

AN INVESTIGATION INTO FACTORS INFLUENCING HIGH
DENSITY RESIDENTIAL LOCATIONAL CHOICE IN CAPE TOWN.

A THESIS
PRESENTED TO
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IN PARTIAL FULFILMENT
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MASTER IN URBAN AND REGIONAL PLANNING.

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CHAPTER 1

I n t r o d u c t i o n

The observed phenomena

In many cities the demand for high density residential development close to the central business district seems to be increasing. (1) The extent and timing of the demand increase seems to vary from city to city. In Cape Town this trend is evident and is manifested in the development of large high density residential projects being constructed close to the C.B.D. (2)

The problem to be investigated

This investigation seeks to discover the motivations which cause people to choose a residential location in or near to the city centre. If definite patterns of motivation causing particular residential location choices are discernable, the analysis of such patterns may assist urban planners in evaluating "environmental quality" demands.

It is postulated that the demand for particular residential locational environments is a function of the level of urban value patterns and interaction linkages.

Qualitative and quantitative projection of demand

Demographic projections of population growth, economic trend analysis, etc. are tools with which the planner obtains QUANTITATIVE projections of demand patterns. The many unattractive and often unlivable urban residential environments, recently built, using quantitative demand projections as motivation for action demonstrate that this type of analysis is inadequate for the planning of residential locations. (3) The analysis of QUALITATIVE demand trends as to type of environment demanded, will in future have to form a more important aspect in the gathering of data prior to action in urban renewal and development. This is a field where the teamwork between Planner and Behavioural Scientist is of great importance.

A city has a human as well as a technical function. The techniques for the analysis of the human functions of the city have in recent years not developed as rapidly as those techniques which analyse the more technical functions of the city.

Relevant research findings

Urban Scientists in other parts of the world, notably in the United States of America, have been showing increasing interest in the establishing of planning tools that will give a greater understanding of the subtleties of human value orientations and their effect the environmental demand patterns.

Notable are the following studies:

Robert L. Wilson at North Carolina's Center for Urban and

Regional Studies, studied locational behaviour and related attitudes which stem from livability considerations. (4)

Richard A. Lamanna states that social values rather than physical values appear to be the principal reasons for locational choice and suggests that future research might profitably delve into interrelationships between objective past and present experiences, subjective interpretation of these experiences and current value orientations, to determine their relative contribution to satisfaction with place of residence. (5)

F. Stuart Chapin suggests that the needs of human interaction must give the key to the spatial organisation of cities and develops the notions of value systems influencing choice mechanisms which in turn influence activity components (6)

Willem F. Heinemeyer analyses the "urban core" as a centre of attraction, in particular the informal social function of the innercity. He develops a model in which the concept of urban core mindedness as related to "urban core" use can be evaluated for a particular city. (7)

William Michelson in an article on urban sociology as an aid to urban physical development suggests that the study of Mental and Experiential Congruence could aid the studying of urban physical environment. He found no variation in the characteristics of people living in a flat or house. Social Rank and Stage in life-cycle fail to vary systematically with ideal choices of environment. It follows therefore, that the choices people would make, are not a simple function of age or status, but of more subtle influences - their values and styles of life. (8)

Research methodology

In this study a conceptual frame work for the problem is developed. Certain hypotheses are stated and these are tested by analysing two locationally separated high density residential environments in Cape Town, namely St Martini Gardens, being adjacent to the C.B.D. and Devonshire Hill in Rondebosch, which is located away from the C.B.D. close to a suburban node.

A personal interview questionnaire survey was conducted by the author and through the use of statistical analysis the results have been evaluated.

The investigation has revealed certain basic motivational value patterns which influence locational choice of residential environment. As these findings agree in principle with findings of the above mentioned references, it can be postulated that these motivational value patterns will probably also be found in other cities.

References - chapter 1.

- (1) Richard L. Nelson. THE SELECTION OF RETAIL LOCATIONS. Mc Graw-Hill.

P322. "One of the few places in the older cities where population density is increasing, is in desirable sites immediately adjacent to the C.B.D. Most cities are witnessing a very substantial demand for close-in apartments."

- (2) Reference is here made to such projects as "St Martini Gardens" in Queen Victoria Street, Parliament Chamber in Parliament Street.
- (3) e.g. Bonteheuvel, a coloured township on the cape flats.
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CHAPTER 2

T H E S I S

Major orientation

The major orientation of this study is the investigation of the social values and spatial interaction patterns in the urban environment which result in the choice of certain residential locations in preference to other locations. More specifically, the motivations leading to residential locational choice of the highly urban fringe areas to the C.B.D., as opposed to the choice of less urban environments such as that of suburban locations, are to be investigated.

Urban environment continuum

Inherent in this major orientation is the concept that the urban sphere (1) can be seen as a continuum of varying degrees of urbanity. The continuum runs from rural/country through varying degrees of suburban to the city environment. Furthermore the relative intensity of city environment will vary from city to city. Thus a person wishing to choose a particular level of urban environment has within a specific city a certain range of choice. If he wishes to choose outside the range that the city can offer in environmental type, he presumably must relocate in a larger city having a higher degree of city environment, or alternatively further away from the urban sphere where a stronger rural environment would be found.

A city environment is understood as being an environment entirely man made, found in the dense parts of the city, close to its centre, where locational recreations are chiefly those of the city. For the purpose of this study such an environment is considered "highly urban". A semi-urban environment is that environment of the suburb which purports to be semi-city and semi-country at once. There is great variety in the degree of intensity in urbanity possible in the semi-urban continuum.

The rural/country environment lies beyond the suburban fringes of the city. Here residential densities are low and large areas of open nature or agrarian activity are dominant.

Motivations based on urban value orientations

The actions of people are motivated. (2) These motivations are apparently based on values gained through the experiences of an individual in the socialization processes (3) and interaction and associations with his environments. The values so gained influence and direct the interaction needs of people in society.

Chapin suggest, that the choice of residential environment and location will tend to be close to the optimum centre of gravity of the various interactions valued. (4) Thus if a person values the country environment and atmosphere above the factor of being close to the heart of things, as would presumably be the case in a centre city location, he will choose to locate in a

the locational zonings for the functions of the city. Areas of economic activity and places of work are in turn located in relation to the residential zonings.

The Group Area inherently will offer certain environmental development opportunities to a population group. We therefore have the factors of physical and socio-economic development for a particular population group to consider as potential environmental creators. The choice of alternate environments are thus limited.

