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Relocation and High-rise Living:
A Study of Singapore's Public Housing

being a Thesis submitted for the Degree of

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by

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August, 1986

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Summary of Thesis submitted for the Ph.D degree

by Ching-Ling Tai

on Relocation and High-rise Living:
A Study of Singapore's Public Housing

Public housing in Singapore is one of the most significant development programmes in the state. It has been centrally planned and implemented by the Government not only to tackle housing problems and rebuild the decaying inner city areas, but also to restructure Singapore society in terms of the visions of the power elite.

This study attempts to examine the social and political implications of relocation and public housing in Singapore, and to analyse the difficulties faced by and the impact of relocation on individuals and families from the various contrasting groups of relocatees, with an emphasis on problems of economic hardship, adaptation to high-rise living, and neighbourliness in the public housing estates.

To achieve this task, three types of material have been used, viz. official data, empirical material from previous studies, and empirical data and information collected during fieldwork. The fieldwork comprises a sample survey of 1,200 households and an in-depth study of 27 relocated families.

The thesis consists of three parts. The first part reviews the literature on relocation and public housing and the conceptual framework employed in their study. The second part examines the policies underlying and the salient

social and political aspects of relocation and public housing in Singapore. The final part analyses the data and information obtained from the sample survey and the in-depth study.

The findings of the present study show that while the Singapore Government has made some impressive quantitative achievements of its public housing programme, some of its original objectives may never be fully achieved. Two of the eight hypotheses deduced from the assumptions and observations of the previous studies are refuted by data obtained from the present study. Five of them are however supported, and one is inconclusive. Some sensitive issues relating to public housing in Singapore, which have significant social and political effects and yet are usually avoided by most researchers, are also analysed and discussed in the light of their policy implications.

August 1986
Singapore

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CHAPTER 1

INTRODUCTION: REVIEW OF THE LITERATURE AND CONCEPTUAL FRAMEWORK

I. Introduction

Winston Churchill once remarked that "we shape our buildings and afterwards our buildings shape us." ¹ This statement forcefully points out the fact that man plays a vital role in creating his living environment, of which housing is one of the most important components, and that subsequently his whole life is influenced by his environment. The questions "How?", "Why?" and "With what consequences?" are issues of considerable theoretical and practical significance, particularly for countries like Singapore where more than four-fifths of its population are living in a planned, high-rise public housing environment.

As a result of the rapid growth of large cities and the ever increasing concentration of people living in densely populated urban areas, large-scale relocation programmes, involving both voluntary and involuntary relocation, have been undertaken by many governments in both developing and industrial countries with the hope of providing better shelter for people and of improving their general life-

1. Quoted by R.K. Merton, "The Social Psychology of Housing," in Wayne Dennis, ed. Current Trends in Social Psychology (Pittsburg: University of Pittsburg Press, 1948), p.204.

styles and living conditions. The effects of the relocation process, either positive or negative, on the relocatees and their communities are far-reaching.

Singapore is one of the most urbanised nations in the world. Like many other countries, the city-state faced many serious housing and environmental problems in the 1950s. Before 1960, many people in Singapore were living in totally inadequate housing. A survey of low-income residents in the city area conducted in 1954 showed that 84 per cent of the sample households occupied accommodation consisting of one room or less. Another survey of a densely populated area in the city centre found that more than half of the residents lived in cubicles which had no corridors, and that sanitary conditions were often inadequate (Chen & Tai, 1977:13-18). This problem had been accelerated by the rapid population growth rates during the years before 1960.

The population of Singapore has increased about ten times since the beginning of this century. Today its total population is 2.5 million.¹ The density of population has increased from about 390 persons per square kilometre in 1901 to around 3,900 persons per square kilometre today. This is approximately 10 times more congested than the most congested country in Europe, the Netherlands; and 20 times more so than the United Kingdom. It is officially projected that Singapore's population will stabilise at about 3.5

1. See Chapter 3 for details of figures and changes in these through time.

million in the year 2030 (Chen & Tai, 1977:27). The average population density by then will be about 5,800 persons per square kilometre. The ever-increasing population and its limited area are, therefore, two major and interrelated factors which determine the options of Singapore's urban development plan, especially the government's policy to adopt a high-rise public housing programme.

When the present Government took office in 1959, it regarded housing and urban renewal as one of the most urgent issues and it immediately embarked on a large-scale urban redevelopment programme. This task was assigned to the Housing and Development Board (HDB). This is a Statutory Board established in 1960, under the portfolio of the Minister for National Development. The HDB has since undertaken large-scale public housing programmes, slum clearance and urban renewal. In order to ease the burden of the over-loaded housing authority, the Urban Redevelopment Authority (URA) was constituted in 1974 to take over the functions of slum clearance and urban renewal. The HDB and URA have since worked hand in hand because the processes of public housing, slum clearance and urban renewal are interrelated.

Since the inception of the HDB in 1960, four Five-Year Building Programmes have been successfully completed. All HDB housing comprises high-rise buildings. By March 1985 the HDB had built a total of 508,242 units of high-rise flats, and more than 2.1 million persons or 81 per cent of

the total population in Singapore were living in public housing estates (HDB, 1985:71). At present the HDB is building about 30,000 dwelling units per year. It is estimated that by 1992, when the urban development programme, as proposed in the Comprehensive Plan, is completed, about 85 per cent of the total population will be accommodated in high-rise public housing estates.

In the initial years of the large-scale relocation programme, the main task of the HDB was to build as many dwelling units as possible in the limited land areas. The level of expectation regarding housing conditions was very low in the 1960s. Liu Thai Ker, the Chief Executive Officer of the HDB points out that "In 1960 when there were virtually no decent dwellings in Singapore, any shelter at all provided by the Government was welcomed." (Liu, 1975:168). The level of expectation changes, however, within any society. Once adequate shelter is provided, people begin to demand better homes and amenities. This has been the case in Singapore. Moreover, by the late 1960s the Singapore Government realised that while the large-scale public housing programme had increasingly overcome housing shortages, it had a range of important social, political and economic implications as well. Therefore, from the Third Five-Year Building Programme (1971-75) onward the neighbourhood concept has been incorporated into the housing programme, and the housing schemes have been extended to provide accommodation not only for low-income but also for middle-income families. Priorities have shifted from the

quantitative to the qualitative by giving more attention to recreational, commercial, service, transportation and community facilities as well as other cultural and social amenities, which aim at promoting neighbourliness and community ties in the estates.

The massive relocation programme in Singapore has been very impressive, especially in quantitative terms. It is, therefore, important to highlight the successes of the public housing programme in Singapore, but it is equally, if not more important, to examine the social costs and the problems resulting from this large-scale relocation programme. There are some comprehensive studies on the achievements of the public housing programme in Singapore (Yeh, 1972 & 1975), but detailed sociological studies on its social consequences are relatively scarce.

It is the purpose of this study to examine the following questions: (1) What are the social and political implications of the large-scale public housing programme? (2) Are there differential effects of the relocation process on various sub-groups within the relocated population, namely voluntary and involuntary relocatees, villagers and urbanites, and various ethnic groups? (3) If there are differential effects, what then are the differences and their implications? (4) To what extent has the large-scale relocation process in Singapore caused disruption to the pre-existing social systems and patterns of life of the people in the public housing estates? (5) What are the

patterns and extent of neighbourliness in different high-rise public housing estates and what are the factors contributing to these?

II. Review of the Literature

Large-scale relocation activities are designed and implemented by the authorities ideally to provide better accommodation and social amenities for the people. However, the environment proposed by the planners does not always meet the expectations of the people and the objectives of the authorities. To use Herbert Gans' terminology, there is a gap between "potential environments" proposed by the planners and "effective environments" participated in by the residents (Gans, 1968:4-12). The effects of the relocation process on residents and communities, especially in America and Britain, have attracted considerable attention from social scientists. Some studies have also been carried out in Africa, Latin America and Australia.¹ Sociological studies on the effects of relocation in the Asian setting are, however, relatively few.

The findings of most studies tend to show that relocation, particularly of an involuntary kind, fails to achieve the proposed goals of planners and results in

1. There is a substantial literature on relocation and rehousing. Some of the studies are reviewed here with special reference to the following publications: Back, 1962; Colson, 1971; Gans, 1959 and 1966; Hole, 1959; Jephcott, 1971; Key, 1967; Lee, 1978; Schorr, 1975; Vereker, 1961; Willmott, 1963; Young and Willmott, 1957; Wilson, 1966; and Wolf, 1969.

serious social and psychological problems for the affected population. Most American researchers became more and more critical of the undesirable effects of relocation in the early 1960s, and increasingly antagonistic towards it. As pointed out by William Key, "Urban renewal has become to the academic community and the press of the twentieth century what the 'heartless' banker of the late nineteenth and early twentieth century was to the social protesters of that era." (Key, 1967:161).

In a review of relocation activities in the United States, Peter Marris observes that the current aim of the relocation programme may be contradictory (Duhl, 1963:113-134). He points out that relocation offers only marginally better, higher rent housing in very similar neighbourhoods and probably worsens rather than improves or solves the social conditions of the displaced families. Furthermore, the relocation process "disrupts the work of established agencies of social welfare and, worse, destroys the informal pattern of mutual help and tolerance which had grown up in the old communities." (Duhl, 1963:122). Marris' observations are supported by empirical studies conducted in the United States, the United Kingdom, Australia, Africa and other countries by social researchers such as Philip Schorr (1975), Vere Hole (1959), Pearl Jephcott (1971), Trevor Lee (1978), and Elizabeth Colson (1971).

The findings of these studies show that, although the results of relocation appear to vary widely from project to

project and from society to society, on the whole, relocation is a highly disruptive and disturbing experience.

A. Studies on Relocation in Singapore

As more than four-fifths of Singapore's population are presently living in high-rise public housing estates, it is important for social scientists to investigate the extent to which the effects of relocation in other countries are also faced by the relocated families in Singapore. In the Singapore context research on the impact of relocation and high-rise living has been undertaken both by the housing authority, i.e. the Housing and Development Board and by independent social scientists and staff and students of the National University of Singapore.

Table 1.1 presents a summary of the completed studies on relocation and high-rise living in Singapore conducted during the period 1964-1982.¹ As summarised in the table, there are one Master's thesis and ten academic exercises written by students of the National University of Singapore, five studies undertaken by local and foreign social scientists, and two surveys conducted by the housing authorities. Except for the three survey studies (Yeh 1972, 1975; Chen & Tai 1977), all other studies were conducted in the poorer housing estates and none of these studies covered any better-off housing estates such as Marine Parade, Telock

1. This summary includes, to the best of my knowledge, all studies related to the subject under study conducted in Singapore from 1964 to 1982.

Blangah, Clementi, or Toa Payoh. Moreover, most of these studies are case studies of a small number of low-income families living in one-room flats in one or two of the poorer housing estates in Singapore. As of March 1982, only 18.1 per cent of all HDB dwelling units were one-room flats. Therefore, all the completed studies, except for the three surveys, focus on the effects of relocation on the poor families and not the general population in public housing estates. Almost all of the completed studies focus on: (a) the planning process of relocation and public housing programmes, (b) the perceptions and attitudes of the tenants towards public housing, and (c) problems faced by the low-income families in public housing estates. There are no comprehensive studies comparing the effects of public housing schemes on different sub-groups of the population, nor have changing community patterns and neighbourliness in public housing estates been examined in detail. This section attempts to review some general findings of the completed studies on relocation and public housing programmes in Singapore. The findings specifically related to the hypotheses of this study will be discussed in detail in the next section of this chapter.

1. Studies Applauding Relocation and Public Housing Programmes

Three major sample household surveys were conducted by the HDB in 1968, 1973, and 1981 respectively. The findings

Table 1.1 A Summary of Local Studies Related to Relocation and High-rise Living in Singapore Conducted During the Period 1964-1982

Study/Publication	Sample Size	Study Area	Type of Flat	Time of Study
<u>I. HDB Publications</u>				
Yeh/HDB 1972	7,391 units	10 housing estates	all types	1968
Yeh/HDB 1975	6,575 units	various estates	all types	1973
HDB 1982*	8,486 units	various estates	all types	1981
<u>II. Academic Publications</u>				
Gamer 1972	40 respondents	Queenstown	not identified	1965
Buchanan 1972	36 respondents	Tanjong Rhu	not identified	1966-67
Spiro 1976	90 respondents	Chai Chee	various types	1975
Hassan 1977	414 respondents	Bukit Merah	1-room & 2-room flats	1971-72
Chen & Tai 1977	150 respondents	5 estates	all types	1976
<u>III. Masters Thesis</u>				
Roney Tan 1974	123 households	Bukit Merah	1-room flats	1970-71

Table 1.1 A Summary of Local Studies (Cont'ed)

Study/Publication	Sample Size	Study Area	Type of Flat	Time of Study
IV. Academic Exercises				
Zahrah 1965	40 Malay families	5 estates	various types	1964
K. Tan 1965	67 Chinese families	Cantonment Road	1-room, 2-room & 3-room flats	1964
Lim 1973	40 Chinese families	not identified	1-room flats	1972
Ong 1974	30 Malay families	Geyland Serai	not identified	1973
Loh 1974	30 Chinese families	Dakota Crescent (Kallang)	1-room flats	1973
M. Yap 1975	8 households	Chai Chee	3-room flats	1974
G. Yap 1976	20 Chinese families	Whampoa Drive & Flander's Square	1-room flats	1975
MacIntyre 1976	20 families	Whampoa Drive & Flander's Square	1-room flats	1975
Goh 1976	12 families	Kallang Basin	not identified	1975
Choo 1977	22 households	Lorong Limau	1-room flats	1976

* The report of the 1981 sample household survey was completed in 1982, but is not available to the public. Some of its findings were reported in the press and in the HDB official magazine, Our Home (June 1982).

of the first two surveys were subsequently published in two books (Yeh, 1972 and 1975). The report of the third survey was completed in 1982, but it is not available to general readers. Some findings of this survey were, however, reported in the press recently and published in the HDB official magazine, Our Home (June 1982). These are the three largest sample surveys on the subject ever conducted in Singapore.

The main findings of the two surveys¹ are: (i) Relocation results in a considerable change in various aspects of living conditions and the change is more for the better than for the worse. The change "was especially pronounced with respect to expenditure, cleanliness of neighbourhood, amount of noise and environment for bringing up children; some 90 per cent of the respondents indicated changes for each of these items since relocation." (Yeh, 1975:336).

(ii) With respect to the degree of satisfaction with the changes of living conditions that have taken place, "the data from the two surveys on the whole showed a fairly high level of satisfaction." (Ibid., 337). For example, fairly high proportions of surveyed households in the 1973 Survey stated that "the change was for the better with respect to employment opportunities for females (52 per cent), health of household members (48 per cent), marketing and shopping

1. As the report of the third survey is not available to general readers, our discussion in this chapter will refer only to the first two surveys.

facilities (53 per cent), cleanliness of building (49 per cent) and cleanliness of neighbourhood (49 per cent)." (Ibid., 338).

(iii) The findings show that approximately 95 per cent of the survey respondents considered their immediate environment with respect to their flat, floor, block and estate to be either satisfactory or acceptable and that "there was some improvement in 1973 over 1968, especially with respect to satisfaction with the floor on which the households were located." (Ibid., 227). As pointed out by Stephen Yeh, these figures "are significant since the residents are the ultimate clients of the Housing and Development Board." (Ibid.)

(iv) One of the most important findings of the two surveys conducted by the HDB is that the survey data show that, "contrary to some popular beliefs, households relocated into public housing as a result of clearance did not suffer hardship resulting from the change." (Ibid., 349). In fact, the data indicate that "both with respect to satisfaction with present living conditions and to satisfaction with the kind of change since relocation, the resettled households in HDB estates fared as well as their neighbours who voluntarily moved in, if not better." (Ibid.). Referring to this finding, Stephen Yeh, the

1. These are involuntary relocatees who were relocated into public housing as a result of the resettlement scheme.

2. They are voluntary relocatees who applied for HDB flats of their own will.

Honourary Consultant to the HDB, concludes that "Since these were the views of those actually affected by the resettlement, there is some justification in ascribing the success of Singapore's public housing and urban renewal efforts, in part to a sound resettlement policy." (Ibid.)

The above findings of the HDB surveys demonstrate one important point, viz. that the Singapore experience of public housing is apparently significantly different from those of other countries in Europe and America. While the latter's experiences appear either disturbing or disastrous, the Singapore experience seems remarkably "satisfactory" and "sound". However, many social researchers will undoubtedly ask the question, would one expect criticism from a survey conducted by a housing authority to evaluate its own housing schemes? It would be difficult to answer this question decisively. But, a brief discussion of the samples and the objectives of the above-mentioned HDB surveys will help to clear up some doubts about the favourable conclusions derived from the findings of these surveys.

In terms of sample, all the three HDB surveys used a large-scale, stratified random sample (Yeh, 1972:5; 1975:215). For the 1968 survey, a ten per cent sample of HDB households, which amounted to 7,391 units, was chosen. For the 1973 and 1981 surveys, a five per cent sample (6,575 units) and a three per cent sample (9,947 units) of HDB households were taken respectively. A structured questionnaire was used for the surveys. Apart from the

large sample, the sampling scheme was carefully designed, the field work, coding and editing were all closely supervised, and the data were systematically verified and analysed (Yeh, 1972:4-8; 1975:215-216).

There is, therefore, no reason to doubt the validity of the sample and the sampling scheme of the surveys. The findings of these surveys represent the views and opinions of a large number of residents in public housing estates. The only doubt is whether the answers to the questionnaire given by the respondents reflect their actual views or are they the answers which respondents thought the authority would like to have? From my experience in conducting survey interviews in Singapore during the past ten years¹ and the experiences of some other researchers², it has been found that while some Singaporeans are reluctant to be interviewed because they say they are "too busy", some other Singaporeans are so "polite" that they tend to give "ideal" answers to the interviewers, especially if the respondents know that the interviewers are conducting a survey for the Government. We have, however, no way of assessing to what

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1. For example, the interviews for the project on social ecology in Singapore (1976), the project on relocation and population planning in Singapore (1980), and the present study conducted by me during the past few years.
 2. See, for example, Ong Meng Yoke, "The Social Implications of Residents' Committees in Singapore," unpublished research paper (Singapore: National University of Singapore, 1983), p.5; Lim Kim Chwee, "A Study of Malay Business," unpublished research paper (Singapore: National University of Singapore, 1983), pp.7 & 13.

extent this affects the reliability of data collected from such surveys.¹ We must, therefore, be aware of such a limitation when we interpret survey data of this nature.

The main focus of the three HDB surveys was to find out the views and attitudes of residents towards public housing in Singapore, with particular emphasis on the levels of satisfaction with housing conditions and social amenities in the estates. However, no comparison between the views of residents in public housing estates and those of residents in other types of residence has been made. Therefore, the high degree of satisfaction with housing conditions among HDB tenants cannot illustrate whether HDB tenants are more satisfied with, or less satisfied with the modern high-rise flats than people living in other types of housing. As demonstrated by the findings of a study conducted by Robert Gamer, the researcher concludes that "Despite the fact that we compared one of the worst neighbourhoods in the old city with one of the best public housing estates, the same percentage in the slum as in the housing estate expressed great satisfaction with their home." (Gamer, 1972:168).¹ A similar conclusion is made by Syed Bahasin and his associates when they observe that "The changes that have been brought about by the move into a housing estate have given many physical advantages, i.e. better facilities and amenities, but in no way can a housing estate replace the feeling of closeness and solidarity which prevailed in the

1. This matter will be discussed in greater detail in the next chapter on the methodology of the present study.

kampong; this casual, carefree and complacent way of life has disappeared. Instead, in the housing estate, there are always feelings of insecurity, anxiety, fear and inadequacy." (Bahasin, et al., 1971:21).

Moreover, questions relating to problems faced by the relocated families, difficulties in the process of adjustment to the public housing environment among various sub-groups of relocatees, and differential social and psychological effects of the relocation on various sub-groups of the population are not included in the above-mentioned surveys.

2. Studies Critical to Relocation and Public Housing Programmes

The findings and resultant conclusions of the surveys conducted by the HDB are, however, not only contradictory to the experiences in America and Europe¹, but also contradictory to the findings of some studies conducted in Singapore.² While the HDB studies (Yeh, 1972 & 1975) show favourable response to public housing, two of the only four studies ever conducted in Singapore by foreign researchers are critical of the programme (Buchanan, 1972; Gamer, 1972). The findings of the other two studies (Spiro, 1976; Hassan, 1977) show that while there is a high level of satisfaction

1. See, for example, Schorr (1975), Gans (1962), Hole (1959), Duhl (1963), Weller and Luchterhand (1973), and Key (1967).

2. For example, Buchanan (1972), Gamer (1972), and Syed Bahasin and associates (1971).

with the housing conditions among tenants in the estates, the relocation programme has caused some negative effects to the society and to the relocated families, especially the low-income families and the ex-villagers.¹ The fieldwork of all the four studies was conducted when the researchers were affiliated with the University of Singapore. The studies by Robert Gamer and Iain Buchanan were conducted in the mid-1960s, and the studies by Riaz Hassan and Shimon Spiro were undertaken in the 1970s.²

Buchanan's research is a case study of 36 families affected by relocation and residing in the public housing estate in Tanjong Rhu (Buchanan, 1969 & 1972). His conclusions are that "for many households, both work opportunities and incomes are reduced with resettlement, while fixed expenditures are increased." (Buchanan, 1972:241). Therefore, there is a significant group of people, "to whom resettlement is a step backward, socially and economically, in their search for security." (Ibid.,241). Moreover, slum life "has been transformed from something with a coherent personality into something with a split personality, from a system in equilibrium into a system in disequilibrium - and this is one of the most striking consequences of mass squatter resettlement." (Ibid., 243).

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1. Some findings of these two studies will be discussed in the latter part of this section.
 2. See Table 1.1 for detailed information about the sample and the study areas of these four studies.

Robert Gamer's study takes quite a different approach. He emphasises the planning process and the political implications of the programme. He also compares the Singapore and the American experience in urban renewal and public housing. Gamer's study is mainly a case study of 48 interviews in a slum in the Chinatown and 40 interviews in the Queenstown public housing estate (Gamer, 1972:167). His observations are also supplemented by documents and other material. Gamer argues that there was no participation in the planning process by the people who were affected by the programme (Ibid., 164) and the redevelopment authorities "knew little about the problems of the people being cleared." (Ibid., 167). He, therefore, concludes that "today, urban redevelopment and public housing in Singapore, as in America, is not necessarily in response to solid demands of the poor." (Ibid., 168).

In analysing the findings of his study and the quantitative achievement of the public housing programme, Gamer concludes that "Despite these accomplishments, however, I remain pessimistic about urban development - in Singapore and elsewhere." (Ibid., xviii). He also warns, "A day might come when Singapore would regret that it has reduced the number of marginal businesses, diminished the number of small farmers, and moved the zinc- and attap-dwellers to Housing Board flats." (Ibid., 190).

The major studies conducted by the staff members of the National University of Singapore are those undertaken

by Riaz Hassan (1977), Shimon Spiro (1976, 1977), and Chen and Tai (1977). Hassan's study was to investigate the impact of public housing on the low-income families. It was carried out between September 1971 and February 1972 in the Bukit Merah Housing Estate - one of the poorest public housing estates in Singapore, and 414 households of one- and two-room flats were interviewed. The main findings of this study are: (i) high internal density appears to be positively correlated with 'worry index'¹, i.e. people with less space tend to worry more; (ii) relocation produces negative effects on primary group contacts and neighbourliness, and (iii) it also produces serious psychological and physiological pathologies (Hassan, 1977:61-144). These findings are consistent with the conclusion of an earlier study (Hassan, 1969) made by the same author. In that study, Hassan concludes that the "process of resettlement or relocation to the public housing estates destroys the old basis of community solidarity without providing a new basis of social cohesion and

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1. The 'Worry Index' was developed by asking the respondents whether they are worried about their health, children's health (if applicable), children's security (if applicable), cost of living, household work, neighbours, relatives, old age, money, height of flats. The respondents were given three choices for all of the above-mentioned worries, namely, 'yes often', 'yes sometimes', and 'no'. A score of one was assigned to the answer with 'yes often', 2 to 'yes sometimes', and 3 to 'no'. Those respondents who did not supply the information were excluded. Persons with an average score of 2 or more were considered to have a low score and those with a score of 1.9 or less were considered to score high on the Worry Index (Hassan, 1977:131-132).

integration." (Hassan, 1969:25). Moreover, the physical arrangements of flat dwelling tend to inhibit communication with one's neighbours (Ibid.).

The study by Shimon Spiro and his colleagues was undertaken in 1975. This was a pilot study of 90 residents in Chai Chee public housing estate, of which 48 were from villages and 42 from other urban areas, who were affected by the relocation and public housing programme. The findings show that there are significant differences in the effects of the programme on these two sub-groups (Spiro, 1977). In general, the relocation programme causes more adverse social and economic effects on the ex-villagers than on the urbanites. Thus, a large number of ex-villagers are acutely unhappy in their new environment (Spiro, 1976:42).

The Chen-Tai study on the impact of high density and public housing was sponsored by the Ministry of Science and Technology and conducted in five public housing estates and nine rural areas in Singapore. The objective of this study was to compare the lifestyles and neighbourly interaction of public housing dwellers and those of rural residents. The project was undertaken by Peter Chen and myself between March 1975 and September 1976. The analysis of the survey data was supplemented by census data and other material.

Our findings (Chen & Tai, 1977) show that due to their different physical and social environments, the lifestyles and human interaction patterns of public housing dwellers are different from those of rural residents. The study

concludes that, compared with the rural communities, the improved man-made environment in public housing estates is still not effective in fostering community ties and close human relationships (Ibid., 98). Our findings, however, do not support the common argument that crowding and high-rise living force children to play outdoors and produce social and psychological pathologies (Ibid., 61-64 & 93).

Apart from the above-mentioned studies undertaken by the HDB and independent social scientists, there are altogether eleven small projects on the study of relocation and public housing, which were completed by students during the period 1964-1982.¹ One of these studies is a Master's thesis, the others are academic exercises by honours students of the University of Singapore. All these research projects are case studies of low-income families, and six focus on studies of families in one-room flats.²

The first studies on the impact of relocation are probably those by Tan (1965) and Zahrah (1965). Both studies were conducted in 1964. Tan's study attempted to examine the impact of relocation on Chinese families, whereas Zahrah's study was to examine the impact of relocation on Malay families.

1. These studies are: Zahrah (1965), K. Tan (1965), Lim (1973), R. Tan (1974), Ong (1974), Loh (1974), M. Yap (1975), G. Yap (1976), MacIntyre (1976), Goh (1976), and Choo (1977).

2. The sample sizes and study areas of these studies are presented in Table 1.1.

Zahrah's study clearly demonstrates the negative effects of relocation on the Malay families relocated in the public housing estates. Her findings show that, "a complaint that they felt like 'a bird being caged' came from the majority of the respondents" (Zahrah, 1965:71), and that "the feelings of the newly re-housed families were those of loneliness and isolation" (Ibid., 79). On the whole, the re-housed families "were unhappy and dissatisfied." (Ibid., 48).

Although Tan's study does not show serious negative effects of relocation, he observes that the physical conditions of the public housing "seem to limit and confine the families to their own flats and keep neighbourliness to the minimum." (Tan, 1965:131). He, however, believes that the level of neighbourliness may improve with the longer duration of residence in the estate. He says, "Perhaps the people in the estate are still new to each other. Time may slowly wear away their shyness and more interaction among the neighbours may result." (Ibid., 125).

Since the studies conducted by Zahrah and Tan in 1964, nine more students' projects on the subject have been completed. Findings from these studies are, in general, conflicting and inconclusive. Most of these studies, such as Loh (1974), Goh (1976), Choo (1977), MacIntyre (1976),

and G. Yap (1976)¹, find that relocation produces negative effects on the people.

For example, findings from studies by Loh (1974), Goh (1976) and Choo (1977) all show that the level of neighbourliness in public housing estates is, in general, lower than the neighbourliness in other types of neighbourhoods. Choo's study shows that 86 per cent of the respondents "claimed that they experienced closer contacts in their former neighbourhoods." (Choo, 1977:71-72). While Goh's study finds that the physical structure of HDB flats inhibits social interaction among neighbours (Goh, 1976:31-32), Loh's study confirms "the study by Mitchell that high density discourages social interaction." (Loh, 1974:35). The other negative effects of relocation as shown in the above-mentioned studies are: adverse effects on children's academic performances (Loh, 1974:23), experiencing more

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1. Both Yap's and MacIntyre's studies attempted to compare family life-styles in high-rise and low-rise homes. Both studies used the same sampling scheme, which covered 10 families from each of the three types of dwelling, namely high-rise dwellings (HRD), low-rise dwellings (LRD) and kampong dwellings (KD). HRD were families living on the 10th floor or above, where LRD were families living on the 1st and 2nd floors. Both HRD and LRD respondents were residents in public housing estates. Thus, the comparison of life-styles in HRD and LRD is only to compare life-styles between residents living on the lower floor levels and those living on the higher floor levels; both were living in the public housing estate which is a high-rise environment. The effects of relocation on the relocated families, therefore, can only be studied by comparing the life-styles of KD and HRD (or LRD). The general conclusion relating to these two studies as stated in this review is, therefore, derived from findings from the comparison between KD and HRD (or LRD), and not from the comparison between HRD and LRD.

loneliness and more anxieties and being less relaxed in their life-style among residents in public housing estates compared to those living in other types of residence (G. Yap, 1976:88-91).

3. Conflicting Findings Among Some Studies

The studies by Tan (1972), Lim (1973), Ong (1974) and M. Yap (1975), however, show that relocation results in both positive and negative effects. For example, Tan's study shows that relocation results in great economic burdens to the low-income families (Tan, 1972:106-107), and that neighbourly interactions among flat dwellers "were only limited to members of one's own ethnic group." (Ibid., 93). However, "the majority of the respondents adjusted successfully to their new physical environment." (Ibid., 37). This conclusion is derived from the survey data which show that "about 55% of the respondents were satisfied with both their flats as well as their neighbourhood." (Ibid.). This statement, however, cannot demonstrate that flat dwellers are more satisfied with their new living environment than their former environment. Moreover, it implies that relocatees have to face some problems, but they adjust themselves "successfully."

Lim's study shows that although relocation results in less contacts among neighbours and a lack of communal solidarity of the people in the estate (Lim, 1973:66), it results, on the other hand, in a greater awareness of the



benefits of upward social mobility among HDB residents (Ibid., 65). Ong argues that "Relocation in HDB flats merely works as a useful facilitator for government effort in transforming the Singapore Malays into a more urban and more urbanised people so as to enable them to participate fully in the national development of Singapore." (Ong, 1974:29). The findings of M. Yap's study show that "the flat dwellers are no less neighbourly than in similar socio-spatial configuration in the private estate." (M. Yap, 1975:65).

We are given an overall impression from the literature that relocation into public housing is a disruptive and disturbing experience in the United States, Britain and other countries. The relocation process usually results in the disruption of community ties, social networks and established life-styles, which in turn causes serious socio-psychological and financial problems to the relocated population and the community. The Singapore experience, as shown in the findings of the empirical studies by Stephen Yeh and his associates, is an exception (Yeh, 1972 and 1975). According to them, the massive relocation and public housing programme have improved the overall living conditions of the population and caused very little disruption to them. Thus, the majority of residents are happy with the new living and social environment of the public housing estate. These conclusions are, however, challenged by empirical studies conducted by other

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researchers , although the findings of some of these studies are also conflicting among themselves.

B. Major Effects of Relocation

Although the findings of the existing studies on relocation provide some useful information, Chester Hartman concludes that "we are still a long way from knowing all that needs to be known about the effects of relocation." (Wilson, 1966:331). Without more detailed knowledge of the effects on housing, community life and psychological reactions, it is impossible to know the ultimate results of the renewal programmes: (a) whether the programmes are improving the living conditions of slum families or merely shifting the slum to another section of the city; (b) whether relocation aids the slum family or is merely a device to use urban land for more favoured groups in the society.

We will discuss in this section, some major effects of relocation demonstrated by the empirical studies conducted in foreign countries and locally. A number of hypotheses will be formulated from the findings and assumptions relating to these effects; and these hypotheses will be tested in Part III of this thesis.

1. Among those discussed above are: Buchanan (1972), Gamer (1972), Hassan (1977), Zahrah (1965), Loh (1974), Goh (1974), and Choo (1977).

1. Political and Redistributive Effects

Housing has been, and continues to be, a controversial political issue in both industrial and developing countries. One solution to housing problems is government intervention by providing public housing for low-income families. The idea of public housing gained impetus in Great Britain, the United States, Singapore and other countries immediately after the First World War; but the active participation by governments of these countries in financing and promoting the building of public housing for low-income families started only after the Second World War and accelerated in the 1960s.

It is argued that the high cost of housing and the unequal distribution of income have meant that significant sections of the population would have been unable, without assistance from the Government, to afford the full economic price of decent accommodation. The main objectives of resettlement and public housing schemes in most countries are, therefore, to improve the living conditions of the urban population in general and the urban poor in particular, and to use these schemes as a means of redistributing income to increase the welfare of the poor.

The findings of most studies conducted in Europe and America, however, show that the relocation and public housing schemes are, in many cases, merely shifting the slum

1. Many studies have discussed these issues in detail. See, for example, Grimes (1976), Lansley (1979), Cullingworth (1979), Wilson (1966), and Lambert, et.al (1978).

to another section of the city, and that the living conditions in the new housing estate are no better than those of the cleared slums. As pointed out by Martin Anderson, there are, however, great discrepancies in findings and conclusions between private and government studies (Wilson, 1966:495-496). Adds Anderson, "Obviously, both the private studies and the government studies cannot be correct." (Ibid.)

According to Wallace Smith, a 1961 study of renewal projects in 41 cities in the United States "shows that 60 per cent of the dispossessed tenants were merely relocated in other slums"; and renewal "sometimes even created new slums by pushing relocatees into areas and buildings which then became overcrowded and deteriorated rapidly." (Wilson, 1966:539).

In a study of urban renewal projects for the period 1950-1960 in the United States, Martin Anderson concludes that during the period under study "more homes were destroyed than were built"; and that "housing conditions were made worse for those whose housing conditions were least good", but "housing conditions were improved for those whose housing conditions were best." (Wilson, 1966:495).

In the Singapore scene, studies by both Buchanan (1972) and Gamer (1972) support the above arguments. Gamer argues

2. See, for example, Anderson (1964), Wilson (1966), Schorr (1975), Duhl (1963), Hole (1959), Buchanan (1972), and Gamer (1972).

that the "interests of those who control resources, skills, and administrative and political capabilities often run counter to what is needed to cater to the needs of people." (Gamer, 1972:132). Moreover, Singapore lacks "an atmosphere of freedom in which grievances will be expressed, and trained personnel capable of doing surveys and studies to evaluate such grievances..." (Ibid., xxi). As a result, the relocation and public housing schemes in Singapore do not respond to the "demands of the poor" (Ibid., 168); they "may isolate the best resources in the hands of a few people and destroy cultural traditions without replacing them with new ones." (Ibid., 131). Buchanan argues similarly that the living conditions in the public housing estates are no better than those of other neighbourhoods, and that the process of squatter resettlement has simply resulted in a physical transfer of the slum system from one place to another (Buchanan, 1969 & 1972). These arguments are, however, refuted by Yeung and Yeh in their analysis of the 1973 HDB Sample Household Survey data. They say that this kind of criticism against Singapore's programmes is "sometimes guided by nothing more than intuition, and worse by guesswork." (Yeh, 1975:279).

As the resettlement and public housing schemes in Singapore have affected a great variety of people and transferred a great deal of private land to the Government for national development, the schemes have inevitably¹ resulted in gains for some and losses for others. In a

study of the implications of public housing in Singapore, Tai and Chen conclude that public housing programmes have "become a most effective measure for income redistribution, diverting the wealth from the rich to the poor." (Tai & Chen, 1982:170).

In his study of public housing, Riaz Hassan concludes that the statistical data clearly demonstrate "that the lower income groups are the main beneficiary of public housing." (Hassan, 1976:245). Adds Hassan, "This situation is, however, likely to be modified in years ahead." (Ibid.). This is because since 1972 the income ceiling for eligibility to public housing has been raised several times (at present almost 95 per cent of Singapore households are eligible). Moreover, the HDB has since then started building bigger flats (four and five rooms) and, in fact, in recent years the tendency has been to concentrate on middle-class housing needs. The consequence of these changes is "that poorer groups are becoming the problem cases." (Ibid.). Hassan cautions that "this situation could create in the future a paradoxical situation in which the poor segments of population will be left out of public housing as the programme becomes more responsible to the middle-class housing needs." (Ibid.).

Apart from the redistributive effect, public housing in Singapore also has important political implications. As

1. This issue will be dealt with at length in Chapter 4.

pointed out by Jon Quah, public housing has "indirectly contributed to continued political stability in Singapore." (Chen, 1983:204). Iain Buchanan, however, argues that "Destruction of the slum system, and mass resettlement of slum dwellers in planned housing estates, are together one of the Singapore government's basic tools of political discipline. Such policies are based upon an elemental assumption: that the urban proletariat has a high potential for revolutionary upheaval. On the same assumption, however, the policies may well be self-defeating - for they seek to contain discontent rather than destroy its roots." (Buchanan, 1972:245).

Whether public housing results in political stability or discontent of the urban proletariat is a controversial issue. In a study of the political implications of public housing in Singapore by Tai and Chen, the authors, however, demonstrate the fact that public housing "has been an important election issue in almost all the general elections and by-elections since 1955." (Tai & Chen, 1982:174). Moreover, candidates of the People's Action Party (PAP), which has been the ruling party since 1959, "in almost all elections have made maximum use of the Party's achievements¹ in public housing." (Ibid., 171).

1. This issue will be dealt with at length in Chapter 5.

2. The Social and Psychological Costs of Relocation

It is argued that in the relocation process, planners and political leaders usually ignore the social and psychological costs faced by the people who are affected by the programme. For example, Elizabeth Colson, in a study of the experience of the Gwembe Tonga in Zambia, argues that "in planning drastic alterations in environment that uproot population or make old adjustments impossible, they count the engineering costs but not the social costs." (Colson, 1971:1). Trevor Lee in his study of public housing in Tasmania in Australia, observes that people who are rehoused "face certain costs which arise from the disruption they experience, and these must be balanced against any ensuing advantages. Some of these costs are easy to measure while others are much less tangible." (Lee, 1978:84). The costs which are easy to measure include direct financial burdens such as higher rent, utility expenses and transport costs. Rehousing may also impose a number of less tangible social costs such as disruption of established community ties, social networks and social values.

In addition to these social costs, there are psychological ones. In a study of the impact of relocation in Boston in the United States, Marc Fried observes that forced relocation results in a 'grief' syndrome which manifests itself in "the feelings of painful loss, the continued longing, the general depressive tone, frequent symptoms of psychological or social or romantic distress,

the active work required in adapting to the altered situation, the sense of helplessness, the occasional expressions of both direct and displaced anger, and tendencies to idealize the lost place." (Duhl, 1963:151).

In a study of low-income families in public housing in Singapore, Riaz Hassan concludes that relocation not only results in an "autonomy-withdrawal syndrome" but also in a loss of community (Hassan, 140-144). Hassan says, "Pushed by stress, pulled by autonomy, people in the new high-density high-rise public housing communities tend to withdraw into a private world, thereby creating a special environment which is characterized by inward-looking dwelling, impersonality, individualism, apathy, and a sense of general insecurity." (Ibid., 142).

3. Disruption of Social Organisation and Neighbourhood Patterns

Relocation usually results in disruption of established community ties and social networks. Herbert Gans has observed that relocation activities usually destroy a social network of satisfying and supporting personal and social relationships in the community, ^{and this} ~~which~~ serves as an effective functioning social system in strengthening community ties and neighbourliness. Moreover, relocation programmes usually utilise middle-class standards of evaluation like the physical characteristics of dwelling units and so tend to ignore social concerns such as a desire to move close to similar-type neighbours (Gans, 1962). In some slum

neighbourhoods, "the taverns and restaurants functions as local meeting places for groups of adults, the luncheonettes and candy stores cater to the teen-agers, while the grocery stores or 'bodegas' may extend credit till pay day." (Schorr, 1975:107). These informal social networks usually disappear in the relocated public housing estates.

In the study of a local authority housing estate in Scotland, Vere Hole observes that "the old type of social organisation based on kinship and locality has been disrupted with consequent strain on the tenants themselves, without the compensation of an enlarged sense of neighbourhood." (Hole, 1959:171). Families affected by relocation have to face a transition "from a closed network of relationships, where all friends and kin are mutually known to each other, because they live in the same area, to an open network, where the circle of friends and contacts of a particular family are not inter-connected." (Ibid.).

