical</i>		<input type="checkbox"/>	Student <i>Student</i>		<input type="checkbox"/>
Professioneel <i>Professional</i>		<input type="checkbox"/>	Afgetree <i>Retired</i>		<input type="checkbox"/>
Vervaardiging <i>Production</i>		<input type="checkbox"/>	Werkloos <i>Unemployed</i>		<input type="checkbox"/>

APPENDICES

AFDELING B: LEWENSPATROON / SECTION B: LIFE PATTERN					
VRAAG 10: Hoeveel jaar woon u al in Schubart Park? <i>QUESTION 10: How many years have you been living in Schubart Park?</i>					V12
VRAAG 11: Hoeveel mense woon in die betrokke woonstel? <i>QUESTION 11: How many people live in this particular flat?</i>					V13
VRAAG 12: Wat is u woonstel grootte? <i>QUESTION 12: What is your flat size?</i>					V14
Klein enkel <i>Small single</i>			2,5 Slaapkamer <i>2,5 Bedroom</i>		
Groot enkel <i>Large single</i>			3,5 Slaapkamer <i>3,5 Bedroom</i>		
1,5 Slaapkamer <i>1,5 Bedroom</i>			Onseker <i>Unsure</i>		
<p align="center">BY VRAE 13 & 14 KAN U MEER AS EEN OPSIE MERK <i>YOU MAY MARK MORE THAN ONE OPTION AT QUESTIONS 13 & 14</i></p>					
VRAAG 13: Watter van die volgende fasiliteite gebruik u? <i>QUESTION 13: Which of the following facilities do you use?</i>					
Die P - vlak <i>The P - level</i>		V15	Winkels <i>Shops</i>		V18
Swembad <i>Swimming pool</i>		V16	Gemeenskapsaal <i>Community hall</i>		V19
Tennisbane <i>Tennis courts</i>		V17	Parkering & stoorgeriewe <i>Parking & storage</i>		V20
VRAAG 14: Wat is u hoof redes om in Schubart Park te woon? <i>QUESTION 14: What are your main reasons for living in Schubart Park?</i>					
Finansieel <i>Financial</i>		V21	Behuisingstekort <i>Housing shortage</i>		V24
Ligging <i>Location</i>		V22	Goeie behuising <i>Good housing</i>		V25
Sosiaal <i>Social</i>		V23	Afhanklike <i>Dependant</i>		V26
VRAAG 15: As u 'n keuse gehad het, sou u verhuis uit Schubart Park? <i>QUESTION 15: If you had a choice, would you move from Schubart Park?</i>			Ja <i>Yes</i>		Nee <i>No</i>
					V27
VRAAG 16: In watter vorm van behuising wil u die graagste woon? <i>QUESTION 16: In which form of housing would you most want to live?</i>					V28
Gewone woonstelblok <i>Ordinary block of flats</i>			Huis in die voorstede <i>House in the suburbs</i>		
Meenthuis <i>Town house</i>			Kompleks soos Schubart Park <i>Complex like Schubart Park</i>		
VRAAG 17: Wat verkies u? <i>QUESTION 17: Which do you prefer?</i>			Eienr. <i>Owner</i>		Huur <i>Rent</i>
					V29

AFDELING C: PERSEPSIES VAN ESTETIESE ASPEKTE VAN SCHUBART PARK

SECTION C: PERCEPTIONS OF AESTHETICAL ASPECTS OF SCHUBART PARK

MAAK ASSEBLIEF 'N KRUISIE OP EEN VAN DIE SEWE SPASIES TUSSEN ELKE PAAR BESKRYWENDE WOORDE BY VRAE 18 - 27 WAT DIE NAASTE AAN U PERSEPSIE KOM. DAAR IS GEEN REGTE OF VERKEERDE ANTWOORDE NIE - **BYVOORBEELD:**

PLEASE MAKE A CROSS ON ONE OF THE SEVEN SPACES BETWEEN EACH PAIR OF DESCRIPTIVE TERMS AT QUESTIONS 18 - 25 THAT COMES CLOSEST TO YOUR PERCEPTION. THERE ARE NO RIGHT OR WRONG ANSWERS - **FOR EXAMPLE:**

VRAAG: Wat is u persepsie van die Unie geboue?

QUESTION: What is your perception of the Union buildings?