Metropolitan linkages, the location of "basic interaction" nodes, the location of "non-basic interaction" spheres all form part of the possible environmental qualities.

"Basic Interaction Patterns" represent those patterns of communication that form the essential daily or weekly regular movements, i.e. home to work; home to shopping; etc.

"Non-Basic Interaction Patterns" are those patterns of human communication exercised purely for enjoyment, out of freewill and on which there is no parameter compelling regularity of movement.

Predominant urban value patterns:

The analysis of urban value patterns of the individual and in turn the group is the purpose of this investigation. The analytic factors relevant to this orientation are:

- (a) urban value patterns
- (b) basic linkages
- (c) non-basic linkages
- (d) personal restraining influences.

Regarding the concept of "Urban Value Patterns":

An individual can be oriented to a city environment in varying degree. - Some shy away from the city and seek, when ever possible, refuge in the country. Such persons are considered as negatively urban oriented and will thus have a low level of urban value orientation. - Others, who would be considered as positively oriented to urban participation, will have a high level of urban value orientation. These persons seek the environmental atmosphere of those urban locations where "things happen". Such participation could be of a commercial nature and/or of a social and human environmental nature. Those having a high level of urban orientation seek to spend most of their leisure time partaking of the amenities offered by the city environment. The location of amenity is a factor which changes relative to the time of day, year and weather condition. A crowded beach on a Saturday afternoon, a large sport meeting in a stadium, a traditional festivity, the centre of city night life, are all part of the "urban core" concept, (9) a core which, fluid and flexible in location, but, due to the participation of large numbers of people, must be considered as URBAN. The location of such "urban cores" also forms a part of the urban physical frame of reference, i.e. the urban environmental locations offered.

Between the two extremes of rural/country and urban/city orientation we have a continuum of varying degrees of "urban" amenity. A suburban location of medium density building, where both the country and the urban can be psychologically experienced, would be termed a semi-urban orientation location in the scale of urban value orientations.

All environments around the city are under the influence of the city, but their density, degree of urban amenity and potential for interaction, vary considerably.

The concept

The concept is therefore that the level of demand for a certain type of residential location in an urban area is initially a function of environmental alternatives available, but is mainly a function of the level of urban orientation of individuals and population groupings. Urban orientation is caused by a pattern of values which in turn arise from the associations people have with differing degrees of urban environment and the accompanying amenities.

It is postulated that it is feasible to measure and predict trends in value orientations towards the city. These trend predictions, when related to demographic, socio-economic and physical growth predictions of the various components of the city, should indicate the environmental QUALITY demand pattern, for which locational provision must be made and where economic development potential lies.

Relevant factors

The following relevant factors arise out of the major orientation. They are grouped into categories a) pertaining to the individual and b) pertaining to the environment.

Pertaining to the individual

- Urban value patterns
 - degree of urban orientation
 - past experiences in terms of urban environment
 - orientation to different urban environments
 - degree of social standing associated with an area.
- Basic interaction linkages
 - home to work (commuting)
 - home to shopping, etc.
- Non-basic interaction linkages
 - closeness to friends and social activities
 - attitude to locational amenity and recreations, etc.
- Personal restraining influences
 - family structure (small children, etc.)
 - physical disabilities (health, etc.)
 - mobility possibilities (non-possession of a motor car, etc.)

The above mentioned factors must be related to the following personal characteristics, so that comparisons to other forms of urban data can be made: age; sex; education; occupation; income; family structure.

Pertaining to the environment

- the basic activity structure of the metropolitan area.
- the type of metropolitan linkages and their efficiency in terms of time distance and degree of comfort.
- the level of "urban core" atmosphere in the city's centre.
- the location of "urban core" activities at different times of the day, year, etc.
- the nature of the micro-structure of an environment and its ability to support the level of urban activity demanded.

The decision process

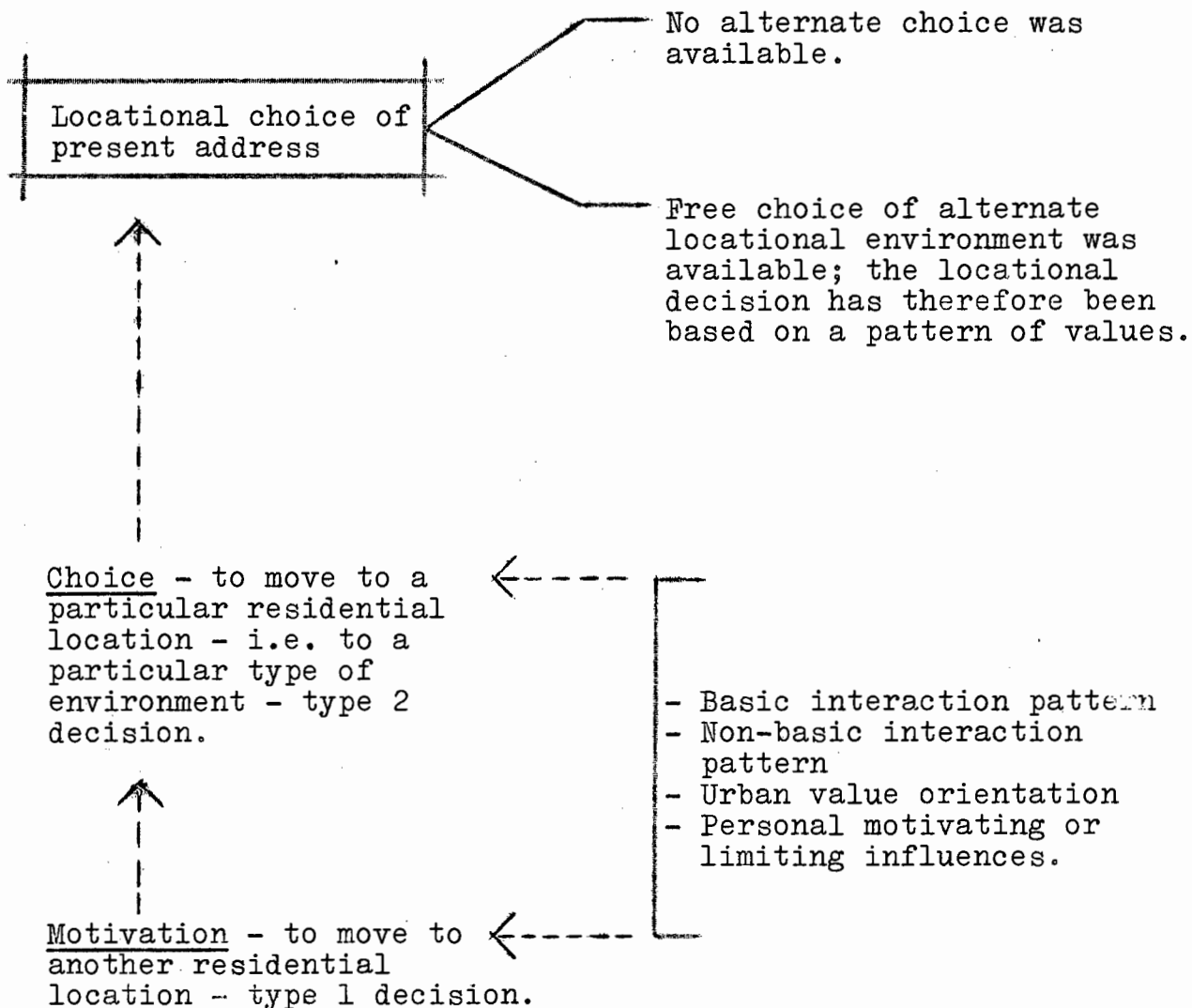
Chapin has developed a conceptual frame work explaining the various stages in the decision process. (10)