According to the study of relocation in Singapore by Iain Buchanan, the disruptive effects of relocation on social networks and neighbourly interaction as experienced in the West are also experienced in Singapore (Buchanan, 1969). Buchanan observes that, "The squatter slum is socially and economically a more coherent phenomenon than the housing estate. It is a spontaneous expression of socio-economic reality, rather than the considered expression of planning ideals." (Ibid., 244). The relocation of people into public housing estates, especially those from slum areas, will, therefore, result in

considerable social and economic maladjustment. This is because "an already well-established system of social-economic security has been disrupted, without any fundamental transformation occurring in the context within which it finds its meaning." (Ibid.).

Thus, on the one hand well-established social networks and social support systems in the slum or other communities affected by the relocation scheme have been destroyed, and, on the other hand, new social networks and social support systems in the public housing estates have not yet been established.

It has also been observed by many researchers¹ in Singapore that one of the problems faced by the relocation scheme is that while well-established social organisations and social systems in the slum and other communities affected by the scheme have been destroyed, new organisations and systems are yet to be established in the public housing estates. As a result, communal solidarity and community ties in housing estates are relatively weak (Lim, 1973; Hassan, 1977; Chen & Tai, 1977). In a comparative study of life and the living environment in kampongs and public housing estates, Chen and Tai conclude that the relocation scheme has "provided better housing, better living facilities and better social infrastructures for the majority of the population in Singapore as reflected

1. See, for example, Hassan (1977), Buchanan (1972), Lim (1973), Chen & Tai (1977).

in the findings of this survey and in many other studies. However, the improved man-made environment in high-rise public housing estates still cannot be as effective as the environment of kampong and rural areas in fostering community ties, close human relationships and strong attachment to the community." (Chen & Tai, 1977:98).

As will be discussed at length in Chapter 8, the housing authorities and the Government are, however, aware of this kind of problem, and have since the early 1970s accelerated their efforts in promoting modern social organisations such as community centres (CC), residents' committees (RC), and neighbourhood watch groups (NWG) in an attempt to make these replace the roles and functions of traditional social organisations such as clan associations, mutual assistance groups, secret societies and street organisations.

4. Differential Effects of Relocation on Various Sub-groups of Relocates

Large-scale relocation programmes have differential effects on various sub-groups. It is argued that those groups likely to be affected most adversely are those with the least resources for mobility. They are the poor, the elderly, the small businessmen, the female single-parents, and the minority ethnic groups. Peter Marris argues that urban renewal, because it usually displaces the poorest of the city's population, "raises all the issues of the underprivileged in contemporary America." (Duhl, 1963:113).

The American experience shows that although the authorities have spent so much money on urban renewal, it has usually shifted the slum to another section of the city without improving the living conditions of the poor. Involuntary relocation in particular, creates more negative effects for the old people than for the young. Charles Abrams points out that in addition to their imminent loss of shelter, the elderly are burdened with financial and emotional problems as well (Key, 1967:217).

In a study of the effects of relocation on Negro families in the United States, Leonard Weller and Elmer Luchterhand point out that the low-income Negro families are "overburdened by their economic problems and by the degradation of identities that tend to characterise inner-city life." (Weller and Luchterhand, 1973:288).

In an examination of the social and psychological consequences of urban renewal on a group of Portuguese, Canadians, and "others" (including many Jews) in Toronto, Marvin Lipman finds that the Portuguese, who are upwardly mobile, react positively towards relocation; whereas the Canadians, who are primarily downwardly mobile, white, lower-class welfare recipients, are less able to adapt to relocation. It is, therefore, argued that the ability to cope with change is related to one's socioeconomic status in society. The higher one's status is, the less the dependence upon local, social, and spatial networks and vice versa (Lipman, 1968:127-34). It is, therefore, important to

find out how the effects of relocation vary among different population groups in Singapore.

The findings from most studies conducted in Singapore also show that some segments of the population are more adversely affected than others by the relocation programme. They are usually the involuntary relocatees (Roney Tan, 1974; Hassan, 1977), the minority groups (Zahrah, 1965; Baharin, 1971), and the ex-villagers (Spiro, 1976). These findings and the resultant conclusions are, however, refuted by Stephen Yeh in his analysis of the HDB Sample Household Survey data (Yeh, 1972 & 1975). His findings show that there are no significant differences with respect to the effects of relocation on the various sub-groups of the residents in public housing estates.

5. Length of Residence

When people have lived in a community for a long period, they tend to be strongly attached to it. In a study of a Scottish public housing estate, Vere Hole points out that after the houses have been occupied for a year, most of the tenants achieve some identification with the estate, which they did not possess on first moving there (Hole, 1959:168). This identification, is, however, limited to the area or street in which their house is located, and does not extend to the estate as a whole. Based on a study of the African experience in Zambia, Elizabeth Colson concludes that it takes approximately five years for the relocatees to be sufficiently re-established in their new areas to see

themselves as settled members of the community (Colson, 1971:1).

Although many studies of relocation and public housing in Singapore conclude with a general remark that the loss of community ties in relocation is only temporary and new ones will be formed,¹ no comprehensive studies have been conducted to examine the relationship between the length of residence and the degree of neighbourliness in public housing estates.

In explaining the causes of low neighbourly interaction in public housing estates, Riaz Hassan observes that "The fact that the majority of the households were involved at a relatively low level of neighbourly interaction could be a function of the fact that most of the residents had moved into the flats only two to three years before. It is possible that the intensity and extensity of neighbourly contacts tend to increase with the length of stay in the flats." (Hassan, 1977:102). He then concludes that "it would seem that the intensity, as well as the extensity, of neighbourliness may improve with time." (Ibid.).

This observation is supported by the findings of a study comparing the differences between kampong and HDB dwellers, which show that, compared to the HDB dwellers, kampong dwellers have a higher degree of neighbourliness and a stronger sense of attachment to the community. This is

1. See, for example, Tan (1965), Lim (1973), and Goh (1976).

because, apart from other reasons, the kampong dwellers have been living in the kampong for a longer period of time than the HDB dwellers have been living in the estate. While the majority (94%) of the kampong dwellers have lived in the kampongs for more than five years, only the minority (36%) of HDB dwellers have lived in the estates for more than five years (Chen & Tai, 1977:78-84).

Findings of the 1973 and 1981 HDB surveys also support the above observation. In the 1973 HDB survey, it was found that the percentage of HDB dwellers, who said that there was less contact with neighbours in their present neighbourhood than their previous neighbourhood, decrease with increasing length of residence in HDB estates.¹ In the 1981 HDB survey, it was found that familiarity with neighbours² improves considerably with length of stay in the estate.

III. Conceptual Framework and Hypotheses

The assumptions and observations in relation to the impact of relocation and high-rise living, derived from the studies discussed in the preceding section, provide the conceptual framework for the present study. A series of hypotheses deduced from some of these assumptions are formulated to be tested in this study. They are hypotheses relating to differential effects of relocation on sub-groups

1. See, Tan Soo Lee and Sharon Wong Hock Lim, "Housing and Development Board Household Survey 1973," in Singapore Statistical Bulletin, Vol.3, No.2 (December 1974), p.99.

2 Our Home, June 1982, pp.4-5.

of the population, the process of their adaptation towards the new neighbourhood, and the neighbourhood functions and neighbourliness in public housing estates.

A. Differential Effects on Sub-group Population

It is argued that the large-scale relocation and public housing programmes have different effects on various sub-groups of the relocated population. The programmes have caused more problems to some population groups than others and, in practical terms this requires special attention, such as, providing additional facilities and services to those most adversely affected. Generally speaking, the people who have less resources and weak adaptive capability, are most adversely affected. They are the poor, the elderly, the minority ethnic groups, the villagers, and the involuntary relocatees. The present study will focus on four sub-groups of the relocated population, namely, villagers and urbanites, voluntary and involuntary relocatees, the majority and minority ethnic groups, and the older and the younger population.

1. Villagers and Urbanites

The effects of relocation on and the adaptive capability of those who are from rural areas and those who are from urban areas may be quite different. For most urbanites, relocation into public housing is just a change from one urban area to another, although the two

neighbourhoods may be different and, for some people, it may also result in a change from low-rise to high-rise living. For villagers, relocation means moving from low-rise houses to high-rise apartment buildings, from a rural to an urban community, and from a loosely structured environment to a highly planned man-made environment.

Thus, relocation of villagers into public housing estates involves not only the consequences such a move would have for the urbanites, but a further step in the process of urbanisation as well. The direct transition of villagers from "kampongs" (i.e. villages) to modern high-rise housing estates may cause serious social, economic and psychological problems to the relocated ex-villagers. Let us translate this assumption into the first hypothesis to be tested in this study.

Hypothesis 1. The relocation of people into high-rise public housing estates causes: (a) more economic hardship and, (b) more adaptation problems for relocatees from rural areas than for those from urban areas as the latter are already familiar with urban life, but the former have to adapt themselves to new urban ways.

2. Voluntary and Involuntary Relocatees

It is a common observation derived from studies in Western societies that those people who are affected by urban renewal and are forced to move into public housing involuntarily, usually face more financial difficulties and problems of adaptation than those who move into public

housing voluntarily.¹ Contrary to this observation, Stephen Yeh and his associates found little difference in the degree of satisfaction between resettled and non-resettled households (Yeh, 1975:345).

This finding is interesting for it indicates that the Singapore experience may be different from that of other countries. It cannot, however, tell us the actual dynamics of rehousing of these two sub-groups of the relocated population and the differences in their adaptation to the new public housing environment.

As involuntary relocatees are mainly poor squatters or those who formerly lived in slums and who had less resources to move, they are likely to be more adversely affected by the relocation process and to face serious financial difficulties and adjustment problems. They may be as equally satisfied with the physical environment as their counterparts, who voluntarily moved into the public housing estates. But, they may, at the same time, face different problems. Derived from these assumptions, the second

1. Some researchers classify the relocated population into voluntary and involuntary relocatees (e.g. Schorr, 1975:115; Hassan, 1977:60). In this study, involuntary relocatees are those who were affected by urban renewal projects and were forced to move into high-rise public housing estates. Voluntary relocatees are those who voluntarily applied for public housing flats. The public housing authorities distinguished these two groups as resettled and non-resettled population (Yeh, 1975:343).

hypothesis to be tested in this study is as follows:

Hypothesis 2. The relocation of people into high-rise public housing estates causes: (a) more economic hardship and, (b) more adaptation problems for involuntary relocatees than for voluntary relocatees as the former are mainly from the low-income groups who formerly lived in slums or squatter areas.

3. Effects on Various Ethnic Groups

It is argued that proximity is not a sufficient condition for creating ethnic integration. Referring to the Singapore situation, Robert Gamer says, "Nor does proximity of races automatically build neighbourliness. When you destroy an old ethnic neighbourhood environment, and move individuals to mass-produced high-rise public housing blocks, they do not necessarily associate with their neighbours." (Gamer, 1972:138). Yeung and Yeh, however, argue that "This kind of statement is totally unsubstantiated" by the HDB survey data (Yeh, 1975:279).

One of the main objectives of Singapore's public housing programme is to bring people of all ethnic groups to live together in a planned environment with the hope of promoting ethnic integration. To what extent has Singapore achieved this objective?

There are three major ethnic groups in Singapore, namely Chinese, Malays and Indians. Each ethnic group has its own cultural and religious background, though they all share some common beliefs and cultural traits such as multilingualism, multiracialism and multiculturalism. Moreover, the Malays are known to be "kampong" (i.e.

village) dwellers, whereas the Indians are mostly urban residents. The Chinese population is distributed all over the island republic (Chen & Tai , 1977:28-33). The effects of relocation, adjustment problems and their duration may be different for each ethnic group. Thus,

Hypothesis 3. The minority ethnic groups are: (a) more adversely affected by relocation and, (b) more dissatisfied with the new environment than the majority ethnic group as they have to move into ethnically heterogeneous communities from the relatively ethnically homogeneous ones.

4. Differential Effects on the Older and the Younger Population

The adaptive capabilities of the older population and younger people towards the high-rise public housing environment may differ. Older people, who are generally used to an informal and unplanned type of community which has close neighbourhood and community ties, may find it more difficult to adjust to the high-rise public housing environment than the young. The young people may mix easily among their new peer groups in the public housing estates and be adaptable to the new environment.

Moreover, the physical environment of high-rise housing may cause more problems to the elderly than to the young. Living in a high building not only causes difficulties of movement for the elderly, but it may also cause other psychological effects such as anxiety, depression, loneliness, and a sense of helplessness. This assumption is

to be tested in the present study. Therefore,

Hypothesis 4. The older people find it more difficult to adapt to the high-rise public housing environment than the younger population as the former are used to an informal and unplanned environment, whereas the latter are more receptive to change.

B. Neighbourhood and Neighbourliness

For the purpose of this study, "neighbourliness" is broadly defined as the forms of behaviour, activities and interactions ranging from sporadic, casual and informal contacts to highly formalised and regular neighbourly habits. "Neighbourhood" refers to the observable delimited geographical area in which neighbourliness may occur. As defined by Suzanne Keller, "This may be a clearly demarcated spatial unit with definite boundaries and long-established traditions or a fluid, vaguely defined subpart of a town or city whose boundaries are only vaguely apparent and differently perceived by its inhabitants." (Keller, 1968:12).

It is argued that the function of neighbourhood is closely correlated with the neighbourhood pattern and both of these two variables, in turn, affect the nature of neighbourliness in the community. Donald Warren classifies the diversified neighbourhood functions into six categories. According to him, a neighbourhood can be viewed as: (a) a sociability arena, (b) an interpersonal influence centre, (c) a mutual aid base, (d) an organisational base, (e) a social context, or (f) a status arena (Warren, 1977:152-

156). A neighbourhood may perform one or more of these six functions.

The patterns of neighbourhood in high-rise public housing estates are quite different from those of the residents' former neighbourhoods. To what extent and, in what ways, has this resulted in changes in the neighbourhood functions in public housing estates and what kinds of neighbourhood functions are these? How do the changing patterns and functions of neighbourhoods affect the nature and extent of neighbourliness in the public housing estates? If we are able to answer these questions, we should then be able to know the reasons why, despite providing better housing conditions and living amenities, neighbourliness and community ties are still relatively low in public housing estates.

Some social scientists¹ argue that the established social networks and informal social organisations in the slums, squatters, and "kampongs" (i.e. villages) are more conducive to neighbourliness and community ties, especially in the case of lower social classes. Planned environment, planned administration and formal social organisations as manifested in public housing estates can promote discipline and modernity of the population, but they are not sufficient or conducive conditions for promoting neighbourliness and community ties.

1. See, for example, Jacano (1975), Buchanan (1972), Schorr (1975), and Chen and Tai (1977).

Apart from the patterns of social networks and social organisations, the physical design of the buildings may also be an important factor. Human interaction patterns tend to function in the horizontal rather than vertical direction.¹ This tendency is manifested by the fact that people living in high buildings meet more neighbours from the same floor than from different floors. It is rare that flat dwellers will voluntarily go to floors above or below to meet their neighbours unless they know each other or want to meet for a particular purpose. The horizontal human relationship pattern is, therefore, an important factor in affecting the extent of neighbourliness in high-rise public housing communities.

From the assumptions discussed above, we therefore formulate the following hypotheses to be tested by empirical data:

Hypothesis 5. Adaptation to the new high-rise public housing environment is a function of time. The longer the person lives in the public housing estate, the greater the degree of satisfaction he has with the neighbourhood.

Hypothesis 6. The extent of neighbourliness is a function of time. The longer the residents live in the public housing estate, the greater the degree of neighbourliness among them.

1. See, for example, Michelson (1970), Blake (1956), Chein (1954), Parr (1965) and Feldman (1960).

Hypothesis 7. Human interaction activities tend to function in the horizontal rather than vertical direction. People living on the higher floors of the building are, however, constrained from free movement at both horizontal and vertical directions because of the limitations of social space at the higher floors, fear of lift breakdown, inconvenience of going down to the playground, around the building (especially for the older people) and other worries. As a result, there is a lower degree of neighbourliness among people living on higher floors of the public housing building than those living on lower floors of the building.

Hypothesis 8. The degree of neighbourliness decreases with an increase in the socioeconomic status of the residents in the neighbourhood. The higher social classes have a lower degree of neighbourliness than the lower social classes as the former are more individualistic and less dependent upon local social networks.

SAMPLE AND METHODOLOGY

I. Study Design

The main objectives of the present study are: (i) to examine the social and political implications of the relocation and public housing programmes in Singapore (Part II, Chapters 3, 4 & 5); and (ii) to study the impact of relocation on the various contrasting groups of the population and to identify factors contributing to neighbourliness in public housing estates (Part III, Chapters 6 to 10). To achieve this task, three types of material, viz. official data, empirical material from previous studies, and empirical data collected during the fieldwork of the present study, are used.

The study consists of three parts. Part I of the study is a review of the literature on relocation and public housing, with emphasis on studies conducted in Singapore during the period 1964-1982. In Chapter 1, the main findings of studies completed during this period were discussed, and their resultant conclusions and assumptions formed a series of hypotheses set to be tested in Part III of this thesis. In this chapter (i.e. Chapter 2), study design, sampling scheme, research methods and the socio-economic characteristics of the sample population of this study will be discussed.

Part II of the present study describes and examines the policies underlying and the important social and political

aspects of relocation and public housing in Singapore. The description and discussion, which are based mainly on official data, press reports, and empirical material from previous studies, provide useful information for the study of the relocation and public housing schemes and their effects on the population.

Part III of this thesis analyses the effects of the relocation and public housing schemes, the problems faced by the affected population, and the dynamics of adjustment to the high-rise environment among public housing residents. A set of specific hypotheses related to these problems as outlined in Chapter 1 will also be tested in the course of the analysis, which is based on data and information obtained from fieldwork conducted in Singapore by myself and my research assistants. The fieldwork consists of a sample survey of 1,200 respondents in nine major public housing estates and an in-depth study of 27 relocated families living in high-rise public housing flats.

Both survey and intensive interviewing methods have been used in the fieldwork. This is because while the survey data can provide useful baseline data for the analysis, the dynamics of adaptation and other problems faced by the individuals in the relocation process are not readily verbalised in response to the structured questions used in the sample survey. These dimensions are best examined through intensive in-depth interviews, which were conducted by myself and my research assistants. This is partly due to the fact that living in Singapore, I

frequently have informal contacts with people who live in HDB flats. I also undertook some participant observation on high-rise living and visited HDB estates as frequently as possible in the course of the in-depth study.

II. The Sample Survey

The sample survey used a structured questionnaire on a random sample selected from nine major public housing estates. They are Ang Mo Kio, Bedok, Bukit Ho Swee, Clementi, Marine Parade, Queenstown, Telok Blangah, Toa Payoh and Jurong. The first eight housing estates were developed by the Housing and Development Board (HDB), whereas the last estate was developed by the Jurong Town Corporation (JTC).¹ Among these nine housing estates, Bukit Ho Swee and Queenstown are the oldest estates, whereas Ang Mo Kio and Bedok are the newest. Ang Mo Kio, Bedok and Toa Payoh are among the largest public housing estates in Singapore, each of which will have a total population of more than 200,000 when the development of the whole estate is completed.

In March 1979 when the sample was selected, there were altogether 176,260 units of public housing flats in the nine housing estates included in the survey. This figure represents 52.5% of the total number of 335,852 units of public housing flats built by the HDB and the JTC at March

1. As will be discussed in Chapter 4, both the HDB and JTC are statutory boards. All public housing flats built by these two boards have, however, since May 1982, been under the control and management of the HDB.

1979.

The sample was stratified by size of estate and type of housing unit. The sample size for those estates with a total of less than 15,000 flats is 100 households per estate; the sample size for those with a total number between 15,000 and 30,000 flats is 150 households per estate. For those with a total of more than 30,000 flats, a sample size of 200 was selected. Thus, a total number of 1,200 households was selected for the survey (see Table 2.1).

The sample for each housing estate was selected according to two main criteria, namely type of relocatee and type of flat. Relocates were classified into two types, viz. voluntary and involuntary relocatees. According to the available data, 28 per cent of HDB households at the end of 1972 were resettled households and the other 72 per cent were non-resettled households.¹ The resultant percentages of these two types of relocatee among the sample of the present survey are: 27.9 per cent (335 cases) from involuntary relocatees and 72.1 per cent (865 cases) from voluntary relocatees (see Table 2.2). The proportion of the two types of relocatee in our sample is almost exactly the same as the proportion of these two types of relocatee in all public housing estates in Singapore.

1. See, Yeh (1975), p.343. I cite this data because no other recent data are available. The criteria for classifying the relocated population into involuntary and voluntary relocatees are similar to the criteria used by the HDB for classifying them into resettled and non-resettled population.

Table 2.1 Sample Size of the Nine Public Housing Estates Selected for the Survey

Housing Estate	Number of households selected for the survey	Number of flats as at 31 March 1979					
		1-room	2-room	3-room	4-room	5-room	Total
Ang Mo Kio	150	2,696	3,258	13,852	6,406	1,282	27,494
Bedok	150	1,756	1,402	13,179	8,507	2,840	27,684
Bukit Ho Swee	100	4,826	2,628	3,239	-	-	10,693
Clementi	100	484	656	6,753	3,941	940	12,774
Marine Parade	100	-	1,350	3,124	1,798	1,632	7,904
Queenstown	150	1,112	3,764	11,110	474	-	16,460
Telok Blangah	100	2,676	898	5,788	2,456	1,588	13,406
Toa Payoh	200	11,368	5,676	15,423	2,607	768	35,842
Jurong	150	2,104	1,522	15,115	3,574	1,688	24,003
Total	1,200	27,022	21,154	87,583	29,763	10,738	176,260

Sources: HDB Annual Report 1978/79 (Singapore: Housing and Development Board, 1979), pp. 50-53;
JTC Annual Report 1978/79 (Singapore: Jurong Town Corporation, 1979), p. 29.

Table 2.2 Sex, Age, Ethnicity, Education and Type of Relocates

	Number	Percentage
<u>Sex</u>		
Male	822	68.5
Female	378	31.5
Total	1,200	100.0
<u>Age Group</u>		
Under 30	224	18.7
30 - 39	364	30.3
40 - 49	312	26.0
50 and above	300	25.0
Total	1,200	100.0
<u>Ethnic Group</u>		
Chinese	832	69.3
Malays	245	20.4
Indians	103	8.6
Others	20	1.7
Total	1,200	100.0
<u>Type of Relocates</u>		
Voluntary relocatees	865	72.1
Involuntary relocatees	335	27.9
Total	1,200	100.0
<u>Education</u>		
No formal education	203	16.9
Primary	387	32.2
Secondary	470	39.2
Post-secondary	105	8.8
University	35	2.9
Total	1,200	100.0

The public flats were classified into three major types, namely one- and two-room flats, three-room flats, and four- and five-room flats; each amounted to the approximate proportion of the distribution of the actual number of each type of flat in the housing estates. The resultant percentages of households in different types of flats selected for the survey are as follows: 28% one- and two-room, 50% three-room, and 22% four- and five-room families (see Table 2.4). These proportions are quite close to the national averages for the three major categories of public housing households, which were 32%, 48% and 20% respectively in 1980 (Khoo, No.6, 1981:44).

The selection of the sample was based on households, but interviews were directed towards adult individuals. Each respondent represented one household, and the respondent was either the household head, or his spouse, or an adult member of the family who was nominated by its members.

The survey questionnaire consisted of 129 questions, which were grouped into seven parts, namely background information, relocation and neighbourhood, satisfaction with the flat and the housing estate, neighbourly interaction, high density and crowding, life satisfaction, and physical and mental health. This is a joint survey questionnaire; the first four parts were used for the present study and the project was financially supported by the Institute of Southeast Asian Studies and conducted by myself. The last three parts of the questionnaire were used for another

project,¹ which was sponsored by the Ministry of Science and Technology and conducted by my co-researcher.² This kind of arrangement was made because the two projects are on similar topics and were carried out at the same time. Survey data used for this thesis are confined to the findings of the first four parts of the questionnaire, whereas the analysis of the survey data derived from the last three parts of the questionnaire will be presented in a separate and independent report prepared by my co-researcher.

III. The In-depth Study

An intensive in-depth study of 27 relocated families was carried out simultaneously with the sample survey. Five families from Ang Mo Kio, two families each from Bukit Ho Swee and Queenstown, and three families each from the other six housing estates covered by the sample survey were selected. The particulars of these selected families are presented in Table 9.1.

This in-depth study basically comprised intensive in-depth interviews of the 27 families. The respondents were encouraged to talk freely and discuss whatever seemed

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1. The topic of this project is "Psycho-social Effects of High-density Living in Singapore."
 2. My co-researcher is Peter S.J. Chen, who is Associate Professor of Sociology, National University of Singapore. Both of us had jointly conducted another research project on a similar topic in 1976, which was sponsored by the Ministry of Science and Technology. The results of the study were published in a book entitled, Social Ecology of Singapore (Singapore: Federal Publications, 1977).

relevant to the topics raised by the researcher. In general, each case included a total of four to twelve interview hours. Out of the total of 27 cases, five were selected for more intensive interviews. Each of these five cases consisted of four to six semi-structured discussions with the household head and members of the family as well.¹ The slow progression of interviews was inevitable as it provided the necessary time for rapport and confidence to be established between the respondents and the researcher. For the remaining 22 cases, each case consisted of only two interview sessions.

All interviews for the in-depth study were conducted by myself together with my research assistants, and data and information obtained from this in-depth study are exclusively for this thesis. The research assistant also played a role as interpreter when we interviewed the Malay and Indian families.

IV. Data Collection and Analysis

Field interviews for both the sample survey and the in-depth study were undertaken between September 1979 and November 1980. Coding of the completed questionnaires was carried out between January and March 1981; and data-analysis was made during the period July-October 1981.

Field interviews for the sample survey were conducted by trained interviewers, but field interviews for the in-

1. These five case-studies are analysed in Chapter 9.

depth study were mainly conducted by myself. Altogether 25 interviewers were recruited to conduct the fieldwork for the survey. All of them were undergraduates, and were thoroughly trained, briefed and field-tested by myself and the supervisors.

Throughout the fieldwork, very close supervision was maintained on all interviewers by two supervisors, my co-researcher and myself. Spot checks were made, and re-interviews were carried out in several cases.

It took an average of sixty to seventy minutes to complete the interview for each questionnaire. The long interviewing time posed some problems. In some cases, the interview had to be broken into two parts due to various reasons, and the respondent was visited twice to complete the interview.

Before the survey questionnaire was finalised and adopted, a pre-testing was conducted to test the questionnaire and the attitude of respondents towards the survey. Altogether 50 households from two housing estates, viz. Toa Payoh and Ang Mo Kio, were included in the pre-testing.

In conducting the pre-testing, we purposely divided the 50 prospective respondents into two groups, 25 per group. For the first group, the interviewers explained clearly to the respondents their identification as students from the University of Singapore and that they were gathering the information for a research project conducted by the staff of the University, and assured them that their name and address

would not be recorded and all items of information given by them were strictly confidential and would be used only for academic purposes. As for the second group, the respondents were told about the identification of the interviewer and the objective of the survey only after the interviews were completed. However, three of the 25 respondents of this latter group insisted on knowing the identification of the interviewer and the objective and purpose of the survey before they cooperated by answering the questions.

Among the 22 respondents who did not know the identification of the interviewer and the objective and purpose of the survey, 20 respondents (i.e. 91%) said that they thought the survey was being conducted by the HDB to find out the opinion of residents about HDB flats when they were asked at the end of the interview; the other two respondents said that they were not sure whether the housing authority or another organisation was conducting the survey.

Some interesting findings result from these two different approaches in conducting interviews. First, we find that there is no difference in terms of the extent of co-operation from the prospective respondents. The rejection rate is 8 per cent for each group of respondents. The four prospective respondents (i.e. two per group), who refused to be interviewed, were subsequently replaced by other respondents.

Second, there are, however, significant differences in the answers to the questions given by the respondents between the two different approaches. We focus only on

analysing two questions of the questionnaire: (1) the degree of satisfaction with the housing estate in which the respondents live; and (2) whether their present neighbourhood is better or worse than their former one. Among the 22 respondents who thought the survey was conducted by the HDB, 27.3% (6 respondents) said that they are 'very satisfied' with their housing estate, and 45.5% (10 respondents) said that their present neighbourhoods are 'better' than their former ones. Among the 25 respondents who knew that the survey was not conducted by the HDB but by independent researchers, the percentages of those expressing the same opinion towards the two questions are 16% (4 respondents) and 36% (9 respondents) respectively. This finding shows that the respondents tend to give more favourable answers to questions concerning public housing if they think the survey is conducted by the housing authority. This observation, however, may be biased and may not be representative of the attitude of the general population in Singapore as the sample for this pre-testing survey is rather small.

Based on the experience of the pre-testing, we modified some questions of the questionnaire to make them clearer to the respondents. We also instructed our interviewers to explain clearly to all respondents the identification of the interviewers and the objective and purpose of the survey before the interviews were formally conducted, i.e that it was not a HDB project. This approach was also used in the fieldwork of the intensive in-depth interviews.

Coding of the answers to the structured questionnaires was done by five coders trained and supervised by my co-researcher and myself. Supervision of coding included random checks on accuracy and coding reliability.

Data coded from the 1,200 completed questionnaires were subsequently transmitted onto computer cards. Tabulations of the survey data were made, using the computer facilities at the Computer Centre of the National University of Singapore.

V. Socioeconomic Characteristics of the Sample

The population of the sample survey consists of 822 (68.5%) male respondents and 378 (31.5%) female respondents, making a total of 1,200 respondents (see Table 2.2). Males are over-represented because the interviews were mainly conducted with household heads, and only when the household head was not available, the spouse or some other adult member of the family was then interviewed instead.

In terms of age group, 18.7% of the sample are under 30 years old, 30.3% are between 30 and 39, 26.0% are between 40 and 49, and 25.0% are 50 years old and above (see Table 2.2).

The distribution of respondents by ethnic group is shown in Table 2.2. The Chinese respondents amount to 69.3% of the sample population; the Malays, 20.4%; the Indians, 8.6%; and the others amount to 1.7%. The proportions of the four major ethnic groups in our sample are quite close to the distribution pattern of the total population in the

Republic, with the Chinese slightly under-represented and both the Malays and the Indians slightly over-represented. According to the 1980 Census of Population, the distribution of the four major ethnic groups was: 76.9% Chinese, 14.6% Malays, 6.4% Indians, and 2.1% others (Khoo, No.1, 1981:2).

Where did the respondents live before they moved into their present public housing flats? Table 2.5 shows that 34.3% of them lived in the city centre, 42.7% lived in suburban areas, and 23.0% lived in rural areas. Among the total respondents, 56% lived in low-rise housing and 44% lived in high-rise housing before they moved into their present flats.

In terms of education, 32.2% had received some primary school education, 39.2% received some secondary school education, and 11.7% received some post-secondary or university education. The remaining 16.9% of the respondents had not received any formal education (see Table 2.2).

The occupational status of the respondents reported in Table 2.3 shows that 17.2% of the respondents are professional, administrative, and managerial personnel; 15.2% are sales and clerical workers; 28.3% are manual workers; and 19.2% are classified as others. The remaining 20.1% are either housewives, unemployed, or unspecified.

In terms of household income, 16.7% have a total monthly household income below S\$500¹, 41.9% between S\$500

1. US\$1=S\$2.07; £1=S\$3.15 as at March 1, 1983.

and S\$999, 23.7% between S\$1,000 and S\$1,499, and 17.2% have a total monthly income of S\$1,500 or above. The remaining 0.5% did not give definite answers to the question (see Table 2.3). The distribution of these four income groups in the survey sample is quite close to the general pattern of distribution of the same income groups among all households in public housing estates in the whole country, with the samples of the highest and the lowest income groups of the survey slightly under-represented and the income groups between S\$500 and S\$1,499 slightly over-represented. According to the census data, the percentages for the four respective income groups are: 23.3%, 36.5%, 18.6%, and 21.0%. The remaining 0.6% are unclassified (Khoo, No. 7, 1981:9).

As shown in Table 2.3, the majority of the households (83.2%) belong to nuclear families, and extended families and joint households¹ amount to only 16.8% of the total households. The percentages of nuclear families in our sample is very close to that of nuclear families (i.e. 84.7%) in all households in public housing estates shown in the 1980 census data (Khoo, No. 6, 1981:4).

Today, there are five types of public housing flat in Singapore, namely one-, two-, three-, four-, and five-room.

1. The definition of nuclear family, extended family and joint household used in this study are: nuclear family comprising one or two parents and unmarried children; extended family comprising one or two parents, one or more than one married child with or without children; joint household comprising two or more unrelated adults living together as one household.

The number of rooms include both living rooms and bedrooms. In 1979, the majority of public housing flats were three-room flats, which amounted to 45.3% of the total public housing flats in the whole country when the sampling for this study was made. As shown in Table 2.4, the distribution of the five different types of flat in our sample is as follows: 10.4% one-room, 17.4% two-room, 50.5% three-room, 8.5% four-room, and 13.2% five-room.

The majority of the respondents have lived in their present public housing flats for more than three years. As shown in Table 2.5, about 34.9% of the respondents have lived in their present flats for less than three years, 26.0% for three to four years, 15.4% for five to six years, and 23.7% for seven years or longer. Survey data also show that 11.4% of the total respondents have changed residence two times or more during the past five years (see Table 2.5).

Table 2.3 Occupation, Income and Household Type

	Number	Percentage
<u>Occupation</u>		
Professional	82	6.8
Administrative/managerial	125	10.4
Clerical	122	10.2
Sales	60	5.0
Manual	340	28.3
Others	230	19.2
Inapplicable/no answer	241	20.1
Total	1,200	100.0
<u>Household Income</u>		
Below \$500	200	16.7
\$500 - \$749	267	22.2
\$750 - \$999	237	19.7
\$1,000 - \$1,499	284	23.7
\$1,500 and above	206	17.2
Not applicable/no answer	6	0.5
Total	1,200	100.0
<u>Average Income Per Person</u>		
Below \$250	478	39.8
\$250 - \$499	239	19.9
\$500 - \$749	174	14.5
\$750 - \$999	135	11.3
\$1,000 and above	110	9.2
Not applicable/no answer	64	5.3
Total	1,200	100.0
<u>Type of Household</u>		
Nuclear family	998	83.2
Extended family	166	13.8
Joint household	36	3.0
Total	1,200	100.0

Table 2.4 Household Size, Type of Flat, Floor Level, and Height of the Building

	Number	Percentage
<u>Number of People Living Together in the Flat</u>		
Less than three persons	52	4.3
Three persons	162	13.5
Four persons	264	22.0
Five persons	246	20.5
Six persons	216	18.0
Seven and more	260	21.7
Total	1,200	100.0
<u>Type of Flat</u>		
One-room	125	10.4
Two-room	209	17.4
Three-room	606	50.5
Four-room	102	8.5
Five-room	158	13.2
Total	1,200	100.0
<u>Floor Level</u>		
Ground-2nd floor	179	14.9
3rd-4th floor	229	19.1
5th-6th floor	199	16.6
7th-8th floor	194	16.2
9th-10th floor	185	15.4
11th-12th floor	98	8.2
13th floor and above	116	9.6
Total	1,200	100.0
<u>Height of the Building</u>		
1-4 storeys	26	2.2
5-8 storeys	41	3.4
9-12 storeys	631	52.6
13-16 storeys	303	25.2
17-20 storeys	37	3.1
21 and more storeys	162	13.5
Total	1,200	100.0

Table 2.5 Duration and Location of Residence

	Number	Percentage
<u>No. of years residing in the flat</u>		
Less than one year	82	6.8
1-2 years	337	28.1
3-4 years	312	26.0
5-6 years	185	15.4
7 years and above	284	23.7
Total	1,200	100.0
<u>Number of times the respondents have changed residence during the past five years</u>		
None	473	39.4
Once	590	49.2
Twice	108	9.0
Three times and more	29	2.4
Total	1,200	100.0
<u>What type of housing did the respondents live in before moving into the flats?</u>		
High-rise housing	528	44.0
Low-rise housing	672	56.0
Total	1,200	100.0
<u>Where did the respondents live before moving into the flats?</u>		
City centre	411	34.3
Suburban area	512	42.7
Rural (villages/kampongs)	277	23.0
Total	1,200	100.0

CHAPTER 3

HOUSING CONDITIONS AND HOUSING PLANNING

Singapore faced problems of overcrowding and housing shortages as early as the beginning of this century, but, the problems were enlarged to critical proportions in the postwar period by rapid population growth resulting from a great inflow of immigrants from China, India and Malaya in the late 1940s and early 1950s. The first attempt made by the colonial government to solve the acute housing problem was the setting up of the Singapore Improvement Trust (SIT) in 1927, which started its first public housing scheme in 1936. The SIT, however, did not succeed in achieving its objective of improving housing conditions for the people. For a period of more than 30 years, i.e. from 1927 to 1959, the SIT built only 23,000 units of low-cost public housing (Chen & Tai, 1977:13). The failure of the SIT was partly due to the lack of legal authority and financial support given by the Government to its building programmes.

It was only in 1960, when the present government made public housing programmes one of the top priorities of national development for social and political reasons¹ that the HDB was established to undertake large-scale public housing programmes which would provide low-cost high-rise housing for the lower income groups. By 1985, twenty-five years after the inception of large-scale high-rise public

1. This issue will be discussed at length in Chapters 4 & 5.

housing programmes, the HDB had provided housing for more than 80 per cent of Singapore's population.

I. Housing Conditions

In general, housing conditions in any society are characterised by three main factors, namely the quality and permanence of the housing stock, the population density and extent of overcrowding in existing housing, and the availability and quality of services and amenities related to housing. The criteria of assessing these indices in measuring housing conditions, however, differ among different societies and vary with time in a given society as well.

Until recently, Singapore's population had always tended to grow faster than the Government could provide decent accommodation for its population. The population of Singapore has increased more than ten times since the beginning of this century. In the 1901 census, Singapore had a total population of 227,592. The figure increased to 2,472,000 in 1980.

Moreover, the heavy concentration of people in the central business area of the city made the problem unmanageable. The resultant overcrowding and housing shortage, especially in the pre-1960 period, not only caused serious health problems such as the high incidence of tuberculosis in the 1940s and 1950s, but also became a controversial political and social issue. It is, therefore, not surprising to note that the promise to provide low-cost housing for the low-income families was probably the only

common platform of all the political parties participating in the first general elections in 1959, when Singapore obtained its internal self-governing status.

A. The Pre-1960 Period

The first report on the housing conditions in Singapore was made in 1907 by Professor W. J. Simpson of King's College, London. The report deplored the overcrowding of dwellings, the lack of open space, the lack of light and air, the lack of windows, and the primitive sanitary conditions (Sennett, 1948:2). In 1918, the Housing Commission further investigated the housing conditions in Singapore and reported that the poorer people could not afford to pay rent for individual houses per family, and in consequence there was general subdivision of housing space into cubicles, thus further aggravating the overcrowded conditions and, leading to "a high percentage of sickness and a high rate of mortality" (Ibid.). Nine years after the report, the SIT was created to build low-cost housing for the low-income families. But it took ten years for the SIT to start its first public housing scheme, which was a small-scale project.

The public housing scheme was interrupted by the Pacific War in 1941, and the Japanese occupation made the housing situation very much worse for the population of Singapore. The War had destroyed thousands of houses. Moreover, during the Japanese occupation, there was no proper control of building. As a result, thousands of

people constructed their own unauthorised houses and dwellings. By the end of the War, tens of thousands of people were living in huts made of attap, old wooden boxes, rusty corrugated iron sheets and other such salvaged material. They lived in congested squatter settlements with "no sanitation, water, or any elementary health facilities" (Seow, 1965:11). The critical situation of overcrowding and substandard living conditions was accelerated by the big inflow of immigrants from China, India and Peninsular Malaya immediately after the War.

Widespread substandard living conditions and the resultant health and social problems in the post-war period were reported by Sennett (1948), Goh (1956), and Kaye (1960). The Housing Committee formed in 1947 reported that the housing shortage had reached "famine proportions". The slum conditions were associated with a high incidence of crime and health hazard. For example, the tuberculosis death rate in Singapore was 235 per 100,000 in 1947, as compared with a rate in London of 63 per 100,000 in 1946 (Sennett, 1948:11). Moreover, there were more than 100,000 people, which constituted more than 10 per cent of the total population, living in squatter settlements with no sanitation or any elementary health facilities in the Municipal area. It was literally and physically impossible to evict these people as they had nowhere else to go.

In 1953, the Department of Social Welfare embarked on a social survey of urban incomes and housing, which was conducted by Goh Keng Swee, the then Assistant Director of

Social Welfare (Social Research) and the former Deputy Prime Minister of the present Government; it was completed in 1954. The report was the first comprehensive analysis of urban housing and living conditions ever made in Singapore. The main findings concerning housing and living conditions (Goh, 1956:61-81) are as follows:

(a) House density - Data showed that less than one-fifth of the survey households had exclusive occupation of the house they lived in. More than four-fifths of the households had to share houses with others. Twenty-three per cent of the survey households were living in houses each of which was shared by eleven or more households.