Aantreklik / <i>Attractive</i>	<input checked="" type="checkbox"/> _X_	Onaantreklik / <i>Unattractive</i>
Mooi / <i>Beautiful</i>	<input checked="" type="checkbox"/> _X_	Lelik / <i>Ugly</i>
Vuil / <i>Dirty</i>	<input type="checkbox"/> _X_	Skoon / <i>Clean</i>
Uitstaande / <i>Distinctive</i>	<input checked="" type="checkbox"/> _X_	Gewoon / <i>Ordinary</i>
Uitlokkend / <i>Inviting</i>	<input checked="" type="checkbox"/> _X_	Afstotend / <i>Repelling</i>
Onnetjies / <i>Messy</i>	<input checked="" type="checkbox"/> _X_	Netjies / <i>Neat</i>
Stylvol / <i>Stylish</i>	<input checked="" type="checkbox"/> _X_	Onstylvol / <i>Unstylish</i>
Onsmaakvol / <i>Tasteless</i>	<input checked="" type="checkbox"/> _X_	Smaakvol / <i>Tasteful</i>
Duur / <i>Expensive</i>	<input checked="" type="checkbox"/> _X_	Goedkoop / <i>Cheap</i>
Ordelik / <i>Orderly</i>	<input checked="" type="checkbox"/> _X_	Chaoties / <i>Chaotic</i>

APPENDICES

VRAAG 18: Wat is u houding teenoor die woonstelblokke van Schubart Park?

QUESTION 18: What is your attitude towards the flat blocks of Schubart Park?



Aantreklik / <i>Attractive</i>	_____	Onaantreklik / <i>Unattractive</i>	V30
Swak skaal / <i>Poorly scaled</i>	_____	Goeie skaal / <i>Well scaled</i>	V31
Gemaklik / <i>Convenient</i>	_____	Ongemaklik / <i>Inconvenient</i>	V32
Stylloos / <i>Unstylish</i>	_____	Stylvol / <i>Stylish</i>	V33
Georganiseerd / <i>Organized</i>	_____	Ongeorganiseerd / <i>Disorganized</i>	V34
Oudtyds / <i>Old-fashioned</i>	_____	Modern / <i>Modern</i>	V35
Goed beplan / <i>Well planned</i>	_____	Swak beplan / <i>Poorly planned</i>	V36
Mistroostig / <i>Gloomy</i>	_____	Vrolik / <i>Cheerful</i>	V37
Onoorlaai / <i>Uncrowded</i>	_____	Oorlaai / <i>Crowded</i>	V38
Uitstaande / <i>Distinctive</i>	_____	Normaal / <i>Ordinary</i>	V39

APPENDICES

VRAAG 19: Wat is u houding teenoor die P-vlak?
 QUESTION 19: What is your attitude towards the P-level?



Mooi / <i>Beautiful</i>	_____	Lelik / <i>Ugly</i>	V40
Swak balans / <i>Poorly balanced</i>	_____	Goeie balans / <i>Well balanced</i>	V41
Bruikbaar / <i>Usefull</i>	_____	Ongemaklik / <i>Inconvenient</i>	V42
Stylloos / <i>Unstylish</i>	_____	Stylvol / <i>Stylish</i>	V43
Georganiseerd / <i>Organized</i>	_____	Ongeorganiseerd / <i>Disorganized</i>	V44
Onindrukwekkend / <i>Unimpressive</i>	_____	Indrukwekkend / <i>Impressive</i>	V45
Goed beplan / <i>Well planned</i>	_____	Swak beplan / <i>Poorly planned</i>	V46
Onaangenaam / <i>Unpleasnt.</i>	_____	Aangenaam / <i>Pleasant</i>	V47
Privaat / <i>Private</i>	_____	Openbaar / <i>Public</i>	V48
Algemeen / <i>Plain</i>	_____	Ornamenteel / <i>Ornate</i>	V49

APPENDICES

VRAAG 20: Wat is u houding teenoor die interne inkopie en parkeer geriewe?

QUESTION 20: What is your attitude towards the internal shopping and parking facilities?



Treffend / <i>Appealing</i>	_____	Ontreffend / <i>Unappealing</i>	V50
Eenvoudig / <i>Simple</i>	_____	Kompleks / <i>Complex</i>	V51
Gemaklik / <i>Convenient</i>	_____	Ongemaklik / <i>Inconvenient</i>	V52
Smaakloos / <i>Tasteless</i>	_____	Smaakvol / <i>Tasteful</i>	V53
Doeltreffend / <i>Efficient</i>	_____	Ondoeltreffend / <i>Inefficient</i>	V54
Outyds / <i>Old fashioned</i>	_____	Modern / <i>Modern</i>	V55
Onoorvloedig / <i>Uncluttered</i>	_____	Oorvloedig / <i>Cluttered</i>	V56
Onaangenaam / <i>Unpleasant</i>	_____	Aangenaam / <i>Pleasant</i>	V57
Privaat / <i>Private</i>	_____	Openbaar / <i>Public</i>	V58
Gewoon / <i>Usual</i>	_____	Ongewoon / <i>Unusual</i>	V59

APPENDICES

VRAAG 21: Wat is u houding teenoor die gemeenskapsaal?
 QUESTION 21: What is your attitude towards the community hall?