A person is motivated towards moving away from his present residential location. This Chapin calls a "type 1 decision". The reason for such a decision can be because of a change in the basic interaction or non-basic interaction pattern, a change in urban value orientation, a change in personal restraining factors such as economic reasons, family changes, etc. Such a person then has to make a second decision as to which location will best suit his particular value orientation as opposed to accepting a compromise of interaction opportunities offered by his initial location. Such a decision is called a "type 2 decision".

If an acceptable location in terms of the new value orientation is available, it can be assumed that the individual will move to a new locational environment.

The relation between motivations and decision process is shown in figure 1.

figure 1: MODEL SHOWING RELATIONS BETWEEN
MOTIVATIONS AND DECISION PROCESSES



References - chapter 2

- (1) "Urban Sphere" is here understood as being that sphere which is primarily urban in orientation and interaction.
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CHAPTER 3

Hypothesis and analysis

Towards a working hypothesis

The major orientation of this research is to investigate to what extent urban value orientations and interaction patterns influence locational choice for residential areas of differing levels of "urban environment", i.e. different levels of urban amenity.

In order to be able to state a working hypothesis, the following assumptions have to be made:

- 1) A particular residential location can be ranked relative to other available residential locations in the same metropolitan area, on a continuum of environment which ranges from rural/country to urban/city. In a particular metropolitan area under study all residential locational environments can thus be ranked in terms of degree of urban amenity offered.
- 2) A "locational environment" refers to a locational amenity in terms of mental congruence and experiential congruence(1)
- 3) A free choice of locational alternatives must be available if a person is to make an optimum choice in terms of value orientation and interaction possibilities.

Hypothesis

The following hypothesis can thus be stated:

The demand for residential location in an environment close to the centre of the city, having a high level of urban environmental amenity, as opposed to an alternate location having a lower level of urban environmental amenity, is a function of the level of urban value patterns of that portion of the population which is free to locate in a variety of degrees of urban environment.

Selection of sample population locations

To test this hypothesis in Cape Town, two high density residential locations have been selected for investigation. The two locations answer the assumptions formulated for the hypothesis, namely that they can be ranked relative to each other in level of urban environment and amenity, and those living in these locations have a free choice of alternative locational possibilities. Furthermore the population group in the two locations are similar in terms of Ethnic race (white), and can be assumed to be similar in income, education, occupation, etc. (These assumed factors have been verified in the questionnaire).

The locations chosen for analysis are:

- 1) St Martini Gardens, which is located adjacent to the C.B.D. in an environment that can be considered urban in a high degree, and
- 2) Devonshire Hill, which is located away from the C.B.D.

in a pleasant suburban environment of considerable natural beauty, having upper class residences. This suburban area can be considered as having an average degree of urban environment.

The two locations are similar as far as type of person, rent structures and micro environmental qualities such as landscaping, parking facilities are concerned.

The locations differ in terms of:

- 1) physical distance to the city.
- 2) the locational environment, i.e. that of St Martini Gardens being more urban than that of Devonshire Hill.
- 3) The level of urban amenity offered by each location respectively - St Martini Gardens being close to the C.B.D., close to the main entertainment centre of the metropolitan area, close cultural amenities such as art galleries, museums etc., Devonshire Hill on the other hand is well situated in relation to schools, local shopping opportunities, public transport facilities.

St Martini Gardens thus offers the environmental amenities typical of the city, while Devonshire Hill offers those environmental amenities typical of a medium density suburb.

When comparing the two locations in terms of the relation to the metropolitan area of Cape Town as a whole, the following brief comments can be made:

- 1) Regarding locations of the main functions of the metro area:
 - a) The C.B.D. still plays a major role in commerce, finance and durable shopping. For certain low income groups the perishable retail outlet is of considerable importance due to ease of rail and bus commuting to the city centre. The retail function has in recent years shown a tendency to decentralize to the suburbs. Rondebosch has only a small relative proportion of retail shopping in comparison to Claremont, Wynberg or Sea Point.
 - b) Residential areas through national legislation are distinctly separated. The two locations being investigated are reserved for white occupation only.
 - c) Although the industrial function of the city is still relatively centralized, it is beginning to decentralize especially towards the Northern Suburbs.
- 2) The types of linkages and efficiency of access to various parts of the metropolitan area from the two locations to be analysed are well developed.
A choice between Rondebosch or the Central City as a residential location is not significant in terms of time distance frictions. (this assumption will be tested in the survey)
- 3) The time distance frictions to the central city from most of the residential areas is generally below 40 minutes.
- 4) The city has a very definite "urban core" atmosphere during the day time, while in the evenings the core of night life

activity has a tendency to be split between the theatre world in the lower central city area, and the Seapoint main road area.

- 5) Urban core activities in other parts of the metropolitan environment are easily accessible by means of private transport, which is also extensively used for this purpose.