(b) Rooms and cubicles - In the congested areas of Singapore, the home of a family often consisted solely of a cubicle or a room. Shop-houses and terraced houses were partitioned into cubicles, which were up to five or six or even more to a floor. So far as the family was concerned, this was their home. Kitchens, bathrooms and lavatories were shared by all households living in the house.

(c) Overcrowding - The findings showed that 50 per cent of the households were acutely overcrowded, 22 per cent overcrowded but not acutely, and 28 per cent not overcrowded. The extent of overcrowding was measured by the following criteria: where there were more than four equivalent adults per room, it was classified as 'acutely overcrowded'. 'Overcrowded but not acutely' meant that there were four equivalent adults per room, and 'not overcrowded' meant less than four equivalent adults per

room.

The findings of the Goh study were confirmed by another sociological study of housing conditions in the densely populated area of Upper Nanking Street conducted by Barrington Kaye in 1956. Kaye described the living conditions in this part of Chinatown as "among the most primitive in the urban areas of the World" (Kaye, 1960:5). Houses in Upper Nanking Street were all shophouses.¹ The majority of these were divided internally, on the first and second floors, into living-cubicles, and, there were usually one or two cubicles behind the shop on the ground floor. Many of these living-cubicles were without windows or external openings, and the only sources of light and ventilation were the windows at the end of the corridor, those in the front cubicles, and those opening on to the air wells. Almost all the people had to share the use of kitchen, bathing and toilet facilities with members from other households.

The mean number of cubicles per shophouse was 8, the mean shophouse population was 30. The mean number of persons to a cubicle was 3.3 persons or 2.9 equivalent adults. The average size of cubicles was 103 square feet. The mean floor density was 39 square feet per equivalent adult (Kaye, 1960:45 & 66).

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1. Shophouses are row-houses, most of these are two or three storeys. In general, the ground floors or the front parts of ground floors are used as shops or offices, and the first and higher floors are used as dwelling units.

The overcrowded situation and substandard living conditions of the street described by Kaye were typical for almost the whole central business area, which amounted to about 1.2 per cent of the total land area of the then colony, and within this area lived one-quarter of the total population of Singapore.

B. The Post-1960 Period

As demonstrated in the above discussion, both research findings and official data show that the physical deterioration of the housing situation and the overcrowded conditions in the central areas of the city had reached a critical state in the 1950s. The seriousness of these problems, however, seemed to be more the concern of the social scientists, the politicians, and the press than the concern of the common people who lived in such substandard housing. Although there were frequent reports in local newspapers about the seriousness of the substandard housing conditions and frequent incidents of disastrous fire in the squatter settlements during this period, no studies were undertaken to find out how the squatters and slum dwellers felt about the problems of housing and overcrowding. Therefore, there is no documented material or research data reporting the actual opinions and feelings of the slum dwellers in particular or of the general population in Singapore.

The acute overcrowding and substandard living conditions in rural squatter settlements and the central

areas of the city had, however, become a most pressing and controversial social and political issue, as provoked by the radical politicians and the anti-colonial movement, in the 1950s. The housing problems, therefore, became one of the most controversial issues in the general elections in the 1950s and early 1960s.

When Singapore became internally self-governing in 1959 and the PAP Government assumed office in the same year, development programmes to solve the housing problems were given top priority. Large-scale high-rise public housing programmes have, since 1960, been carried out and many private dwellings, both high-rise and low-rise, have been built by private developers in response to the economic boom and the encouragement given by the Government. Housing conditions have, therefore, improved significantly.

Today, extreme overcrowding and substandard living conditions are almost things of the past. Comparing the household conditions in 1954 and 1970, the average number of rooms per household grew from 0.9 to 2.2, whereas, the average number of households per housing unit decreased from 2.8 to 1.2, and the average number of persons per room dropped from 4.8 to 2.5 (Yeh, 1975:34-35). The average size of households also declined from 5.82 persons in 1966 to 5.35 in 1970 and 4.71 in 1980.¹

1. Khoo, Release No. 6, 1981, p.5; You Poh Seng, et. al., Singapore Sample Household Survey 1966 (Singapore: Ministry of National Development, 1967), p.213.

The rapid development of public and private housing in the post-1960 period has resulted in a remarkable change in the distribution of the population living in various types of dwelling units. Since 1960, the percentage of people living in shophouses, and attap and zinc-roofed houses, has dropped drastically; the percentage of people living in public flats has, however, progressively increased (see Table 3.1). The consequence of this change is that more and more people have moved from low-rise to high-rise buildings.

II. Housing Needs, 1970-1992

Housing need and housing demand are two different concepts. Stephen Yeh distinguishes these two concepts by referring to housing need as "the inadequacy of existing provision of accommodation when compared with a socially acceptable norm. It takes no account of ability to pay." Whereas, housing demand is related to "the accommodation for which people are able and willing to pay." (Yeh, 1975: 37-38). This distinction is useful, as housing demands change over time, usually together with the increase of affluence in the society. Therefore, it is possible to project housing needs, but not housing demands, in the long-term. These two terms are, however, usually used as interchangeable among most researchers and planners.

The detailed estimates for housing needs from 1970 to 1992 are projected by Stephen Yeh. Based on the population projections made in 1961 and modified in 1968, Stephen Yeh estimates that "on the low, medium, and high estimates, some

Table 3.1 Distribution of Households by Type of House in Singapore, 1966, 1970 and 1980

Type of Housing Unit	1966	1970	1980
Detached bungalows, semi-detached bungalows and terraced houses	7.2	14.1	9.3
Public flats (HDB, JTC and other public flats)	25.4	30.9	67.4
Private flats	3.9	4.8	3.6
Attap and zinc-roofed houses	30.9	33.6	12.3
Shophouses	31.1	12.6	5.5
Others	1.6	4.0	1.9
All units (%)	100.0	100.0	100.0
Total households	331,900	380,523	509,524

Sources: P. Arumainathan, Report on the Census of Population 1970 Singapore Volume 1 (Singapore: Department of Statistics, 1973), p. 209; You Poh Seng, et al., Singapore Sample Household Survey 1966 (Singapore: Ministry of National Development, 1967), p. 165; and Khoo Chian Kim, Census of Population 1980 Singapore, Release No. 6 (Singapore: Department of Statistics, 1981), p. 59.

470,000, 506,900 and 575,700 units, respectively, would be needed." (Yeh, 1975:45). He points out that the housing needs of Singapore will be met mostly by public housing. Yeh's estimates of housing needs seem to be on the high side if we consider only the population factor. This is because the estimates are based on population projections made in the 1960s. As a result of the rapid decline in population growth rates in recent years, the projections of population made recently are much lower than those made in the last decade (Chen & Tai, 1977:27).

Based on the most recent projections¹, by 1992 the total population will be about 2.8 million. The average size of households was 4.7 persons in 1980 and this figure is estimated to drop to four persons per household in the late 1980s.² Based on the assumption that the average household size is 4.5 persons per household, there will then be about 622,222 households in 1992. The average number of households per housing unit by that time should be quite close to one. In 1970, there were altogether 305,800 housing units in Singapore. If we assume that about 30 per cent of these buildings will be demolished and replaced by new buildings during the period 1970-1992, this will result in the demand of 408,162 housing units for the period, in

1. See, Chen (1983: 84-85); Chen & Tai (1977:27); and Saw Swee Hock, Population Control for Zero Growth in Singapore (London: Oxford University Press, 1980), p.192.

2. See, Khoo, Release No. 6 (1981:4-5); and The Straits Times, February 22, 1983.

order to maintain the standard of there being 4.5 persons per household and one household per housing unit.

It is estimated that about 18 per cent of the housing needs during this period will be met by private houses and apartments, and the remainder will be met by public housing flats.¹ In other words, the HDB should build at least 335,000 units of public flats during the period 1970-1992, otherwise a situation of housing shortage will result again. During the period 1971-1980, the HDB had already built a total of 225,000 dwelling units. The HDB has targeted to build some 290,000 new units for the period 1981-1990.² Therefore a total of 515,000 new dwelling units, exceeding the projected needs for public housing by 180,000 units, will be built by the HDB if the targets set for the fifth and sixth Five-Year Building Programmes are achieved.³

As there has been a sharp decline in the proportion of private land in the Republic and a steep rise in land prices⁴ since the passage of the Lands Acquisition Act in

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1. See, Philip Motha, "Prospects for Property in the 1980s," in Reprints 1981/82 (Singapore: Department of Building & Estate Management, National University of Singapore, 1983), pp.78-79.
 2. The Straits Times, January 15, 1983; and February 22, 1983.
 3. There are reasons to believe that the targets will be achieved as public housing programmes have always been regarded as the top priority of national development and all, but the fourth Five-Year Building Programme, had not only achieved but surpassed their original targets.
 4. This issue will be discussed at length in Chapter 4.

1966, private developers may not be able to meet the projected 18 per cent of housing needs during the period 1970-1992. For example, during the period 1975-1978, only 7.3 per cent of the total dwelling units completed in this period was built by private developers. The other 92.7 per cent was built by the HDB and the JTC.¹

Housing demands change over time, due to increases in income levels, improvement of living standards, and changes in life-styles of the population in the society. The per capita income of Singapore's population rose from S\$1,330 in 1960 to S\$15,230 in 1984, a more than ten-fold increase in twenty-four years. As a result, housing demands have also changed dramatically. The demands for both private and public housing sharply increased in the late 1960s and the 1970s.

During the period 1968-73, the prices of private housing increased two- to three-fold, whereas the selling price of HDB flats remained relatively unchanged. Moreover, the demands for HDB flats have shifted from small to large flats. In the 1960s, one- and two-room flats were most popular. But, since the early 1970s, three- and four-room flats have become most sought after. The numbers of new applications for HDB flats steadily increased from 1960 to 1973; but from 1974 the numbers declined remarkably until 1980 when the numbers increased again, and by January 1983

1. Philip Motha, op. cit., p.81.

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the numbers reached the highest record.

Although no studies have been done to find out the changing patterns of housing demands among Singaporeans over a period of time, data collected from my study of 1,135 Singapore youths conducted in 1978 show that people would like to have large dwelling units, preferably terraced, semi-detached, or detached houses if they could afford to buy these types of houses.² Findings of my study show that 94.2 per cent of the youths included in the study indicated that they would like to have at least three rooms, only 5.8 per cent indicated that one or two rooms would be sufficient for them. The average number of rooms the youths would like to have is 4.2.³ This indication shows that there will be less demand for one- and two-room flats in the future and that more and more people would like to have four- and five-room flats.

In terms of housing preference, only 23.4 per cent of the respondents would prefer to live in HDB flats. 20.2 per cent would like to live in private apartments, and 56.4 per cent would like to live in terraced and semi-detached houses

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1. Chen & Tai, 1977, p.19; and The Straits Times, January 29, 1983. Factors contributing to the increase in demand for public housing since 1980 will be examined in Chapter 4.
 2. Tai Ching Ling, Survey on Youth Attitudes in Singapore, Research Project Series No.13 (Singapore: Institute of Humanities and Social Sciences, Nanyang University, 1980), pp.15-16.
 3. Ibid., p. 16.

or detached bungalows.¹ In other words, 43.6 per cent of the respondents would prefer to live in high-rise flats and 56.4 per cent would prefer to live in low-rise housing. This finding suggests that when society becomes more affluent and people have sufficient financial means, they prefer low-rise housing. This is another important fact the public housing authority cannot ignore when it makes long-term planning for public housing.

Three important questions in relation to housing planning for the future in Singapore can be deduced from the above findings: (1) Will there be a surplus of HDB flats in excess of demand in 1992 when the HDB achieves its target of building HDB flats for 85 per cent of Singapore's population, as only 23.4 per cent of the young generation in Singapore would prefer to live in HDB flats over other types of housing? (2) Will the HDB modify its long established norm of concentrating all its building projects on high-rise flats in the future, since the majority of young Singaporeans (56.4%) would prefer to live in low-rise housing? (3) Will the HDB concentrate its building programmes on only the larger units of flats, i.e. three-, four- and five-room flats in the future?

The Government's response to the third question is positive as the HDB has since 1977 stopped building one- and two-room flats and has since its fifth Five-Year Building Programme (1981-85) shifted its priority to building large

1. Ibid.

units of flats (The Mirror, December 1, 1982). There are, however, no indications that the housing authority will slow down its building programmes or consider other alternatives to supplement or complement its high-rise option. In fact, the Government has re-assured the people that it will continue to speed up its building programmes for high-rise flats in the next decade (The Straits Times, January 15, 1983; and February 22, 1983).

III. Urban and Housing Planning

Slums and housing problems in many countries start in the city centre but measures to solve these problems cannot be confined to the centre. Buildings alone cannot create a lively living environment nor can they solve the slum and housing problems as they must be accompanied by such infrastructural facilities necessary for recreation, commerce, community activities, and transport. Therefore, urban renewal, housing projects and urban development must be regarded as integrated programmes under an overall development plan. This rationale was recognised in Singapore as early as 1947 when the Housing Committee recommended that a long term Master Development Plan for Singapore should be formulated (Sennett, 1948:11).

A. The Statutory Master Plan

Following the recommendation of the Housing Committee, the SIT was in 1951 given the additional duty of preparing a Master Plan for Singapore and, a Master Plan Team was formed in 1952 to carry out this task. The team first conducted a

survey to identify the current and future needs of Singapore's land use for all purposes. The information collected from the survey and the experience gained by the SIT from 1927 onwards formed the basis of the Master Plan. In 1955, Singapore's first comprehensive Master Plan for residential and urban development was completed and submitted to the Government. During 1956 and 1957 the Plan was closely examined by the Government and it was finally adopted in 1958.

The statutory Master Plan covered a 20-year period from 1953 to 1972. It contained a set of 53 maps of the various parts of Singapore and showed how land and buildings should be used for the said period. The machinery for implementation of the Master Plan was spelled out in the Planning Ordinance, which was passed in 1959 and went into operation in 1960. Consequently, the Housing and Development Board, a statutory board, was constituted and the Planning Department, a government department, was set up within the Ministry of Law and National Development. The major proposals of the Master Plan were, among others, as follows:

(a) The Plan proposed large-scale programmes for the clearance of unsatisfactory temporary dwellings, and the development of large areas for public and private housing. A housing rate of more than 10,000 dwellings a year, supplemented by temporary housing, was to be achieved by both public and private efforts.

(b) This target was to be achieved by: (i) the creation of new planned attap settlements and the development of existing villages to accommodate more people; and (ii) a proposed programme to re-develop the older, central parts of the city. The emphasis of the re-development of the central areas was, however, to reduce the population in these areas from their existing population of 340,000 to 279,200 persons by means of de-centralisation, i.e. shifting part of the population from the city centre to the new satellite towns.

(c) Three new satellite towns, at some distance from the city centre, were proposed. These new towns were to be self-contained, with sufficient schools, open spaces, shops, industrial and community facilities. Moreover, the growth of the existing city should be limited by the provision of a green belt of open space. Of the total area of 6,838 acres reserved for green belt, 1,152 acres were to be used eventually for playing fields and public parks, and the remainder for agriculture, recreation and other purposes.

Generally speaking, the core policy for urban development as reflected in the Master Plan can be described as one of de-centralisation. The growth of the existing city was to be limited by a green belt. The population living in the central areas of the city was to be reduced by one-sixth to alleviate problems of overcrowding and traffic congestion. Further urban growth was to be accommodated in the proposed new towns at some distance from the city centre.

Most of these major proposals were accepted and partially implemented. The proposal to create new planned attap settlements and to develop existing villages, however, was never given serious consideration, and was in fact dropped from all governmental housing and urban development programmes.

The Master Plan was formulated and approved before Singapore attained self-governing status in 1959. Since then, Singapore has experienced rapid political, social, economic and demographic changes, which made the Master Plan outdated. As pointed out in the report of the third review of the Master Plan, the main shortcomings of the Plan "stem from the inability to foresee mounting traffic growth and demands and, more importantly, the Master Plan's inability to cope with the new demands made upon it by rapid changes in the direction and tempo of the Government programmes since the early 1960s."¹

According to the Planning Ordinance, the Master Plan must be reviewed at least once in every five years. In compliance with this requirement, the first review was made in 1965, the second in 1970 and the third in 1975. There were no major changes in the first and second revisions. But the third review involved major changes, not only on the specific proposals but also on the basic planning philosophy. The changes made in the third revision are in

1. Singapore, Planning Department, Master Plan: Third Review (Singapore: Government Printing Office, 1975), p.2.

response to the Concept Plan proposed by an ad hoc planning study committee set up by the present Government in 1967.

B. The Concept Plan

To tackle the shortcomings of the statutory Master Plan and the problems of urban growth and renewal, the Singapore Government undertook a major planning project in 1967 with the assistance of the United Nations Development Program (UNDP) to prepare another long-range comprehensive development plan for the whole of Singapore. An ad hoc organisation known as State and City Planning (SCP) was set up within the Ministry of Law and National Development. The office was staffed by officers seconded from the Planning Department, the Public Works Department, the Housing and Development Board, and by staff specially recruited for the project.

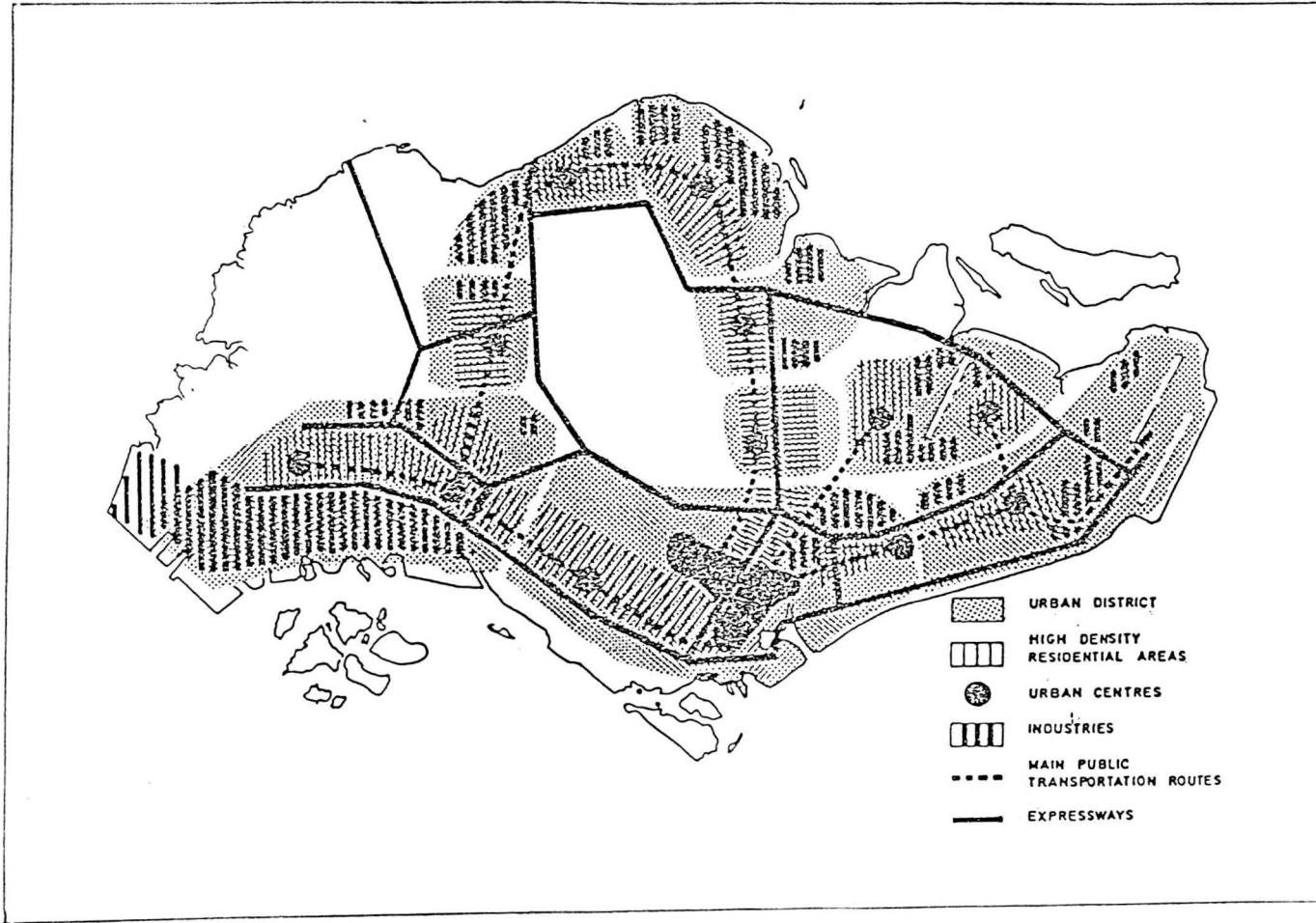
The terms of reference for the project, among others, comprised: (a) the collection of data required to support both comprehensive and project planning; (b) the preparation of long-range, comprehensive physical development plans for Singapore; (c) the preparation of a policy sketch plan for urban renewal of the Central Area; (d) the preparation of a general traffic and transportation plan; and (e) assistance in developing the resources of the Planning Department to enable it to undertake the comprehensive planning of a large and complex city on a continuing basis.

The project adopted a multi-disciplinary approach to formulate a long-term physical development strategy. It dealt comprehensively not only with the question of physical planning but also with subjects ranging from sociology to transportation and from land economics to urban design. After examining a wide range of alternative solutions, the Project finally selected a ring concept plan (see Map 1). The project was completed and the Concept Plan, which has since 1979 been referred to by official documents as the Comprehensive Plan, was produced in 1971.

The Plan was projected to 1992, covering a period of 20 years, and designed to accommodate a population of 3.4 to four million.² According to the Project Manager, the Plan could accommodate up to six million people, but at a considerably higher density. The proposed traffic and transportation services, road network, mass rapid transit system, parking facilities and other provisions proposed in the Concept Plan could, with due adjustment, cater for a population of about six million.³ Among others, the major proposals of the Concept Plan are as follows:⁴

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1. A. Doudai, "Singapore's United Nations-Assisted State and City Planning Project," in Journal of the Singapore Institute of Planners, Vol.1, No.1 (September 1971), p.5.
 2. As discussed in the second section of this chapter, the most recent projected population for Singapore in 1992 is 2.8 million.
 3. A. Doudi, op. cit., p.7.
 4. Singapore, Planning Department, op. cit., pp. 4-10.

Map 1: Proposed Major Urban Districts in Singapore in 1992



(a) The Plan recommends that provision for continued growth of the Central Area, with particular emphasis on residential development, should be made. Allowance is made for further development of new towns. Emphasis is placed on the further development of the southern belt, which will be expanded eastwards from the existing central urban area to Changi and westwards to Jurong to form a heavy belt of urban development along the southern coastline (see Map 1). Further urban growth is provided for in two corridors extending northwards from the city centre on either side of the central water catchment area.

(b) Provision is made for the expansion and further development of urban areas in Jurong, Woodlands/Sembawang, Yio Chiu Kang/Thomson, Bukit Panjang, and Changi/Bedok. Adequate provision is also made for the further development of industrial estates in Jurong and Woodlands, and public housing estates in Toa Payoh, Queenstown, Telok Blangah, Ayer Rajah, Clementi, Jurong, Ang Mo Kio, Woodlands and Bedok.

(c) When the housing and urban developments proposed in the Concept Plan are completed in 1992, there will be altogether nine urban centres in the Republic, with one commercial centre, two industrial areas and six residential areas (see Map 1).

(d) The physical and land use pattern of development in the Concept Plan has to be serviced by an adequate highway network. The highway system shall provide quick access to important activity centres. Moreover, it is

proposed that provision for a high capacity Mass Rapid Transit (MRT) system¹ be made to link the heavy concentration of population from the Central Area to Queenstown, Clementi and Jurong in the west, to Bedok and Tampines in the east, and to Toa Payoh, Ang Mo Kio and Yishun (also known as Nee Soon) in the north (see Map 3). Provision is also made for the comprehensive development of Changi International Airport.

(e) Island-wide recreational and open space provisions are other important proposals, which include: the retention of the large central water catchment area; the preservation and further development of major parks and recreational areas; the reservation of the coastline along Loyang, the East Coast reclamation area and Pasir Panjang for public use; and the protection of the choice beaches of many of the off-shore islands for future recreational needs.

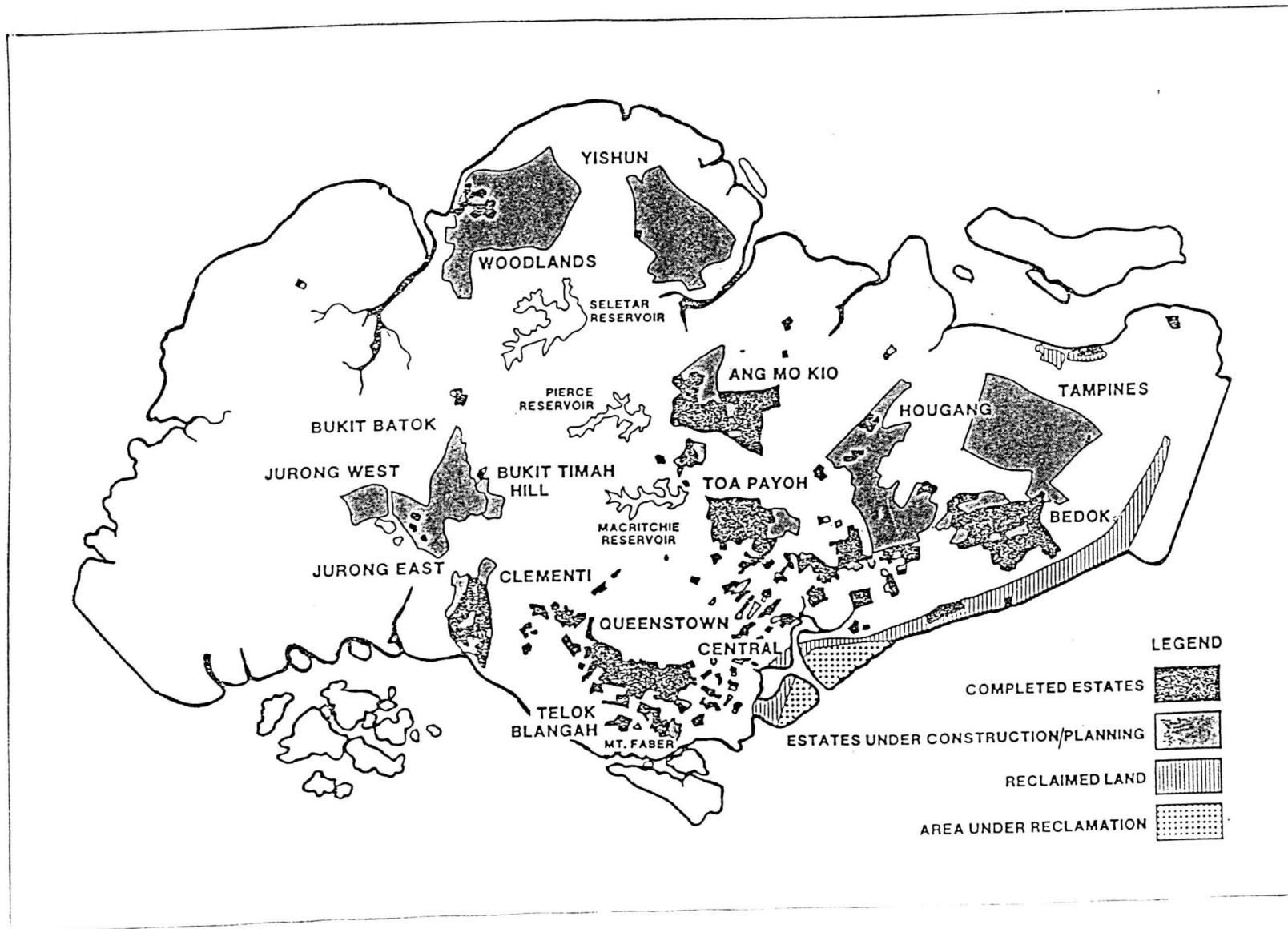
Comparing the Concept Plan with the Master Plan, apart from the new provisions of the Concept Plan, there are some fundamental differences between the two plans.

First, the Master Plan advocates a de-centralisation policy for the development of the city centre, whereas the Concept Plan recommends the extension and continued growth of the city centre.

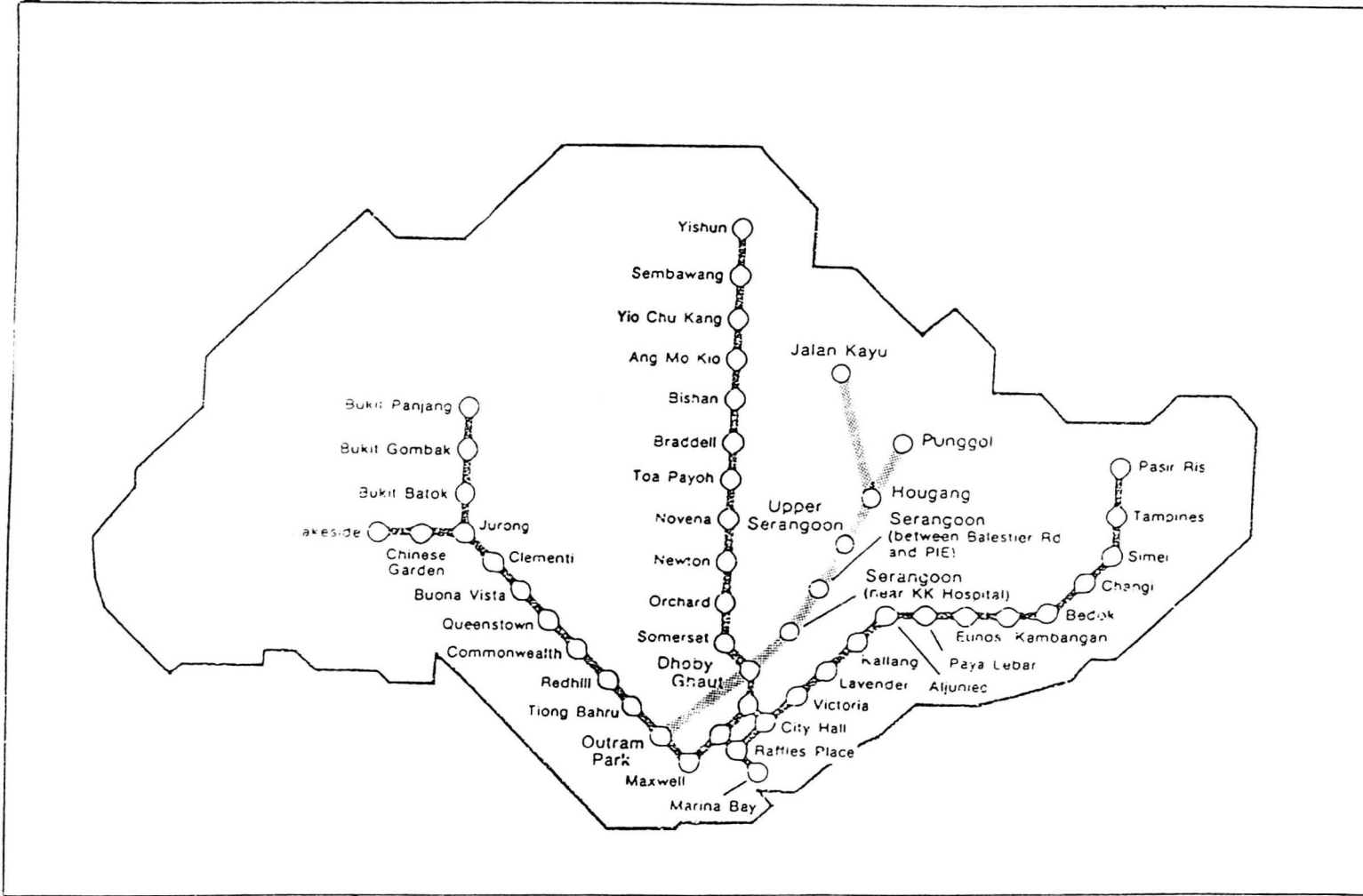
The rationale behind this change, among other things, is that land in the Central Area is so valuable that it

1. The construction of the MRT has been started in 1984 and will be completed in 1989.

Map 2: Location of Public Housing Estates and Reclaimed Land in Singapore



Map 3: The Proposed MRT System



should therefore be optimally used not only for social improvement but also to generate economic development. Thus, urban renewal programmes should not just aim at relocating residents from the city centre to the proposed new towns, but should be directed to an overall development of building new or improving the existing commercial and residential facilities to ensure the continued growth of the city centre.¹

Second, while the Master Plan proposes the development of existing villages and new planned attap settlements in addition to the development of new satellite towns, the Concept Plan has dropped these rural and low-rise elements of housing and urban development and emphasised the importance of high-rise urban development.

The argument for the high-rise option is that in a land-scarce Singapore, the task of housing development should aim at "achieving as high a residential density as possible, within the limits of social acceptability, environmental amenability and economical constraint." (Yeh, 1975:145). A low-rise development or a combination of high-rise and low-rise buildings would involve too much extra land, which Singapore cannot afford. The high-rise option has therefore become the official policy for both public housing programmes and for other building programmes developed by private enterprises on land released by the

1. See, for example, Yeh, 1975, pp.97-116; J.B. Ooi and H.D. Chiang, eds. Modern Singapore (Singapore: Singapore University Press, 1969), pp.161-170.

Urban Re-development Authority (URA) as well.

Third, the Master Plan stresses the importance of planning for both public and private developments, whereas the Concept Plan concentrates on planning for housing and urban development to be carried out by the Government, although maximum flexibility for implementation has been recommended.

The philosophy underlying this change is that, the processes of public housing, slum clearance and urban renewal in Singapore are inter-related, and these, in turn, are again inter-related with other activities such as the development of industrial estates, and commercial, educational, recreational and community facilities. In order to venture into this complex more effectively, a well-coordinated and properly planned programme for housing and urban development had to be implemented with the active participation of the Government. This argument is in line with the development ideology of the political leadership and the Government, that Singapore "had to try a more activist and interventionist approach" in its planning process and development policies (Chen, 1983:20). Since the late 1960s the Government has played an active role in housing and urban development, and has participated actively in industries, business and banking activities (Chen, 1983:105-159).

Unlike the Master Plan, the Concept Plan functions only as a policy plan and not a statutory plan. The Concept Plan sets out guidelines, principles, policies and broad urban

structures for long-term urban and environmental developments in Singapore. It does not, however, have legal provisions. Although the Concept Plan was completed and submitted to the Government in 1971, it was not until 1975 that all the proposals and recommendations of the Concept Plan were incorporated into the statutory Master Plan. Since then, all guidelines, proposals and strategies for housing and urban development of the Concept Plan have replaced those of the Master Plan, but are being implemented within the legal provisions of the statutory Master Plan.

IV. Public Housing Estates and New Towns

Both the statutory Master Plan and the Concept Plan were worked out primarily to solve housing problems. As these are very complex and closely related to many other problems, the Concept Plan not only proposes provisions for the development of public housing estates but also specifies land use patterns for industrial estates, transportation networks, and other infrastructures.

As shown in Map 1, when the final stage of housing and urban development as provided for in the Concept Plan is achieved in 1992, there will be nine urban districts, comprising the Central Area and eight urban centres. The population within each district will be between 200,000 and 350,000. Each district will have high-density public housing estates¹, industries, and a centre incorporating

1. Projected residential densities in the new towns range from the lowest of 592 persons per hectare in Tampines to the highest of 1,118 persons per hectare in Toa Payoh.

main commercial, recreational, and community facilities. Inter-district linkages are based on efficient and fast transport facilities. An expressway system and a mass rapid transit (MRT) system will link all major activities and residential districts with the Central Area (see Map 3).

Following closely the Concept Plan, public housing estates have been and will be built in the identified urban centres (see Map 2). It is clearly stated by the Chief Executive Officer of the HDB that the "locations and population sizes of these various satellite towns have to fall within the broad framework of the Concept Plan of Singapore." (Yeh, 1975:126).

The projected population and housing units of these new towns are shown in Table 3.2. Altogether there will be twelve major new towns when all the housing development programmes are completed in 1992 (see Table 3.2). By then, each new town will have a population between 70,000 and 290,000. The five new towns having a population each exceeding 200,000 persons are Woodlands (290,000 persons), Ang Mo Kio (245,000 persons), Bedok (237,500 persons), Tampines (225,000 persons) and Yishun (200,000 persons). All these new towns will be filled by high-rise HDB buildings. All HDB housing comprises high-rise buildings, with a normal height of 12 to 18 storeys, although some buildings are as high as 25 storeys. High-density and high-rise buildings are the main features of all public housing estates.

The layout of HDB housing estates is based on the 'neighbourhood' principle, which basically aims at self-sufficiency not only in the basic necessities, but also to a large extent, in the recreational and social needs of the residents. Each neighbourhood has between 4,000 and 6,000 families. Markets, shopping centres and other communal amenities are provided within the neighbourhood. Whenever there are more than three neighbourhoods close to one another, a town centre is built to provide post offices, banks, theatres, department stores and other facilities. In addition, about 10 to 15 per cent of the land area within housing estates is set aside for the development of clean, labour-intensive industries. The objective is to increase employment opportunities for residents within housing estates. It is estimated that about 15 to 20 per cent of the working population are now employed in industries within housing estates. The major industrial estates are, however, located in only two of the eight urban districts, namely Jurong and Woodlands.

V. HDB and Public Housing

The development of new towns and the construction of public housing are undertaken by the Housing and Development Board (HDB), which was established in 1960 by the Housing Development Act Chapter 271. The HDB is a statutory board under the portfolio of the Minister for National Development. The main functions of the Board are: (a) the clearance and redevelopment of slum and urban areas and

Table 3.2 Projected Population and Density of New Towns

New Town	Projected total population	Projected total dwelling units	Residential density (persons per hectare)	Estimated population as at March 1982
Ang Mo Kio	245,000	49,500	790	237,500
Bedok	237,500	48,800	792	214,900
Bukit Batok	n.a	24,800	n.a	-
Clementi	122,500	24,500	875	104,400
Hougang	120,000	25,500	750	8,100
Jurong	137,000	27,300	787	18,300
Queenstown	150,000	28,000	1,071	134,400
Tampines	225,000	45,700	592	5,700
Telok Blangah	70,000	13,700	824	63,300
Toa Payoh	190,000	36,600	1,118	175,700
Woodlands	290,000	55,000	879	33,300
Yishun (Nee Soon)	200,000	40,000	823	4,100

Sources: Computed from HDB Annual Report 1979/1980, p. 19; and 1981/82, p. 22.

squatter settlements in rural areas, and (b) the construction and management of public housing and other building projects such as HDB multi-storey factories, shopping complexes, and office buildings.

In addition to these functions, under Section 14 of the Ordinance, the Minister for National Development is empowered to assign other functions to the Board. The Board has therefore extended its activities by undertaking agency work for other government and statutory bodies such as reclamation on the East Coast and the Marina Centre, building of flats and factories for the Jurong Town Corporation and community centres for the People's Association.

To undertake the task assigned to the HDB in 1960, the Board decided that housing problems could best be met by the implementation of the following measures (HDB, 1963:8):

(a) An immediate programme to build as many low-cost housing units as possible to meet the needs of people in the lower income groups whose requirements had never been catered for by private enterprises. This would form part of a short-term plan to relieve the acute congestion in the central areas of the city by the creation of new centres of population in the form of properly planned housing estates which would be within easy reach of communication to the city.

(b) A long-term plan to provide for the eventual redevelopment of the city - This would need more detailed study and the assistance of a team of urban renewal experts



Photo 1: Queenstown is one of the earliest housing estates constructed by the HDB in the early 1960s



Photo 2: Ang Mo Kio is one of the newest housing estates constructed by the HDB in the late 1970s and early 1980s



Photo 3: These blocks of high-rise flats at Clementi Housing Estate were built by the HDB in the late 1970s



Photo 4: These blocks of middle-income flats at Farrer Court were built by the HUDC in the mid-1970s



Photo 5: This block of low-rise flats at Prince Charles Crescent was constructed by the SIT in the early 1950s



Photo 6: This block of shop-houses, used as Government quarters for customs workers, was built by the SIT in the 1930s



Photo 7: A common scene in all public housing estates in Singapore



Photo 8: A new innovation of colour scheme to give HDB estates an individual identity (photo taken at Bedok Housing Estate)

Table 3.3 Targets of Five-Year Building Programmes, 1961-1990

Period	Number of units to be built
First Five-Year Programme (1961-1965)	50,000
Second Five-Year Programme (1966-1970)	60,000
Third Five-Year Programme (1971-1975)	100,000
Fourth Five-Year Programme (1976-1980)	150,000
Fifth Five-Year Programme (1981-1985)	155,000
Sixth Five-Year Programme (1985-1990)	160,000

Source: Housing and Development Board.