Aantreklik / <i>Attractive</i>	_____	Onaantreklik / <i>Unattractive</i>	V60
Eenvoudig / <i>Simple</i>	_____	Kompleks / <i>Complex</i>	V61
Bruikbaar / <i>Useful</i>	_____	Onbruikbaar / <i>Useless</i>	V62
Goedkoop / <i>Cheap</i>	_____	Duursaam / <i>Expensive</i>	V63
Funksioneel / <i>Functional</i>	_____	Onfunksioneel / <i>Nonfunctnl.</i>	V64
Oudtyds / <i>Old-fashioned</i>	_____	Modern / <i>Modern</i>	V65
Ordelik / <i>Orderly</i>	_____	Chaoties / <i>Chaotic</i>	V66
Koud / <i>Cold</i>	_____	Warm / <i>Warm</i>	V67
Stil / <i>Quiet</i>	_____	Raserig / <i>Noisy</i>	V68
Algemeen / <i>Plain</i>	_____	Ornamenteel / <i>Ornate</i>	V69

APPENDICES

VRAAG 22: Wat is u houding teenoor die hoof ingang van Schubart Park?

QUESTION 22: What is your attitude towards the main entrance of Schubart Park?



Aantreklik / <i>Attractive</i>	_____	Onaantreklik / <i>Unattractive</i>	V70
Eenvoudig / <i>Simple</i>	_____	Kompleks / <i>Complex</i>	V71
Gemaklik / <i>Convenient</i>	_____	Ongemaklik / <i>Inconvenient</i>	V72
Stylloos / <i>Unstylish</i>	_____	Stylvol / <i>Stylish</i>	V73
Doeltreffend / <i>Efficient</i>	_____	Ondoeltreffend / <i>Inefficient</i>	V74
Oudtyds / <i>Old-fashioned</i>	_____	Modern / <i>Modern</i>	V75
Ordelik / <i>Orderly</i>	_____	Chaoties / <i>Chaotic</i>	V76
Koud / <i>Cold</i>	_____	Warm / <i>Warm</i>	V77
Privaat / <i>Private</i>	_____	Openbaar / <i>Public</i>	V78
Algemeen / <i>Plain</i>	_____	Ornamenteel / <i>Ornate</i>	V79

APPENDICES

VRAAG 23 Wat is u houding teenoor die straat fasade?

QUESTION 23: What is your attitude towards the street façade?



Mooi / Beautiful	_____	Lelik / Ugly	V80
Swak skaal / Poorly scaled	_____	Goeie skaal / Well scaled	V81
Gerieflik / Convenient	_____	Ongerieflik / Inconvenient	V82
Goedkoop / Cheap	_____	Duursaam / Expensive	V83
Funksioneel / Functional	_____	Onfunksioneel / Nonfunctnl.	V84
Oudtyds / Old-fashioned	_____	Modern / Modern	V85
Ordelik / Orderly	_____	Chaoties / Chaotic	V86
Koud / Cold	_____	Warm / Warm	V87
Privaat / Private	_____	Openbaar / Public	V88
Normaal / Ordinary	_____	Uitstaande / Distinctive	V89

APPENDICES

VRAAG 24: Wat is u houding teenoor die uitleg van Schubart Park?

QUESTION 24: What is your attitude towards the layout of Schubart Park?



Treffend / <i>Appealing</i>	_____	Ontreffend / <i>Unappealing</i>	V90
Swak balans / <i>Poorly balanced</i>	_____	Goeie balans / <i>Well balanced</i>	V91
Gemaklik / <i>Convenient</i>	_____	Ongemaklik / <i>Inconvenient</i>	V92
Stylloos / <i>Unstylish</i>	_____	Stylvol / <i>Stylish</i>	V93
Georganiseerd / <i>Organized</i>	_____	Ongeorganiseerd / <i>Unorganized</i>	V94
Onindrukwekkend / <i>Unimpressive</i>	_____	Indrukwekkend / <i>Impressive</i>	V95
Goed beplan / <i>Well planned</i>	_____	Swak beplan / <i>Poorly planned</i>	V96
Onaangenaam / <i>Unpleasnt.</i>	_____	Aangenaam / <i>Pleasant</i>	V97
Privaat / <i>Private</i>	_____	Openbaar / <i>Public</i>	V98
Normaal / <i>Ordinary</i>	_____	Uitstaande / <i>Distinctive</i>	V99

APPENDICES

VRAAG 25: Wat is u houding teenoor die omgewing rondom Schubart Park?