Continuum of urban residential environment in Cape Town

As a frame work for the continuum of urban environment the following classifications have been used in the questionnaire:

- I) Dense city - highly urban - adjacent to or part of the C.B.D. - e.g. St Martini Gardens.
- II) Dense suburb - high density residential development away from the C.B.D. - e.g. Seapoint Beach front area.
- III) Open suburban flat environment - e.g. Rondebosch
- IV) Dense suburban house - high density low rise development (40 to 50 pp. acre) - e.g. Newlands Cottage Area.
- V) Open suburban housing - 10 to 15 pp. acre - e.g. Pinelands and Milnerton.
- VI) Rural/country - under 5 pp. acre - e.g. Constantia.

The questionnaire

The factors relevant to the individual affecting residential locational choice could now be investigated. These factors have been previously described and have been categorised into basic categories of:

- A. Urban value patterns
- B. Basic interaction linkages
- C. Non-basic interaction linkages
- D. Personal restraining influences
- E. Classifying data.

It was decided to conduct the survey on a personal interview basis.

A questionnaire was formulated after a pilot survey was conducted in order to test various survey techniques and question types. In the pilot survey the game technique of information gathering was tried, but was found to be too time consuming and did not appear to give more accurate information than was the case when asking straight forward questions. The survey questionnaire has been kept to a time duration of approximately 20 minutes. The questions have been so framed that the decision model, as discussed at the end of the previous chapter, could be tested against a basic urban motivational frame work which incorporated all relevant factors relating to the individual that influence a residential locational decision. If more than one answer to a question was given, as was occasionally the case, then - after discussion with the respondent - the more relevant answer was noted.

MOTIVATIONS AND SPATIAL INTERACTION PATTERNS RELATING TO RESIDENTIAL
LOCATIONAL CHOICE - QUESTIONNAIRE

1.)
2.) Reserved for computerprogramming
3. Address - (0) SMG (1) DH flat No.(.....)
4. Respondent - (0) male (1) female
5. How long have you been living at this address?
(0) under 3 months (1) 3-6 months (2) 6 - 12 months
(3) over 12 months
6. Which of the following describes most closely your attitude to living in this neighbourhood, all things considered?
(0) no response (1) very satisfied (2) satisfied
(3) neutral (4) dissatisfied (5) very dissatisfied
7. What made you decide to come to live here?
(0) no reason given (1) convenient to places of leisure time activity (2) accessibility to friends and family
(3) convenient to public transport (4) economic reasons
(5) neighbourhood environment (6) change in family situation
(7) convenient to place of work (8) no alternative choice
(9) close to schools
8. Would you prefer to live in another part of Cape Town, if so, what type of neighbourhood?
(0) no
If yes (1) flat near city centre - SMG (2) flat in Sea Point or upper Cape Town (3) flat in Clifton (4) flat in suburb such as Rondebosch or Kenilworth (5) cottage in Newlands
(6) house in suburb (7) house on farm or large country holding
(8) house in Bakoven or Camps Bay (i.e. amenity location/home)
9. If so, why?
(0) not relevant - a "no" given in question 8 (1) environment
(2) close to friends (3) right area (status) (4) family reasons (children etc.) (5)
10. Where did you live before you came to your present address?
(0) a less urban environment (1) a similar urban environment
(2) a more urban environment
11. Why did you decide to move from that address?
(0) no reason (1) convenient to leisure time activities
(2) accessibility to friends and family (3) convenient to public transport (4) economic reasons (5) environment
(6) change in family situation (7) convenient to place of work (8) jobtransfer from another place outside the Cape town Metropolitan area

12. In which part of Cape Town do you work?
(0) don't work (1) city centre (2) Woodstock, Salt River or Paarden Eiland (3) Northern Suburbs (4) Southern Suburbs (5) from flat
13. How do you generally travel to your place of work?
(0) not applicable (1) walking (2) bus (3) train (4) bus and train (5) motor car
14. How long do you take to get to work in the mornings?
(0) not applicable (1) under 10 mins. (2) 10-20 mins. (3) 20-30 mins. (4) 30-40 mins. (5) over 40 mins.
15. When shopping for your daily needs, where do you generally do this?
(0) not applicable (1) local neighbourhood (2) near to place of work (3) city centre (4) large suburban centre like Claremont etc.
16. Where do you do your shopping for durable goods such as clothes, furniture appliances etc.?
(0) not applicable (1) local neighbourhood (2) near to place of work (3) city centre (4) large suburban centre like Claremont, etc.
17. In which part of Cape Town does your best friend live?
(0) out of the Metropolitan area of Cape Town (1) in the immediate neighbourhood; 5 min. walking distance (2) another part of Cape Town but reasonably close (3) another part of Cape Town, but far away
18. Do you have any friends in this local neighbourhood? If so, approximately how many ("local neighbourhood" represents a 5 minute walking distance from this address)
(0) no friends (1) to (10)() (11) over 10 friends
19. 20. What do you generally do with your leisure time on weekday
21. evenings? (three activities can be given)
(0) no response (1) stay at home (2) go to friends (3) go out alone (4) do a second job (5) cinema (6) concerts and plays (7) art galleries and libraries (8) restaurant or pub. (9) community or political work (10) social clubs (11) dancing - (12) shopping (13) sport (14) outing in country (15) church (A) work

22. What do you generally do on a Saturday morning?
(Use classifications as set out in Question 19 for this questions as well as for questions 23 to 27.)
23. What do you generally do on a Saturday afternoon?
24. What do you generally do on a Saturday evening?
25. What do you generally do on a Sunday morning?
26. What do you generally do on a Sunday afternoon?
27. What do you generally do on a Sunday evening?
28. If you were given a choice between living in the country, living in the suburb or living in the city, which of these three choices would you say represents the type of environment that would best suit your present living pattern?
(0) no response - (1) country living (2) suburban living
(3) city living
29. Would you please rank the following 4 items in order of
30. importance to you (start with the most important)
31.
32.
- (1) Security in a financial as well as a social sense.
(2) The fulfilling of personal goals - achievement
(3) frequenting important social functions - social status
(4) enjoyment in life.
33. Where were you born?
Place..... (1) rural environment (2) semi-urban
environment (3) urban environment.
34. How old were you when you first left your birth place?.....
0 = 0 - 4 ; 1 = 5 - 9 ; 2 = 10 - 14 ; 3 = 15 - 19 ;
4 = 20-24; 5 = 25-29 ; 6 = 30 - 34 ; 7 = 35 - 39 ;
8 = 40-44; 9 = 45-49; 10 = 50 - 54 ; 11 = 55 - 59 ;
12 = 60-64; 13 = 65-69; 14 = 70 - 74 ; 15 = 75 +
A = No response.
35. Could you very briefly describe to me the places where you have lived since leaving your birth place and also the approximate duration of your stay in these places . (A stay of less than 6 months can be discounted).
.....
.....
.....
.....
.....
.....
.....
.....