Table 3.4 HDB Dwelling Units Built and Proportion of Population living in Public Housing Estates, 1965-1985

Year	Cumulative Number of Units	Proportion of Population Living in Public Housing (%)
1965	54,430	23.2
1970	120,669	34.6
1975/76*	242,076	51.0
1977/78*	280,828	60.0
1978/79*	311,849	64.0
1979/80*	334,444	67.0
1980/81*	348,915	68.0
1981/82*	357,822	69.0
1982/83*	400,657	75.0
1983/84*	444,816	78.0
1984/85*	508,242	81.0

Sources: Housing and Development Board, Annual Reports 1973/74, p. 12; 1975/76, p. 69; 1977/78, p. 52; 1978/79, p. 48; 1979/80, p. 50; 1981/82, p. 62; 1984/85, p.71.

Note: *From April of the year to March of the following year.

would be sought.

The first measure formed the basic guideline of the first two Five-Year Building Programmes, whereas the second measure resulted in massive urban redevelopment projects first undertaken by the HDB and then re-assigned in 1974 to the newly established Urban Redevelopment Authority (URA).

Five Five-Year Building Programmes have so far been completed. The first Five-Year Building Programme for large-scale public housing started in 1961. It was projected by the Government that during the period 1961-1970, a total of 150,000 dwelling units would be required to meet the demand for housing. It was further estimated that private enterprises could only build about 40,000 units during this period for the middle and upper classes; the other 110,000 units should then be built by the HDB. Therefore, 50,000 and 60,000 units of public housing were planned under the first and second Five-Year Building Programmes (1961-65 and 1966-70) respectively. By the end of 1970, a total of 120,669 units were built, exceeding the target of the two Five-Year Building Programmes by more than 10,000 units (HDB, 1974:12).

The target for the third Five-Year Building Programme (1971-1975) was fixed at 100,000 units, but another 13,000 units were later added to the target to be completed by 1975. By the end of 1975, a total of 113,819 dwelling units was completed. The target for the fourth Five-Year Building Programme (1976-1980) was increased to 150,000 dwelling units. The HDB, however, for the first time could

not achieve this target at the conclusion of the project period. By the end of 1980, only 137,670 dwelling units, i.e. 12,330 units below the target, were built (HDB, 1983:63).

The target set for the fifth Five-Year Building Programme (1981-1985) is 155,000 dwelling units, and by March 1985, a total of 140,700 dwelling units has already been completed. The target for the sixth Five-Year Building Programme (1986-1990) is set at 160,000 dwelling units (HDB, 1985:34).

It is estimated that by 1992, when the urban development programme, as proposed in the Comprehensive Plan, is completed, about 85 per cent of the total population will be living in high-rise public housing estates. This will make Singapore probably the only non-communist country to provide public housing for more than four-fifths of its citizens.

CHAPTER 4

COSTS AND BENEFITS OF PUBLIC HOUSING

Public housing programmes were undertaken by three housing authorities, namely the Housing and Development Board (HDB), the Jurong Town Corporation (JTC), and the Housing and Urban Development Company (HUDC),¹ until May 1982 when all public housing built by these three authorities was under the control and management of the HDB. The HDB, however, has always been the main housing authority responsible for the planning and development of public housing in Singapore. The JTC was only responsible for the development of public housing in two industrial estates, namely Jurong and Sembawang. The design and construction of the JTC flats were, however, undertaken by the HDB. The HUDC was responsible only for the development of a small number of flats for middle-income groups.

In March 1982, the total dwelling units provided by these three housing authorities were 384,421, of which more than 93 per cent (357,822 units) were provided by the HDB. The JTC provided 24,003 units, and the HUDC provided only 2,596 units. The design and allocation policies of both the HDB and JTC flats were exactly the same. The design of HUDC flats and their allocation policies were, however, significantly different from those of the HDB and JTC as the

1. The JTC was established in 1968 to take charge of the development of the industrial estate in Jurong. The HUDC was set up by the Government in 1975 to build flats for middle-income groups.

HUDC flats were built for the middle-income groups, but both HDB and JTC flats were for lower-income groups. Since May 1982, all HDB and JTC flats have been referred to as HDB flats, and the HUDC flats have been referred to as middle-income flats by the Government. All applications to purchase or to rent these flats are now centrally handled by the HDB.

I. Allocation and Related Policies¹

As all types of public housing are subsidised by the Government, therefore not all people in Singapore are eligible to rent or to purchase public flats. The housing authorities have stipulated a set of policies and rigid conditions governing sale, resale, rental, and sub-letting of public flats.² These policies and conditions, however, change from time to time; and their changes usually result in some significant social, economic or political implications.³ This is because the public housing scheme is used not only as a means to solve housing problems in the Republic, but is also used as a powerful instrument to

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1. Policies change frequently, and there are no written documents specifying all current policies. Thus, our discussions mainly rely on the analysis of current newspaper reports and government statements announced in the press.
 2. The rules and conditions governing HDB flats and JTC flats are exactly the same. In the past, the rules and conditions of sale and resale of HUDC middle-income housing were more lenient, but the new rules and conditions announced in February 1983 are now essentially similar to those of the HDB.
 3. This issue will be dealt with at length in the latter part of this chapter and Chapter 5.

support other national development programmes and government policies.

A. Eligibility for Public Housing

The conditions of eligibility for public housing are related to citizenship, marital status, household income and household size.

In terms of citizenship, only Singapore citizens are eligible to rent or to buy HDB flats. Some of these flats are, however, rented to factories and approved institutions such as the National University of Singapore for them to provide accommodation for their employees, the majority of whom are non-citizens. The citizenship condition is more relaxed for applications to purchase HUDC middle-income housing. While Singapore citizens have priority over permanent residents, some permanent residents approved by the Government¹ are allowed to purchase this type of public housing.

Each family is eligible to purchase or rent one flat to be used solely as a private dwelling house by the purchaser (or the lessee) and his immediate family members who are authorised by the Board to stay in the flat.

The rules governing minimum household size to rent or to purchase HDB flats have been changed several times. In 1960 the minimum household size was five persons, who had to be directly related through blood or marriage. In 1962 the

1. The criterion for approval is based on the basis of their talent and economic contribution to Singapore.

minimum household size for one-room public flats was reduced to three persons. For those who applied for other types of HDB flats, the minimum household size was still five persons. In 1967, these rules were further relaxed and the minimum household size was reduced to two persons, who had to be members of the same family, for any type of flat. The minimum requirement was further relaxed in 1978 to allow any two adults, over 40 years old, to submit a joint application to rent or to purchase one public flat. A person planning to get married may apply to rent a flat with his/her fiance/fiancee subject to their eligibility in all aspects. They must, however, produce their marriage certificate within three months after the commencement date of the tenancy agreement.

The monthly family income ceiling of applicants to buy HDB flats was fixed at s\$1,000 in 1964. The ceiling was raised to S\$1,200 in 1970, and to S\$1,500 in 1971. In 1979, households were classified into two categories, namely the nuclear family and the extended family. The monthly income ceiling for the nuclear family was fixed at S\$2,000, whereas the ceiling for the extended family was S\$2,500. In August 1981, the income ceilings for the nuclear and extended families were raised to S\$3,500 and S\$4,000 respectively. Since May 1982 the types of households have increased to three categories, namely the single family, the extended

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family, and the multi-tier family; and the income ceilings for these three types of families are at the present S\$3,500, S\$4,000, and S\$6,000 respectively.

There is only one income ceiling for applications for HUDC middle-income flats. The monthly family income ceiling was set at S\$4,000 when this type of housing was first introduced in 1975. Since April 1980, the ceiling has been increased to S\$6,000.

For applications to rent HDB flats, the total family income per month at the time of application must not exceed S\$500 for a one- or two-room flat, and S\$800 for a three-room flat.

Income ceilings for applications to purchase or to rent public flats apply to the time when applicants submit their applications. If their joint family income exceeds the ceiling when they eventually get their flats, this does not affect their eligibility to buy or to rent the flats.

B. Priority and Punishment

In general, the average waiting period for getting a public flat is between three to five years. However, not all eligible applicants for public housing have to wait for

1. The criteria for the classification of these three categories of families are rather confusing. In general, the single family consists of members of one generation or parents with unmarried children who are under 21 years old; the extended family consists of members of one married generation and one unmarried generation, all are over 21 years old; the multi-tier family consists of two or more married generations living together.

the same length of time, some may jump the queue and get a three-year headstart in getting a flat if they qualify for the priority allocation scheme.

The Government announced in January 1983 that seven categories of applicants are being given priority in getting HDB and JTC flats (The Straits Times, January 15, 1983). These are: (i) resettlement cases, (ii) multi-tier families, (iii) Singapore Armed Forces regulars and reservists, (iv) policemen, (v) firemen, (vi) HDB staff, and (vii) members of Citizens' Consultative Committees (CCC).

For purchase of HUDC middle-income housing, senior civil servants are given the privilege of jumping the queue and a large proportion of HUDC flats in the choice estates is reserved for them (The Straits Times, February 19, 1983).

Some people, even if they meet all the conditions of eligibility for public housing, may be denied such a privilege. In a written reply to a question raised by the only opposition MP in Parliament, the Minister of National Development listed out ten groups of people who have been barred from applying for Housing Board flats (The Straits Times, September 2, 1982). They are: (i) persons who have used their HDB flats for illegal purposes; (ii) those who have been convicted of assaulting the Board's officers who were on duty; (iii) vandals who have damaged the HDB properties; (iv) tenants and lessees who have sub-letted their entire flat without the Board's permission; (v) former tenants of HDB flats who have not cleared their rent; (vi)

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foreigners who have contravened the government's work permit or marriage restriction policy; (vii) foreign workers² who have been a nuisance to the public; (viii) their employers who have failed to control them; (ix) former HDB lessees who are not allowed to buy or rent another flat for 30 months if they have sold their homes to their own buyers after staying in them for five years; and (x) former HDB lessees who have transferred their HDB flats, within five years of occupation, to their immediate relatives who are not their parents.

The categories and criteria for punishment and the allocation of privileges are revised from time to time, new categories may be added when they are considered as being effective in achieving a particular objective of the Government. Although there "is an objective behind each allocation" as pointed out by the Minister of National Development (The Straits Times, January 15, 1983), each change of the category and the criterion for housing allocation also has its political implication.³

C. Constraints and Restrictions

Apart from the stern conditions of eligibility for public housing, there are many other constraints and

1. They are employees living in public flats rented by their companies, as foreigners and foreign workers are not eligible for public housing.
2. See the preceding footnote.
3. The political implications of public housing policies will be analysed in Chapter 5.

restrictions imposed on the applicant with regard to the use and the transfer of public flats.

When people apply to buy HDB flats or HUDC middle-income housing, they can only indicate the types of flat and the districts of housing estate for which they would like to apply. They cannot choose the exact flat they would like to have. The allocation of flats to the buyers is done by means of a public ballot. When blocks of flats are completed, the eligible buyers, whose turn it is to be allocated a flat, are then informed and gather at a specified place for the balloting, at which time the applicant will draw a number indicating the exact flat allocated to him. If the applicant does not like the location of the flat for various reasons, he can either withdraw his application or wait for another chance at the next balloting, which usually means a long wait. The balloting function is usually officiated by a Minister or the Member of Parliament for the constituency of the housing estate.

Owners of both HDB flats and HUDC middle-income housing have to observe, among other things, the following restrictions concerning the use and transfer of their flats. First, the owner can only use his flat as a residence for himself and members of his immediate family and is not allowed to let or sub-let. This restriction has been relaxed since 1972 to allow families with no more than three children to sublet rooms in their flats under certain conditions. However, approval must be obtained from the

housing authorities before they sub-let their rooms.

Second, until 1975 HDB-flat owners, who wanted to sell their flats even after five years of occupation, had to sell their flats back to the HDB at original purchase prices. The HDB might, however, exempt this restriction and allow them to sell their flats to other buyers under conditions acceptable to the Board. This condition was relaxed in 1975. The current rules are that, owners of HDB flats and HUDC middle-income housing can resell their first flats to their own buyers at market prices after five years of occupation. However, owners of HUDC flats have to pay a 30 per cent levy on the resale price (The Straits Times, February 18, 1983). For HDB flats, the resale levies are 10 per cent, 15 per cent and 20 per cent of the resale price for three-, four- and five-room flats respectively (The Straits Times, January 15, 1983).

Third, owners of HDB flats and HUDC flats are not allowed to own any private property. This restriction was relaxed in 1978 to allow them to own commercial property ie. shops or offices. But they are still not allowed to own any residential property. Owners of HUDC flats sold under Phases One and Two before 1982 can own private property, but owners of new HUDC flats to be sold by the HDB in mid-1983 and thereafter will not be allowed to own private property, even after five years of occupation (The Straits Times, February 19, 1983).

II. Demand for Public Housing

Despite the rigid conditions of qualification for public housing, the strict and ever-changing rules and regulations governing the use and resale of this type of housing, and the steep increase of their selling prices every year since 1979, the demand for all types of public housing, whether they are HDB, JTC or HUDC flats, is always much greater than the supply. This phenomenon has not changed since the inception of the HDB in 1960, although the number of applications has fluctuated from time to time.

What are the reasons behind this phenomenon? The possible explanations, among many other reasons, are: (a) The housing authorities have been successful in providing better accommodation and people are happy with the public housing. (b) The property prices in the private market have escalated during the past decade to the stage where the majority of the Singapore populace cannot afford to buy private housing. This situation leaves them no choice but to opt for public housing. Although these two explanations are contradictory, they are, however, the joint forces which stimulate the demand for public housing.¹

As shown in Table 4.1, the number of applications to purchase HDB flats had increased steadily from 1964 to 1973, whereas the number of applications to rent public flats remained almost unchanged during this period. The number of

1. This phenomenon will be examined in detail in the sections on the economic and redistributive effects of public housing in this chapter.

applications to purchase HDB flats increased from 1,451 in 1964 to 20,305 in 1971, and then jumped to 45,999 in 1973, the highest figure during the period 1964-81. After then, the number of new applications and the total number of applications on the waiting list began to drop until 1979 when the number of applications to purchase flats increased rapidly again. In January 1983, the total number of applications on the waiting list to purchase HDB flats increased to 107,000 applicants, exceeding the peak of 104,000 applicants in 1973 (The Straits Times, January 15, 1983).

As will be demonstrated in the last section of this chapter on the economic effects of public housing, the two periods 1970-1973 and 1979-82 when the number of applications to purchase HDB flats increased remarkably are concurrent with the periods when the prices of private housing escalated drastically, with an average of a two to three-fold increase for each period.

The HDB has built five major types of flats, namely 1-, 2-, 3-, 4-, and 5-room flats. The bulk of HDB flats built during the period of the first two Five-Year Building Programmes (1960-1970) were mainly 1-, 2-, and 3-room flats as the majority of applicants during these years opted to rent or to purchase these types of flats. Since the late 1960s, 3- and 4-room flats have become the most popular. Many people would now like to buy larger flats.

During the period 1964-1972, 86.2 per cent of all dwelling units sold to the public were 3-room flats. This

Table 4.1 HDB Flats: Supply and Demand, 1960-1981

Year	Number of HDB-flats completed	Number of new applications		
		To rent flats	To purchase flats	Total new applications
1960	1,682	2,627	Nil***	2,627
1961	7,320	3,381	Nil***	3,381
1962	12,230	13,177	Nil***	13,177
1963	10,085	11,895	Nil***	11,895
1964	13,028	9,928	1,451	11,379
1965	10,085	11,400	1,516	12,916
1966	12,659	17,313	1,576	18,889
1967	12,098	15,562	2,384	17,946
1968	14,135	9,501	7,407	16,908
1969	13,096	11,305	8,048	19,353
1970	14,251	12,324	20,598	32,922
1971	16,147	10,671	20,305	30,976
1972	20,252	11,888	24,644	36,532
1973	23,224	13,685**	45,999**	59,684**
1974	26,169	10,480*	16,588*	27,068*
1975	28,027	10,310*	15,677*	25,987*
1976	30,024	9,209*	16,498*	25,707*
1977	30,406	9,704*	21,870*	31,574*
1978	30,176	8,851*	29,577*	38,428*
1979	27,189	9,099*	35,561*	44,660*
1980	19,875	11,095*	37,924*	49,019*
1981	16,318	12,370*	38,232*	50,602*
Total	388,476	235,775	345,855	580,054

Source: Computed from HDB Annual Report 1981/82, pp. 63 & 68.

Note: * These figures are for the fiscal year, i.e. from April of the year to March of the following year.

** These figures are for the period January 1973 to March 1974.

***The Home Ownership Scheme was introduced in 1964. Before that all HDB flats were for rent only.

Table 4.2 Applications to Purchase and Allocation of HDB Flats by Type of Flat, 1972 and 1982

(percentage)

Type of flat	Number of flats sold during the period 1964-1972	Number of applications on the waiting list to purchase flats as at 31st December 1972	1981/82		
			Number of applications on the waiting list	Number of new applications in 1981/82	Number of flats sold in 1981/82
1- and 2-room*	8.8	0.4	-	0.1	1.3
3-room	86.2	64.2	37.9	42.7	47.9
4-room	5.0	25.3	40.1	38.1	30.8
5-room	-	10.1	16.7	15.2	20.0
Executive flat**	-	-	5.3	3.9	-
Total (%) (N)	100.0 45,024	100.0 53,101	100.0 100,486	100.0 38,232	100.0 11,638

Sources: HDB Annual Report 1972, pp. 71-76; 1981/82, pp. 49-50.

Note: * The Board no longer builds one- and two-room flats. Applicants in these categories registered to buy only resale flats from existing leasees.

** The category of executive flats was introduced in 1979, the building of executive flats will however be discontinued in 1985.

Table 4.3 Applications to Rent HDB Flats by Type of Flat, 1972 and 1982

(Percentage)

Type of flat	1972		1981/82	
	Number of units rented to the public as at 31st December 1972	Applications on the waiting list	New applications	Applications on the waiting list
1-room	52.2	50.1	28.0	29.5
2-room	29.2	32.8	27.5	26.4
3-room	16.9	16.9	41.3	43.5
4-room	1.7	0.2	2.5	0.3
5-room	-	-	0.7	0.3
Total (%) (N)	100.0 94,826	100.0 24,995	100.0 12,370	100.0 14,902

Sources: HDB Annual Report 1972, pp. 71-76; 1981/82, pp. 49-50.

pattern has since the late 1970s changed significantly. For example, more than 40 per cent of the total number of applicants on the waiting list on 31 March 1982 registered to buy 4-room flats, and 16.7 per cent wanted to buy 5-room flats (Table 4.2).

The number of applications to rent HDB flats has also shifted from smaller flats to larger flats. In 1972, more than 50 per cent of applicants on the waiting list registered to rent 1-room flats, but the figure dropped to 29.5 per cent in 1982. During the same period, the proportion of applications to rent 3-room flats increased from 16.9 per cent in 1972 to 43.5 per cent in 1982 (Table 4.3).

In consequence, the HDB has since the early 1970s concentrated its building programmes on larger flats, especially 3- and 4-room flats, and more recently 5-room flats as well. For example, the percentages of 1-, 2-, 3-, 4- and 5-room flats among all the dwelling units completed during the fiscal year 1981/82 are 0.4 per cent, 1.2 per cent, 42 per cent, 33.9 per cent, and 22.5 per cent respectively (HDB, 1982:48).

The concentration on building bigger flats in recent years is in response mainly to the increasing demand for the larger flats, and probably, partly to criticisms made by sociologists such as Peter Chen and Riaz Hassan that the social costs of families living in one-room flats are

extremely high.¹ Unless the Government is prepared to subsidise the very poor groups,² the concentration on building larger flats may result in a situation where the poorest segment of the population will be left out of public housing (Hassan, 1975:245).

III. Resettlement and Compensation

Resettlement cases are one of the seven groups of people who are being given priority in getting HDB and JTC flats. Resettlement takes place all over the Republic, in both urban and rural areas, where land is acquired by the Government for housing and other national development programmes. As pointed out by the Government, "It is a painful process, but it is unavoidable because unless resettlement takes place, there is no way the HDB can meet its building programmes." (The Straits Times, February 23, 1983). Resettlement was one of the most controversial issues in the 1950s and early 1960s. Today, it is, however, no longer a controversial issue as most people accept it as an "unavoidable" process, which, on the one hand, is regarded by the Government as a necessary and desirable process, and on the other hand, is considered by most people affected by the scheme as one of the things about which the individual is powerless to challenge the Government.

1. See, for example, New Nation, May 14, 1972; and Riaz Hassan, "Some Sociological Implications of Public Housing in Singapore," Southeast Asian Journal of Sociology, Vol. 1, No. 1, 1969.

2. There is, however, no indication that the Government will do so in the near future.

During the period 1960-1982, there was a total of 174,564 cases affected by HDB's resettlement schemes. Out of these cases, 105,115 cases (60.2%) were rehoused in HDB flats, 2,961 cases (1.7%) were moved to resettlement areas, and 66,488 (38.1%) found their own accommodation (see Table 4.4). Although families affected by resettlement schemes are given the option of choosing whether they would like to be rehoused in HDB flats or to find their own accommodation, most cases who opt to be rehoused in HDB flats have no other alternative due to financial and other reasons. In consequence, they have to opt for HDB flats.

Comparing Table 4.4 and Table 3.4, we find that 29.4 per cent of HDB tenants are involuntary relocatees, who were affected by resettlement schemes and then rehoused in HDB flats. The others (70.6 per cent of the present HDB tenants) are voluntary relocatees, who were not affected by resettlement schemes but who voluntarily applied for HDB flats.

The total amount of compensation paid by the Board to the 174,564 cases affected by resettlement schemes during the period 1960-1982 was S\$556 million. This works out to an average of S\$3,186 for each case. The compensation rates were first worked out in 1964, and subsequently revised in 1971, 1979 and 1981.

There are three major categories of resettlement cases, namely residential families, farmers, and shops. Under the

Table 4.4 Clearance and Relocation, 1960-1982

Year	No. of cases rehoused in HDB flats	No. of cases moved to resettlement areas	No. of cases found own accommodation	Total	Compensation paid
1960	45	132	207	384	S\$ 0.3m
1961	77	57	160	294	0.3m
1962	342	198	277	817	0.9m
1963	589	307	285	1,181	1.7m
1964	2,584	150	909	3,643	3.2m
1965	4,570	182	1,758	6,510	5.5m
1966	4,158	266	1,594	6,018	5.1m
1967	4,002	90	1,892	5,984	4.1m
1968	4,063	123	1,677	5,863	3.1m
1969	3,924	416	2,179	6,519	4.8m
1970	3,922	277	1,926	6,125	4.1m
1971	2,263	145	1,474	3,882	5.5m
1972	2,668	235	1,157	4,060	9.2m
1973/74*	8,008	91	3,968	12,067	18.5m
1974/75**	7,062	16	3,902	10,980	20.8m
1975/76**	7,447	17	4,547	12,011	44.0m
1976/77**	6,052	70	4,893	11,015	41.0m
1977/78**	8,137	84	6,797	15,018	54.0m
1978/79**	9,050	51	7,342	16,443	52.8m
1979/80**	10,300	48	7,704	18,052	94.9m
1980/81**	8,495	6	6,532	15,033	79.6m
1981/82**	7,357	-	5,308	12,665	102.7m
Total	105,115	2,961	66,488	174,564	S\$ 556.1m

Source: Derived from HDB Annual Report 1978/79, pp. 60-61; 1980/81, p. 68; 1981/82, p. 69.

Note: * From January 1973 to March 1974.

** From April of the year to March of the following year.

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current compensation policy, residential families, who are affected by resettlement schemes, are given compensation for their houses (according to the size of the house) and priority in buying or renting HDB flats. In addition, those opting to rent HDB flats are given a rental rebate of S\$33.33 per month for a period of three years; those wanting to buy HDB flats are exempted from paying the 20 per cent downpayment required from other buyers; and those opting to find their own accommodation are paid a cash grant of S\$2,000.

Farmers affected by the scheme are given a compensation payment of S\$19,500 plus S\$156 per square metre for built-up areas. They are also given allocation priority in buying or renting HDB flats.

Compensation payments for shops affected in the Central Area are based on the size of the shop. Single-tenanted shops of less than 200 square metres are paid S\$30,000; and those of more than 200 square metres are paid S\$40,000. For multi-tenanted shops of more than 200 square metres, the chief tenant is paid S\$20,000 while each sub-tenant is paid S\$10,000 up to a maximum of S\$40,000 per shop. For multi-tenanted shops smaller than 200 square metres, the chief tenant is paid S\$15,000 and each sub-tenant is paid S\$10,000 up to a maximum of S\$35,000 per shop.

There was strong resistance against resettlement, and compensation rates were a serious political issue in the

1. The Straits Times, March 23, 1979; August 16, 1979; February 21, 1983; and February 22.

late 1950s and early 1960s.¹ Since 1968, when Singapore became a one-party system in Parliament, resistance has been weakened and the problem of compensation is no longer a political issue. In recent years, the question of whether the current compensation rates are adequate or not has not been critically challenged in Parliament nor challenged by any pressure groups, although there are occasionally complaints about compensation rates from people affected by resettlement, especially the farmers.

The Government has, however, assured the people that it "will help all those affected by resettlement and will review the compensation rates periodically to make sure that these are in step with the rising costs of living." (The Straits Times, February 21, 1983).

IV. Income Redistributive Effects

Resettlement and public housing schemes have served as a powerful instrument to effect the redistribution of national income by, among other things, two measures, viz. housing subsidies under the public housing scheme and the compulsory acquisition of private land for housing and other development programmes.

As rentals usually constitute a very heavy burden on the poor, housing subsidies were initially introduced to help the poorer families in getting adequate accommodation. Later on, when the home ownership scheme was introduced in

1. This issue will be discussed in Chapter 5.

1964 and further encouraged in 1968,¹ housing subsidies have, since then, been extended to all people who are eligible to rent or to purchase HDB flats.

From the very beginning, the Board's policy has been to keep rentals and selling prices of public housing as low as possible. While rentals of private housing have increased four to five times during the past decade, rentals of public housing have increased by only about 40 per cent. At present, rentals of one-, two- and three-room public flats are S\$25 to S\$40, S\$50 to S\$80, and S\$100 to S\$150 per month respectively. Compared with the private housing market, these are extremely low. The rentals of public flats are, on average, less than one-fourth of those of private flats of a comparable size.

With regard to the selling prices of public flats, the Housing Board, however, has raised the prices several times during the past few years. In 1979, the selling prices were increased by 15 per cent, and price increases for 1980 and 1981 were 20 per cent and 38 per cent respectively (The Straits Times, September 23, 1982). In 1982, the price increases were between 4.7 and 17.6 per cent according to the type of flat (The Straits Times, September 24, 1982). In order to prevent a big rush for public flats, the Minister of National Development has given assurance that future price increases will be "moderate." Price increases

1. Since 1968 people have been allowed to use their Central Provident Fund (CPF) savings to buy HDB flats.

for the period 1983-1985 will be 7.5 per cent a year for three- and four-room flats, and 10 per cent a year for five-room flats. This is the first time the HDB has set a ceiling on future price increases, and the Minister said that the Government was taking a big risk in giving such a guarantee of "very moderate" increases (Ibid.)

The selling prices of various types of flats in New Towns are shown in Table 4.5. Prices vary not only between different types of flat, but also between different locations of housing estate. There are five categories of location¹, namely inner urban, outer urban, inner suburban, outer suburban, and new town. Prices indicated in Table 4.5 are for the flats in New Towns, the cheapest among the five categories. For example, the price of a 5-room model 'A' flat in a New Town was S\$76,500 in April 1983, whereas prices of the same type of flats in outer suburban, inner suburban, outer urban, and inner urban were S\$84,200, S\$94,300, S\$107,500, and S\$122,600 respectively.

If we compare the selling prices between 1978 and 1982, prices for the same types of public flat² increased by about 118 per cent. In spite of the steep increase in prices, public flats are still much cheaper than private flats. As shown in Table 4.7, prices of three- and four-room HDB flats

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1. The main criterion of the classification of the categories is the distance between the housing estate and the Central Area of the city.
 2. Specifically we refer to three types of flats, namely three-room new generation flats, four-room new generation flats and five-room improved flats.

Table 4.5 Costs and Selling Prices of HDB Flats in New Towns

Type of flat	Cost per unit (land cost not included) (S\$)	Selling price (S\$)	Internal floor area (square metres)
<u>1972</u>			
1-room (1I)	5,016	3,300	32
2-room	7,020	4,900	46
3-room (3I)	9,455	7,800	60
4-room	12,213	12,500	84
5-room	20,602	22,000	121
<u>1978</u>			
1-room (1I)	9,240	3,300	33
2-room (2I)	11,960	8,000	45
3-room (3I/3N)	15,459/17,255	11,800/15,800	60/69
4-room (4I/4N)	19,857/22,952	18,500/24,500	83/93
5-room (5I)	29,158/31,076	35,000	123/127
<u>1982</u>			
3-room (3N/3A)	37,460/47,000	28,100/34,500	69/75
4-room (4N/4A)	51,110/64,000	43,000/53,200	93/105
5-room (5I/5A)	64,810/81,000	65,500/76,500	127/135

Sources: HDB Annual Report 1972, pp. 51-59; 1977/78, pp. 64-71; 1981/82, pp. 75-81; and The Straits Times, September 24, 1982.

Note: * Each type of flat has several models. The figures in parentheses indicate the models of the flats. They are: one-room improved flat (1I), two-room improved flat (2I), three-room improved flat (3I), three-room new generation flat (3N), three-room model "A" flat, four-room improved flat (4I), four-room new generation flat (4N), four-room model "A" flat (4A), five-room improved flat (5I) and 5-room model "A" flat (5A).

Table 4.6 Selling Prices of HUDC Flats

Location and type of flat	Average floor area (sq m)	Average Prices (S\$)	
		Public Prices*	Prices for civil servants
<u>Pine Grove</u>			
Apartment	158	272,200	231,600
Maisonette	168	331,800	282,400
<u>Gillman Heights</u>			
Apartment	161	277,400	236,000
Maisonette	168	332,800	283,200
<u>Bedok North</u>			
Apartment	164	203,600	n.a.**
Maisonette	161	229,700	n.a.**
<u>Hougang</u>			
Apartment	157	194,500	n.a.**
Maisonette	165	235,200	n.a.**
<u>Jurong East</u>			
Apartment	156	189,900	n.a.**
Maisonette	161	225,100	n.a.**

Sources: The Straits Times, February 18, 1983; February 19, 1983.

Note: * Public prices are for Singapore Citizen applicants only. Permanent Resident applicants approved by the Government will have to pay 10 per cent over and above these prices.

** There is no information indicating whether there will be any differences between public prices and prices for civil servants in these estates.

Table 4.7 Comparison of Selling Prices of Public and Private Flats During the Period 1982-1983

Type of housing	Location of housing estate (S\$ per sq.ft*)		
	Rural/new town	Suburban	Urban/city centre
<u>Public Flats</u>			
HDB (3- & 4-room flats)	33-47	36-58	47-75
HDB (5-room flats)	50-53	55-65	70-84
HDB (executive flats)	62	68-76	87-99
HUDC	113-132	160-190	n.a.**
<u>Private Flats</u>			
Chinatown Plaza	n.a.**	n.a.**	280-300
Teresa Ville	n.a.**	n.a.**	230
Fairways	n.a.**	n.a.**	191-208
Katong Garden	n.a.**	280-300	n.a.**
Lengkong Garden	n.a.**	240-280	n.a.**
Coronation Grove	n.a.**	286-385	n.a.**
Charlton Gardens	n.a.**	261-265	n.a.**
Clementi Park Phase 3L	n.a.**	265-375	n.a.**
Apollo Garden Phase 3	250	n.a.**	n.a.**
Green Meadows Tower Block	209-222	n.a.**	n.a.**
Cashew Park Condominium	307	n.a.**	n.a.**
Parkview Condominium	316-329	n.a.**	n.a.**
Westvalle	275-285	n.a.**	n.a.**

Sources: The Straits Times, September 24, 1982; February 18 & 19, 1983; Lian He Zao Bao, March 20, 1983.

Note: * The prices of both public and private flats indicated here are the current selling prices quoted around March 1983. All the private flats listed in this table are high-rise condominiums built by private developers which were put up for sale in late 1982 and early 1983.

** n.a. = not applicable.

Table 4.8 Housing Subsidy, 1968-1978*

Year	Annual Subsidy	Average Subsidy Per HDB Resident	Average Subsidy Per HDB Unit Built in the Year
1968	S\$ 4.8 m	S\$ 8.20	S\$ 340
1969	S\$ 6.3 m	S\$ 9.60	S\$ 481
1970	S\$ 5.9 m	S\$ 8.20	S\$ 414
1971	S\$ 8.4 m	S\$ 10.60	S\$ 520
1972	S\$ 15.5 m	S\$ 17.40	S\$ 765
1973/74**	S\$ 41.9 m	S\$ 44.40	S\$ 1,804
1974/75***	S\$ 34.9 m	S\$ 33.80	S\$ 1,334
1975/76***	S\$ 44.0 m	S\$ 38.30	S\$ 1,570
1976/77***	S\$ 61.0 m	S\$ 47.70	S\$ 2,031
1977/78***	S\$ 70.0 m	S\$ 50.00	S\$ 2,300

Source: Derived from HDB Annual Reports, 1968-1978.

Note: * The HDB has since 1979 discontinued disclosure of this type of information in its annual reports.

** From January 1973 to March 1974.

*** Fiscal year, i.e. from April of the year to March of the following year.

Table 4.9 Households by Household Income 1980

Monthly household income	Public Flats	All Households	Difference
Below S\$500	23.2	24.9	-1.7
S\$500 - 999	36.5	31.7	+4.8
S\$1,000 - 1,999	28.7	26.3	+2.4
S\$2,000 and over	11.0	16.1	-5.1
Not stated	0.6	1.0	-0.4
Total (%)	100.0	100.0	
(N)	343,483	509,524	
Mean income	S\$1,048	S\$1,240	-S\$192

Source: Derived from Khoo Chian Kim, Census of Population 1980 Singapore, Release No. 7, p. 9 & p. 54.

range between S\$33 and S\$75 per square foot, prices of 5-room HDB flats and executive flats range between S\$50 and S\$99 per square foot, and prices of HUDC middle-income flats range between S\$113 and S\$190 per square foot.

In terms of the size of flat, the last three types of public flat, viz. 5-room HDB flats, HDB executive flats and HUDC flats, are comparable with private flats. If we compare the selling prices of these three types of public flat with those of private flats, we find that the prices of these three types of public flat are 74-78 per cent, 68-74 per cent, and 40-50 per cent, respectively, cheaper than those of private flats.

As a result of the increasing building and management costs, the subsidy for public housing has been increased annually. This is necessary because the "selling prices, rentals and service and conservancy charges of flats are well below actual costs." (HDB, 1978:7). For example, during the fiscal year 1977/78, the amount of housing subsidy was S\$70 million, with an average of S\$50 for every resident, based on a population of about 1.4 million people living in public housing. This increased from S\$9.60 per resident in 1969 to S\$50 per resident in 1978 (see Table 4.8). If we compare the number of housing units built per year with the amount of annual housing subsidy, the amount of subsidy per housing unit built each year is quite high. For example, during the fiscal year 1977/78 the amount of

subsidy was S\$2,300 per housing unit built in that year.¹

The subsidy rates for various types of HDB flat are different. As shown in Table 4.5, the HDB is subsidising each three-room model 'A' unit by 36 per cent (S\$12,500), a four-room model 'A' unit by 20 per cent (S\$10,800), and five-room model 'A' flat by 6 per cent (S\$4,500). This amount of subsidy is only based on the difference between the selling price and the construction cost of the unit, excluding the cost of the land, which usually amounts to about 10 to 20 per cent of the total cost of low-income high-rise housing.² In other words, the subsidy rates for these three types of flat actually range between 16 and 56 per cent.

As indicated in the first section of this chapter, one of the most important conditions for people to qualify for public housing is that their total household incomes should not exceed the income ceiling fixed by the Housing Board at the time when they submit their applications. Consequently, the household incomes of public housing residents are, in general, lower than those of private housing residents. As shown in Table 4.9, the monthly household incomes of S\$500 and S\$2,000 are the cut-off points to differentiate the

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1. The HDB disclosed the information on subsidy in its annual reports until 1979, but since then this type of information is no longer available.
 2. See, for example, Philip Motha, "Government Land Acquisition and Management for Low-income Housing," in Reprints 1981/82 (Singapore: Department of Building and Estate Management, National University of Singapore, 1983), p. 87.

income disparity between HDB households and the general households in Singapore. Compared with the general households in Singapore, HDB households have a higher proportion of those having monthly incomes of between S\$500 and S\$1,999 but a lower proportion of those having a monthly income of less than S\$500 and those having a monthly income of S\$2,000 and above.

The income disparity between HDB households and the general households in Singapore has, however, been reduced in recent years. For example, the average monthly income of HDB households in 1977 was S\$397 lower than that of the general households in Singapore.¹ This figure was reduced to S\$192 in 1982 (see Table 4.9).

The above data clearly demonstrate the fact that the lower income groups are the main beneficiaries of public housing. However, the poorest segment of the lower income groups in Singapore benefits least from the public housing schemes.

This trend is clearer if we look at the subsidies given to those who rent and those who buy public flats. It is interesting to note that the subsidies given to people who rent HDB flats are much lower than those given to people who purchase HDB flats. For example, it was officially stated that in 1971 "on the average, the Board subsidises a little less than S\$1.00 a month for each person living in rented

1. See, Report on Survey of Households 1977 (Singapore: Department of Statistics, 1978), pp. 30 & 59.

Board accommodation." (HDB, 1972:31).¹ But, the average amount of subsidy in that year was S\$10.60 per HDB resident, and S\$520 per housing unit built in that year, implying that, although the public housing scheme aims at assisting the low-income groups by providing them with low-cost, low-rental housing, the poorest people of these groups, who can only afford to rent HDB flats, do not seem to get the same benefits as those low-income groups who can afford to purchase HDB flats.

Apart from the housing subsidy given to the lower income groups, the other factor which affects the redistribution of income is that a lot of private land has been compulsorily acquired by Government for public housing development. The prices paid by the Board to acquire land are usually much lower than the market prices although this is very much subject to value judgement and subjective argument. The large number of appeals against the awards made for the acquired land demonstrates this point. During the period 1975-1981, altogether 597 appeals were filed against awards made by the Board.² Let us take a few cases of appeal reported in the press, for illustration:

(a) The first case involved a property of 145,844 square feet (13,126 square metres), which was sold to six brothers for S\$380,362 in 1973. Two years later the

1. We do not have this type of information for the recent years because the last time the HDB disclosed such information was in its annual report of 1971.
2. HDB, Annual Reports, 1975-1981.

property was acquired by the Government for S\$83,131, less than one quarter of the purchase price. When the dispute was heard in the High Court, the land valuer for the appellants suggested that the acquired land was worth S\$2.20 per square foot, whereas the government valuer said its true value should be 75 cents a square foot. The court's decision was to increase the award from S\$83,131 to S\$154,197, which was still less than half of the original purchase price (The Straits Times, March 30, 1979).

(b) The second case involved a property of about one million square feet of land in Woodlands owned by a private property development company. The land was compulsorily acquired in 1974 and compensation of S\$316,736 was paid. However, the owners claimed that the land was worth S\$1,905,000. The assessor for the appellants stated that the land should be worth S\$1.90 a square foot, but the assessor for the Government said that it was worth only 40 cents a square foot. The court decided that the land should be worth 50 cents a square foot and the total award should increase to S\$395,920, still about S\$1.5 million lower than the amount claimed by the owners (The Straits Times, April 11, 1979).

(c) The third case involved a property of 33 acres at Upper Thomson Road. The land was compulsorily acquired in 1971 and was awarded S\$1,111,000 by the Housing Board. The owner, however, appealed to the Land Acquisition Appeals Board to increase the award to S\$5,880,000. At the hearing in the High Court, the chartered assessor for the owner

claimed that the land at the time when it was acquired by Government was worth S\$4.00 per square foot. The assessor for the Housing Board, however, said that the land was worth only 76 cents a square foot. The court decision was to increase the award to S\$1,321,000, which is still less than one-fourth of the amount claimed by the appellant (The Straits Times, May 16, 1980; Nanyang Siang Pau, May 15, 1980).