QUESTION 25: What is your attitude towards the area around Schubart Park?



Aantreklik / <i>Attractive</i>	_____	Onaantreklik / <i>Unattractive</i>	V100
Eenvoudig / <i>Simple</i>	_____	Kompleks / <i>Complex</i>	V101
Gemaklik / <i>Convenient</i>	_____	Ongemaklik / <i>Inconvenient</i>	V102
Smaakloos / <i>Tasteless</i>	_____	Smaakvol / <i>Tasteful</i>	V103
Georganiseerd / <i>Organized</i>	_____	Ongeorganiseerd / <i>Unorganized</i>	V104
Oud / <i>Old</i>	_____	Nuut / <i>New</i>	V105
Ordelik / <i>Orderly</i>	_____	Chaoties / <i>Chaotic</i>	V106
Onaangenaam / <i>Unpleasant</i>	_____	Aangenaam / <i>Pleasant</i>	V107
Stil / <i>Quiet</i>	_____	Raserig / <i>Noisy</i>	V108
Gewoon / <i>Usual</i>	_____	Ongewoon / <i>Unusual</i>	V109

APPENDIX B - DEMOGRAPHIC PROFILE OF THE COMMUNITY

SEX PROFILE OF THE COMMUNITY			
Sex	Frequencies	Percentages	Cumulative Percentages
Male	96	38.4	38.4
Female	154	61.6	100.0
Missing Responses Total	4 254	100.0	

POPULATION GROUP PROFILE OF THE COMMUNITY			
Population Group	Frequencies	Percentages	Cumulative Percentages
Asian	1	0.4	0.4
Coloured	23	9.2	9.6
Black	61	24.3	33.9
White	166	66.1	100.0
Missing Responses Total	3 254	100.0	

AGE PROFILE OF THE COMMUNITY			
Age	Frequencies	Percentages	Cumulative Percentages
21 - 35 Years	123	48.5	48.5
36 - 50 Years	67	28.3	76.8
51 - 65 Years	34	14.3	91.1
66 + Years	13	8.9	100.0
Missing Responses Total	17 254	100.0	

APPENDICES

LANGUAGE PROFILE OF THE COMMUNITY

Language	Frequencies	Percentages	Cumulative Percentages
Afrikaans	180	73.2	73.2
English	14	5.7	78.9
isiNdebele	2	0.8	79.7
Sesotho	5	2.0	81.7
Sesotho sa Leboa	11	4.5	86.2
Setswana	7	2.8	89.0
siSwati	1	0.4	89.4
Tshivenda	8	3.3	92.7
Xitsonga	3	1.2	93.9
isiXhosa	6	2.4	96.3
isiZulu	9	3.7	100.0
Missing Responses Total	8 254	100.0	

MARITAL STATUS PROFILE OF THE COMMUNITY

Marital Status	Frequencies	Percentages	Cumulative Percentages
Not Married	66	26.5	26.5
Married	93	37.3	63.9
Living Together	26	10.4	74.3
Divorce/Seperated	42	16.9	91.2
Widow	19	7.6	98.8
Widower	3	1.2	100.0
Missing Responses Total	5 254	100.0	

PRESENCE OF CHILDREN IN UNITS

Presence of Children in Units	Frequencies	Percentages	Cumulative Percentages
Children in Unit	149	61.3	61.3
No Children in Unit	94	38.7	100.0
Missing Responses Total	11 254	100.0	

APPENDICES

INCOME PROFILE OF THE COMMUNITY			
Income	Frequencies	Percentages	Cumulative Percentages
Less than R 800	56	27.3	27.3
R 800 - R 2 000	104	50.7	78.0
R 2 001 - R 3000	29	14.1	92.2
R 3001 - R 4000	14	6.8	99.0
R 4 001 - R 5000	1	0.5	99.5
More than R 5 000	1	0.5	100.0
Missing Responses	49		
Total	254	100.0	

EDUCATIONAL PROFILE OF THE COMMUNITY			
Level of Education	Frequencies	Percentages	Cumulative Percentages
Primary School	18	7.7	7.7
Secondary School	128	54.9	62.7
College	36	15.5	78.1
Technikon	22	9.4	87.6
University	12	5.2	92.7
None	17	7.3	100.0
Missing Responses	21		
Total	254	100.0	