36. What level of education have you achieved to date?
(0) no education (1) less than a Std. 6 level (2) Std. 6 -9
(3) matric (4) post matric study (non-degree study) (5)
university bachelor's degree (6) university post graduate
degree - master's degree or a Phd. degree.
37. What is your present occupation?
(0) no occupation (1) professional, technical (2) admini-
strative, executive and managerial (3) clerical (4) sales
(5) transport and communications work (6) craftsman or
labourer (7) public service - nursing, police, etc. (8)
housewife (9) student (10) teaching/lecturer.
38. What type of firm is your employer?
(0) not economically active or self-employed (1) agricultural,
forestry, fishing (2) mining or quarrying (3) manufacturing
(4) construction (5) city services - electricity, gas, water
(6) commerce and finance (7) transport storage and communi-
cations (8) governmental business (9) social services (10)
educational institution.
39. What is your marital status?
(0) never married (1) married (2) widowed (3) divorced
(4) separated
40. What was your age last birthday?
0 = 0 - 4 years; 1 = 5 - 9 ; 2 = 10 - 14 ; 3 = 15 - 19;
4 = 20 - 24 ; 5 = 25 - 29 ; 6 = 30 - 34; 7 = 35 - 39 ;
8 = 40 - 44; 9 = 45 - 49; 10 = 50 - 54 ; 11 = 55 - 59 ;
12 = 60 - 64; 13 = 65 - 69; 14 = 70 - 74; 15 = 75 +years;
A = no response.
41. What is your annual income? (Combined income for husband and
wife, living at the same address)
(0) no response (1) no income (2) under R800
(3) R800 - R1,199 (4) R1,200 - R1,599 (5) R1,600 - R1,999
(6) R2,000-R2,999 (7) R3,000 - R3,999 (8) R4,000 - R4,999
(9) R5,000-R5,999 (10) R6,000 - R7,999 (11) R8,000 - R9,999
(12) R10,000 - R 14,000 (13) over R15,000
42. Number of other persons living in the flat unit. (Other than the
respondent)
(0) none - (10) wife/husband - (2) wife & 1 child
(3) wife & 2 children (4) wife and 3 children
(5) 1 child (6) 2 children (7) 3 children
(8) 1 boarder (9) 2 boarders (10) 3 boarders

With regard to the questionnaire questions the following comments:

Question 10: the respondent was asked to describe his previous locational environment. According to the type of environment described, the author evaluated the relative degree of past urban environment to present urban environment.

Question 17: the distance of the "best friend location" from the residential location of the respondent has been evaluated 1) in terms of a 5 minute walking distance, which has been taken as immediate neighbourhood;
2) the location in an immediate adjacent suburb has been taken as being reasonably close and
3) any location other than 1) and 2) above, in the metropolitan area of Cape Town has been coded as being far away.

Questions 19 to 27: in these questions the most frequent activity of the respondent has been recorded.

Question 21: in some cases the respondents required an explanation of the terms country-living, suburban living and city living. Country living has been described as meaning a low density predominantly rural environment, e.g. a country holding in Constantia or a farm. Suburban environment was compared to that of Rondebosch and city environment was related to that of St Martini Gardens.

Question 35: the respondent was asked to describe the type of environment of each place where he had lived. The description given of the type of environment was categorised as 1) city environment
2) suburban flat environment
3) suburban house environment
4) rural environment.
The locational environmental pattern of the respondents last ten years has been taken as being indicative of environmental associations, i.e. the degree of urban orientation in environmental values.

Statistical analysis

The data of the research consisted of frequencies in 2 discrete locational categories. To determine the significance of differences between the independent locational categories the G-test for homogeneity was used.

Null hypothesis:

H₀: there is no difference in urban value orientation between the two populations.

H₁: there is a greater degree of urban value orientation amongst those who choose to locate residentially near the city centre in Cape Town.

Statistical test:

The G-test (log likelyhood ratio test) for homogeneity of two independent samples has been chosen, because the two locational groups (St Martini Gardens and Devonshire Hill) are independent locations.

Significance level:

Let $\alpha = .05$.

N = the number of respondents in the two samples = 60.

Sampling distribution:

The G-test (log likelyhood ratio test) gives a χ^2 sampling distribution with degrees of freedom. Critical values of χ^2 are given in table C of Sidney-Siegels non-parametric statistics for the behavioural sciences. (2)

Rejection region:

The rejection region consists of all values of χ^2 , which are so large that the probability associated with their occurrence is equal to or less than $\alpha = .05$. Since H₁ predicts the direction of the difference between the two groups, the region of rejection is one tailed and therefore the values of rejection must be read off under $\alpha = .10$ in table C of Siegels non-parametric statistics (3).

Small frequencies:

When the observed frequencies in certain sub-categories were too small, these categories have been combined, thereby reducing the number of cells. Care has been taken that such combining did not rob data of its meaning.

Sample selection method:

For each location all the flat units were numbered consecutively. From a table of random numbers a separate selection of 30 units per location was made. In cases where no response could be elicited from the actual flat unit drawn, a coin was tossed for either the next higher or next lower flat, which was then interviewed.

Data processing

The data so gathered through the technique of interview surveying was punched in "machine code" on computer cards and analysed for homogeneity, using the G-test.

Appendix 1 gives the actual data collected.

Appendixes 2 to 7 give cell totals together with the percentage of the total per location. (Note as the number of samples per location was only 30, the % analysis is somewhat crude, and occasionally does not add as column totals to exactly 100%. The figures have purposely been left as printed out by the computer, so that the relative comparisons between the 2 locational categories are kept.)

References - chapter 3

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CHAPTER 4

D i a g n o s i s

Urban Value Patterns.

The hypothesis upon which the investigation is based, states: "The demand for residential location in an environment close to the centre of the city, having a high level of urban enviromental amenity, as opposed to an alternate location having a lower level of urban enviromental amenity, is a function of the level of urban value patterns of that portion of the population which is free to locate in a variety of degrees of urban environment.