(d) Another appeal was about a property of 107,000 square feet (9,960 square metres) located at Upper Bukit Timah Road. The land was acquired by the Government in 1977 and compensation of S\$1.8 million was paid to the company who owned the property. The company appealed to the Appeals Board and claimed that the property was valued by the chartered assessor at S\$16.5 million and, therefore, requested that the award be increased from S\$1.8 million to at least S\$15.7 million. The hearing of this appeal took a total of 18 days, and the court decision was to increase the award to S\$1.9 million, only slightly more than one-tenth of the value assessed by the company's assessor (Nanyang Siang Pau, May 29, 1981; The Straits Times, May 30, 1981).

The above are some examples of appeals against the compensation for land compulsorily acquired by Government during the period 1979-1981. In terms of the extent of disparity between the amount of compensation and the amount claimed by the owners, these cases are not unusual, because many similar cases were reported in the press during this period. Most of these, however, only briefly reported the

amount awarded and the amount claimed by the owners. Based on the analysis of the above cases, the awards made for private land compulsorily acquired by the Government were only about 20 per cent of the value claimed by the owners and assessed by their chartered land valuers. The actual market value of the acquired land is, of course, disputable.

Under the Lands Acquisition Act, the current method of determining the compensation rate is tied to two bases of valuation - the market price of the property prevailing on November 30, 1973, and the market price prevailing on the date of gazette notification of acquisition. According to the Act, the lower of the two valuations should be taken for award purposes (The Straits Times, April 14, 1982). The Government is aware that the compensation rate (based on 1973 prices) has caused some problems to owners affected by resettlement, especially for those owner occupied properties, to whom the compensation paid is not enough for them to obtain alternative accommodation (The Straits Times, February 21, 1983; March 1981, 1983). Moreover, the Government is also aware that prices of private properties increased about 400 per cent during the period 1977-1983 (Lian He Zao Bao, March 23, 1983).

Nevertheless, it is the opinion of the Government and some political leaders that the cost of land acquired for housing and other national development purposes should be kept at a reasonable, low level. As pointed out by Philip Motha, the former Head of the Department of Building and Estate Management at the National University of Singapore,

"If land acquisition means that the government would have to pay the full market value in all cases of acquisition of land for public purposes, this would make the cost of acquiring land necessary to implement economic and social progress exorbitant."¹

The acquired land is used for building public housing and other national development programmes. The acquisition of private land not only facilitates the public housing building programmes by providing sites for building projects, but also ensures a low cost of land for these programmes. The public flats built under these programmes are then sold or rented to the low-income families. Consequently, the resettlement and public housing schemes have served as an important measure to effect the redistribution of income among Singaporeans by: first, shifting part of the wealth of the 'haves' (those whose land has been acquired by the Government) to the 'have-nots' (those who qualify for low-cost public flats); and second, subsidising public flats, for which only the lower income families qualify.

Another significant effect of the resettlement scheme is that there has been a sharp rise in government ownership of land in Singapore in the past two decades, especially since 1960. In 1952, government ownership of land was only

1. Philip Motha, "Government Land Acquisition and Management for Low-income Housing," in Reprints 1981/82 (Singapore: Department of Building and Estate Management, National University of Singapore, 1983), p. 96.

37 per cent. It rose to 44 per cent in 1960 and 67 per cent in 1979 (The Straits Times, April 19, 1979). As there is an increasing demand for land for public development including public housing programmes, the proportion of government ownership of land will undoubtedly continue to increase in the future.

V. Economic Effects

Apart from the income redistributive effect, public housing programmes also result in other economic effects. First, the construction industry has been one of the fastest growing sectors in Singapore's economy during the past fifteen years, with an average annual growth rate of 23 per cent between 1966 and 1978. The annual growth rate of construction in 1982 was 40 per cent, the highest among all economic sectors. The contribution of the construction industry to the GDP increased from 3.6 per cent in 1960 to 7.3 per cent in 1970 and 9.7 per cent in 1982.¹ The building activities of public housing have constituted the major part of the construction industry, which has had multiplier effects on other sectors of the economy. For example, a large number of factories manufacturing building materials such as steel, cement, plywood, paints, bricks, hollow blocks, sanitary fittings and iron-mongery were established to meet the demand for building materials generated by large-scale public housing programmes.

1. Derived from Economic Survey of Singapore 1982 (Singapore: Ministry of Trade and Industry, 1983), p.90.

Second, HDB programmes have generated employment. In 1982, the construction sector employed 6.3 per cent of Singapore's total work-force. In the early 1960s when Singapore was faced with massive unemployment, it was estimated that a housing programme of 10,000 units per annum would create 15,000 jobs directly and indirectly. This contributing factor is now not so important as Singapore's unemployment rate for the past 10 years has been maintained at 3 to 4 per cent, which is normally regarded as full employment by international standards. Moreover, it is estimated that more than half of the construction workers in Singapore are alien workers, mostly from Malaysia.

Third, the moderate increases in rentals and selling prices of some types of public flat, as compared with those of private properties, have served as a stabilising factor for the economy. In Singapore, people spend on the average about 15 to 20 per cent of their monthly income on housing. For most young people, the percentages can be as high as 50 to 60 per cent if they purchase a HUDC flat or a private flat. Rapidly increasing rentals and selling prices of houses and flats would undoubtedly stimulate the demand for higher wages. This would in turn result in higher production costs and would lower the competitive position of Singapore with other countries.

In fact, Singapore is one of the very few countries of which the Government has purposely pushed down wages, especially wages for unskilled workers (Chen, 1983:115-125; 165-166). The wage structure and wage increases have been

monitored closely by the National Wages Council (NWC), the National Trades Union Congress (NTUC) and the Government to "ensure that potential investors are not scared off" (Ibid., p. 122), and to "maintain Singapore's competitiveness in world markets" (Ibid., p. 165).

Fourth, as land is scarce and very expensive in Singapore, the prices of private properties increased more than seven-fold between 1972 and 1982. The selling prices of HDB flats remained almost unchanged between 1972 and 1978. The prices, however, increased by about 80 per cent between 1979 and 1982 (see Table 4.5). The selling prices of HUDC middle-income flats, however, increased by 148 per cent (The Straits Times, March 23, 1983).

The low increase in prices of public flats, as compared to those of private properties, especially during the years before 1979, has helped stabilise the prices of housing in Singapore. Moreover, the compulsory acquisition of private lands for public housing development has caused anxieties among property owners about suddenly losing their properties. This anxiety will have an effect on the prices of land.

In fact, the Government has intervened in the highly volatile property market by taking measures such as acquisition of private land for re-development, adjusting rentals and selling prices of public flats periodically, revising policies and conditions governing the sale and use of public flats, restricting non-citizens in the purchase of low-rise flats or landed properties, and adjusting the

supply of public flats.

As pointed out by the Minister of National Development, the Government, as the largest single landowner and builder in Singapore, was in a position to influence the supply of properties and to stabilise rentals (The Straits Times, November 21, 1980). He warned that the Government would not permit rentals "to escalate to a stage where they adversely affect the economy and discourage investors and professionals from coming to Singapore." (Ibid.). He also said that "To curb speculation, the authorities are studying the possibility of acquiring land involved in speculative deals for sale through the Urban Redevelopment Authority." (Ibid.).

VI. Success or Failure

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The Government and some Singaporeans have always been proud of the achievement of their public housing. As pointed out by Joh Quah, "The HDB's performance in public housing is very impressive by any standard." (Chen, 1983:202). Stephen Yeh observes that "Besides quantitative statistics, the success of the Singapore experience can be seen in the high level of satisfaction of the residents themselves." (Yeh, 1975:351). Riaz Hassan concludes that the achievement of Singapore's low-cost housing programmes "has made its public housing a symbol of national pride."

1. This is based on the opinions expressed in the press and in many research projects on public housing such as Yeh (1975), Ong (1974), Yap (1975), Tan (1972), Seow (1965), and Hassan (1976).

(Hassan, 1976:240).

HDB housing estates are a show-case of Singapore's achievement as manifested by the many conducted tours of the HDB estates arranged for visiting foreign dignitaries to the Republic. During the past few years, many countries, most of them Asian, have sent their official missions or urban planning experts to study and to "learn" from the experience of Singapore's public housing programme. They include Japan, Soviet Union, Korea, People's Republic of China, Taiwan, Hong Kong, India, Pakistan, Sri Lanka, Thailand and Malaysia. In a short period of 25 years, the HDB has built public housing for 80 per cent of Singapore's population. With regard to the quantitative achievement of Singapore's public housing programme, there is no dispute about its impressive performance. There are, however, different views among urban planners and social scientists on the following issues: Should high-rise housing be accepted as the only solution to Singapore's public housing programme or should there be other options or supplementary programmes? What are the social costs the society and the people have to pay? Is the quantitative achievement of public housing a short-term or a long-term success?

The official arguments for adopting high-rise public housing as the only option are that, Singapore has a limited land area and that high-rise housing is the most vital, effective, functional and economic measure in solving housing problems in Singapore. These arguments are, however, challenged by architects and urban planners such as

Rory Fonseca, William S.W. Lim, and Tay Kheng Soon. They all argue that Singapore has sufficient land for developing low-rise high-density housing. Moreover, the low-rise development, or a combination of high-rise and low-rise, can achieve the same residential density as the high-rise option.

Says Tay, "The concept that limitations of land must lead to high-rise building is false." He demonstrates his point by comparing his prototype two-storey low-rise housing with the high-rise HDB building, and concludes that the prototype low-rise housing "is capable of producing a density of 62 to 70 houses per acre, which compares favourably with the average HDB estate density of 65.2 dwelling units per acre." (The Straits Times, September 26, 1975).

Fonseca, Lim and Tay also argue that the low-rise environment (or a combination of both high-rise and low-rise housing) is more conducive to human interaction than the high-rise environment since low-rise living patterns, compared with high-rise, are more compatible with traditional social systems and social structures, and they do not cause so much destruction to the society.

As a sociologist, I do not have the expertise to comment on aspects related to the land use technique and its



1. See, for example, The Straits Times, April 26, 1975; September 26, 27 & 29, 1975; November 21, 1982; New Directions, Vol. 3, No. 1 (March 1976), pp. 4-13; Chen & Tai, 1977, pp. 101-102; William Lim, 1980, pp. 81-95; and Fonseca, 1975.

resulting residential density. However, the findings of studies conducted in Singapore by social scientists such as Chang (1975), Hassan (1969, 1977), Spiro (1976, 1977), Tai (1983), and Chen & Tai (1977) all support the argument that a low-rise environment is more conducive in fostering neighbourliness and community identity.

Apart from this controversial argument, there are, moreover, indications that people's demands for housing change over time. As discussed in Chapter 3, survey data show that people in Singapore would like to have larger dwelling units, and would prefer terraced, semi-detached and detached houses to flats if they could afford to buy those types of houses. This implies that the demand for public flats may decline when the society becomes more affluent. When people become more affluent in the future, say 10 to 20 years from now, they may like to shift back to low-rise housing from their high-rise flats. Up to now, high-rise buildings are the only option adopted by the HDB for its public housing programme, and by 1992 about 85 per cent of Singapore's population will be housed in high-rise housing estates. By that time it will be too late for the Government to change its high-rise housing policy.

The physical design of public flats and housing estates is another area of debate. The public housing environment is often criticised by local architects, social scientists and some foreign observers, for being too impersonal and monotonous. Almost all HDB building blocks have standardised designs and are painted with similar or

identical colours. Until very recently, almost all HDB blocks were cement plastered and painted in white or cream colours. Standardised block designs are the slab blocks for 1-, 2-, 3- and 4-room flats, and the point blocks or tower blocks are used only for the 5-room flats.

Not only are all HDB building blocks standardised, the design and the lay-out of all HDB housing estates are also almost identical. Therefore, people usually get lost when they enter big housing estates such as Toa Payoh, Ang Mo Kio or Bedok, as the hundreds of building blocks are similar or identical. When I take foreign friends or researchers to tour the housing estates or to study the urban sociology of these estates, I usually take them to visit two or three different housing estates with the aim of giving them some comparative perspectives of public housing in Singapore. But, most of my foreign friends usually ask me during the tour whether we are still in the same housing estate when we have actually already visited two housing estates, a distance of some 10 kilometres apart.

The monotony of public housing estates has been criticised by architects and social scientists and suggestions for improvements have also been made. For example, in their study of the life and living environment in kampungs and HDB estates in Singapore, Chen and Tai suggest that improvements can be made by using different colour schemes, types of building materials and shapes of block designs to reduce the degree of monotony of HDB

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estates (Chen & Tai, 1977: 100-101). Tay Kheng Soon, a local architect, proposes a "modern kampung concept", which retains some features of the typical kampung environment, as an alternative in diversifying the housing options and reducing the degree of monotony of public housing estates (The Straits Times, September 26, 1975).

Opinion about designs and lay-outs of housing estates is, however, a rather subjective and value-laden matter. Although some architects and social scientists criticise these aspects of HDB estates, others praise their achievements. Richard Ho, a young private architect, says, "The Housing Board has to be given a generous pat on the back. Despite its impossibly large volume of work each year and stringent cost constraint, the HDB seems to have succeeded where others have failed. And I'm not talking about figures but a very conscious effort to humanise and personalise public housing and its amenities." (The Straits Times, March 13, 1983).

With respect to the external physical designs of public housing, the HDB announced in 1979 that it was exploring the possibilities of making more individualistic designs for future HDB estates so as to allow them to have their own identity. This new concept in planning for housing estates in Singapore "would be experimented upon, based on a cluster of buildings to form a precinct with its own design

1. Some of these suggestions have been implemented recently in some new housing estates, for example, see Photo 8.

identity. More varied heights between building blocks will also be introduced. The emphasis on distinct identities for the various estates will be augmented through elevational treatment, colour scheme, types of building materials used, etc." (Our Homes, February 1979:26). The precinct planning concept will first be used in the new town in Tampines.

The third area of debate concerns the various types of flat to be built by the Board. In the early years of the HDB building programme, the main target was to build as many dwelling units as possible in a given land area. As a result, many one-room flats were built in the 1960s. The one-room flat, which consists of only a single room used as a living, dining and sleeping area, has a floor area of 230-350 square feet (21-33 square metres), and the average household size is more than five persons. According to the 1980 population census, there were altogether 109 households with eleven persons or more per household, living in one-room flats (Khoo, Release No.6, 1981:49).

It is not difficult for any social scientist (or even the common people) to realise the high social costs associated with this kind of living condition. As pointed out by Peter Chen (New Nation, May 14, 1972), the social costs for one-room flats are extremely high in terms of crime, delinquency, family problems, and school dropouts of children from the one-room flats. Chen's observation is supported by the findings of the Committee on Crime and

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Delinquency. He further argued as early as 1972 that the Housing Board should stop building one-room flats. This argument was not accepted by the Board as the demand for one-room flats at that time was so large. Nevertheless, the HDB stopped building one-room flats in 1977 and has, since 1979, embarked on an improvement programme to eliminate 75 per cent of the one-room flats either by converting them into two-room or three-room flats or by demolishing some of them to provide open green space or sites for the construction of new flats (Our Home, February 1979:26). The demolition work is to be carried out in three stages over a period of five years (HDB, 1979:24). Moreover, the Board has also decided to spend S\$106 million to improve the quality of old housing estates to close the disparity between the old and the new (The Straits Times, March 22, 1979).

Fourth, as a result of massive resettlement and public housing programmes during the past two decades, old buildings have been demolished and replaced by new ones all over the Republic, especially in the city centre. Many people, especially the architects and social scientists, have asked the question whether the old must give way to the new completely? In commenting on the Government's decision to clear the Singapore River, Chinatown and Serangoon Road Areas, a group of young Singaporeans recently expressed

1. Report of the Committee on Crime and Delinquency (Singapore: The Committee on Crime and Delinquency, 1974), pp. 19-20.

their concern with the loss of their heritage in the process of relocation and urban renewal.¹ They stressed the importance of preserving these areas for their rich historical and cultural value. They ask, "How can we teach our children about their roots if all visible evidence of them is destroyed?" And they conclude that, "We are not suggesting that Singapore stop advancing but must we lose our heritage in the process?" Tay Kheng Soon, a private architect, also stresses the importance of the history of a city in that it is a link with the past, inseparable from our sense of identity. He argues that a city should not be just high-rise, newly-built towers, it should be a place full of life and activity that is a continuity between the new and the old. This aspect of urban planning has, however, been overlooked by the housing authorities. Tay advocates that not only certain areas of buildings should be preserved, but also the distinctively Singaporean features such as the street bazaar, the corner coffeeshop, the recreational backlane, the city park-way like the Ang Siang Hill, and meandering streets such as Club Street or Emerald Hill, should be used to activate the city (The Straits Times, November 21, 1980).

1. This view was expressed in a letter to the editor, which carried a total of 179 signatures and was published in The Straits Times, March 30, 1983. In Singapore, the letters-to-the-editor sections of the newspaper serve as a very important forum for public opinion and complaints about government policies. See, for example, Eddie Kuo and Peter Chen, Communication Policy and Planning in Singapore (London: Routledge & Kegan Paul, 1983), pp. 49-51.

In the conclusion of their study of social ecology in Singapore, Peter Chen and Tai Ching Ling also argue that "to preserve these historical landmarks not only increases the variety of housing features in the area, it also maintains certain historical values and traditional ways of life." (Chen & Tai, 1977:101).

Although the Preservation of Monuments Board was established in 1970 as a statutory board to deal specifically with the preservation of historical buildings, the buildings classified under preservation orders are, however, very few, and most historical landmarks such as the whole Chinatown area, have had to give way to housing and urban development. The rapid urbanisation process accelerated by large-scale public housing programmes, and the destruction of the old city and the traditional communities, result in not only adaptation problems, but also the breakdown of traditional social systems and social structures. These are the social costs Singapore and her people have to pay for the rapid process of transformation. The social costs could, however, be reduced to a minimum level if some of the above proposals suggested by the architects and social scientists were to be given due consideration by the housing authorities.

The fifth area of debate is related to the complaints of the residents in public housing estates. Studies conducted by the HDB and Stephen Yeh (1975: 214-239) show that the degree of satisfaction with living conditions and the environment among HDB tenants is very high (see Chapter

1). Degree of satisfaction is of course a relative, value-laden concept. It does not tell us much about the social costs and the hidden problems.

Although public housing programmes aim at providing better living conditions and conducive community environments, vandalism, robbery, rape and other crimes have been serious threats to the security of public housing estates. At one stage, people were worried about Toa Payoh, one of the largest public housing estates, becoming like a Chicago ghetto. The Government has made every attempt to ensure the security of estates. More police patrols have been carried out. Community organisations such as Neighbourhood Watch Groups and Residents' Committees have been set up by the Government to work out measures to promote neighbourhood identity and the security of the community. The HDB has since 1979 installed closed circuit television cameras in lifts in an attempt to reduce crime, as incidents such as molestation and robbery occurred frequently in the lifts of the HDB flats (The Strait Times, February 18, 1979).

The problems faced by HDB residents and complaints about their living conditions in public housing estates have never been reported in any academic research or in the press as explicitly as those revealed by Eugene Yap, a candidate of the ruling party for the by-elections in February 1979. During his six day door-to-door visits in the Mountbatten constituency, Yap was stuck in the lifts twice and received about 194 complaints, which included those of frequent lift

breakdowns, nuisance caused by mosquitoes, and the arrogant attitude of some of the HDB staff (The Straits Times, February 7, 1979). The complaints of the attitude of some HDB officers confirm the findings of the study done by Riaz Hassan on the social status and bureaucratic relationships among HDB tenants in the early 1970s, which criticised the unfriendly and discriminatory attitudes of some HDB officials towards one- and two-room flat dwellers.

In a survey of courtesy among civil servants conducted by Nanyang Siang Pau in 1981, the attitudes of civil servants in Government clinics and the HDB were rated the worst among eleven government organisations (Nanyang Siang Pau, June 28, 1981). In response to the criticism about the negative attitudes of some HDB officers, the HDB has assured the public and the political leaders that it will do its best to improve the attitudes of its staff. However, the issue of the negative attitudes of some HDB officers became a heated issue again in the Parliamentary Debate of March 1983. Some backbenchers of the ruling party criticised some "robot-like" HDB officers who were "programmed" at the HDB headquarters and had an "inflexible" attitude (The Straits Times, March 24, 1983).

The above illustrations demonstrate the fact that much improvement of public housing estates can be made, and that the planning for public housing estates should be based on a long-term and not a short-term perspective, although various constraints such as financial resources and current demand for public housing should also be taken into consideration.

CHAPTER 5

POLITICAL IMPLICATIONS OF PUBLIC HOUSING

I. Introduction

The achievements of the public housing programmes in the past twenty five years have been a salient factor in the electoral triumphs of the People's Action Party (PAP) since 1959 when it became the ruling party, and public housing has become an immediate and significant symbol of national development in Singapore.¹ This view has been emphasised by social scientists such as Stephen Yeh and Pang Eng Fong.² According to them:

Public housing is probably the most visible and demonstrative project in the Republic. Its success has assured support for many other Government policies. It is perhaps not a pure coincidence that results of the study on the level of satisfaction with public housing are similar to the result of the 1972 election in which the People's Action Party received 70 per cent of the popular vote and won all the seats in the parliament.³

As analysed in Chapter 3, housing and urban deterioration became a very serious social and political problem in the 1950s, and public housing has since 1955,

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1. See, for example, Hassan, 1976:240; Yeh, 1975:351; and Chen, 1983:202.
 2. Stephen Yeh is the Honorary Consultant to the Systems and Research Department of the HDB. Pang Eng Fong is the former Director of the Economic Research Centre and currently Associate Professor of Business Administration at the National University of Singapore.
 3. Stephen Yeh & Pang Eng Fong, "Housing Employment and National Development: The Singapore Experience," Asia, Vol. 31, 1973.

been an important election issue in almost all general elections. The PAP Government has since 1960, made public housing a top priority for national development. This situation was summarised by Robert Gamer as follows:

When Singapore secured independence from the British in 1959, under the leadership of the People's Action Party, it boldly confronted two common contemporary problems - political instability and urban deterioration - and found solutions for them (Gamer, 1972:xvii).

The solution to the problem of urban deterioration was the firm commitment of the PAP Government to the large-scale resettlement and public housing programmes, and the unflinching implementation of these programmes by the housing authorities. We have discussed in the preceding chapter the social and economic implications of these programmes. In this chapter, we shall analyse their political implications, and focus specifically on the following issues, viz. (a) public housing as an election issue; (b) public housing as a powerful force in supporting government policies; (c) public housing as a form of social and political control; and (d) factors affecting the achievement of public housing in Singapore.

II. Public Housing as An Election Issue

Since the mid-1950s, housing has been a crucial political and election issue. In 1955, Singapore's constitutional status changed from that of a Crown Colony to a ministerial form of government, giving local citizens a certain degree of political power and representation. Elections for the Legislative Assembly were held and the

Labour Front (LF) Coalition Government took office in April 1955. Realising the seriousness of the housing problem in Singapore and its political implications, the LF Coalition Government made a serious attempt to build more public housing units under the SIT. It managed to build some 10,978 dwelling units at an average of about 2,000 units a year (SIT, 1959:36). This figure, however, was well below the targeted 10,000 units annually, as estimated by the 1955 Master Plan.

The inability of the LF Coalition Government to meet the expectations of the people in public housing programmes became a critical political issue, used by the opposition political parties to attack the inefficiency of the LF Coalition Government. The press and opposition parties called upon the LF Coalition Government for more decisive and drastic measures to remedy the housing shortage.¹ In the Legislative Assembly, it was stressed that "the two main problems which face the Government and for that matter any future Government, are education and housing."² At one stage the opposition in the Assembly even called for the resignation of the LF Coalition Government for its failure

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1. See, for example, a series of editorials on housing issues published in The Straits Times, July 5, 1958; September 12, 1958; and December 20, 1958.
 2. See, Singapore Legislative Assembly Debates, 18 December 1958, Col. 1562.

in the public housing programmes.

The LF Coalition Government, however, defended the slow pace of public housing programmes by attributing it to a combination of factors such as the lack of manpower and materials, insufficient funds, the competition for funds by other public sectors, and the rapid natural population increase after the Second World War.

In early February 1959 the disastrous Kampong Tiong Bahru fire destroyed some 700 attap squatter huts. The LF Coalition Government realised the important political implications this would have on the election to be held the following May. It immediately made available 1,000 SIT units at the Kallang Airport estate to rehouse the fire victims (SIT, 1959:42). A few weeks later the Government announced the construction of some 740 dwelling units at the aforementioned fire site to be completed within three

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months. The above actions taken by the ruling party were an attempt to show the people that it was capable of meeting their housing needs. This move by the Government was, however, criticised by the PAP³ as capitalising on the calamity for election purposes.⁴

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1. The call was made by the leader of the Liberal Socialist Party. See, Singapore Legislative Assembly Debates, 19 December 1957, Col. 3284.
 2. Singapore Legislative Assembly Debates, 3 March 1959, Cols. 1998-9.
 3. The PAP was an opposition party at the time when it made this criticism in March 1959.
 4. See Petir, Organ of PAP, Vol. 11, No. 3, March 1959.

In the 1959 general elections, housing became a major election issue for almost all the contending political parties, especially for the two main contenders, namely the People's Action Party (PAP) and the Singapore People's Alliance (SPA).¹ The PAP, a newly emerging major political party, decided to choose housing as the first of the Party's major electoral policies to be outlined to the people.² The PAP, on the one hand, criticised the inability of the ruling party to solve the critical housing problem. On the other hand, it outlined its bold and comprehensive housing policy, which promised the electorate that if the PAP were elected to power, it would immediately carry out large-scale housing programmes to build low-cost flats for the people and ensure that housing would be within the means of the lower income groups. Moreover, the SIT would be re-organised and replaced by a more effective housing authority, and the 1955 Master Plan would be thoroughly revised to suit the local conditions and the changing patterns of housing needs.³

In a last attempt to convince the electorate that the ruling party was concerned with the housing problem as much as the PAP, and that the ruling party was capable of solving

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1. The SPA was formed by the Chief Minister Lim Yew Hock in November 1958 to contest the 1959 elections. It comprised mainly former members of the ruling Labour Front.
 2. See The Tasks Ahead: PAP's Five Year Plan, 1959-64, Parts 1 & 2 (Singapore: PAP, 1959).
 3. Ibid., Part I. pp. 29-31; and The Straits Times, April 6, 1959.

the housing problem in the shortest possible period of time, the Chief Minister announced, during the last week of the election campaign in May, that if the Labour Front Coalition Government was re-elected, it could easily build some 10,000 units of public housing in the first year of office and 15,000 units for the succeeding year in accordance with the Master Plan (The Straits Times, May 12, 1959). But, because of its past performances in general and its inefficiency in public housing programmes in particular, the SPA obtained only four seats out of a total of 51 seats in the new Assembly.

The overwhelming victory of the PAP in the 1959 general elections was beyond the expectations of the Party, which won 43 seats in the Assembly and has since then been the ruling party for an uninterrupted period of more than two decades.

As the promise to provide massive low-cost public housing for the electorate resulted in its electoral triumph in the 1959 general elections, the PAP determined to make its public housing programmes a successful one, not only to honour its promise to the electorate, but also to demonstrate to the people the PAP's ability to accomplish things which other governments had failed to achieve.

In the course of public housing development, the PAP Government met with strong objections in the 1960s to land clearance, and with problems of resettlement among the people who were affected. The opposition parties, especially the Barisan Sosialis, sought to capitalise on the

grievances of those affected by the resettlement programmes and to exert their influence by providing leadership for the large number of squatters affected by the scheme. The organised resistance prevented any physical progress in the proposed Toa Payoh housing scheme, the Siglap fire-site and the Geylang Serai development project in the early 1960's. The PAP Government attributed the obstruction to the work of "irresponsible elements."¹

In February 1963 the Singapore and Malayan governments carried out a large security operation called "Operation Cold Storage", which resulted in the detention of 111 political, labour and student leaders on charges of engaging in pro-communist subversive activities. Following this security operation,² the Singapore Government gave the green light for the resettlement of Toa Payoh's squatters in June 1963 without meeting much resistance (Gamer, 1972:66-70). Toa Payoh is now one of the largest public housing estates in the Republic.

During the initial years of the HDB housing programmes, the PAP gave maximum publicity to the various housing projects carried out by the HDB. Housing exhibitions were held, tours of the various housing projects were conducted, and most of the major housing projects were

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1. See Singapore Legislative Assembly Debates, 14 December 1961, Cols. 2145-55.
 2. This security operation was aimed at the pro-communist activities and had no direct connection with the resistance against the resettlement schemes.

either made known of or officiated at by the Prime Minister himself.

By 1963, the HDB had built enough units of flats to meet basic housing needs, and about 350,000 people or 20 per cent of the population were benefiting from subsidised public housing. The Yang di-Pertuan Negara¹ announced in the Legislative Assembly that the housing shortage had been solved.² In the 1963 general elections, the PAP made maximum electoral use of the housing issue by emphasising the achievement of its housing programmes. Its election manifesto stressed that the Party had, in a short period of four years, overcome various problems such as the housing shortage that had been "conceived to have needed several decades to achieve." (Nanyang Siang Pau, September 13, 1963).

The PAP again won the 1963 general elections and continued to be the ruling party. It immediately set about implementing the second stage of its Social Revolution by focusing on "four principal targets of construction effort" for the next five years, namely industrialisation, housing, education and the raising of social standards. With regard to housing the goal was to build 60,000 units of HDB flats during the second Five-Year Building Programme and to undertake the redevelopment of the city centre through urban

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1. The Yang di-Pertuan Negara was the Head of State.
 2. Singapore Legislative Assembly Debates, 27 March 1963, Cols. 8-9.

renewal. Large-scale public housing programmes and urban renewal called for greater power for the HDB to acquire lands for the development programmes. Consequently, the Lands Acquisition Act was passed in 1966 and the Board was given the power to acquire compulsorily any piece of land deemed necessary for development purposes.

During the 1968 general elections, the major opposition parties decided to boycott the elections, and only seven out of a total of 59 constituencies were contested. The PAP won all the 59 seats in Parliament, which resulted in the emergence of a dominant one party system in Singapore. In the 1972 and 1976 general elections, the PAP again won all the seats contested. During these general elections, the PAP continued to make maximum electoral use of the achievements of the public housing and the urban renewal programmes. Candidates of the PAP in their election pamphlets revealed future plans for more housing estates, shopping centres, swimming pools and community centres. They also outlined or elaborated on these plans at various election rallies to gain the support of the electorate.

In his election-eve statement in the 1972 general elections, Prime Minister Lee Kuan Yew announced that the HDB would shortly raise its annual building target from 20,000 to 30,000 units and that the Government would make Singapore into a metropolis that would be the best in the tropics (The Straits Times, September 2, 1972). In the 1976 general elections, Lee Kuan Yew at an election rally in Bukit Ho Swee referred to the disastrous fire that had taken

place in the area in 1961 and stated that it gave us the chance to start a building programme, which today has built 225,000 flats, half of which have been sold to the people who live in them. He further added that "no other place in Asia, outside Japan, can do this or has done this."¹ In his eve of poll broadcast, Lee Kuan Yew stressed that the Government would do away with slums in the next ten years and with more investments and jobs "then each of you can own your home and have your family brought up in healthy and gracious surroundings." (The Straits Times, December 23, 1976).

The opposition parties also made housing an election issue. They attacked the Government by criticising the HDB for failing to cater for the welfare of the poor and for increasing the hardship of people affected by resettlement. For example, in the 1972 general elections, the Barisan Sosialis criticised the policy of urban renewal as being "poorly and haphazardly planned" and claimed that HDB flats were "not really designed to meet the welfare and needs of the flat dwellers" (The Plebian, April 30, 1972). They argued that resettlement had resulted in great anxiety and mental strain, a higher cost of living and loss of livelihood for those affected, and, therefore, urged the immediate halt to all urban renewal activities (The Plebian, June 4, 1972). The Workers' Party, on the other hand,

1. The Straits Times, December 17, 1976; & December 19, 1976.

emphasised the need for better flats and greater government subsidies for public housing (The Straits Times, December 1, 1972). The People's Front meanwhile, called for better and more reasonable terms of compensation for the displaced (The Straits Times, August 28, 1972).

The 1979 by-elections saw an interesting change of strategy by the PAP, in making public housing an election issue. Unlike the strategy used in the previous four general elections in which all PAP candidates emphasised the PAP's public housing achievements, some PAP candidates in the 1979 by-elections instead made known to the press the serious complaints of HDB residents. Some others continued to emphasise the success of the Government's housing programmes and announced future development plans for their constituencies. The opposition parties, however, seemed to be silent about the housing issue for the first time. This was probably because the opposition parties had learnt from past experience that their criticisms against the resettlement and public housing schemes had never proved to appeal favourably to the electorate or the press, but instead, on many occasions their criticism had had counter effects, as the problems faced by people affected by resettlement were overshadowed by the achievements of these schemes.

The PAP candidate for the by-election for Mountbatten, Eugene Yap, told the press that he had received complaints about the poor quality of HDB flats by the residents of Mountbatten during his six-day door-to-door campaign. He

had received 194 complaints from the residents. On the top of the list of complaints were demands for larger flats, the long waiting period for the allocation of HDB flats, the poor quality of materials used in the flats such as rotten wooden front doors and toilet doors, frequent lift breakdowns, nuisance caused by mosquitoes, and the arrogant attitude of some of the HDB staff (The Straits Times, February 7, 1979).

Three days later, the PAP candidate announced at a press conference, the HDB's 24-million dollar plan for the development of housing and other amenities in the Mountbatten constituency. These included the construction of 1,000 units of three- and four-room flats, the building of an ultra-modern community hall for recreational purposes and the building of an old folks' home with a day care centre (New Nation, February 9, 1979).

The political implication of this particular case is how it demonstrated to the electorate the capability of the PAP Government in handling matters like housing, and the efficiency and flexibility of the HDB in response to public complaints. It would be interesting to know whether the HDB is so effective and flexible and if it could really work out such a large improvement plan within three days in response to the remarks made by the PAP candidate, or was it merely a coincidence as the HDB already had the plans worked out?

Yap's remarks on the problems faced by HDB residents were, however, very significant as this was the first time a candidate of the PAP Government had, during an election

campaign, made such an explicit public statement about residents' complaints of HDB housing estates. It becomes even more significant when one considers that the statement was made at the time another PAP candidate, Teh Cheang Wan, who had just relinquished his position as Chief Executive Officer of the HDB a few days before the by-elections, also stood for the first time for election in another constituency. In the 1979 by-elections, the PAP again defeated all the opposition candidates and all the seven PAP candidates won the elections. Teh Cheang Wan was immediately appointed Minister for National Development.

The political implications of the resettlement and public housing schemes became more apparent in the Anson by-election, which was held in October 1981. In this by-election, the PAP experienced its first defeat in fifteen years. Based on the analyses of social scientists, political observers, and journalists¹, two main factors contributed to the defeat of the PAP in the Anson by-election, viz. (a) the unhappiness among residents of the constituency about the impending resettlement of nearly 2,000 voters in Blair Plain and Kampong Bahru, the steep increases in selling prices of HDB flats in recent years, and the long waiting period for obtaining HDB flats; and (b) the arrogant attitude of some PAP leaders towards the citizens and their absence of feeling towards the common

1. See, for example, The Straits Times, October 31, 1981; November 8-11, 1981; November 22, 1981; and December 14-15, 1981.

people in Singapore.

If we analyse the housing statistics of the voters in the constituency, the factors contributing to the PAP's defeat become apparent. Among the total of 14,510 eligible voters in the constituency, 8,553 voters (58.9%) lived in HDB flats. Of those staying in HDB flats, 3,970 owned their homes while 4,583 rented theirs (The Straits Times, October 31, 1981). The majority of those renting HDB flats were on the waiting list to purchase HDB flats, and they amounted to 4,576 voters, who were confronting the hefty price increases¹ for HDB flats of the preceding three years.

In addition, there were nine blocks of flats in Blair Plain owned by the Port of Singapore Authority (PSA) and rented out to its workers, but the PSA wanted to evict the 700 or so families living in these high-rise blocks, to make way for the development of a container complex. This decision of resettlement was made by the Government at a time of costlier HDB flats and longer waiting periods for those without HDB priority for allocation. The number of voters affected by the planned eviction was 1,179, and this was the group of voters who were most discontented with the Government. Another 750 voters from Kampong Bahru were to be affected by resettlement.

1. As analysed in Chapter 4, the selling prices of HDB flats remained almost unchanged from 1972 to 1978, but the prices suddenly increased by 15 per cent in 1979, 20 per cent in 1980, and 38 per cent in 1981. The announcement of the price increase in 1981 had upset many applicants who were on the waiting list to purchase HDB flats.

The total number of the latter three groups of voters, who were directly affected adversely by resettlement and steep price increases of HDB flats was 6,505 voters, amounting to 44.8 per cent of the total eligible voters in the constituency.

From the above analysis, it is obvious that the unhappiness of those voters affected by resettlement and the hefty price increases of HDB flats in the preceding three years was one of the main factors contributing to the PAP's defeat in the Anson by-election. This fact was also admitted by the PAP leaders. In a policy speech analysing the outcome of the Anson by-election, the Prime Minister said the lessons of the by-election were: First, resettlement, without HDB priority, was still very unpopular however cogent the reasons and however illogical it was to resist resettlement when without it, no urban renewal was possible. Second, people wanted to own their homes and HDB homes must be at prices and in instalments within the CPF savings¹ of nearly all households (The Straits Times, December 14, 1981). He expressed the Government's determination to ensure that every Singaporean couple would be able to afford to own a home despite rising prices,

1. At present, people are allowed to use up to 90 per cent of their Central Provident Fund savings to purchase HDB flats or private residential properties. CPF savings are compulsory for all employees. The monthly CPF contributions at present are 45 per cent of their monthly salaries, of which 23 per cent are contributed by the employees and another 22 per cent by their employers.

because "this is more than just a housing problem as it involves economic, social, political and security considerations." (Ibid.). He added, "We shall go back to Anson in 1984/85, with the Blair Plain tenants out and the resettlement of Kampong Bahru completed, and we shall win." (Ibid.).

The above discussion illustrates the point that public housing has been an important election issue in almost all the general elections and by-elections since 1955. However, we must not over-emphasise the importance of housing as an election issue, as many other important matters were debated during the elections as well. Although PAP candidates in all these elections made maximum electoral use of the PAP's achievements in public housing, they also campaigned for the Party's solid performances in other social and economic developments and the capability and credibility of its leadership in the course of national development during its period of office of more than two decades.

III. Public Housing as A Powerful Force in Supporting Government Policies

In the early 1960s public housing programmes were implemented merely to solve the housing shortage problem. But, the programmes have since the late 1960s, played a very crucial role in supporting other government policies and national development programmes such as promoting social integration ; supporting industrialisation and economic

1. This matter will be dealt with in Chapter 6 & 8.

development and the redistribution of income¹; and supporting government policies aimed at creating a new, planned, and disciplined society.²

In this section we will focus our discussion on public housing policies which have been used specifically, and explicitly, to support the following government policies: (a) moral and traditional values, (b) population and family planning, and (c) rewards for the select groups.

A. Moral and Traditional Values

In recent years, Singapore's political leaders, especially the 'old guard' of the political leadership of the ruling party, have begun to worry about social issues, such as the decay of some traditional Asian values³ crucial to the growth and prosperity of the Republic, the increasing proportion of one-family nucleus household⁴ and the subsequent breakdown of the extended family system and

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1. These issues were analysed in Chapter 4.
 2. This issue will be discussed in the fourth section of this chapter.
 3. For example, respect of elders, respect for the authorities, group spirit and mutual assistance.
 4. According to the Census of Population, one-family nucleus households are those with just a married couple, one parent only with unmarried children, or one grandparent only with unmarried grandchildren. The proportion of this type of household in 1980 was 46 per cent more than in 1970 (The Straits Times, April 2, 1982).

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traditional family values. These issues result from the rapid process of urbanisation and industrialisation over the past two decades, and if left unmonitored, they could not only cause problems to the society and the economy in the future, but could also result in greater government expense in providing services for the elderly, problem teenagers, and broken families.

Therefore, the Government recently introduced into all schools, a new moral education programme based on the teaching of Confucian ethics, and other government policies such as income tax allowance for taxpayers living together with their parents and a housing allocation priority scheme for multi-tier families, to promote the awareness and the practice of moral and traditional values among Singaporeans.

In his Chinese New Year message (The Straits Times, January 25, 1982), Prime Minister Lee Kuan Yew said he found the break up of the extended family structure "disturbing and worrying." He stressed the importance of bringing back the three-tier family where younger generations would look after the old.

In response to the call by the Prime Minister, the HDB immediately set about studying various formulae to give priority to three-tier families living in the same flats.

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1. See, for example, The Straits Times, February 1, 1982; April 2, 1982; April 30, 1982; Peter Chen & Chang Chen-Tung,); The Elderly in Singapore (Singapore: Ministry of Health, 1982); The Study Group on the Elderly, Social Policy and the Elderly in Singapore (Singapore: Singapore Council of Social Service, 1981).