OCCUPATIONAL PROFILE OF THE COMMUNITY			
Occupation	Frequencies	Percentages	Cumulative Percentages
Services	56	23.3	23.3
Educational	6	2.5	25.8
Clerical	50	20.8	46.7
Professional	10	4.2	50.8
Production	8	3.3	54.2
Arts & Writing	3	1.3	55.4
Domestic Tasks	23	9.6	65.0
Student	11	4.6	69.6
Retired	32	13.3	82.9
Unemployed	41	17.1	100.0
Missing Responses	14		
Total	254	100.0	

APPENDIX C - LIFE PATTERN PROFILE OF THE COMMUNITY

DURATION OF STAY OF THE COMMUNITY			
Duration of Stay	Frequencies	Percentages	Cumulative Percentages
1 - 5 Years	161	68.2	68.2
More than 5 Years	75	31.8	100.0
Missing Responses Total	18 254	100.0	

NUMBER OF PERSONS LIVING IN UNITS			
Number of Persons living in Units	Frequencies	Percentages	Cumulative Percentages
1 - 2 Persons	76	32.5	32.5
More than 2 Persons	158	67.5	100.0
Missing Responses Total	20 254	100.0	

UNIT SIZES			
Unit Sizes	Frequencies	Percentages	Cumulative Percentages
Small Single	17	6.8	6.8
Large Single	33	13.2	20.0
1.5 Bedroom	71	28.4	48.4
2.5 Bedroom	123	49.2	97.6
3.5 Bedroom	6	2.4	100.0
Missing Responses Total	4 254	100.0	

FACILITIES USED BY THE COMMUNITY		
Facilities Used	Frequencies	Percentages
The P - Level	57	22.4
Swimming Pool	60	23.6
Tennis Courts	16	6.3
Shops	231	90.9
Community Hall	34	13.4
Parking & Storage	90	35.4

APPENDICES

COMMUNITY REASONS FOR LIVING IN SCHUBART PARK		
Reasons for living in Schubart Park	Frequencies	Percentages
Financial	188	74.0
Location	38	15.0
Social	6	2.4
Housing Shortage	54	21.3
Good Housing	28	11.0
Dependent	18	7.1

PREFERENCE FOR MOVING OR STAYING			
Preferences for Moving or Staying	Frequencies	Percentages	Cumulative Percentages
Moving	167	67.1	67.1
Staying	82	32.9	100.0
Missing Responses Total	5 254	100.0	

HOUSING PREFERENCES			
Housing Preferences	Frequencies	Percentages	Cumulative Percentages
Ordinary Flat Block	35	14.2	14.2
Town House	57	23.2	37.4
Complex similar to Schubart Park	55	22.4	59.8
House in Suburbs	99	40.2	100.0
Missing Responses Total	8 254	100.0	

PREFERENCES FOR OWNERSHIP OR RENTAL			
Preferences	Frequencies	Percentages	Cumulative Percentages
Ownership	157	65.4	65.4
Rental	83	34.6	100.0
Missing Responses Total	14 254	100.0	

APPENDIX D - MODES FROM ATTITUDE SCALES

(Key: 1 = Extreme Positive / 7 = Extreme Negative)

QUESTION 18		QUESTION 19	
Scales	Modes	Scales	Modes
V30	7	V40	7
V31	7	V41	6
V32	1	V42	1
V33	7	V43	7
V34	6	V44	6
V35	7	V45	5
V36	2	V46	6
V37	7	V47	7
V38	7	V48	7
V39	7	V49	7

QUESTION 20		QUESTION 21	
Scales	Modes	Scales	Modes
V50	1	V60	7
V51	7	V61	7
V52	1	V62	1
V53	7	V63	7
V54	1	V64	1
V55	7	V65	7
V56	7	V66	1
V57	7	V67	7
V58	7	V68	7
V59	7	V69	7

APPENDICES

QUESTION 22		QUESTION 23	
Scales	Modes	Scales	Modes
V70	7	V80	7
V71	7	V81	7
V72	1	V82	1
V73	7	V83	7
V74	1	V84	1
V75	7	V85	7
V76	7	V86	7
V77	7	V87	7
V78	7	V88	7
V79	7	V89	7

QUESTION 24		QUESTION 25	
Scales	Modes	Scales	Modes
V90	1	V100	7
V91	2	V101	7
V92	1	V102	7
V93	7	V103	7
V94	6	V104	6
V95	5	V105	7
V96	2	V106	7
V97	7	V107	7
V98	7	V108	7
V99	7	V109	7