In the investigation the following has been revealed: The majority of the respondents in each location respectively were satisfied to very satisfied with their present residential locational environment and did not desire to change their locational environment (column 8 - See Appendix). Only a small portion of the respondents, notably those in St Martini Gardens desire to move to a flat in Sea Point. As Sea Point has a high level of urban amenity such as restaurants, clubs, night life, promenades, beach, etc., it can be postulated that the opportunities for non-basic interaction activity are the reason for this demand tendency. The respondents gave "desirable environment" as reason for their desire to move to Sea Point.

A small portion of the respondents desired a lesser level of urban environment. Here a notable difference is apparent, where-by those living in the city environment wish to move to a house in the country, while those living in a suburban environment desire a house rather than a flat, but wish to remain in the same suburban environment. Again the reasons given for this desire to move was that of a desirable environment.

The following table analyses the choice of ideal locational environment under present living conditions in relation to the degree of urban environment lived in by the respondent in his past residential locational history.

<u>choice</u> <u>of</u> <u>ideal</u> <u>location</u> (column 28)	<u>Degree of urbaness in past locational history</u> (column 35)		Rural	Suburban	Urban
	Rural	DH SMG	1	4 4	1 1
	Suburban	DH		20	3
		SMG		3	2
	Urban	DH		1	
		SMG		7	13

This table suggests that it is probable that past locational history, and in turn the level of urban values resulting from such past urban enviromental associations influences the locational choice pattern.

Furthermore the survey results indicate a very marked tendency to move into an environment of a similar or greater degree of urbanity, when a change in residential location is made (column 10). There is only a small tendency to move into environments having a lesser degree of urbanity than that of the environment presentedly located in.

The degree of urbaness in past locational history apparently influences present residential locational choice. The tendency when changing residential location is to move into the more urban environments of the city. As the populations become more urban oriented, the demand for residential environmental location in the more urban city environment will therefore increase. The hypothesis, that the increase in the demand for residential location in the urban city environment is a function of urban value patterns, can thus be accepted.

As an indicator of the urban value pattern trend, past locational residential patterns in relation to present residential locational environment, can be used.

Regarding "Value Ranking", the locations show homogeneity of orientation (column 29-32). The answer were broken down into sub-categories, to see if a difference in relative pattern could be found, but no relationship was apparent.

Decision Processes

Type 1 decision

The main reasons for deciding to move from previous residential location to present residential location are changes in family situation and convenience to place of work. In a few cases environmental reasons were given as reasons for wanting to move away from the original residential location (column 11).

Under the category of "family situation", birth of a child, death of a family member, divorce or children leaving the home were the main reasons given by the respondents.

Type 2 decision (column 7)

The general pattern of reasons given for type two decisions shows homogeneity for the two locations. The city location, however, displays a stronger tendency to factors of convenience to place of work and leisure activity than does the suburban location. The suburban location tends to emphasize neighbourhood environment and closeness to friends as principal reasons for residential locational choice.

The choice of preferred location (column n^o 28) as previously mentioned, relates strongly to present residential location, thus indicating freedom of choice.

Basic Interaction Patterns

Work location appears to be an important "Basic Interaction" parameter affecting residential choice (column 12). Each respective location shows a marked relation to place of work.

The mode of travel to work differs for the two locations (column B). In the city there is a distinct tendency to walk, while in the suburb the tendency is to use the motor car. Irrespective of the transport mode used, the time distance to place of work is the same for both locations, generally under 20 minutes (column 14).

Perishable shopping location: As could be expected, the C.B.D. is the main location for such activity with those living in the city, while in the suburb the local neighbourhood centre is generally used (column 15).

Durable shopping: Although the C.B.D. of the city is still the dominant location for durable shopping, the suburban dwellers show a significant tendency to shop for durables in the suburban shopping areas (column 16).

Non-Basic Interaction Patterns

The non-basic interaction patterns towards the urban environment do not appear to be strongly developed in Cape Town. (columns 19-27). This could indicate that the level of non-basic urban amenity has not developed to as high a degree as was anticipated when formulating the assumptions towards the formulation of the hypothesis.

The following summary extract from the columns 19 to 27 shows that the general tendency during leisure time is to stay at home. There is, however, a difference in the degree to which the different types of leisure activity are practised in the two degrees of urban locational environment.

leisure activity - weekdays (columns 19-21)

	city	suburb
stay at home	70%	87%
cinema	13%	3%
work	10%	0%
other	7%	10%

leisure activity - Saturdays (columns 22-24)

	city	suburb
stay at home	27%	27%
cinema	11%	11%
shopping	16%	19%
sport	6%	11%
country outing	13%	10%
other	27%	22%

leisure activity - Sundays (columns 25-27)

	city	suburb
stay at home	43%	43%
go to friends	19%	17%
country	21%	26%
church	10%	8%
other	7%	6%

These results lead one to postulate that there may be mental congruence, but not physical congruence towards the environment chosen for residential location.

The location of "best friend" in the city is further away than is the case with those living in the suburb (column 17). A good follow-up question in future surveys would be an enquiry into whether the "best friend" works at the same place as the respondent.

Classifying Data

All facets of the classifying data statistically show homogeneity between the two locations.

The city location appears to have an employment tendency towards commerce and finance, while the suburban location has a tendency toward teaching (this is to be expected, as the suburban area is exceptionally situated in relation to a wide variety of education institutions) (column 38).

Regarding flat occupancy, the city location tends towards small family units and single persons - particularly old aged persons, who prefer the city location as this gives such persons a feeling of still being a part of society, although they can no longer participate in the environmental physical interaction patterns. i.e. Mental congruence is dominant to physical congruence. The suburban location tends towards families with children and boarders sharing (column 42).

CHAPTER 5

Conclusions

In this investigation it has been attempted to analyse the motivations influencing demand patterns for residential environment close to the Central Business District of Cape Town.

The thesis has been founded on the assumption that in an urban area a continuum of urban residential environmental quality exists. The level of urbanity increases, as one moves away from the rural into the city environment.

A conceptual frame work, postulating that the analysis of the demand patterns for a particular level of urban residential environment must evaluate the level of urban value patterns of those who can locate in such an area out of free choice, was developed.

The hypothesis that urban values influence residential locational choice, was stated and tested against two environmental locations in Cape Town.

The sample populations were so chosen that they were as far as possible similar, with their main difference, being in the environmental location, i.e. environmental amenity.

The following conclusions can be drawn from this investigation:

The demand for a particular level of urban residential environment, i.e. amenity, is a function of the level of urban values of that section of the urban community which has freedom of locational choice. The level of these urban values can be analysed from the past locational history of the populations concerned.