Consequently, a new priority allocation scheme for three-tier families was introduced on May 3, 1982 with the explicit aim of supporting the Government's policy to revive the spirit and values of the extended family system (The Straits Times, April 30, 1982).

Under this scheme, multi-tier families would get a three-year headstart on other applicants on the waiting list to buy or rent HDB flats. In other words, a multi-tier family registering under the scheme, say, on March 30, 1983, would be accorded priority as if it had registered on March 30, 1980. According to the Minister of National Development, about 10 per cent of the 116,813 applicants waiting to buy or to rent HDB flats as of April 1982, would benefit from the new policy.

Other incentives of the scheme include: a longer loan repayment term and lower initial downpayments for those with insufficient Central Provident Fund savings. There are, however, also conditions to ensure that members of multi-

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1. The definition of multi-tier families is rather complicated. Basically, a multi-tier family should consist of a married couple living with their parent(s), grandparent(s), or great-grandparent(s). In other words, a multi-tier family is defined as the one which consists of members of at least two married generations, with or without other unmarried members. The family members are: great-grandparents (A), grandparents (B), parents (C), married son or daughter (D), and unmarried son or daughter (E). Those families which are eligible for the multi-tier family priority allocation scheme include any of the following combinations: A+B, A+C, A+D, B+C, B+D, C+D, A+B+C, A+B+D, A+B+E, A+C+D, A+C+E, A+D+E, B+C+D, B+C+E, B+D+E, C+D+E. The following combinations are ineligible: A+E, B+E, C+E, or D+E.

tier families stay together as long as they occupy their allocated flats. HDB maintenance inspectors from area offices will make regular visits to check abuse. If any multi-tier family breaches the scheme's conditions, the Housing Board will compulsorily acquire the flat and debar all adult members listed in the application from applying for another HDB flat for 30 months.

B. Population and Family Planning

Public housing has also been used as a measure to support the national programme of population and family planning. In the early years of HDB housing programmes, large families were given priority for public housing. The minimum household size was five persons in the early 1960s. In 1966, the Government launched an all-out and centralised campaign for family planning to discourage people from having large families. In supporting this government policy, the minimum household size for application for public housing was reduced from five to two adult members of a family. In 1972, the HDB relaxed its restriction on subletting and allowed families with no more than three children to sublet rooms in their flats. In 1973, a new restriction was imposed on all female work permit holders and since then, a work permit holder must obtain permission from the Commissioner of Labour before she can marry a

1. Alien workers are classified as work permit holders and employment pass holders. The former are unskilled workers, the latter are skilled workers or professionals.

Singaporean. Otherwise, she and her husband will lose all privileges for public housing and other government subsidies. One of the stipulated conditions for a work permit holder to obtain permission to marry a Singaporean is that the couple must agree that one or the other of them will undergo sterilisation immediately after the birth of their second child, otherwise the non-Singaporean will lose the privilege of becoming a citizen and the couple will forego all government subsidy programmes including public housing.

C. Rewards for Select Groups

Public housing has also been used as a form of reward given to some select groups of people who, in the opinion of the Government, contribute in one way or another to the Government and the community. Let us take the case of senior government officers as an illustration. In response to a call by the Government to recruit and retain the able persons in the civil service,¹ the housing authority has worked out a priority allocation scheme for senior

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1. The pay for senior civil servants in Singapore is among the highest in the world. For example, the monthly salaries for senior civil servants classified as Grade 'A', Staff I, Staff II, and Staff III are: S\$13,600, S\$15,900, S\$18,800, and S\$21,700 respectively. Thus, the monthly salary of a 'Staff III' civil servant in Singapore (S\$21,700) is higher than that of the Governor of Hong Kong (HS\$58,700 = S\$18,279). In addition, they are eligible for many other allowances such as car allowance, entertainment allowance and annual National Wages Council (NWC) adjustments. The exchange rates as of April 5, 1983 were US\$1 = S\$2.09; and £1 = S\$3.09.

government officers wishing to purchase middle-income public housing.

In January 1981, the Government announced its priority allocation scheme for senior government officers, including the local staff of the National University of Singapore. However, only officers selected and approved by the Public Service Division of the Finance Ministry are given priority allocation. This is one of the Government's moves to make the civil service more attractive.

Government officers allocated flats under this scheme must serve the Government or statutory boards for ten years from the date of signing the purchase agreement. Those who leave before the bond is up must resell their flats to the HDB at the original purchase price. In return, they enjoy the following privileges: (a) They pay 17.5 per cent less than other applicants for HUDC middle-income flats, and a number of the choice estates are reserved for them. (b) They are not subject to the monthly income ceiling of S\$6,000 for other applicants. (c) They are exempted from paying an initial downpayment at the time of registration while other applicants have to make a downpayment of 20 per cent of the selling price of the flats.

At the time when the HDB announced the selling prices of the Phase Three HUDC flats in February 1983, altogether 4,136 applicants had registered to buy these flats. Of these, 170 applicants were senior civil servants who qualified for the priority scheme (The Straits Times, February 19, 1983). The number of HUDC flats to be offered

for sale in the near future is 2,846 units. Of these, 400 units in the choice estates are reserved for sale to senior civil servants, while there are only 170 applicants in this category who wish to buy the flats. Another 303 units will be taken up by the National University of Singapore for rent to its expatriate staff (Ibid.).

In other words, the number of senior civil servants applying for HUDC flats under the priority scheme as at February 1983 was much lower than the number of flats reserved for them. But, the number of other applicants, who do not qualify for the priority scheme, is much higher than the number of flats to be offered for sale to them.¹

The above are only some examples which show evidence of how the public housing programmes have been used as important instruments to support government policies.

IV. Public Housing as A Form of Social and Political Control

Public housing in Singapore not only provides accommodation, it also rebuilds the city, restructures the community and creates a well planned and an "ideal" society as perceived by the Government. In the course of resettlement and public housing programmes over the past two decades, more than two-thirds of residential buildings have been demolished and rebuilt; the whole of Chinatown, ie. the heart of the city, has almost entirely been

1. The Straits Times, February 19, 1983; March 23, 1983; April 3, 1983.

demolished and rebuilt; more than two-thirds of Singapore's population have been re-housed in new towns; more than two-thirds of the factories and offices of the industrial sectors have been relocated in new industrial estates; more than half of the community centres have been relocated or newly built in housing estates.

Consequently, new social structures and social systems have been established, and the society has been transformed from a more informal, less closely controlled and 'loosely structured' society into a highly organised, well planned and disciplined society. In this section, we shall discuss some of these new social structures and systems which have served as a form of social and political control, used by the Government to establish the new social order.

First, let us look at the decision-making process in public housing. Unlike many Western countries, Singapore adopts the 'top-down' approach rather than the 'bottom-up' approach. The authorities decide which types of building and community facilities they want to build, without consulting the people who will eventually live in these buildings. They may, however, make some improvements in response to the demands of the community after the buildings have been built. This feature of Singapore's policy-making process is well described by Chen and Fawcett in the following remarks:

1. See, for example, Gans (1968, 1969), Lansley (1979), and Jacano (1975).

Despite the compactness of Singapore society, little information is publicly available about the processes by which decisions on national development policies and programmes are made. Cabinet deliberations are not generally reported in the press, special interest groups are not usually invited by government to present their views on impending policies, and meetings of government advisory committees are usually confidential. The style of the government is to treat consideration of policy alternatives as an 'in-house' matter, rather than as one for public discussion. Typically, then, information about policy formulation, is available only after the fact, at which point the information to be disclosed is a matter of government choice (Chen & Fawcett, 1979:243).

The 'top-down' approach proves, however, to be functional and effective in the context of Singapore, especially for the resettlement and public housing programmes, because there are no complications or obstacles for the authorities in implementing their programmes, and nor will there be for as long as this type of approach is practised without a serious challenge from the electorate. Consequently, very few adjustments need to be made and, therefore, rapid implementation of the programmes can be achieved.

One of the consequences of this approach, which has been practised by the PAP Government not only for public housing programmes but also for other national development programmes since 1965 when Singapore obtained independence, is that people tend to take things (provided for them by the Government) for granted and people do not take the trouble to air their views. This situation is well recognised by the political leaders, and has caused some worry among the

political leadership recently.¹ This situation can lead to greater control of the people and the community by the Government, as is the case of Singapore, especially in public housing estates where the social structure is influenced by the infrastructural facilities provided by the Government and the regulations governing the use of these facilities.

Second, in the process of the re-structuring of the society through large-scale resettlement and public housing programmes, the Government has established and promoted "modern" community organisations such as Community Centres (CC), Residents' Committees (RC), and Neighbourhood Police Posts (NPP). These government-sponsored organisations are mostly set up in public housing estates, and in fact, the RCs and NPPs are exclusively located in public housing estates.

On the other hand, the Government has maintained "a cautious if somewhat negative attitude."² towards the "traditional" social organisations, which are essentially based on ethnicity, clan affiliation, surname, dialect and locality. These traditional organisations had played a very important role in the process of community development in

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1. For example, both the Minister of Health (The Straits Times, April 3, 1983) and the Minister of Labour and Communication (The Straits Times, April 4, 1983) expressed their concern with this situation.
 2. Sharon Carstens, Chinese Associations in Singapore Society (Singapore: Institute of Southeast Asian Studies, 1975), p. 11.

Singapore until recently. What the Government is most concerned about is the potential political power of these associations. Sharon Carstens observes that, "So far, rather than directly attacking these associations, the government has chosen to emphasise its provision of alternatives."¹ Thus, the government-sponsored community organisations have gradually replaced some of the functions of the traditional organisations.

All government-sponsored community organisations are closely controlled and monitored by the Prime Minister's Office (PMO). The number of these organisations has increased very rapidly in recent years. The number of Community Centres increased from 28 in 1960 to 152 in 1982. The first Residents' Committee was established in 1977, and by March 1982 there were altogether 230 Residents' Committees in public housing estates. These two types of community organisation are the most important and influential grassroots organisations in Singapore, and are under the direct control of the PMO. All advisers of the CCs are appointed by the Prime Minister's Office; and all chairmen and committee members of the Management Committees of the CCs are appointed by the Chairman or Deputy Chairman of the Board of Management of the People's Association.²

1. Ibid., p. 12.

2. All Community Centres are under the control of the People's Association (PA), the Chairman of the PA is the Prime Minister and the Deputy Chairman is the PM's appointee, who is normally a cabinet Minister or a Minister of State.

With regard to the RCs, chairmen and committee members of all RCs are appointed by their Advisers, who, in turn, are appointed by the Prime Minister's Office.

The constitutions and rules of the CCs and RCs do not exclude MPs of opposition parties from being appointed as advisers to these organisations, as they are government-sponsored organisations and not party-run organisations. However, so far no opposition MP has been appointed as Adviser to either of these organisations. The incumbents are all PAP members and MPs for the constituencies in which the CCs and RCs are located.

The CCs and RCs are very important grassroots organisations, through which community leaders and the Government can mobilise the mass support of the electorate for community development and government policies. In addition, committee members of these organisations have played a crucial role in mobilising support for and providing assistance to candidates of the ruling party during all general elections and by-elections.

G. Riches observes that, "In Singapore the community centres appear to be used as instruments of political control." Moreover, they are "regarded as being vital to the political development of Singapore, to the political survival of the PAP, and to the destruction of opposition political parties."¹ Similar criticisms have been made by

1. G. Riches, Urban Community Centres and Community Development (Hong Kong: University of Hong Kong, 1973), p. 83.

the opposition political parties. The ruling party, however, claims that all CCs are properly run by the Management Committees and that the support and assistance provided by the committee members of the CCs to the MPs and candidates during election campaigns are on a voluntary basis.¹

Apart from the CCs and RCs, a new scheme called the Neighbourhood Police Post (NPP) has been recently set up in public housing estates. At present, there are eight NPPs. During the period 1984-1988, another 50 NPPs will be set up. In the final phase from 1989 to 1992, another 30 NPPs will be constructed in new towns. There will be at least one NPP for each constituency. The NPPs are under the management of the Ministry of Home Affairs, and they will work closely with committee members of the RCs and CCs as the latter can help the police to liaise with the residents.

Finally, some public housing policies have performed, explicitly or implicitly, a function of social control. The following are some of these policies:

(1) The priority allocation policies, which grant priority to certain select groups of people in the allocation of flats, have played an important role in strengthening social control in public housing estates. Among those people who are given priority in getting public flats are: members of the Citizens' Consultative Committees,

1. The Straits Times, March 17, 1983; Lian He Zau Bao, March 19, 1983.

HDB staff, policemen, Singapore Armed Forces regulars and reservists, firemen, and senior civil servants. These people, especially the first three groups, can serve as the ears and eyes of the authorities, and can in due course provide "real feedback" to the HDB (The Straits Times, January 15, 1983). They can also help maintain law and order in the public housing estates.

(2) On the other hand, some public housing policies have been used to punish those people who are anti-social or who violate government policies. For example, in order to control the situation of vandalism in public housing estates, vandals who have records of damaging the HDB properties are barred from applying for any type of public flat. Moreover, the HDB can take back the public flats if any member (including adults and children) of the families is involved in serious vandalism in the housing estates. People who have contravened certain government policies such as work permit or marriage restriction policies, and those who have been convicted of assaulting the Board's officers on duty are also barred from applying for public flats. These policies not only put pressure on the population in general, and people living in housing estates in particular, to re-enforce their conformity with the policies set up by the Government, but they also result in the phenomenon that there is fear among HDB dwellers, especially among the lower

social classes, in contacting HDB's officers,¹ and that some of the HDB's officers are arrogant, inflexible, and uncooperative towards HDB tenants and applicants.²

(3) HDB officers of the Area Offices regularly carry out spot checks on flats to ensure that tenants do not abuse their public housing privilege, which means that HDB flats cannot be used for illegal purposes, cannot be rented out or sublet without the HDB's approval, and only people whose names are listed on their application forms and their immediate family members can live in their flats. In reply to questions raised in Parliament, the Minister of State (National Development) disclosed that, in 1982 tenants of nine rented and 29 sold flats were evicted, while tenants of 23 rented and 32 sold flats were being prosecuted (The Straits Times, March 5, 1983).

In fact, the fear among HDB tenants with regard to the regular spot checks is very apparent. When we conducted our interviews for the survey of this study, I encountered one household,³ where the people living in the flat explained to me that they were relatives of the owner of this 4-room

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1. Riaz Hassan, Social Status and Bureaucratic Contacts Among the Public Housing Tenants in Singapore (Singapore: Institute of Southeast Asian Studies, 1972).
 2. The Straits Times, March 24, 1983; Nanyang Siang Pau, June 28, 1981; August 27, 1981.
 3. As pointed out in Chapter 2, interviews of the survey were conducted by the trained interviewers. I only conducted several cases together with the interviewers for supervision purposes.

flat, and that they were from Malaysia and would stay in the flat for only five days as by then, the whole family of the owner would be back from their overseas vacation. They kept repeating that I could return to check again after the five days if I had any doubts. At first, I was quite puzzled because I had only told them we would like to interview the household head on his views about HDB flats and I did not understand why they seemed to be so frightened and took such great pains to explain the reasons why they were staying in the flat.

I then decided to ask them the reasons why they were explaining all this to me. They told me that they thought we were HDB officers and their relatives had repeatedly told them that they should tell any officers who came to carry out spot checks the reasons why they were staying in the flat, otherwise it might cause the owner to lose the flat.

Another incident concerning the fear about spot checks is that one of my former domestic servants once requested me to give her a letter indicating that she was working for us and only returned home once a week during the weekends. She said that she needed this letter to show to the HDB officers because they had been to check her flat several times and had found that she was not at home during their spot checks. The officers had told her children if she were not to be seen at the flat during their next round of spot checks, they would be "in trouble."

Apart from the above examples of using public housing as a form of social and political control, the housing

authorities keep detailed information such as education, occupation, income, ethnic group, language and age of all HDB tenants. This type of information is not required for those who live in private housing. Therefore, the HDB and the Government are very well informed about the background of all flat-dwellers living in public housing estates, which amounts to nearly three-fourths of Singapore's population.

V. Factors Affecting the Achievement of Public Housing in Singapore

The analyses of the social and political implications of public housing in Chapter 4 and this chapter clearly demonstrate the point that the effects of public housing on the society and the people in Singapore are multifarious and far-reaching. It is, however, not possible to conclude from the present study or other completed studies whether public housing in Singapore is in broad terms either a success or a failure as this is basically a subjective evaluation and multiple criteria would have to be taken into account. But, if we evaluate the programmes using criteria such as the accomplishment of the targets set by the HDB and the number of people applying for public housing, we cannot deny the fact that the achievement of public housing in Singapore is very impressive.

As discussed in Chapter 3 and 4, the HDB not only has achieved, but has also exceeded the targets set in all but one of the Five-Year Building Programmes over the past twenty years. In spite of the large number of public flats built every year, the number of applications to buy or to

rent HDB flats has constantly far exceeded the number of flats the HDB can provide. This phenomenon is an indication that there has always been a popular demand for public housing in Singapore, since the phenomenon has continued uninterrupted for more than twenty years, although there are other reasons for the large number of applicants for public housing as well.

Moreover, findings from most studies reviewed in Chapter 1 show that the level of satisfaction with HDB flats and estates is, in general, quite high, although the findings with regard to whether there are positive or negative effects of public housing and problems faced by residents in HDB estates are inconclusive and, in some cases, conflicting.

In spite of these inconclusive findings, the fact that the achievement of public housing programmes in Singapore is impressive, remains unchallenged by almost all the studies completed between 1965 and 1982. In fact, public housing in Singapore has now become a source of national pride for Singapore as well as the symbol of the PAP's success in national development.¹ Why was public housing a failure under the SIT but a great achievement under the HDB? Why have public housing programmes been a painful experience for some countries but so impressive in Singapore?

According to the Chairman of the HDB, "Singapore's achievement in public housing is attributable to the

1. See, for example, Yeh (1975), Hassan (1976), and Chen (1983).

interaction of many factors, among them political leadership, administrative capability, technical expertise, financial resources, and the support of the public." (Yeh, 1975:vi). We will in this section identify some important factors contributing to the achievement of Singapore's public housing.

Firstly, the firm commitment of the Government towards large-scale public housing programmes is a very important factor. In this regard, the experience of the SIT's public housing programmes during the period 1927-1959 strengthened rather than weakened the Government's position towards public housing. In the study of Singapore's public housing, researchers and observers are usually prone to criticise the failure of the SIT's programmes, which provides a sharp contrast to the achievement of the HDB's large-scale public housing programmes. It is quite right that the SIT failed to alleviate the problem of housing shortage. But the failure of the SIT was not due to a lack of awareness of the seriousness of housing problems nor to the lack of technical expertise; but mainly due to the lack of firm government commitment, the lack of financial resources, and insufficient institutional and legal provisions to support the implementation of building programmes.

When the HDB was set up to replace the SIT in 1960, the political leaders recognised the fact that a firm commitment of the Government, full financial support and adequate legal provision in supporting the implementation of the resettlement and public housing programmes were essential.

Public housing programmes have therefore since then, been given full financial support and top priority in the process of national development. In addition, legal provisions, such as the passage of the Lands Acquisition Act in 1966, have been instituted to support the resettlement and public housing schemes. These legal provisions are a vital component in the resettlement and public housing programmes and allow planning for these programmes to be undertaken well in advance.

Secondly, planning and co-ordination are important factors. Public housing programmes in Singapore are not based on piecemeal planning but on long-term and overall planning for the whole country. At present, the development of public housing in a national context is closely linked to the development in industrial estates, community and commercial centres, educational and recreational facilities, and the transportation network. All of these are provided for in the Comprehensive Development Plan for the period 1972-1992. The role of the HDB is, therefore, "not restricted to the mere construction of dwelling units but lies in the creation of entire communities reflecting an integration of physical, social and economic planning." (Yeh, 1975:vii). As summarised by Teh Cheang Wan, the former Chief Executive Officer of the HDB and presently Minister for National Development, "the planning approach is not merely one of providing housing but rather one of creating a better living environment." (Yeh, 1975:11).

In addition to building low-cost high-rise flats, the HDB also undertakes responsibility for community centres, schools, factories, shopping complexes, and sports and recreational facilities; some of which are not confined to public housing estates. In carrying out these programmes, the HDB must co-ordinate closely with other government bodies such as the Jurong Town Corporation, the Public Works Department, the Economic Development Board, the Ministry of Culture, and the Ministry of Education. The co-ordination must be fast, effective and functional at both the planning and implementation levels.

The style of the Singapore Government is such, that once a development programme is given top priority in the process of national development, it expects full support and cooperation from all government bodies concerned. The resettlement and public housing programmes are, of course, no exception. Moreover, the smallness and compactness of the city-state also make this coordination fairly easy. Chen and Fawcett point out that, "Coordination among the various government ministries is fairly strong, largely because of the relatively small number of people in policy-making positions and their frequent interactions, and the planning mechanism is flexible enough to respond to changing conditions." (Chen & Fawcett, 1979:256).

Thirdly, the uninterrupted period of PAP rule for more than twenty years is another important factor. No one approach in public housing can be regarded as a perfect one, nor can any one approach be accepted by all the people

involved, because of the complexities of the programmes. Two practical questions will inevitably arise: (a) Should the people affected by the public housing programme be allowed to participate in the planning of public housing programmes or should they let the Government decide everything for them? (b) Is high-rise housing the only good solution for public housing in Singapore? No two governments will have the same answers to these questions. Continuous debates on these issues would usually slow down or disrupt the development process.

As analysed in Chapter 4 and Section IV of this chapter, the Singapore Government adopts the 'top-down' approach in its public housing programmes, and decides what it thinks is good for the people without consulting them. And, the Government is also very firm with its high-rise housing option as it thinks this is the best for Singapore. This approach and this option have so far not encountered any serious challenge by the electorate or the opposition political parties.

Fourthly, to many Singaporeans, especially in the 1960's, public housing provided better accommodation and modern facilities. In the 1950's many people lived in congested squatter settlements with "no sanitation, water, or any elementary health facilities" (Seow, 1965-11). Under such circumstances, any decent housing accommodation was preferable for the people of Singapore.

Moreover, the HDB has made a continuous effort to improve the quality of its flats and the facilities of

public housing estates; and at the same time, the rentals and selling prices of private housing have escalated in recent years to a point where only a very small proportion of the population can afford to live in private houses or flats. Therefore, HDB flats are still in great demand. At present, applicants still have to wait for an average period of three years in order to buy an HDB flat.

Fifthly, in countries like the United States there has always been a stigma attached to living in public housing,¹ which is associated with poverty, broken families, the unemployed or dependence on social welfare assistance. In Singapore, many people are, however, proud of their HDB flats, especially those who live in four- or five-room flats.²

The attitude of tenants towards public housing is very important. If the tenants feel ashamed of living in public housing since it bears an undesirable stigma, then it is hardly possible to expect the tenants to develop a sense of attachment to the public housing estate, nor could we expect them to provide proper maintenance of their flats. Tenants will move out of public housing as soon as they can afford to find a better place. In these circumstances, the upkeep of the public housing estates and the flats is merely the concern of the authorities.

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1. See, for example, Wilson, 1966:491-508 & 537-557; Schoor, 1975:117-132; Wheaton, et. al., 1966:245-260.
 2. The evidence for this attitude is shown in Chapters 6 and 9 and in the studies by Yeh (1975), Seow (1965), Ong (1974), and Tan (1972).

In Singapore, no stigma is attached to public housing dwellers. This remark is drawn from observations and findings of the present study and most of the local studies reviewed in Chapter 1. In fact, in many cases, tenants are willing to spend thousands of dollars to renovate and decorate their HDB flats. It is not uncommon to see HDB flats with marble flooring. Once people have moved into the HDB flats, they will stay there for a long period, especially those who live in four- and five-room flats. Many tenants in public housing estates such as Queenstown have lived in their HDB flats for more than ten years. The Board and the Government have also continuously taken various measures to improve the living environment and the security of the community.

Sixthly, excessive population mobility in public housing estates in many American cities¹ accelerates the deterioration of public housing. In Singapore, population mobility in public housing estates is very low. This is due to several factors. Singapore is a city-state of only 616 square kilometres. It seldom takes more than one hour by car to travel from one place to any other place in the Republic. Therefore, if a person changes the location of his employment, say from the West coast to the East coast or from the Southern part of the city to the Northern part, it is not necessary for him to change his residence. This is not the case in many other countries, where people change

1. See, for example, Wheaton, et. al., 1966:231-240 & 244-260.

the location of their employment from one city to another. The other factor is that the majority of tenants in public housing estates own their flats. In March 1982, more than 64 per cent of HDB tenants owned their flats (HDB, 1982:62-65). Many restrictions are imposed upon the use and transfer of public housing flats. Therefore, people cannot easily change their residence if they live in HDB flats. These restrictions help reduce the mobility of the population in public housing estates.

The stability of population in public housing estates strengthens the sense of attachment to the community. As a result, public housing residents are concerned not only with their own flats but also with the housing estate in which they live.

Finally, Singapore is a highly urbanised city-state, without a rural hinterland. Although about one-fourth of Singapore's population is classified as living in "rural" areas according to the census classification in 1980, the number of its population engaged in agricultural occupations is negligible. In fact, in 1982, only one per cent of Singapore's 1.14 million labour force was engaged in agriculture and fishing. Moreover, as there is no rural hinterland in Singapore, the Republic has virtually no problem of rural-urban migration.

In general, Singapore's population is basically "urban". The mobility from squatter settlements, slum areas

1. Economic Survey of Singapore 1982 (Singapore: Ministry of Trade and Industry, 1982), p. 122.

and other places to public housing estates is only a change from one urban residential area to another. Therefore, this does not cause too much difficulty in adapting to the new public housing estates. Furthermore, during the long period of housing shortage in Singapore before the 1960's, the Singapore population became tolerant of high-density living. To many Singaporeans, moving into HDB flats means greater space, better facilities and improved living conditions, although this, of course, does not mean that there are no difficulties for people in adapting to the new environment.

The above factors are interrelated, and the linkage effects of these factors contribute, to a large extent, to the impressive achievement of public housing programmes in Singapore.

CHAPTER 6

THE SOCIAL AND LIVING ENVIRONMENT OF PUBLIC HOUSING ESTATES

I. Introduction

The layout of public housing estates in Singapore is based on the "neighbourhood" principle. Each neighbourhood is provided with markets, shopping centres and other social and recreational amenities. In all new housing estates, where there are more than three such neighbourhoods close to one another, a town centre is built to provide centralised facilities such as post offices, banks, theatres, large shopping complexes and other facilities for the entire estate. Moreover, social organisations such as community centres (CC) and residents' committees (RC) have been set up in almost every public housing estate to promote neighbourly interaction.

This type of social environment in the public housing estates is in sharp contrast to that of the rural communities and slums in the city centre. In public housing estates, neighbourhoods and social infrastructures are purposefully planned in line with national policies and the ideals of the urban planners. Social interaction in public housing estates takes place mainly within the planned social system resulting from the government-based social organisations. Whereas, in the rural communities and slums in the city centre, neighbourhoods are products of an unplanned process of urban growth. Social interaction in the slums and rural communities is usually functioning

within the loosely structured social networks.

Based on survey data, this chapter will focus on the various aspects of the social and living environment in public housing estates.

II. Improvement of Living Conditions

In the sample survey, respondents were asked to compare the living conditions of their present public flats with those of their previous residences. The indicators selected to measure the living conditions were: floor space, ventilation, noise, lift service, privacy of home, and water and electricity supplies. Although most public housing residents are squatters from both rural areas and the city centre or from other types of private housing, some of them are from other public housing estates. Therefore, the comparison between the living conditions of the present public housing flats and their previous residences cannot be regarded as a comparison between the conditions of public housing and those of non-public housing.

More than half of the respondents (56%) indicate that the question about lift service is irrelevant when they compare their present flats with their previous residences (see Table 6.1). This means that at least 56 per cent of the survey respondents' previous residences were not in public housing estates because all public housing flats are high-rise buildings which require lift service. Therefore, the comparison between the living conditions of present and previous residences is, to a large extent, a

comparison of the conditions between public housing flats and the lower and middle class non-public housing residences, as only these groups of people are qualified for public housing flats.

Data from Table 6.1 show that the majority of the survey respondents express that, compared to their previous residences, the floor space, ventilation and privacy of the present public housing flats are better than those of their previous residences. Seventy-two per cent of the respondents say they have better ventilation, 69 per cent say they have better privacy and 65 per cent say they have more floor space in their present flats.

In terms of age group, more older respondents than younger respondents indicate that there are improvements in floor space, ventilation and the extent of privacy in their present flats. For example, 70 per cent of the respondents aged 40-49 years say they have more floor space, 77 per cent say they have better ventilation, and 71 per cent say they have more privacy in their present flats. The corresponding percentages among respondents under 30 years old, who express the same opinion, are 60 per cent, 66 per cent, and 64 per cent respectively (see Table 6.2). One possible explanation for the difference in opinion towards living conditions between younger and older people is that most of the latter have witnessed or experienced the poor conditions of housing in the 1950s and early 1960s, whereas the younger respondents have not.

It is interesting to note that compared to the lower income groups, the higher income groups have lower percentages saying that the living conditions in terms of floor space, ventilation, and privacy of their present flats are better than those of their previous residences. Let us compare the views expressed by the highest income group and the lowest income group of our survey sample towards the living conditions of their present public flats. The highest income group in our sample comprises those having monthly incomes of S\$1,500 and more, and the lowest income group consists of those having monthly family incomes of less than S\$500. The percentages of these two groups in our sample are 17 per cent each, compared to 21 per cent and 23 per cent for these two groups respectively in all households in public flats in Singapore.¹ Therefore, a comparison of the opinion of these two income groups represents the views expressed by the top 20 per cent and the bottom 20 per cent of public flat dwellers.

The highest income group in the present survey has the lowest percentage expressing satisfaction that their present privacy, ventilation and floor space are better than those of their previous dwellings (see Table 6.2). Respondents whose monthly family incomes are between S\$500 and S\$749 have the highest percentage of them saying that all the three above-mentioned conditions are better for their

1. Khoo Chian Kim, Census of Population 1980 Singapore Release No.7 (Singapore: Department of Statistics, 1981), p.9.

Table 6.1 Comparison of Living Conditions between Present and Previous Homes (In Percentage)

N=1200

Present Home	Improved	Worsened	No Change	No answer/ Not applicable	Total
Floor space	65.1	24.3	9.9	0.7	100.0
Ventilation	72.1	12.9	14.3	0.7	100.0
Noise	49.9	28.2	21.1	0.8	100.0
Life service	27.4	5.3	10.9	56.4	100.0
Privacy of home	68.6	6.9	23.5	1.0	100.0
Water supplies	36.0	2.2	61.0	0.8	100.0
Electricity supplies	35.4	0.8	62.8	1.0	100.0

Table 6.2 Improvement of Living Conditions by Ethnicity, Age, and Income

(in Percentage)

Item of Improvement	Floor space	Ventilation	Noise	Privacy
<u>Ethnic Group</u>				
Chinese	65.1	72.0	50.2	69.7
Malay	67.8	71.8	51.0	67.3
Indian	59.2	72.8	47.6	65.0
Other	65.0	80.0	40.0	60.0
All groups	65.1	72.1	49.9	68.6
<u>Age Group</u>				
Under 30	60.4	65.8	46.2	64.0
30 - 39	60.6	69.7	50.7	68.9
40 - 49	70.2	76.6	51.9	71.2
50 and above	68.7	75.0	49.7	69.0
All groups	65.1	72.1	49.9	68.6
<u>Household Income (per month)</u>				
Below \$500	66.1	71.1	51.7	70.1
\$500 - \$749	66.3	75.3	53.2	73.0
\$750 - \$999	63.6	69.5	48.3	66.5
\$1000 - \$1499	66.2	76.4	49.6	67.9
\$1500 and above	63.6	66.5	47.1	65.5
Not applicable	33.3	50.0	16.6	33.3
All groups	65.1	72.1	49.9	68.6

Table 6.3 Improvement of Living Conditions by Type of Flat,
Previous Residential Area, and Area of Housing Estate

(in Percentage)

Item of Improvement	Floor space	Ventilation	Noise	Privacy
<u>Type of Flat</u>				
One-room	56.8	63.2	52.8	70.4
Two-room	63.3	70.0	51.0	66.7
Three-room	66.8	74.8	52.6	69.3
Four-room	63.4	68.3	41.6	72.3
Five-room	68.4	74.1	41.1	65.8
All types	65.1	72.1	49.9	68.6
<u>Previous Residential Area</u>				
City centre	71.1	73.8	55.1	67.0
Suburban area	65.8	72.8	52.3	72.0
Rural	54.7	68.6	38.0	64.2
All areas	65.1	72.1	49.9	68.6
<u>Housing Estate</u>				
Ang Mo Kio	68.7	75.3	46.7	84.0
Bedok	52.7	62.0	40.7	60.7
Bukit Ho Swee	55.0	56.0	46.0	62.0
Clementi	80.0	74.0	56.0	68.0
Marine Parade	64.0	74.0	42.0	66.0
Queenstown	70.7	80.0	56.7	66.7
Telok Blangah	64.0	73.0	50.0	68.0
Toa Payoh	69.0	73.5	55.5	75.5
Jurong	61.3	76.7	52.0	60.7
All estates	65.1	72.1	49.9	68.6

present public flats than their previous residences.

This finding is interesting because in general, the higher income groups live in larger public flats, and these, compared to the smallest units, are usually designed for better ventilation and privacy, and more floor space. According to the census data of 1980, only 56 per cent of the one- and two-room households in public flats have monthly family incomes of more than S\$500. But, about 86 per cent of the three-, four- and five-room households in public flats have monthly family incomes of more than S\$500.¹

With regards to the design of various types of public flats, the four- and five-room flats are, in general, designed to provide maximum privacy since most of them have their private corridors and each floor has only a few units. Whereas, there are common corridors for the one-, two- and three-room flats, and there are many units on each floor.

However, compared to people living in the smallest units, those living in larger flats do not have a higher percentage of them saying that they have better privacy in their present flats than previously. Only 66 per cent of the five-room flat dwellers say they have better privacy at present. This percentage is lower than the percentages for residents of all other smaller units (see Table 6.3).

From the above, we can conclude that the concept of privacy is relative, and is correlated with a person's socioeconomic status. In general, the higher social classes

1. Ibid., p.76.

are more conscious about privacy than those lower down the social scale. Higher class people also prefer maximum privacy for their residences. This argument can be extended to interpret the different views among the various income groups with respect to other living conditions such as floor space, ventilation, noise and lift service. The demand for and the expectation of the standard of these conditions are usually much higher among the higher than the lower income groups.

Previous experience and environmental factors are also important in affecting views towards housing. When public flat dwellers compare the living conditions of their present flats with their previous residences, those from the city centre or suburban areas have higher proportions than those from the rural areas, who say that they have better privacy, better ventilation and larger floor space in their present flats than in their previous residences (see Table 6.3).

The different opinion between these two groups of residents is probably attributed to the different experience of their previous living environment. As discussed in Chapter 3, the overcrowding situation and the deteriorated housing conditions in the central areas of the city were very serious in the 1950s. Thus, for those people who had lived in these areas, before moving into public housing estates, the housing conditions of their new community are a great improvement for them. But, for residents from rural areas, their relocation into public housing estates means a drastic change from a loosely structured rural community to

a compact high-rise community. In the rural community, there are more open spaces and people's activity spaces are not confined to their own rooms or their houses, while the activity spaces of flat dwellers are mostly confined to their flats. Compared to flat dwellers, rural people are more concerned with the total activity spaces which include not only the size and condition of their rooms but also the activity spaces outside their rooms and their houses as well. Therefore, residents from rural areas do not value the improvement of physical conditions of their living quarters as much as residents from the city centre do. Apart from the views above, respondents were also asked to compare other conditions such as noise, lift service, and water and electricity supplies.

With regard to water and electricity supplies, the majority of the survey respondents say that there are no changes in these between their present and previous residences (see Table 6.1), for the simple reason that water and electricity supplies are available in almost every part of Singapore.

Although the excessive amount of noise in public housing estates has always been a disturbing factor,¹ about 50 per cent of the survey respondents point out that compared to their previous residences, the noise level around their present flats has improved (see Table 6.1). Mr. Kamaris (Case 12), a three-room flat resident in Ang Mo

1. See, for example, Chen and Tai (1977:78-88); and Yeh (1975:222).

Kio, points out that "though it is noisy here, it is ten times better than our former home where we had tolerated less than desirable conditions for many years. Therefore, we have nothing to complain about our present home."¹

The extent of tolerance towards noise is, however, correlated with a person's previous experience, socioeconomic status, and age (see Table 6.2 and 6.3). For example, public flat residents whose previous homes were in the city centre or suburban areas are more tolerant towards noise than those whose previous homes were in rural areas. More than 52 per cent of the former say that the noise level is lower around their present flats than around their previous residences. The corresponding figure for respondents, whose previous homes were in rural areas, is only 38 per cent (see Table 6.3). This is because people who have lived in the city centre or suburban areas before relocation are already used to the large amount of noise, whereas people who previously lived in rural areas are accustomed to a quiet environment. Therefore, they are less tolerant towards the excessive amount of noise in the public housing estates.

In terms of socioeconomic status, people from the higher income groups and those living in the larger flats

1. This reference is made to one of the 27 relocated families selected for the in-depth study. The particulars of the 27 relocated families are reported in Table 9.1, some of these cases are discussed in great detail in Chapter 9. All references regarding the opinion expressed by an individual public flat resident made in this and the following chapters are abstracted from the in-depth study of the 27 cases.

are less tolerant towards noise. Only 47 per cent of the highest income group say that the noise level around their present flats is lower than around their previous residences. The figure for the lowest income group is 52 per cent. Similarly, only 41 per cent of the five-room flat dwellers and 42 per cent of the four-room flat dwellers say that the noise level around their present flats is lower than previously. These figures are much lower when compared with 53 per cent of the one-room flat dwellers and 51 per cent of the two-room flat dwellers (see Tables 6.2 and 6.3).

Lift breakdowns, inadequate lift facilities, vandalism in lifts, and danger for women using lifts at night in some public housing estates are common complaints by residents. A candidate of the ruling party during the 1979 by-election pointed out that frequent lift breakdowns were among the top of the list of complaints made by the public housing residents during his six-day door-to-door campaign. The candidate himself also experienced being trapped twice in HDB lifts during his visits in the constituency (The Straits Times, February 7, 1979).

Remedial and preventive measures have been taken by the housing authorities and other government bodies to solve the above-mentioned problems. Additional lifts have been installed for old housing blocks, more lift facilities have been provided within new blocks. Closed circuit television cameras have been installed in some lifts to check vandalism and to make it safe for residents to use the lifts at night.¹ Among those whose previous residences were also

high-rise housing, 63 per cent of them say that they have better lift service, while 12 per cent say they have poorer service, and 25 per cent say there is no difference (see Table 6.1).

In general, public security in public housing estates is as good as in any other part of the country. It is quite safe for people to go out alone at night in public housing estates. When the survey respondents were asked about how safe is it at night time in public housing estates, only seven per cent say that it is unsafe.

III. Community Facilities and Social Organisations

As public housing estates are planned under the "neighbourhood principle", commercial and community facilities are well provided, especially in the new estates. Mr. Lee (Case 24), a five-room flat resident in Toa Payoh, points out that "we have all the commercial and community facilities in our housing estate. Facilities such as market, shopping centre, children's playground, park, swimming pool, sports complex, and community centre are all easily available here."

Data from the present survey of nine major housing estates show that a considerable percentage of respondents have market, shopping and recreational facilities on their

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1. See, The Straits Times, February 18, 1979; and HDB Annual Report 1978/79, p.8.
 2. In terms of the proportion of the total respondents, it is 27 per cent and not 63 per cent (see Table 6.1).

Table 6.4 Availability of Community Facilities Around the Public Housing Estates (in Percentage)

N=1200

Facility	Available	Not available	Total
Community centre	82.4	17.4	100.0
Playground/park	87.3	12.7	100.0
Swimming pool/sport complex	48.9	51.1	100.0
Market/shopping centre	98.2	1.8	100.0

Table 6.5 Utilization of Community Facilities by the Residents (in Percentage)

Facility	Often	Occasionally	Never	Total
Community centre	6.7	28.2	65.1	100.0 (989)
Playground/park	18.0	47.0	35.0	100.0 (1048)
Swimming pool/ sport complex	13.6	28.9	57.5	100.0 (587)
Market/ shopping centre	74.8	24.2	1.0	100.0 (1178)

estates; and nearly half of them have access to swimming pools and sports complexes (see Table 6.4). When the respondents were asked how often they use these facilities, a significant percentage of them say that they have never used them, especially community centres, though almost all respondents visited markets and shopping centres around their housing estates (see Table 6.5).

More than half of the respondents have never visited community centres, but these centres have been regarded by the government and the political leadership as the most important community organisations which organise sports and social, cultural and recreational activities for people, especially the youths, from all ethnic groups. Two of the main objectives of the community centre are (a) to promote social integration, and (b) to mobilise mass support of government programmes. The government has realised the important role of community centres in community development and the enormous potentiality of their political influence as community centres are the biggest and most powerful grassroots organisations in Singapore. The government therefore reorganised the management and organisation of community centres in 1960 and has since then put the management of these centres under direct control of the government. All management committees are appointed by the Prime Minister's Office (PMO) and not elected by members of the centres. The argument for the direct control by the government is that it is a more practical and effective approach (The Straits Times, November 28, 1983). But,

social scientists such as G. Riches argue that community centres have "become the tools of political and social control"¹ in Singapore.

There are altogether 175 community centres in Singapore, and the majority are located in public housing estates. Their numbers will increase in the near future, and between 1979 and 1984, 73 new community centres will be built, 40 of them by the Housing Board for the People's Association² (The Straits Times, April 4, 1979). Some old community centres, especially those in the rural areas, are provided with very simple facilities. But, most of the new centres have modern facilities like multi-purpose halls, health and fitness rooms, sound-proof music rooms, billiard rooms, libraries, art and craft workshops and squash courts.

Apart from community centres, other government-based community organisations have been instituted by the government to help promote neighbourliness in public housing estates. The most important of these is probably the Residents' Committee (RC) which is regarded by the political leadership as "the most representative group of grassroots leaders" in Singapore (The Straits Times, March 8, 1982). At present there are 249 residents' committees operating in

1. G. Riches, Urban Community Centres and Community Development: Hong Kong and Singapore (Hong Kong: University of Hong Kong Press, 1973); p.120.

2. All community centres are under the control of the People's Association, whose chairman is the Prime Minister. The People's Association is a statutory body and is fully financed by the government.

70 of the 75 constituencies, all of them in public housing estates.

The RC scheme was first introduced by the government in 1977 to promote social interaction among residents in public housing estates. Unlike community centres which are based on constituencies and are not confined to public housing estates, residents' committees are organised exclusively for residents in public housing estates. The residents' committees are formed in terms of zone, each zone covers a few blocks of HDB flats in public housing estates. Apart from organising various activities for the residents, RCs also perform the role "to act as a channel of communication for the people to air their views to the government and for the government to explain policies to the masses." (The Straits Times, November 28, 1983). The management committees of RCs, like those of CCs, are appointed by the Prime Minister's Office.

Most RCs have their own offices at the void decks of HDB building, some share offices with community centres. There is a close relationship between RCs and CCs as advisors and management committees of these two organisations are all appointed by the Prime Minister's Office. Moreover, they have jointly organised some social functions and activities for residents in the estates, especially those programmes which responded directly to national campaigns or government policies and participated

1. Asiaweek, May 18, 1984, p.16.

by the political leaders.

Residents' committees have organised such activities as children's parties, campaigns, talks, 'know-your-neighbours' visits, sports and recreation, familiarisation tours to community and government organisations or other interesting places. They also hold meetings and discussions to solve problems faced by the residents, or to suggest improvements for the betterment of the environment and the people in the RC zone.

One of the most important programmes launched by the committees is the 'Neighbourhood Watch' scheme, which is to prevent crimes in the neighbourhood (Ibid.). These schemes have been implemented by 127 residents' committees in some 54 constituencies (Nanyang Siang Pau, April 12, 1982). Such schemes have fascinated the Japanese police study team which visited Singapore recently to study community participation in crime prevention in Singapore.

The expectation of the role of residents' committees in promoting community ties as perceived by the political leaders is very high. As the former Home Affairs Minister puts it, with the Rc scheme "we have found a solution to the problem of creating a sense of community among residents of our high-rise blocks." (The Straits Times, March 8, 1982). It seems, however, too early to assess the contribution of residents' committees in promoting neighbourliness as the pilot scheme was introduced a few years ago and most committees were formed only recently.

Nevertheless, community centres and residents' committees are the two biggest community organisations, which are sponsored and closely monitored by the government. While community centres aim at the community level to promote social integration, residents committees work on the neighbourhood level to foster neighbourliness and mutual assistance among residents in public housing estates. There is much room for the two organisations to work closely in promoting community activities.

Activities for youths, especially those living in public housing estates, have never been neglected by the government. One of the important functions of the People's Association is to promote various types of activity for the young population. However, as a result of the massive relocation of people into public housing estates, youth problems have increased significantly in recent years. According to the present survey, 15 per cent of the younger public housing residents below 30 years of age, compared to only nine per cent of the older residents above 30 years old, say that they usually feel very lonely. About 25 per cent of the younger residents, compared to only 14 per cent of the older residents, say that they are depressed or very unhappy. And 26 per cent of the younger residents, compared to 21 per cent of the older residents, say that they are bored. Moreover, 27 per cent of the younger residents, compared to only 13 per cent of the older residents, say that they would like to move out of their present flats.

Therefore, there is an urgent need to provide more community facilities and organisational support for activities for young people in public housing estates. A response to this call is the recent proposal to set up a nation-wide network of boys' clubs in estates, for boys aged between 12 and 18 years old. A pilot scheme has been launched recently at the MacPherson housing estate by the Home Affairs Ministry and the People's Association (The Straits Times, April 11, 1982). The boys' clubs will either have their own premises or be housed in community centres. The People's Association also has its own youth organisations which comprise members aged between eight and 30 years. It is interesting to note that the proposed boys' clubs are for boys, and are not youth clubs for both sexes. This may be a reflection of the views among the community and political leadership in Singapore that boys are more prone to crime, delinquency, and other anti-social behaviour.¹

All the three aforementioned organisations are 'planned' and government-based organisations, which were instituted by the government with the objective of promoting community development. These organisations, especially the community centres, have played an important role in promoting social integration and community development. Moreover, they have been used by the government and the

1. See, for example, Report of the Committee on Crime and Delinquency (Singapore: Committee on Crime and Delinquency, 1974), and The Straits Times, February 7, 1982.

political leadership as important agents to mobilise mass support of government policies, particularly in relation to development programmes.¹ The rapid expansion of government-based community organisations in recent years has resulted in a significant shift of community organisations from 'non-planned' traditional institutions to 'planned' modern institutions. The traditional social institutions such as clan, provincial, neighbourhood, and mutual help associations and street organisations have a very long history in Singapore, and in the past they performed important functions in promoting the spirit of mutual help and a sense of community. As a result of rapid social change and massive urban redevelopment programme during the past two decades and the government's deliberate policy to put emphasis and special effort in promoting government-based community organisations, many of the traditional social institutions have lost their organisational bases, especially in public housing estates, and some of their functions have been replaced by the government-based

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1. A number of studies of the social and political implications of these organisations have been done in recent years. See, for example, Seah Chee Meow, Community Centres in Singapore; Their Political Involvement (Singapore: Singapore University Press, 1973); Jackson D.E. Loy, Residents' Committees in Singapore: An Exploratory Study, Academic Exercise (Singapore: National University of Singapore, 1980).

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community organisations.

Like the experience of the tenants in public housing estates in other countries, the disruption of the old type of institutions has caused some strain and problems of adjustment to the public housing residents in Singapore.² At present the 'planned' community organisations such as community centres, residents' committees and boys' clubs initiated and supported by the government still cannot substitute the roles played by traditional institutions such as clan and mutual help associations.

In promoting community development and creating a conducive social environment for the people, both the 'planned' government-based and 'non-planned' traditional organisations have each an equal role to play. Physical facilities and social infrastructures are essential for creating an ideal environment, but whether these facilities are effectively used would depend on the interaction between individuals and the wider social systems of the community.

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1. See, for example, Sharon Carstens, Chinese Associations in Singapore Society (Singapore: Institute of Southeast Asian Studies, 1975); Jiann Hsieh, "The Chinese Community in Singapore," in Peter Chen and H.D. Evers, eds. Studies in ASEAN Sociology (Singapore: Chopmen Publications, 1978), pp.184-226.
 2. See, for example, Vere Hole "Social Effects of Planned Rehousing," Town Planning Review, Vol.30, No.2 (July 1959), pp.161-173; and Riaz Hassan, Families in Flats (Singapore: Singapore University Press, 1977), pp.61-86.

IV. Ethnic Integration and Class Segregation

There are two main objectives of the large-scale public housing programmes. One is to provide low-cost housing for the lower income groups, and the other is to promote ethnic integration by relocating people from different ethnic groups to live together in the same estate.

As a result of the massive relocation programme, people from different ethnic backgrounds are now residentially mixed. In the present survey, respondents were asked whether there are more people of different ethnic groups in their present neighbourhoods than in their previous ones. Fifty three per cent of respondents say that there are, while thirty per cent say that there are about the same numbers (see Table 6.6).

In terms of ethnic group, the Chinese and those respondents classified as 'others'¹ have the lowest percentages saying that there are more people of different ethnic groups in their present neighbourhoods than in their previous ones, followed by the Indian respondents, than the Malays (see Table 6.6).

This different perception among various ethnic groups may be attributed to the fact that the Chinese, comprising 77 per cent of Singapore's population, are the majority in most parts of the Republic. Thus, they are less aware of the presence of other ethnic groups in their

1. This category is used in all censuses and official surveys in Singapore to refer to people of all other ethnic backgrounds other than Chinese, Indians and Malays.

Table 6.6 Ethnic Integration in Public Housing Estates
(by Ethnicity and Area of Housing Estate)

(in Percentage)

	More or fewer people of mixed ethnic groups in the present neighbourhood				
	More	About the same	Fewer	No answer	Total
<u>Ethnic Group</u>					
Chinese	50.3	30.8	16.1	2.8	100.0
Malay	61.3	29.0	9.4	0.3	100.0
Indian	56.3	25.2	14.5	4.0	100.0
Other	50.0	40.0	5.0	5.0	100.0
All groups	53.0	30.1	14.5	2.4	100.0
<u>Housing Estate</u>					
Ang Mo Kio	44.7	34.7	19.3	1.3	100.0
Bedok	57.4	20.6	20.0	2.0	100.0
Bukit Ho Swee	39.0	32.0	21.0	8.0	100.0
Clementi	47.0	34.0	13.0	6.0	100.0
Marine Parade	71.0	22.0	7.0	0.0	100.0
Queenstown	44.7	40.0	15.3	0.0	100.0
Telok Blangah	57.0	25.0	13.0	5.0	100.0
Toa Payoh	48.5	37.0	13.5	1.0	100.0
Jurong	70.0	20.7	7.3	2.0	100.0
All estates	53.0	30.1	14.5	2.4	100.0
All Respondents (%)	53.0	30.1	14.5	2.4	100.0
(N)	636	361	174	29	1200

neighbourhoods. Whereas, the people classified as 'others' are the small minority, consisting of only two per cent of the population. They are always surrounded by people of other major ethnic groups. With regard to the Malays and the Indians, they are the second and third biggest minority groups respectively, with the Malays consisting of 15 per cent and the Indians 6 per cent. They are, therefore, more aware of the presence of people from other ethnic backgrounds in their neighbourhoods.

In terms of housing estate, Marine Parade and Jurong are areas which have the highest percentages of residents expressing the opinion that there are more people of different ethnic groups in their present neighbourhoods, whereas Bukit Ho Swee, Queenstown and Ang Mo Kio are among those housing estates with the lowest percentages (see Table 6.6).

The different opinion among residents in various estates is because Bukit Ho Swee and Queenstown are two of the oldest public housing estates where there are the highest proportions of Chinese compared to other estates, whereas Marine Parade and Jurong are two relatively new estates with a high proportion of residential mixture of the various ethnic groups. Ang Mo Kio is the newest estate among the nine areas under investigation. There is a high proportion of residential mixture of various ethnic groups too. It is difficult to explain, why residents in this estate are among the lowest percentages saying that there are more people of different ethnic groups in their present

neighbourhoods. One possible explanation is that there is a higher proportion of residents in this estate, compared to other areas, who have been relocated into biggest flats from other public housing estates. Moreover, Ang Mo Kio was the first estate in which the joint balloting pilot scheme was introduced (in 1979) to allow parents and their married children to apply for HDB flats together in the same building, and in different blocks but in the same estate.

When respondents were asked whether they have neighbours of other ethnic groups, 86 per cent of them gave positive answers. Among those who have neighbours of different ethnic groups, 15 per cent of them say that they prefer to have neighbours of the same ethnic group, 18 per cent prefer neighbours of different ethnic groups, and 62 per cent say that it makes no difference. The remaining five per cent are uncertain.

In general, people from different ethnic backgrounds live together peacefully and harmoniously in public housing estates. Mrs. M (Case 11), an Indian housewife aged 40 years living in a three-room flat in Ang Mo Kio, pointed out that "we did not have any problem adjusting from a predominantly Indian neighbourhood to a multi-ethnic neighbourhood when we first moved into this housing estate four years ago." She adds, "good neighbours and friends can come from any ethnic group. People here get along very well." Mrs. Y (Case 10), a Chinese housewife aged 33 living in a three-room flat in Clementi, says, "we have some

Malay neighbours here. The Malay neighbours are very friendly." Although people from different ethnic groups get along quite well, the extent of relationship with neighbours of the same ethnic group and with neighbours of different ethnic backgrounds is quite different. Mrs. H (Case 2), a Malay housewife aged 38 living in a one-room flat in Toa Payoh, points out, "we usually engage in casual greetings with our Chinese neighbours but are on a mutual help footing with our Malay neighbours."

This finding is consistent with findings of most previous studies conducted by social researchers in Singapore.¹ Findings of these studies show that living in the new neighbourhoods in public housing estates brings a greater opportunity for inter-ethnic contacts and that people from different ethnic groups live in the same estate harmoniously (Hassan, 1977:76; Chen, 1983:16). However, ethnic boundaries among various racial groups have not been completely dissolved (Chen, 1983:58). The degree of inter-ethnic interaction is much lower than that of intra-ethnic interaction. This may be due to the relative lack of linguistic competence in each other's languages and the lack

1. See, for example, Riaz Hassan, Families in Flats (Singapore: Singapore University Press, 1977); Chiew Seen Kong, Singapore National Identity, M.Soc.Sci. thesis (Singapore: University of Singapore, 1971), and "Ethnicity and National Integration: The Evolution of a Multi-ethnic Society", in Peter S.J. Chen, ed. Singapore: Development Policies and Trends (London: Oxford University Press, 1983), pp.29-64.

of a lingua franca among the mass of the population, even though English is a common language used by young Singaporeans. Moreover, in a multi-cultural society like Singapore, different ethnic groups maintain and practise their own values and norms, and in some instances the different norms and practices may clash with one another; what is moral or sacred to one group may be despised or taboo to another. Consequently, ethnic boundaries are maintained and the intensity of inter-ethnic interaction is therefore much lower than that of intra-ethnic interaction.¹

Although the public housing schemes have performed an integrative function in bringing people of different ethnic backgrounds together in the public housing estates, the schemes also have some side-effects, one of which is a tendency towards class segregation in terms of residential areas. As pointed out by Hans-Dieter Evers, low-cost housing schemes in Singapore have "led to a certain degree of racial residential integration, but at the same time to residential segregation by class." (Chen and Evers, 1978:329).

As the public housing programme aims at providing low-cost housing for the lower income groups, only those families with a certain level of income at present not more than S\$3,500 per month are eligible to purchase HDB flats. If it is to rent a HDB flat, the total family income should

1. This issue will be discussed at length in Chapter 8.

not exceed S\$800 per month. Therefore, the average incomes of households in public flats are lower than the average incomes of households in all types of houses. In 1980 the average family income of households in public flats was S\$1,048, compared to S\$2,576 for households in private flats, S\$2,786 for households in bungalows and terraced houses, and S\$1,240 for households in all types of housing.¹

Thus, there is an obvious residential segregation in terms of social class between private and public housing estates, and among different types of housing as well. The government announcement of 39 areas delineated as high class residential zones in 1979 and the steep increase of nearly 500 per cent for prices in the private property market over the past five years between 1978 and 1983 have also contributed to the tendency towards residential segregation by class.

Even in public housing estates, there is class segregation by type of flat and location of estate. Peter Chen points out that the HDB had until very recently "tended to segregate different types of flats between and within public housing estates." (Chen, 1983:16). This is because the planning of public housing estates in Singapore was based on the neighbourhood concept, which emphasised the importance of the compatible socio-economic status of the residents. Thus, as pointed out by Liu Thai Ker, the Chief

1. Khoo Chian Kim, Census of Population 1980 Singapore Release No.7 (Singapore: Department of Statistic, 1981), pp.8-9.

Executive Officer of the HDB, "there is only one type of flat per building block. This segregation is observed more strictly for the smaller dwelling units. Sometimes, when feasible, the three-room and four-room flats or the four-room and five-room flats are mixed in the same block, since their occupants are known to be socially and economically quite compatible with one another." (Yeh, 1975:137).

The policy of having only one type of flat in a building block has, in fact, been extended to the neighbourhood units and, to some extent, even to the housing estates. As a result of this policy, some public housing estates such as Bukit Ho Swee mainly comprise one- and two-room flats, where others such as Marine Parade are mainly of three- and four-room flats (HDB, 1981/82:64-65). In some public housing estates such as Toa Payoh, there may be a combination of types, but even so there is again an obvious concentration of different kinds of flat in different parts of the estate. One can easily observe that children from the one- and two-room flats and those children from larger units usually play in different playgrounds.

Families in the smallest units have lower incomes than those in larger units. According to the 1980 census, the average family income for those households in one- and two-room flats was S\$624 per month, but S\$1,039 for those in three-room flats and S\$1,632 for those in four- and five-room flats and HUDC and executive flats.

1. Ibid, p.9.

This residential segregation by social class in public housing estates is an undesirable effect. As pointed out by the Prime Minister, "we've made serious mistakes, not intentionally, but nevertheless mistakes that we will avoid in future." (The Straits Times, February 9, 1981). To rectify the mistakes, the HDB announced that for their future building programmes, attention will be given to integrating different types of flat in public housing estates so that there will be no segregation by social class (Chen, 1982:16). To this end, the government has taken action to integrate all the various housing authorities namely HDB, JTC and HUDC into one housing authority. Under the Housing and Development (Amendment) Act 1982, all these authorities came under the management of the HDB from 1st May 1982.

The new policy may, in the long term, reduce the degree of class segregation in public housing estates. But, there is very little the housing authority can do with respect to the tendency toward class segregation between people living in public housing estates and those living in the various types of private housing. Moreover, the mixing of people from different socioeconomic backgrounds does not necessarily result in an improvement of inter-class interaction, which depends on many factors other than the physical environment.

V. Length of Residence and Preference for Type of Housing

This section will merely present data on the length of residence among various sub-groups. Chapters seven and eight will analyse length of residence as an important factor affecting the views of residents towards public housing estates and the degree of neighbourliness. A social environment is the consequence of interaction between people and social systems in the community. Therefore, the longer the residents stay in the community, the stronger the sense of community they have.

The average length of residence among respondents in the present survey is four and a half years. Thirty-five per cent of them have lived in the estates for less than three years, 41 per cent have lived there for three to six years, and 24 per cent have lived there for more than six years (see Appendix Table VI.1).

Among the three major ethnic groups, 29 per cent of the Indian respondents have lived in the present estates for more than six years, and 24 per cent of the Chinese and 20 per cent of the Malays have lived there for more than three years (see Appendix Table VI.6). The difference between various ethnic groups in terms of the length of residence in estates is probably due to the traditional concentration of the three major ethnic communities in different localities in the country. These localities were affected by different stages of the urban renewal and resettlement programmes. Peter Chen and Tai Ching Ling have pointed out that, Indians were concentrated in urban areas, Malays in rural and

suburban areas, whereas the Chinese were scattered over all the country (Chen and Tai, 1977:30).

In terms of age group, the older respondents have had a longer length of residence in the housing estates (see Appendix Table VI.2). More than 54 per cent of the respondents aged below 30 years have lived in their present estates for less than three years, whereas only 24 per cent of the respondents aged 50 years and above have lived there for less than three years.

One reason why the younger respondents have had a shorter length of residence is that they will usually move out of their parents' homes to form their own families after marriage and are subsequently allocated public flats. Moreover, like the mistakes made by other countries, public flats in Singapore until very recently have been designed for nuclear families and can not easily accommodate extended families. In response to the current emphasis of the government on traditional social values, the housing authorities have changed the design and policy to build larger units of flats for extended families in the near future.

In terms of the location of public housing estates, respondents in Bukit Ho Swee, Queenstown, and Toa Payoh, which are old housing estates, have naturally had the longest length of residence in these estates. Sixty-two per cent, 59 per cent and 43 per cent of respondents in these three estates respectively, say that they have lived there for more than six years; whereas, respondents in new estates

such as in Clementi, Ang Mo Kio and Bedok have obviously had a shorter length of residence there. Most of the respondents in these three estates have lived there for less than three years (see Appendix Table VI.1).

Although the allocation of public flats is done through balloting methods, 79 per cent of the survey respondents say that the flats they are residing in are in the estate of their own choice; only seven per cent say that the flats are not so, and the remaining 14 per cent say that they did not specify any preference when they submitted their applications (see Appendix Table VI.3). There is also not much different among the three major ethnic groups, nor among various age groups with respect to whether the flats are in the estate of their own choice (see Appendix Table VI.3).

There is, however, a significant difference between voluntary (83 per cent) and involuntary relocatees (68 per cent) in terms of whether the flats are in the estate of their choice (see Appendix Table VI.3). Generally speaking, involuntary relocatees are people whose homes have been affected by resettlement schemes and they are usually pressed for time to find alternative accommodation; whereas, voluntary relocatees are people who look for better or cheaper accommodation, and can wait for a longer period of time to get a public flat in the estate they prefer.

In general, most people, especially the voluntary relocatees, would like to wait until they can get a flat in the estate they prefer. For example, Mr. L (Case

21), who has lived in a four-room flat in Ang Mo Kio since 1979, says that he and his wife indicated Ang Mo Kio as first choice and Hougang as second when they applied to purchase a public flat. The housing authority offered them a flat in Bedok in order to shorten the waiting period. However, they turned down the offer and decided to wait for a flat in Ang Mo Kio. Mr. L. remarks, "when one purchases a flat, which may be a life-time residence, it is best that it is located in a preferred housing estate."

Although the majority of public housing residents are quite happy with their public flats (see Chapter 7), most of them would prefer to live in low-rise housing if they had the means to purchase such houses. Among the respondents, 46 per cent of them would prefer to live in low-rise houses, while 38 per cent prefer high-rise flats, and 16 per cent say that they have no preference (see Appendix Table VI.5).

Respondents whose previous residences were high-rise housing have a higher percentage than those who previously lived in low-rise houses indicating that they prefer to live in high-rise housing (see Appendix Table VI.5). It is also quite interesting to note that those who live on the higher floors of public housing have higher percentages indicating preference to live in low-rise houses (see Appendix Table VI.5).

In terms of type of flat, there are much larger proportions among those in larger units who prefer to live in low-rise houses. For example, 67 per cent of those who live in five-room flats, compared to 43 per cent in one-room

flats, say they prefer low-rise houses (see Appendix Table VI.5).

Apart from other factors, the preference to live in low-rise or high-rise housing is, to a large extent, affected by a person's socioeconomic position, especially so at the present time when low-rise houses are very expensive. An ordinary semi-detached house costs more than half a million Singapore dollars and a detached house costs over one million dollars. Mr. L (Case 21), who lives in a four-room flat in Ang Mo Kio, says that "although we would prefer to reside in a terraced house, the prices of terraced houses nowadays are so expensive and are beyond our means." Mr. T (Case 19), who lives in a four-room flat in Marine Parade, adds that he would like to live in a low-rise house, preferably a semi-detached, but that at present he does not have the means to buy one. The views of Mr. T and Mr. L are shared by most of the 27 relocated families included for the in-depth study. This implies that the demand for and the satisfaction with public flats among people in Singapore, like people in other countries, may change from time to time. Thus, policy and priority for public housing need to be re-examined and revised constantly to meet the changing demands of the people.

VI. Concluding Remarks

As demonstrated in the results of the sample survey and the in-depth study, the majority of the residents in public housing estates, especially those in the new estates, say

that overall the living conditions of their present residences are much better than their previous dwelling. Nevertheless, these views differ in detail among various sub-groups of the sample population. More urbanites than ex-villagers, more older than younger people, and more people from lower income than higher income groups say that the living conditions of their public housing flats are better than their previous residences.

Moreover, the majority of the public flat dwellers consider that they have all the necessary commercial, community, and recreational facilities in their estates. Although there are vandalism and associated activities, it is quite safe for people to go out alone during night time.

Based on findings of studies on public housing in Europe, Africa and the United States¹, the length of residence in the estate is an important factor for the development of identification with and attachment to the estate. Singapore is no exception. Although large-scale public housing programmes were first carried out in the early sixties, most of the large public housing estates such as Ang Mo Kio, Bedok and Clementi were constructed only a few years ago. More than one-third of our sample have lived there for less than three years and only the minority of residents have lived in public housing estates for more than six years. Therefore, community ties and neighbourliness

1. See, for example, Vere Hole (1959) and Elizabeth Colson (1971).

are still weak in spite of the improvements of housing conditions and community facilities.

Although relocation of people into estates results in improvements in the quality of housing and in wider environmental conditions, the relocation process results in the disruption of traditional social organisations. Some of these traditional social organisations such as clan associations, which had played an important role in providing mutual assistance and in promoting community ties in the past, have lost bases in public housing estates. In response to the decreasing functions of these, the government has put a lot of effort into promoting and financially supporting organisations such as community centres, residents' committees and boys' clubs. According to the official remarks by the political leadership, these government-based organisations have made a significant contribution to the promotion of neighbourliness in public housing estates. However, the findings of the present study show that these government-based organisations still have not replaced the role and functions of the traditional organisations, though the former have been used as important agents to mobilise mass support for government policies, particularly in relation to development programmes.

Public housing in Singapore has served an integrative function in bringing people from different ethnic communities to live together in public housing estates. As shown in the findings of the present study, the majority of the residents in public housing estates say that they have

more neighbours of different ethnic backgrounds in the present public housing estates than their previous neighbourhoods, and that neighbours of different ethnic groups live together peacefully. Proximity of various ethnic groups living in the neighbourhoods is an important, but not sufficient, factor in promoting social integration, which is the result of a combination of various social, cultural and political factors.¹

However, public housing has at the same time, until very recently, encouraged residential segregation by class. The housing authorities had, in the past, concentrated on building different types of flat in different housing estates, and in different areas of the same housing estate as well. This has resulted in residential segregation between residents living in the larger units of flat and those living in the smaller units of flat. Moreover, the stringent restriction of income ceiling for applicants to purchase or to rent public flats and the steep increase of prices in the private property market over the past ten years have also created a situation of residential segregation between residents in the public and the private housing sector. Generally speaking, the former are the lower income groups, whereas the latter are the higher income groups. The housing authorities have noted this undesirable effect and have recently taken action in an attempt to rectify the mistake.

1. This aspect of the effect will be discussed in Chapter 8.

ADAPTATION AND ECONOMIC HARDSHIP

In the previous chapter we analysed various aspects of the social and living environment in public housing estates. The patterns and characteristics of these environments are closely correlated with the degree of residents' satisfaction with their flats and their housing estates. They are also important factors in the process of adaptation and the extent of economic hardship faced by residents who have been relocated.

This chapter will examine the extent of economic hardship faced by different types of relocatees when they first moved into the new estates and the adjustment patterns of different types of relocatees to the new environment.

I. Economic Impact of Relocation

People relocated into the public housing estates may face certain costs arising from the disruption of their previous social systems. Some of these costs, as pointed out by Trevor Lee in his study of the Australian experience (Lee, 1978:84), are easy to measure while others are much less tangible. The costs which can be easily measured include direct financial burdens such as higher rent, utilities expenses and transport costs. These costs have different degrees of impact on various groups of relocatees.

A. Increase in Household Expenses and Commuting Time

Respondents in the survey were asked whether there have been any changes in their household expenses and commuting time after they moved into the present estates. The results show that 53 per cent of the respondents say that their commuting time to work has increased, while only 14 per cent say that the time has been reduced (see Appendix Table VII.1).

Residents in Jurong have the lowest proportion indicating that the commuting time, and transport expenses as well, have increased. Only 37 per cent of Jurong residents experience an increase in time and money involved in the journey to work. Whereas in Toa Payoh, for example, 71 per cent and 84 per cent of the residents say, respectively, that the commuting time and transport expenses have increased (see Appendix Table VII.1). Similarly, residents in Jurong have the lowest percentage of persons stating that the changes in household expenses and commuting time adversely affect their financial situation. Only 40 per cent of residents in Jurong, compared to 74 per cent in Queenstown and 73 per cent in Ang Mo Kio, say that their financial situation is adversely affected by the increase in household expenses and commuting time upon relocation (see Table 7.2). One reason for greater satisfaction in Jurong compared to other housing estates is that it has the largest industrial estate in Singapore providing employment for most residents on the estate.

With respect to changes in household expenses, 84 per cent of respondents say that their utilities bills are increased, and 78 per cent and 70 per cent respectively say that their food expenses and transport expenses have increased.

In terms of rental costs, it is an irrelevant question for 55 per cent of the respondents as they own their flats. Although they do not need to pay rent for their flats, most of them have to pay for their housing loans by monthly instalment or from their Central Provident Fund (CPF) savings. Among those who have to pay rent, 81 per cent say that they have to pay more for their present flats than their previous residences. Only five per cent say that they pay lower rentals.

B. Adverse Effects

Data in Table 7.1 show that 22 per cent feel that the changes in household expenses and commuting time adversely affect their financial situation "a lot", 43 per cent feel that the changes adversely affect their financial situation "a little", 30 per cent feel that there are no adverse effects, and the remaining five per cent cannot give definite answers on this issue.

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1. If we take the percentages for the total respondents, i.e. including both those who own and those who rent their public flats, the results as given in Appendix Table VII.1 show that 37 per cent say that they pay more, two per cent say that they pay less and six per cent say that there is no change in rentals. The other 55 per cent say that the question is irrelevant to them as they own their flats.

The increase in financial burdens and commuting time present differential adversity for the various relocated groups. For example, 68 per cent of the relocatees from the city centre and 67 per cent of those from suburban areas respectively say that their financial situation is adversely affected by these changes, compared to only 56 per cent of the relocatees from rural areas (see Table 7.1).

This finding does not support Hypothesis 1a which states that the relocation of people into public housing causes more economic hardship of relocatees from rural than those from urban areas. The finding also contradicts the conclusion made by Shimon Spiro in his study of the relocation of villagers into public housing estates in Singapore that, compared to those public housing residents who had moved from urban neighbourhoods, the "ex-villagers turned out to suffer more economic hardships." (Spiro, 1977:52).

In terms of types of relocatees, it is found that upon relocation the involuntary relocatees face more financial difficulties than those who moved voluntarily. Seventy-three per cent of the involuntary relocatees, compared to 62 per cent of the voluntary relocatees, experience adverse financial effects upon relocation (see Table 7.1). Moreover, 31 per cent of the involuntary relocatees, compared to only 18 per cent of the voluntary relocatees, say that their financial situation has been adversely affected "a lot" by relocation.

Table 7.1 Adverse Effects on Financial Situation by Ethnicity, Age, Type of Relocatee, and Previous Residential Area

(in Percentage)					
	A lot	A little	No adverse effect	No answer	Total
<u>Ethnic Group</u>					
Chinese	21.9	44.8	27.3	6.0	100.0
Malay	21.6	38.4	37.6	2.4	100.0
Indian	18.4	40.8	38.8	2.0	100.0
Other	25.0	55.0	20.0	0.0	100.0
All groups	21.6	43.3	30.3	4.8	100.0
<u>Age Group</u>					
Under 30	21.3	39.1	33.3	6.3	100.0
30 - 39	21.5	40.8	32.0	5.7	100.0
40 - 49	21.2	44.6	31.7	2.5	100.0
50 and above	22.3	48.0	24.7	5.0	100.0
All groups	21.6	43.3	30.3	4.8	100.0
<u>Type of relocatee</u>					
Voluntary relocatees	18.0	43.9	33.3	4.8	100.0
Involuntary relocatees	30.7	41.8	22.8	4.7	100.0
All types	21.6	43.3	30.3	4.8	100.0
<u>Previous Residential Area</u>					
City centre	22.8	45.4	26.7	5.1	100.0
Suburban area	20.6	46.7	28.8	3.9	100.0
Rural	21.5	34.5	38.2	5.8	100.0
All areas	21.6	43.3	30.3	4.8	100.0
All Respondents (%)	21.6	43.3	30.3	4.8	100.0
(N)	259	520	363	58	1200

Table 7.2 Adverse Effects on Financial Situation by Income, Type of Flat, and Area of Housing Estate

(in Percentage)

	A lot	A little	No adverse effect	No answer	Total
<u>Household Income</u>					
Below \$500	21.4	45.8	29.4	3.4	100.0
\$500 - \$749	24.3	47.7	25.1	4.9	100.0
\$750 - \$999	19.9	46.2	28.8	5.1	100.0
\$1000 - \$1499	22.5	40.4	31.3	5.8	100.0
\$1500 and above	19.4	37.9	38.4	4.3	100.0
Not applicable	0.0	50.0	33.3	16.7	100.0
All groups	21.6	43.3	30.3	4.8	100.0
<u>Type of Flat</u>					
One-room	24.0	44.8	29.6	1.6	100.0
Two-room	20.0	45.7	31.9	2.4	100.0
Three-room	20.8	44.6	28.7	5.9	100.0
Four-room	22.8	38.6	32.7	5.9	100.0
Five-room	24.1	36.7	33.5	5.7	100.0
All types	21.6	43.3	30.3	4.8	100.0
<u>Housing Estate</u>					
Ang Mo Kio	14.0	58.7	15.3	12.0	100.0
Bedok	38.0	32.7	25.3	4.0	100.0
Bukit Ho Swee	26.0	42.0	30.0	2.0	100.0
Clementi	23.0	47.0	26.0	4.0	100.0
Marine Parade	29.0	40.0	29.0	2.0	100.0
Queenstown	20.7	53.3	24.7	1.3	100.0
Telok Blangah	36.0	26.0	26.0	12.0	100.0
Toa Payoh	14.5	47.0	34.0	4.5	100.0
Jurong	4.7	35.3	58.0	2.0	100.0
All estates	21.6	43.3	30.3	4.8	100.0
All Respondents (%)	21.6	43.3	30.3	4.8	100.0
(N)	259	520	363	58	1200

The above finding supports Hypothesis 2a that the relocation of people into high-rise public housing estates causes more economic hardship for involuntary than voluntary relocatees. This finding is consistent with the popular observation made by studies on urban renewal in other countries.¹ But, the finding contradicts the conclusion made by Stephen Yeh in his study of public housing in Singapore that there is no difference in terms of hardship faced by resettled and non-resettled households² (Yeh, 1975:349).

With respect to ethnic identity, it is interesting to find that it is the majority ethnic group and not the minority ethnic groups which is more adversely affected by the relocation. Sixty-seven per cent of the Chinese, who are the majority ethnic group in Singapore, are adversely affected by the increase in household expenses and commuting time after they moved into the present estates. But, only 59 per cent of the Indians and 60 per cent of the Malays, who are the minority ethnic groups, face the same problem (see Table 7.1). Among the three ethnic groups, 18 per cent of the Indians and 22 percent each of the Chinese and the Malays say that they are adversely affected "a lot" by the

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1. See, for example, Peter Marris, "A Report on Urban Renewal in the United States," in L. Duhl, ed. Urban Conditions (New York: Basic Books, 1963); and Philip Schorr, Planned Relocation (London: Lexington Books, 1975).
 2. The criteria for classifying the relocated population into "involuntary relocatees and "voluntary" relocatees in the present study are similar to the criteria used by the Housing and Development Board for classifying them into "resettled" and "non-resettled" population.

increases in household expenses and commuting time after relocation.

This finding does not support Hypothesis 3a that the minority ethnic groups are more adversely affected by the relocation into public housing estates, and in this regard the Singapore experience goes against the experiences of other countries in western Europe and America.¹

The impact of relocation on older people has attracted a great deal of attention in the United States and Western Europe. Most studies conducted there found that the relocation programme has caused more economic hardship for older people, especially the elderly, than for younger people.²

There are, however, no studies specially conducted to find out the impact of relocation on the elderly in Singapore.³ In the present study, we have some comparable data for the younger and the older people. But we do not

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1. See, for example, Philip Schorr, Planned Relocation (London:Lexington Books, 1975), pp. 110-116; Leonard Weller and Elmer Luchterhand, "Effects of Improved Housing on the Family Function of Large Low-income Black Families." Social Problem, Vol.20 (1973), pp.282-289.
 2. See, for example, Philip Schorr, op.cit. pp. 108-109; P.L. Niebanck and John Pope, The Elderly in Urban Areas (Philadelphia: University of Pennsylvania, 1965); W.L.C. Wheaton, et al., eds. Urban Housing (New York: The Free Press, 1966), pp.223-230.
 3. There are, however, some studies aimed at finding problems faced by the elderly in general. For example, the Singapore Council of Social Service recently completed a study on the elderly in Singapore, the findings of which are presented in the report entitled, Social Policy and the Elderly in Singapore, 1981.

have data specially for the elderly.¹ As shown in Table 7.1, the younger people are less adversely affected financially by relocation. For example, 70 per cent of those aged 50 years and over experience adverse effects on their finances, compared to 66 per cent for those between 40 and 49 years, 62 per cent for those between 30 and 39 years, and 60 per cent for those under 30 years old.

It was found in Australia and other countries that the poor are more adversely affected financially by the relocation programme than the higher income groups.² To what extent is this the experience of the lower income relocated groups in Singapore? Data presented in Table 7.2 show that the relocation programme has different degrees of impact on the various income groups in Singapore. If we compare the lowest income group and the highest income group of the survey sample, we find that 67 per cent of the former and only 57 per cent of the latter say that their financial situation is adversely affected by the relocation. The people most seriously affected are those with family incomes between S\$750 and S\$999 per month. Seventy-two per cent of

1. Originally I planned to include a study of the impact of relocation on the elderly as part of the present study. But this idea was dropped at the later stage of the survey as many sub-groups were included in the survey and the sample for the elderly was too small to make any significant comparisons.

2. See, for example, Trevor Lee, "Public Housing, Relocation and Dislocation," Town Planning Review, Vol.49, No.1 (1978), pp.84-92; E.P. Wolf and C.N. Lebeaux, Change and Renewal in an Urban Community (New York: Frederick A. Praeger Publishers, 1969).

the residents in this group say that they are adversely affected by the relocation. The percentages for other income groups who witness the same experience are between 63 and 66 per cent.

In general, the poorer families live in smaller types of flat. Data in Table 7.2 also show that those who live in smaller types of flat are more adversely affected by the relocation than those who live in larger types of flat.

C. Coping With Economic Burdens

As we have discussed above, relocation of people into public housing estates, regardless of whether they are voluntary or involuntary, usually causes additional economic burdens. How do the relocatees cope with the additional economic burdens? We do not have any survey information on this question, but, we do have responses of the interviewees of the 27 relocated families selected for the in-depth study. Based on these, we find that the majority of the relocatees faced financial difficulties during the first few months after they had moved. But, most of them solved the problem eventually, and they are quite happy with the public flats.

For those who own their flats, all but one of the interviewees say that they used their Central Provident Fund savings to purchase the flat. As remarked by Mr. W (Case 13), a three-room flat resident at Ang Mo Kio, "when we

bought this flat in 1976, it cost us S\$15,800.¹ But, we are lucky that both myself and my wife are working and we have accumulated enough CPF savings to purchase the flat." Therefore, the couple have not suffered any adverse financial effects.

But, not all the relocated families are as fortunate as the W family. For instance, Mr. M (Case 11), also a three-room resident at Ang Mo Kio, says that they purchased the flat in 1976 through CPF and personal savings, but moving into the new flat initially brought them some stiff financial difficulties. Renovating the flat alone cost them a few thousand dollars. Apart from this, all other items such as utilities bills and food expenses had all increased. Their past savings and current income were inadequate to meet the sudden accelerated expenditure after they moved into the public flat. Therefore, they had to borrow from some close friends and relatives to cope with the increased economic burdens during the first two years.

The adverse effects on the younger people are usually in the first few months or years after relocation. But the adverse effects on the older people seem to be at the later rather than the initial period. For instance, Mr. C (Case 16) says that he did not face any serious financial difficulties when his family first moved into the present flat, but things have become more difficult for him nowadays

1. The price of a three-room flat in Ang Mo Kio increased to S\$40,500 as of March 1982.

as he and his wife have to live on their little savings and things are much more expensive today. The C s are an elderly couple. They do not have any children and they used up almost all their CPF savings to purchase the flat in 1975. In fact, they are very uncertain of the future, and they feel that they might have to sell their flat eventually. But they do not have any idea where they can get alternative accommodation if they sell their flat.