The normal classifying data such as age, occupation, income, etc. between the two sample locations revealed no apparent differences.

Human values influence the motivations of persons and result in patterns of interaction in the urban environment. In this thesis the analysis of human value orientation has indicated significantly the type of urban environment demanded. The survey results indicate that the analysis of QUALITATIVE demand patterns show significant differences between the two populations, while the QUANTITATIVE analytical data reveal no differences between the two locations.

Urban environmental planning is in essence a planning for human needs. In the evaluating of these needs the emphasis should fall on qualitative rather than on quantitative analysis. The urban planners require of the sociologist that he defines those human values which must be associated with his motivation towards environmental choice and furthermore find analytical techniques through which such values can be better measured and analysed.

Appendix II

Analysis of Survey Data

Survey Col. No.	Category Description	Survey % of loc. total		Data actual data		Statistical test for homogeneity	
		SMG	DH	SMG	DH	χ^2	d.f.
4.	Respondents' sex						
	male	27	13	8	4	1.69	1
	female	73	87	22	26		Homogeneous
	Statistically the proportion of male + female respondents for each population group is the same.						
5.	Duration of stay at present address						
	0-3 months	13	17	4	5		
	3-6 "	10	17	3	5		
	6-12 "	7	10	2	3		No test done
	over 12 months	70	57	21	17		
6.	Attitude to neighbourhood						
	very satisfied	60	43	18	13		
	satisfied	27	47	8	14		
	neutral	13	7	4	2	3.53	3
	dissatisfied	0	3	0	1		Homogeneous
	Attitude to neighbourhood is generally satisfied to very satisfied						
7.	Reason for choosing present residential location						
	no reason given	3	3	1	1		
	convenient to leisure activity	13	0	4	0		
	convenient to friends and family	10	17	3	5		
	convenient to public transport	7	7	2	2		
	economic reasons	0	0	0	0		
	neighbourhood environment	13	33	4	10		
	change in family situation	0	0	0	0		
	convenient to place of work	40	27	12	8		
	no alternate choice..	13	10	4	3	8.51	5
	close to schools	0	3	0	1		Homogeneous
	Although generally homogeneous, the actual data of the city location displays a stronger tendency to factors of convenience to place of work and leisure activity, than does the suburban location.						
	The suburban location tends to emphasize neighbourhood environment and closeness to friends as reason for residential locational choice.						
8.	Preference for an alternate residential location in Cape Town						
	no alternate	53	67	16	20		
	flat near city centre	0	0	0	0		
	flat in Sea Point or upper Cape Town	13	7	4	2		
	flat in Clifton	7	3	2	1		
	flat in suburb.	3	0	1	0		

Appendix III

Survey Col. No.	Category description	Survey %		Data actual		Statistical test for homogeneity	
		of loc. total		data		X ²	d.f.
		SMG	DH	SMG	DH		
	cottage in Newlands	0	3	0	1		
	house in suburb	7	13	2	4		
	house in country	13	3	4	1		
	house in Bakoven or Campsbay	3	3	1	1	4.84	7
9.	Reason for preferring alternate residential location					Homogeneous	
	not a relevant question	53	67				
	environment	33	33				
	close to friends	7	0				
	right area (status)	0	0			No test done	
	family reasons	7	0				
10.	Previous address						
	in a less urban environm.	43	47	13	14		
	in a similar urban environment	53	47	16	14	0.51	2
	in a more urban environm.	3	7	1	2	Homogeneous	
	Both locations show that there is a marked tendency to move into environments of a greater degree of urbanity when a change of residential location is made.						
11.	Reason for deciding to move						
	no reason given	13	7	4	2		
	greater convenience to leisure activity	10	0	3	0		
	greater access to friends	0	7	0	2		
	greater convenience to public transport	0	3	0	1		
	economic reasons	7	13	2	4		
	better environment	13	13	4	4		
	change in family situation	27	30	8	9		
	greater convenience to place of work	17	13	5	4		
	job transfer from another urban area	13	13	4	4	6.85	8
						Homogeneous	
12.	Work location						
	not economically active	13	20	4	6		
	city centre	57	27	17	8		
	Woodstock, Salt River, Paarden Eiland	17	7	5	2		
	Northern Suburbs	3	0	1	0	16.22	4
	Southern Suburbs	0	40	0	12	Significant difference	
	economic activity from flat	10	7	3	2		
	Residential location is mainly decided in relation to place of work i.e. in relation to a: "Basic Interaction" pattern.						
13.	Mode of travel to work						
	not applicable	23	20	7	6		
	walking	47	17	14	5		
	public transport	3	17	1	5		
	motor car	27	47	8	14	Heterogeneous	
	In the city the tendency to walk is stronger than in the suburb, where the motor car is more convenient.						

Appendix IV

Survey Col. No.	Category description	Survey % of loc. total		Data actual data		Statistical test for homogeneity		
		SMG	DH	SMG	DH	X ²	d.f.	
14.	Time to get to work in the morning							
	not applicable	27	27	8	8			
	0-10 minutes	43	30	13	9			
	10-20 minutes	27	27	8	8	3.64	3	
	over 20 minutes	3	17	1	5		Homogeneous	
	Irrespective of the transport mode used, the time distance to place of work is the same for both locations.							
15.	Main shopping location - Perishables							
	not applicable	0	7	0	2			
	local neighbourhood	20	80	6	24			
	near to place of work	17	0	5	0			
	city centre	60	3	18	1	38.82	4	
	large suburban shopping centre	3	10	1	3		Significant difference	
	In the city the central business district is more attractive for perishable shopping while in the suburb the local neighbourhood centre is generally used for perishable shopping.							
16.	Main shopping location - Durables							
	not applicable	7	0	2	0			
	local neighbourhood	0	17	0	5			
	near to place of work	3	0	1	0			
	city centre	87	60	26	18	14.62	4	
	large suburban shopping centre	3	23	1	7		Significant difference	
	The suburban dweller displays a considerable tendency to shop for durables in the Suburb.							
17.	Location of best friend							
	not in Cape Town Metro- Area	17	20	5	6			
	in the immediate neighbourhood	13	40	4	12			
	other part of Metro-Area, reasonably close	30	17	9	5	6.77	3	
	other part of Metro-Area, far away	40	23	12	7		Significant difference	
	Those living in the city urban environment tend to have their best friend's residential location further away than those living in the suburbs.							
18.	Number of friends (visiting) within the immediate neighbourhood (5 min. walk)							
	no friends	27	23	8	7			
	1-5 friends	53	40	16	12	2.84	3	
	5-10 friends	13	17	4	5			
	over 10 friends	7	10	2	6		Homogeneous	

Appendix V

Survey Col. No.	Category description	Survey % of loc. total		Data actual data		Statistical test for homogeneity		
		SMG	DH	SMG	DH	χ^2	d.f.	
19.-21	Leisure time - weekday evenings (most general activity)							
	stay at home	70	87	21	26			
	go to friends	0	3	0	1			
	cinema	13	3	4	1			
	concerts and plays	3	3	1	1			
	social clubs	0	3	0	1	7.55	6	
	sport	3	0	1	0			
	work	10	0	3	0			
	Marked predominance to stay at home.						Homogeneous	
22 -24	Activity on Saturdays							
	stay at home	27	27	24	24			
	go to friends	9	10	8	9			
	go out alone	3	0	3	0			
	cinema	11	11	10	10			
	concerts and plays	1	3	1	3			
	social-club, dancin g etc.	6	3	5	3			
	shopping	16	19	14	17			
	sport	6	11	5	10	7.65	9	
	country outing	13	10	12	9			
	work	9	6	8	5			
	Mainly staying at home, shopping, cinema, visiting friends and country outings.						Homogeneous	
25 - 27.	Activity on Sundays							
	stay at home	43	43	39	39			
	go to friends	19	17	17	15			
	go out alone	4	0	4	0			
	sport	1	4	1	4			
	country outing	21	26	19	23			
	church	10	8	9	7	7.57	6	
	other	1	2	1	2			
	Generally staying at home, country outings + visiting friends.						Homogeneous	
28.	Ideal choice of preferred location under present living conditions							
	country living	17	20	5	6	33.70	2	
	suburban living	17	77	5	23			
	City living	67	3	20	1			
	Choice preferences relate strongly to present residential location of the respondent						Significant difference	
29 - 32.	Value Rarking							
	weighted:choice1=4 points							
	" 2=3 points							
	" 3=2 points							
	" 4=1 point							
	security	35	33	105	99			
	achievement	29	28	87	85	4.81	3	
	social association	17	13	52	40			
	enjoyment	19	25	56	76			
							Homogeneous	

Appendix VI

Survey Col. No.	Category description	Survey % of loc. total		Data actual data		Statistical test for homogeneity	
		SMG	DH	SMG	DH	X ²	d.f.
33.	Birth place						
	rural environment	13	17	4	5		
	semi-urban environment	53	57	16	17		
	urban environment	30	23	9	7		
	irrelevant	3	3	1	1		no test done
34.	Age, when first leaving birthplace						
	0 - 4 years	20	53	6	16		
	5 - 9 "	17	7	5	2		
	10-19 "	7	3	2	1		
	15-19 "	33	23	10	7		
	20-24 "	13	10	4	3		
	25-29 "	7	0	2	0		
	30 and over	3	3	1	1		no test done
35.	Degree of urbaners in past locational history						
	mainly rural	0	3	0	1	11.24	2
	mainly suburban	47	83	14	25	Significant	difference
	mainly high density urban	53	13	16	4		
	Locational choice is strongly related to the degree of urban environment that the respondent has experienced in the past.						
36.	Educational level						
	up to standard 9	17	27	5	8		
	matric	27	13	8	4		
	post matric study (non degree)	47	43	14	13		
	University Bachelor's Degree	10	17	3	5	2.60	3
						Homogeneous	
37.	Occupation at present						
	no occupation	13	20	4	6		
	professional; technical administrative;	13	3	4	1		
	executive managerial.	17	10	5	3		
	clerical	30	27	9	8		
	sales	7	3	2	1		
	draftsman or labourer	3	3	1	1		
	public service; politic; nursing etc.	7	3	2	1		
	student	3	10	1	3	4.99	5
	teaching; lecturer	7	20	2	6	Homogeneous	
38.	Type of employer						
	not economically active						
	self employed	17	20	5	6		
	mining	3	0	1	0		
	manufacturing	13	7	4	2		
	construction	0	7	0	2		
	commerce + finance	37	23	11	7		
	transport; storage. and communication	7	3	2	1		
	governmental business	7	3	2	1		
	social services	3	7	1	2	6.09	7
	education and institution	13	30	4	9	Homogeneous	

Appendix VII

Survey Col. No.	Category description	Survey %		Data		Statistical test	
		of loc.		actual		for homogeneity	
		SMG	DH	SMG	DH	χ^2	d.f.
39.	Marrital status						
	never married	30	40	9	12		
	married	43	33	13	10		
	widowed	20	20	6	6	0.82	3
	divorced	7	7	2	2	homogeneous	
40.	Age last birthday						
	under 20 years	0	0	0	0		
	20 - 24 "	10	17	3	5		
	25 - 29 "	12	23	4	7		
	30 - 34 "	7	13	2	4		
	35 - 39 "	10	13	3	4		
	40 - 44 "	7	0	2	0		
	45 - 49 "	7	10	2	3		
	50 - 54 "	13	7	4	2		
	55 - 59 "	13	3	4	1		
	60 - 64 "	0	3	0	1		
	65 - 69 "	10	10	3	3		
	70 - 74 "	10	0	3	0	13.17	10
	over 74 "	0	0	0	0	homogeneous	
41.	Annual income (total income if both husband and wife work)						
	no responce	7	10	4	3		
	under R1,599	7	20	2	6		
	R1.600 - R1,999	10	13	3	9		
	R2000 - R2,999	23	10	7	3		
	R3000 - R3,999	13	20	4	6		
	R4000 - R4,999	7	13	2	4		
	R5000 - R5,999	13	10	4	3		
	R6000 - R7,999	7	3	2	1		
	R8000 - R9,999	7	0	2	0	7.36	8
	over R10,000	0	0	0	0	homogeneous	
42.	Others sharing the flat						
	none	57	37	17	11		
	husband/wife	33	17	10	5		
	husband, wife + child	3	13	1	4		
	husband, wife + 2 childr	3	10	1	3		
	husband, wife + 3 childr	0	0	0	0		
	single parent + child	3	3	1	1		
	single parent + 2 childr	0	3	0	1	12.20	4
	single parent + 3 childr	0	0	0	0	significant difference	
	2 Boarders	0	17	0	5		
	3 Boarders						

Suburban location is preferred by parents with children. In the city there is little tendency to the sharing of a flat with other boarders.

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