People who cannot afford to purchase a public flat can rent one. However, only smaller types of flats, namely one-, two- and three-room are available for rent. Although those who rent a flat may not face so much financial difficulty as those who buy the flat when they first move in, many of the relocatees, especially those involuntarily relocated, complain about the increase in economic burdens. For instance, Mr. A B (Case 6) says that his financial situation is badly affected by the sudden increase of expenditure in utilities bills and monthly rent for his two-room public flat at Ang Mo Kio. Before being relocated into Ang Mo Kio, the A B family had resided for about thirty-three years in a wooden house in a village. Their former residential area was affected by the resettlement programme.

They cannot afford to purchase a public flat as Mr. A B has been unemployed for the past eight years due to poor physical health. The additional expenses for paying rent and utilities bills have become a big burden. They did

not have to pay these in their former residence as they owned the wooden house and no water and electricity were supplied. Mrs. A B works as an "amah" (domestic servant). She complains that after paying rent, utilities bills, and her husband's hefty medical bills from their meagre income, there is not much money left. Thus, she is trying to get an evening job, apart from her regular one, to earn some extra income to support the family. Her situation and experience are similar to some other relocated families such as the H family (Case 2) and the W Family (Case 4).

About 50 per cent of HDB households in this survey have a monthly family income of less than S\$1,000 (see Table 2.3).¹ The majority of these low-income families are living in the smaller flats. A family of four persons with this level of income needs a lot of planning, determination and careful domestic budgeting if they want to make ends meet. Although it is difficult to differentiate whether the financial difficulties faced by these relocatees are due to increasing expenses caused by the relocation programme or by the inflation of living costs in general, many people, especially those who live in the smaller types of flats, complain that rents, water and electricity bills and

1. According to the 1980 Population Census, the average monthly income of a Singapore family is S\$1,240. Whereas, the average monthly family income of the one- and two-room HDB households is S\$624 (see Census of Population 1980 Singapore; Release No.7. Singapore : Department of Statistics, 1981, Page 76).

travelling expenses have all increased upon relocation and this has imposed serious economic burdens on them.

In coping with the additional economic burdens, the relocatees usually resort to one or more of the following measures. First, the most common measure used by many low-income families is to tighten their domestic budgeting. Second, a less favourable and yet not uncommon measure used among poor families, especially those which live in one- and two-room flats, is to borrow constantly from relatives, friends and a loan society.

Third, the most acceptable and widely adopted measure is to find ways to increase their income. Some people like Mr. H (Case 2), Mr. W (Case 4) and Mr B (Case 6) take up a second job, either full-time or part-time, to supplement their family incomes. Many women are working to help raise their family incomes. For those women who cannot take up a full-time job, some of them accept contract jobs such as sewing, packing, or quality checking of electronic components and other products which can be done at home. For example, Mrs. Y (Case 10) and Mrs. T (Case 20) take contract sewing jobs at home, while Mrs. C (case 17) accepts a contract job at home to do quality checking of resistors for a nearby electronics factory. For those women who are better educated, they usually give private tuition at home to earn some extra income. For example, Mrs. C (Case 7) gives private tuition at home to three primary school students who live in the neighbourhood. This gives Mrs. C an income of S\$180 per month. Some

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housewives, however, respond to the foster child scheme and help working couples to look after their children. Mrs. K (case 5), for example, helps a working couple to look after their three-year-old boy. The couple usually send their child to Mrs. K 's home around 8 o'clock in the morning and pick up the child after work. The remuneration for Mrs. K is S\$150 per month. This amount of money helps relieve the financial difficulties of the K family.

II. Satisfaction with the Flat and the Estate

One measure of residents' adaptation to the new environment in public housing estates is the extent of their satisfaction with the flat and the housing estate they reside in. In this sample survey, respondents were asked to express their views in relation to satisfaction with various aspects of their living conditions. As the survey questionnaire is a structured one, it is not possible to find out the dynamics of the adaptation process among the various sub-groups of the residents. This weakness is, however, modified by the in-depth study of the 27 relocated families, for which some aspects of the adaptation

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1. This scheme encourages non-working women to help look after children for the working mother. There are two types of arrangement, one is that the working mother sends her child to the foster family when she goes to work in the morning and picks up the child when she returns from work. Another arrangement is for the parents to leave the child living with the foster family during weekdays and pick up the child during weekends.

process are examined.

Although the majority of the survey sample and the in-depth study sample suffered adverse financial effects of relocation, especially during the first few months, most of the residents in public housing estates are quite happy with their flats and housing estates.

This is because, as discussed in the preceding chapter, the residents find almost all the commercial and community facilities needed in the housing estates. Moreover, they find it quite easy to change their jobs to be nearer their new residences; there are also plenty of opportunities for an extra part-time job in order to earn more income to meet the increased costs of living in public housing estates. In fact, Singapore has witnessed a labour shortage over the past ten years, and it is very easy for anyone who would like to work for some extra income to do so.

A. Facilities in the Housing Estates

The respondents were asked whether they are satisfied with the facilities in their housing estates. As shown in Table 7.6, the majority of the respondents consider all the twelve items included in the survey either satisfactory or acceptable. The items which have higher percentages of respondents considering them satisfactory or acceptable are "nearness to clinics" (94 per cent), "security in the neighbourhood" (90 per cent), "nearness to post office" (88

per cent), and "cleanliness of the neighbourhood" (87 per cent).

The items which have a higher percentage of respondents considering them unsatisfactory are: "nearness to police station" (24 per cent), "nearness to places of worship" (19 per cent), "nearness to work" (17 per cent), "bus service" (16 per cent), and "price of goods in neighbourhood" (23 per cent). All these with the exception of the last complaint are probably due to the fact that public housing estates, especially the newer ones, are built in new localities which are a long distance from the central business areas and other old parts of the city. However, many new police posts, churches, temples and mosques have been constructed in or around new housing estates during the past few years. Moreover, the rapid development of the island-wide expressway system during the past few years has helped to shorten the travelling distance and solve traffic congestion problems for most parts of the city.

The complaint about the high price of goods in public housing neighbourhoods has become a pressing problem faced by the Singaporeans, especially the lower-income groups. All shop-houses and almost all shopping complexes in public housing estates are owned and managed by the Housing Board. The high rentals of these facilities charged by the Housing Board are an important factor contributing to the steep increase of prices in housing estates. In pointing out the hardship faced by the lower income families (the majority of them are living in public housing estates), a former cabinet

Minister said that in the past 25 years, the pay of these groups had gone up by only two or three times, but the cost of living went up five to six times. (The Straits Times, March 6, 1985).

B. Reasons Why Residents Are Not Happy with Their Public Flats

More than 67 per cent of the respondents are happy with the living conditions of their present flats while about 33 per cent are not. Why are people unhappy with their public flats? The reasons given by the respondents are presented in Appendix Table VII.5.

The two main reasons mentioned for dissatisfaction are: "too small" and "too noisy". The other reasons are "too hot", "inconvenient to go up and down," "too much time wasted for commuting to work and schools," "too far away from close relatives," "bad neighbours," and "no sufficient playing areas for children" (see Appendix Table VII.5).

The reasons for dissatisfaction as expressed by public housing residents also explain to some extent why there is a lack of community in public housing estates and why the majority of Singaporeans would prefer to live in low-rise housing if they have the means.¹

Although there are some complaints about their present flats, only 18 per cent of the respondents indicate that

1. The issue of whether Singaporeans would prefer to live in high-rise or low-rise housing was discussed in Section II of Chapter 3. Whereas, the problem of lack of community in Housing Board estates is dealt with at great length in Chapter 8.

they would like to move out of the present flats in the near future. Seventy-two per cent say that they do not plan to move out of the flats, and the other 10 per cent are uncertain about their plans. A large proportion of them, however, express the view that there are no other alternatives for them to move out of HDB flats because rentals and prices of private residential properties are far beyond the means of the average Singaporean.

C. Ex-villagers and Urbanites in Public Housing Estates

As the living and social environments of the rural community are quite different from those of the urban community,¹ it is, therefore, argued by some social scientists² that relocatees from rural areas may face more adjustment problems than those from urban areas.

This general belief is, however, not supported by the survey findings. As discussed in the preceding section, it is the urbanites, and not the ex-villagers, who are more adversely affected financially by the relocation. In terms of satisfaction with the living conditions of the flats and the housing estates, data presented in Table 7.3 and Appendix Table VII.2 show that the extent of satisfaction

1. For a detailed comparison of the two different types of community, see, for example, Peter Chen and Tai Ching-ling, Social Ecology of Singapore (Singapore: Federal Publications, 1977); and Shimon Spiro, Villagers and Estate Residents: Report of a Survey, Resource Paper Series No.5 (Singapore: Department of Social Work, National University of Singapore, 1976).

2. See, for example, Shimon Spiro (1976).

with their flats and housing estates among the ex-villagers and the urbanites are not much different. Ninety-one per cent of the ex-villagers, compared to 89 per cent of the urbanites, say that they are satisfied with their flats. With respect to the housing estates, 91 per cent of the ex-villagers, compared to 92 per cent of the urbanites, say that they are satisfied with the public housing estate. The difference between the ex-villagers and the urbanites is, therefore, insignificant.

The above findings cannot establish sufficient evidence to support or refute Hypothesis 1b which states that the relocation of people into public housing estates causes more adaptation problems for ex-villagers than urbanites, though the findings discussed in Section I of this chapter provide some evidence to refute Hypothesis 1a that relocation causes more economic hardship for ex-villagers than urbanites.

One possible explanation is that Singapore is a highly urbanised society and it is a small city state. Therefore, there is not much difference between those who live in rural areas and those who live in urban areas in terms of their attitudes and lifestyles. Moreover, Riaz Hassan has observed that population in Singapore is characterised by a set of attitudinal and behavioural orientations such as materialism, individualism, achievement, receptiveness to change and aspiration for social mobility. All of these orientations emphasise change and progress as highly desirable ends (Hassan, 1976:340). Thus, people in

Singapore can apparently easily adjust to a new environment, especially one which is materially superior.

This experience is shared by many interviewees in the in-depth study. For example, the M family (Case 11) faced some financial difficulties when they were relocated into a flat in Ang Mo Kio from a village where they had resided for about twenty years. It took them two years to settle these problems. But they were and are still very happy with their new home as they enjoy new household items such as television, hi-fi stereo, and refrigerator, all of which they had never owned when they were residing in their previous house because there was no electricity supply.

Similarly, Mr. H (Case 2) feels that things have changed for the better after he and his family were relocated. The H family lived in a village in the Aljunied area for about nine years before they moved into a one-room flat in Toa Payoh. As a result of the relocation, Mr. H had to change his job because it cost him too much to travel to his former job. He had no difficulties finding new employment near his residence in Toa Payoh. As a matter of fact, he also has a second, part-time job as a petrol kiosk attendant in the housing estate so that he can earn some more money to meet the increased expenditure. Members of the H family find no difficulties in adapting to their new environment. They are quite happy with the neighbourhood in Toa Payoh.

D. Voluntary and Involuntary Relocates

As shown in Table 7.3, the difference between voluntary and involuntary relocatees with respect to their satisfaction with the housing estate they reside in is insignificant. Ninety-three per cent of the involuntary relocatees, compared to 94 per cent of the voluntary relocatees, are satisfied with the housing estate. However, the proportions of these two types of relocatees, who say that they are "very" satisfied with the housing estate, are different. Among the voluntary relocatees, 21 per cent of them say that they are "very" satisfied with the housing estate, while only 16 per cent of the involuntary relocatees express the same opinion.

With regard to the living conditions of the public flats, the extent of satisfaction between the voluntary and involuntary relocatees varies. Among the voluntary relocatees, 94 per cent of them say that they are satisfied with the public flats and 20 per cent say that they are "very" satisfied. But, only 86 per cent of the involuntary relocatees say that they are satisfied, and 14 per cent say that they are "very" satisfied with the flats (see Appendix Table VII.2). These findings together with the findings discussed in Section I of this chapter support Hypothesis 2 that the relocation of people into public housing estates causes more economic hardship and adaptation problems for involuntary relocatees than voluntary relocatees.

Table 7.3 Satisfaction with the Housing Estate by Ethnicity, Age, Type of Relocatee, Previous Residential Area, and Type of Previous Housing

(in Percentage)

	Very satisfied	Quite satisfied	Not satisfied	No answer	Total
<u>Ethnic Group</u>					
Chinese	16.1	77.1	5.9	0.9	100.0
Malay	27.3	66.5	4.9	1.3	100.0
Indian	21.4	71.7	5.9	1.0	100.0
Other	30.0	55.0	15.0	0.0	100.0
All groups	19.1	74.2	5.8	0.9	100.0
<u>Age Group</u>					
Under 30	16.4	76.4	6.8	0.4	100.0
30 - 39	19.3	72.5	6.8	1.4	100.0
40 - 49	19.2	76.6	3.8	0.4	100.0
50 and above	20.7	72.0	5.7	1.6	100.0
All groups	19.1	74.2	5.8	0.9	100.0
<u>Type of Relocatee</u>					
Voluntary relocatees	20.6	72.9	6.0	0.5	100.0
Involuntary relocatees	15.5	77.3	5.7	1.5	100.0
All types	19.1	74.2	5.8	0.9	100.0
<u>Previous Residential Area</u>					
City centre	18.9	73.5	6.5	1.1	100.0
Suburban area	20.2	75.0	4.3	0.5	100.0
Rural	17.5	73.7	7.3	1.5	100.0
All areas	19.1	74.2	5.8	0.9	100.0
<u>Types of Previous Housing</u>					
High-rise building	20.7	73.2	5.7	0.4	100.0
Low-rise housing	17.8	74.9	5.9	1.3	100.0
All types	19.1	74.2	5.8	0.9	100.0
All Respondents (%)	19.1	74.2	5.8	0.9	100.0
(N)	229	890	70	11	1200

One reason for the lower satisfaction of the involuntary relocatees is that in most cases, they have to find alternative accommodation at short notice and accept whatever flats are allocated to them. This circumstance is reflected in the survey data and the in-depth interviews. Eighty-three per cent of the voluntary relocatees, compared to only 68 per cent of the involuntary relocatees, say that their flats are in the housing estate of their own choice (see Appendix Table VI:3). Similarly, in the in-depth study, Mr. K (Case 5), for example, a voluntary relocatee living in a two-room HDB flat in Queenstown, had applied for a four-room flat in Clementi.¹ The K family had waited for more than four years and had been notified three times of their qualification for balloting, but they still chose to wait until they could get the flat, not only in the estate of their choice, but also on the floor level they most desired. On the first occasion, they were balloted for a four-room flat in the housing estate of their choice; the flat was also situated on the ninth floor, which was what they wanted. However, they declined the offer because they were not satisfied with the space of the rooms in the flat. A few months later, they were once again notified of their eligibility to participate in the balloting of another block of flats in the same housing estate. This time, they declined to participate because the flat space was exactly the same as that of the earlier one. The third time, they

1. Clementi is a new housing estate, which is very near to the Queenstown estate.

were not successful in the balloting. Mr. Kwok and his wife are, however, quite confident that they will eventually obtain a flat of their choice, although they are worried that flat prices may increase again.

The experience of relocation of some involuntary relocatees such as the P family (Case 18) is, however, quite different from that of the K family. The P family was relocated into the Bedok housing estate three years ago. Their previous residence in the central area of the city was affected by the resettlement programme and they were offered a flat in Bedok.¹ Although the flat was not in the estate of their choice, they accepted the offer because they had to move out from their previous house quickly and they did not know when they could obtain a flat in the estate of their choice if they rejected the offer. The experience of the P family is shared by some other involuntary relocatees included in the in-depth study.

E. Ethnicity, Age and Income

Unlike the experience of relocatees in the United States and certain European countries, the minority ethnic groups in Singapore do not suffer more than the majority ethnic group in the course of relocation. With respect to satisfaction with the living conditions of their public flats and the housing estates, the percentages of the three

1. Bedok is a new public housing estate, which is about 10-14 kilometres away from the city centre.

major ethnic groups are not much different. Ninety-three per cent each of the Chinese and the Indians, and 94 per cent of the Malays say that they are satisfied with the housing estates (see Table 7.3), and, 94 per cent of the Malays, 91 per cent of the Chinese and 89 per cent of the Indians say that they are satisfied with the living conditions of their public flats (see Appendix Table VII.2)

If we compare the Malays with the Chinese, we find that it is the minority, and not the majority ethnic group, which has a higher proportion of individuals expressing satisfaction with the flats and estates. For example, 27 per cent of the Malays, compared to only 16 per cent of the Chinese, say that they are "very" satisfied with the housing estates (see Table 7.3); and, 25 per cent of the Malays, compared to 17 per cent of the Chinese, say that they are "very" satisfied with the public flats (see Appendix Table VII.2). The data presented above, therefore, do not support Hypothesis 3b that the minority ethnic groups are more dissatisfied with the new environment of the public housing estates than the majority ethnic group.

Nevertheless, it usually takes much longer and more effort for the minority ethnic groups than the majority ethnic group to adjust themselves to the new environment in public housing estates. This is reflected in the in-depth study. For instance, members of the M family (Case 3) say that when they first moved into the Telok Blangah housing estate from a predominantly Indian neighbourhood, it took them some time to get acquainted with their neighbours

who are mostly Chinese. This, however, does not pose too much difficulty for Mr. M and the children as they can speak English and a little bit of the Hokkien dialect, but it causes some problems for Mrs. M as she speaks only Tamil. In the first few months, they did not like the new environment. But they took the initiative to greet their neighbours and sometimes to visit their homes. Their relationships with the neighbours, therefore, improved over time and they came to like the new neighbourhood one year after they moved into the housing estate.

In terms of age group, data presented in Table 7.3 and Appendix Table VII.2 do not support Hypothesis 4 that the older people find it more difficult to adapt to the public housing environment than the younger people. The percentage among the various age groups with respect to satisfaction with the living conditions of the public flats and the housing estates are not much different, and the percentages for those under 30 years old and those 50 years and over are exactly the same. As shown in the two tables, 93 per cent of the younger people and exactly the same proportion of the older people say that they are satisfied with the housing estates; and 90 per cent of the younger people and again exactly the same percentage of the older people say that they are satisfied with the living conditions of the public flats.

The above findings, however, cannot reflect the difficulties faced by the elderly living in the public

housing estates. As pointed out earlier, the sample of the elderly is too small for comparison. However, some views of elderly residents are expressed in the in-depth study. For instance, Mr. and Mrs. C (Case 16), an elderly couple, say that when they first moved into the public flat in Queenstown, they did not think it inconvenient to live on a high floor. But they now feel the inconvenience as they are getting old. Moreover, they are worried about the increasing financial burdens as they do not have any other sources of income but live on their small amount of savings.

The problems faced by the L family (Case 8) are different from those faced by the C s. Mr. L and his wife did not have much difficulty in adjusting to the new environment when they were relocated into the Ang Mo Kio housing estate from the city centre. But, his elderly mother always complains about her dissatisfaction with the new neighbourhood, the new neighbours, and the inconvenience for her to visit her relatives and friends. Most of them are living in the central areas of the city.

Although the lower income groups are more adversely affected financially by relocation, the levels of satisfaction with the housing estate and flat among the higher income groups are not higher than those among the lower income groups. As shown in Table 7.4 and Appendix Table VII.3, those who are most dissatisfied with the living conditions of the public flats and the public housing estates are the highest income group and the lowest income group. The proportion of the highest income families who

are dissatisfied with the flats and the estates is, however, higher than the proportion of the lowest income families. For example, 14 per cent of the respondents in the highest income group, compared to 10 per cent of the lowest income group, say that they are not satisfied with the living conditions of the public flats. Similarly, 12 per cent of the respondents in the highest income group, compared to only seven per cent of the lowest income group, say that they are not satisfied with the public housing estates they reside in.

The above findings point to the fact that the expectations ^{about} housing ^{are} relative. In general, the higher income groups live in larger units of public flats ¹ and these compared with the smaller units, are better designed, more private and larger, yet the higher income groups are more dissatisfied with the flats and the estates. The higher income groups and those living in the larger units of flat also have lower degrees of neighbourliness than the lower income groups and those living in the smaller units of flat (see Chapter 8).

We can only conclude that problems faced by the relocatees vary among various income groups, but there are no conclusive findings to support the popular belief ² that

1. See, Khoo Chian Kim, Census of Population 1980 Singapore: Release No.7 (Singapore: Department of Statistics, 1981), p.84.

2. See, for example, Robert Gamer (1972), Iain Buchanan (1972), and F.L. Jacano (1975).

Table 7.4 Satisfaction with the Housing Estate by Area of Housing Estate and Income Group

(in Percentage)					
	Very satisfied	Quite satisfied	Not satisfied	No answer	Total
<u>Housing Estate</u>					
Ang Mo Kio	25.3	68.7	6.0	0.0	100.0
Bedok	14.7	76.7	8.6	0.0	100.0
Bukit Ho Swee	15.0	72.0	12.0	1.0	100.0
Clementi	22.0	72.0	5.0	1.0	100.0
Marine Parade	34.0	62.0	3.0	1.0	100.0
Queenstown	21.3	74.0	3.3	1.4	100.0
Telok Blangah	12.0	81.0	6.0	1.0	100.0
Toa Payoh	16.0	77.0	5.5	1.5	100.0
Jurong	12.7	82.0	4.0	1.3	100.0
All estates	19.1	74.2	5.8	0.9	100.0
<u>Household Income</u>					
Below \$500	15.9	76.2	6.5	1.4	100.0
\$500 - \$749	19.5	75.3	3.7	1.5	100.0
\$750 - \$999	18.2	76.3	5.1	0.4	100.0
\$1000 - \$1499	21.1	74.6	2.5	1.8	100.0
\$1500 and above	19.9	68.0	11.7	0.4	100.0
Not applicable	16.7	66.7	0.0	16.6	100.0
All groups	19.1	74.2	5.8	0.9	100.0
All Respondents (%)	19.1	74.2	5.8	0.9	100.0
(N)	229	890	70	11	1200

the lower income groups, or the poor, face more adaptation problems than the higher income groups in the course of relocation. In fact, measures such as neighbourly contacts, frequency of visiting neighbours, appreciation of the public flats and the public housing estates, and dislike of high-rise living¹ all suggest that the higher income groups may face more adaptation problems and they are less integrated with the large community of the public housing estates than the lower income groups.

One possible explanation for this trend is that the higher income groups usually have higher expectations and greater demands than the lower income groups and falling short of expectations sometimes translates into problems of adaptation. On the other hand, the lower income groups have lower expectations. Therefore, although most of them experienced basic hardships when they first moved into public housing estates, they tend to adjust to the new environment faster than the higher income groups.

F. Length of Residence and Location of Housing Estates

Length of residence in the community is an important factor affecting the extent of satisfaction with the housing estate and the degree of neighbourliness in the community. This is a conclusion derived from such studies carried out by Vere Hole (1959) in Scotland, Elizabeth Colson (1971) in

1. See Table 7.4, Appendix Table VI.4, Appendix Table VII.3, Appendix Table VIII.5 and Appendix Table VIII.12.

Africa, and Chen and Tai (1977) in Singapore. In a study of villages and public housing estates in Singapore, it was found that the villagers live in their current neighbourhoods much longer than the residents in the housing estates and they have a high degree of satisfaction with their neighbourhoods, and a strong sense of identity with the community (Chen and Tai, 1977:40-84).

The findings of the present study support the above argument with some qualification. As shown in Table 7.5 and Appendix Table VII.4, if we compare the views of the residents living in the present public estates for three to six years with those living there for less than three years, it is quite obvious that those who live longer in the community have a higher degree of satisfaction with the public flats and housing estates. For example, 25 per cent of the residents living in the housing estates for three to six years, compared to only 16 per cent of those living there for less than three years, say that they are "very" satisfied. Moreover, eight per cent of those living there for less than three years, compared to five per cent of those living there for three to six years, say that they are not satisfied with the estate (see Table 7.5).

With respect to the extent of satisfaction with the living conditions of the public flats, 24 per cent of the residents living in the housing estates between three and six years, compared to 18 per cent of those living there for less than three years, say that they are "very" satisfied

with the flats. However, if we compare these two types of residents with those who have been living in the housing estates for more than six years, we then find the opposite trend. Data show that the residents living in the housing estates for more than six years have the lowest percentage of them saying that they are "very" satisfied with the public flats and housing estates, and the highest percentage of them saying that they are not satisfied with the living conditions of the public flats.

Therefore, the findings discussed above cannot prove nor disprove Hypothesis 5 that the longer the person lives in the public housing estate, the greater his/her degree of satisfaction. If we compare only the residents who have been living in the housing estate for less than seven years, the hypothesis is then supported by the survey data. But, if we extend the comparison to include those who have been living there for seven years and more, the finding is inconclusive.

There are, however, some explanations for this situation. One obvious reason is that the housing authorities have shifted their emphasis on the building programme from quantitative to qualitative considerations over the past ten years. Thus, new public flats and new public housing estates are provided with better design, more privacy, and better facilities than the older ones. As a result, those who live in the older flats or in the older estates are more dissatisfied with the flats and estates than those who live in the newer ones. This is

Table 7.5 Satisfaction with the Housing Estate by Duration of Residence, Floor Level, and Type of Flat

(in Percentage)

	Very satisfied	Quite satisfied	Not satisfied	No answer	Total
<u>Duration of Residence</u>					
Less than 3 years	15.7	74.8	8.4	1.1	100.0
3 to 6 years	25.3	69.5	4.6	0.6	100.0
7 years and more	13.0	81.8	4.2	1.0	100.0
All groups	19.1	74.2	5.8	0.9	100.0
<u>Floor level of the flat</u>					
Ground-2nd floor	19.4	74.4	5.6	0.6	100.0
3rd-4th floor	18.8	74.2	6.6	0.4	100.0
5th-6th floor	21.1	74.4	3.5	1.0	100.0
7th-8th floor	13.9	77.3	8.2	0.6	100.0
9th-10th floor	15.7	75.7	6.4	2.2	100.0
11th-12th floor	26.5	66.3	5.1	2.1	100.0
13th and above	23.5	72.2	4.3	0.0	100.0
All levels	19.1	74.2	5.8	0.9	100.0
<u>Type of Flat</u>					
One-room	13.6	78.4	7.2	0.8	100.0
Two-room	19.5	73.3	6.2	1.0	100.0
Three-room	20.8	73.4	5.0	0.8	100.0
Four-room	12.9	78.2	6.9	2.0	100.0
Five-room	20.3	72.2	7.0	0.5	100.0
All types	19.1	74.2	5.8	0.9	100.0
All Respondents (%)	19.1	74.2	5.8	0.9	100.0
(N)	229	890	70	11	1200

Table 7.6 Satisfaction with Public Facilities in Public Housing Estates

(in Percentage)

Facility	Satisfactory	Acceptable	Unsatisfactory	No answer	Total (N)
Bus service	51.7	29.8	16.1	2.4	100.0 (1200)
Taxi service	42.2	40.3	14.5	3.0	100.0 (1200)
Nearness to work	35.3	29.5	16.8	18.4	100.0 (1200)
Nearness to school for children	37.1	26.8	8.7	27.4	100.0 (1200)
Nearness to post office	59.2	28.9	10.7	1.2	100.0 (1200)
Nearness to clinics	63.3	30.8	4.9	1.0	100.0 (1200)
Nearness to police station	44.2	26.5	23.8	5.5	100.0 (1200)
Nearness to places of worship (church, temple, mosque, etc.)	34.5	30.8	19.1	15.6	100.0 (1200)
Cleanliness of neighbourhood	45.1	42.3	12.1	0.5	100.0 (1200)
Security in neighbourhood	47.4	42.1	8.8	1.7	100.0 (1200)
Parking facilities	40.3	29.2	6.8	23.7	100.0 (1200)
Price of goods in neighbourhood	22.3	52.7	23.2	1.8	100.0 (1200)

reflected in the data presented in Table 7.4 and Appendix Table VII.3. Among the nine public housing estates, the newer ones Marine Parade, Clementi and Ang Mo Kio have the highest percentages of their residents saying that they are "very" satisfied with their living conditions. Whereas, Bukit Ho Swee, an old estate, has the highest proportion of its residents saying that they are not satisfied with the flats and the housing estate. Mrs. C (Case 7), a resident in Bukit Ho Swee, has pointed out that most residents in the housing estate have been living there for more than 10 years.

III. Concluding Remarks

More than 70 per cent of the respondents in the nine public housing estates included in the present study have experienced increases in household expenses such as utilities bills, and food and transport expenses after moving into the estates, and more than half of the respondents also experienced increases in commuting time to their places of work. To what extent have these changes adversely affected the financial situation of the relocatees? About 65 per cent of the relocatees say that their financial situation is adversely affected by these changes.

The extent of adversity varies among the various sub-groups. Data from the survey show that those more seriously affected by the relocation are the urbanites and not the ex-villagers, the involuntary and not the voluntary relocatees,

the majority ethnic group and not the minority ethnic groups, the older and not the younger population, as well as the lower income and not the higher income groups.

In general, the degree of satisfaction with the living conditions of the public flats and housing estates among the relocatees is negatively correlated with the extent of adverse effect on their financial situation upon relocation. For example, the relocation of people into public housing estates causes more adverse effects on the involuntary relocatees than the voluntary relocatees, and thus the degree of satisfaction with the living conditions of the public flats and the estates is lower among the involuntary relocatees than among the voluntary relocatees. On the other hand, the relocation causes less adverse effects on the minority ethnic groups than the majority ethnic group, and the degree of satisfaction among the former is therefore higher than among the latter.

There are, however, some inconsistencies and exceptions. For example, compared to the higher income groups, the lower income groups suffer more adverse effects of the relocation and yet they are more satisfied with the living conditions of the public flats and the estates than the higher income groups. Similarly, the urbanites suffer more adverse effects than the ex-villagers, and the older population suffer more adverse effects than the younger population. But, the differences between the former groups and the latter groups, respectively, in terms of their

satisfaction with the living conditions of the public flats and the estates are insignificant.

As discussed above, some common beliefs in relation to the problems faced by the relocatees in other countries are confirmed by the findings of this study, but others are refuted. Consequently, Hypotheses 1 and 3 are not supported by data obtained from the present study. Only Hypothesis 2 is sustained. There are no conclusive findings to support or to refute Hypotheses 4 and 5.

NEIGHBOURHOOD AND NEIGHBOURLINESS

I. Neighbourhood Functions in Public Housing Estates

Public housing in most European and American countries normally involves the relocation of only a small sector of the population in the city, and one serious failure in most of these projects is that public housing estates are, in many cases, planned as dormitories rather than as communities. For example, Vere Hole says in a study of the public housing estate in Scotland, "In spite of protestations to the contrary, estates are still being planned as dormitories rather than as communities, and the tenants moving onto them have had neither the expectations, the incentives nor the opportunities that would be necessary if genuine communities are to be created." (Hole, 1959:173).

Singapore also made a similar mistake in the early years of its large-scale public housing programmes. In the early 1960s, the emphasis was on the numbers of public flats being built, with very little attention to the provision of community facilities and the improvement of amenities in the estates. But as more and more people moved into public flats, the housing authorities have since the early 1970s paid more attention to the improvement of community facilities and amenities, and the strengthening of the roles of neighbourhood in promoting community ties among residents in the estates.

In this section we shall examine some of the neighbourhood functions developed in public housing estates in Singapore. Let us use Warren's classification of neighbourhood functions as a basis of analysis. Donald Warren classifies the neighbourhood functions into six types; any given neighbourhood usually performs some of these functions but seldom all of them. They are: (1) neighbourhood as a sociability arena, (2) neighbourhood as a centre for interpersonal influence, (3) neighbourhood as an organisational base, (4) neighbourhood as a base for mutual assistance, (5) neighbourhood as a social context, and (6) neighbourhood as a status arena (Warren, 1977:152-156). Are the neighbourhoods in public housing estates in Singapore performing any of the above functions?

(1) The sociability arena concept measures the extent of informal interaction in terms of the exchange of greetings and visits among residents in the neighbourhood. As shown in Table 8.1, 98 per cent of the residents in the nine public housing estates included in the present study have engaged in exchange of greeting with their neighbours, 93 per cent of the residents have engaged in talking to their neighbours on neutral territories, and 73 per cent have visited each other's flat. These findings illustrate the fact that neighbourhoods in public housing estates have performed the function of being a sociability arena.

(2) The second neighbourhood function is that of a centre for interpersonal influence. In this respect, "opinion leaders" may play an important role in interpreting

mass media messages or in disseminating information or government policies in the community. We do not have sufficient data from the survey to measure the extent of this function. In the survey questionnaire, we only have one question on whether they have ever discussed their personal problems with their neighbours. Only 20 per cent of the respondents say that they have ever discussed their personal problems with their neighbours (See Table 8.1). If we use this as a rough indicator¹, we can say that this function of neighbourhood is relatively weak in public housing estates.

However, as pointed out in Chapter 6 community leaders have played an important role through community organisations in mobilising mass support and mass participation in community development projects and government programmes. This kind of influence is usually exerted through a series of organised activities for mass participation by the residents in the neighbourhoods. Thus, it seems more appropriate to regard this function as organisational rather than inter-personal influence.

(3) The third neighbourhood function is that of a base for voluntary organisational activity. As discussed in Chapter 6, apart from other voluntary organisations, community organisations such as community centres, residents' committees and boys' club are very active. All

1. This is, however, a weak indicator. To discuss personal problems with neighbours is not the same thing as to seek advise or interpretation of information from opinion leaders.

the 230 residents' committees in Singapore and the majority of the 175 community centres are located in public housing estates. Moreover, 35 per cent of the residents in the nine public housing estates included in the present study, have participated in some activities organised by community centres (see Table 6.5).

As the social systems in the public housing estates are different from those in the rural and slum communities, the organisational function of the neighbourhoods in public housing estates plays a crucial role in promoting neighbourliness. As pointed out by Mrs. A B (Case 6), "in kampongs which only encompass a small area, it is possible for residents to know each other. But here in Ang Mo Kio, it is a big housing estate, people living in the estate only know a small number of their fellow residents."

Mr. K (Case 12), another resident in the Ang Mo Kio housing estate, gives another rationale for the need for neighbourhood organisations. He says, "the degree of neighbourly interaction in kampongs is very high, and everyone is willing to help each other. Thus, there is no need for an organisation to foster interaction. But, in the public housing estates, things are different and people keep very much to themselves, thus there is a need for organisations to bring them closer."

(4) The fourth neighbourhood function is that of a base for mutual assistance. Mutual assistance means the exchange of various kinds of services among neighbours, e.g. taking care of the house, helping out when someone gets sick,

borrowing small items of household goods, helping with household chores, and so forth. As shown in Table 8.2, 54 per cent of the residents in the nine public housing estates have on at least one occasion borrowed household goods from their neighbours or vice versa, 54 per cent of the residents have helped their neighbours in household chores, 74 per cent say that they will seek help from their neighbours when sudden illness or injury occurs and there is no other family member at home to help, and 76 per cent say that they can turn to their neighbours for help in time of emergency. Thus, we can say neighbourhoods in public housing estates do perform the mutual assistance function.

However, findings from the in-depth study show that the network of mutual assistance occurs only among the immediate neighbours and seldom extends to neighbours on different floors or different blocks. Moreover, this network is usually confined to people of the same ethnic group. This situation is confirmed by the views expressed by the H s (Case 2), the K s (Case 12), the P s (Case 18), and the Y s (Case 10).

(5) The fifth neighbourhood function is the social context function, whereby the neighbourhoods should serve as a basis of group or community identity. This can be measured by the level of commitment to the neighbourhood and attitudes about neighbours. Data obtained from the present study show that 72 per cent of the residents in the nine housing estates say that they would like to stay in their present neighbourhoods. This percentage is much lower than

that of the residents in the rural areas.¹ According to a comparative study of people living in the rural areas and in public housing estates conducted in 1977 (Chen and Tai, 1977:81), the proportion of the residents living in rural areas who said that they would like to stay in their present neighbourhoods is 92 per cent, i.e. 20 per cent higher than the percentage of the residents in public housing estates who indicate the same opinion.

When the respondents in public housing estates were asked what kind of neighbours they have in their present neighbourhoods, eight per cent say that their neighbours do not contact each other, 59 per cent say that their neighbours² know each other but maintain a certain distance, and 33 per cent say that their neighbours visit each other and sometimes exchange mutual assistance among them (see Table 8.4). We cannot derive any conclusion from this finding as we do not have comparable data for other types of neighbourhoods. However, findings from some recent studies such as Spiro (1977) and Chen and Tai (1977) all conclude that community ties are weaker in public housing estates

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1. We do not have any comparable data for rural residents as all our respondents are confined to residents in public housing estates. Based on the findings of a survey conducted by myself and my co-researcher in 1977, 92 per cent of the rural dwellers, compared to 73 per cent of the residents in public housing estates, said that they would like to stay in their present neighbourhoods (Chen and Tai, 1977:81). The proportion of 73 per cent of the residents in the 1977 survey is very close to the proportion of 72 per cent of the residents in the present study.
 2. The neighbours are mainly their immediate neighbours.

than in rural communities. There are so far no other studies in Singapore which can provide evidence to refute this observation. Thus, as emphasized by the political leadership, there is an "urgent need to re-create a sense of community among people in the new towns and housing estates spawned by Singapore's rapid re-development" (The Straits Times, February 1, 1982).

(6) The sixth neighbourhood function is the status arena concept. As analysed in Chapter 6, there has been a tendency towards residential segregation by socioeconomic status in the recent years. Class segregation can be observed between people living in the private housing sector and those living in the public housing sector, between residents living in different public housing estates, and between residents living in larger units and those living in smaller units of public flats in the same public housing estate. For example, Marine Parade is considered to be a middle class or upper-middle class public housing estate, most of its residents are professionals and government officers; whereas, Bukit Ho Swee is a lower class public housing estate; most of its residents are manual workers and hawksers.¹

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1. In comparing the prices of flats in different housing estates, Prime Minister Lee Kuan Yew said that the HDB flats that were built on prime reclaimed land in Marine Parade was a mistake, and that "if we had the price mechanism, that mistake wouldn't have been made." (The Straits Times, March 22, 1985).

Moreover, there is a strong status symbol for Singaporeans to live in private housing, especially those in prestigious residential areas such as Districts 10 and 11 along Bukit Timah Road.

Unlike the experience in some industrial countries, there are, however, no stigmas attached to public housing estates in Singapore. In the United States and some European countries, public housing estates usually carry the stigmas of being a place for transitory residences, for broken families, for the social welfare recipients, for the lower class families, and so forth.¹ But, in Singapore more than two-thirds of its population are living in public housing estates and the residents, especially those who live in four-room and five-room flats, are quite proud of their flats. In fact, many people have spent large sums of money to renovate their flats before moving in. For example, the L family (Case 21) bought a four-room flat in the Ang Mo Kio housing estate at the cost of S\$23,500 and they spent another S\$5,000 renovating it.

Derived from the above analysis, we can conclude that neighbourhoods in public housing estates in Singapore do perform at various degrees all the six types of functions. However, some functions are weak and some are negative rather than positive. We do not have empirical data to compare which neighbourhood function is stronger than other functions, or empirical data to compare the functions

1. See, for example, Vere Hole (1958), M. Millspaugh and G. Breckenfeld (1960), and J. Wilson (1966).

performed by neighbourhoods in public housing estates and those performed by neighbourhoods in rural communities or slums in the central areas of the city. Thus, our analysis discussed in this section presents only a general observation of the neighbourhood functions in public housing estates, and suggests some important areas of neighbourhood functions for future research.

II. Present and Previous Neighbourhoods

A. Views on Neighbourhoods

In the sample survey, respondents were asked to compare their present neighbourhoods with their previous ones. The comparison between the present and previous neighbourhoods, however, cannot be regarded as a comparison between neighbourhoods in the public and the private housing sector as some residents in the present neighbourhoods are from other public housing estates. Nevertheless, the data presented in Table 6.1 and the analysis of the data discussed in Chapter 6 show that more than 56 per cent of the survey respondents' previous residences were not in public housing estates but in low-rise housing. Thus, the comparison of their present and previous neighbourhoods is, to a large extent, a comparison between neighbourhoods in the public housing estates and neighbourhoods in the private housing sector¹, as well as a comparison between high-rise

1. As only lower and middle class people are eligible for public housing flats, the neighbourhoods therefore refer to the lower and middle class neighbourhoods in the private housing sector.

and low-rise housing neighbourhoods.

In response to the question on whether their present neighbourhoods in public housing estates are better or worse¹ than their previous neighbourhoods, 42 per cent of the residents say that their present neighbourhoods are better than their previous neighbourhoods, 36 per cent say that there are no differences between their present and previous neighbourhoods, 18 per cent say that their present neighbourhoods are worse than their previous neighbourhoods, and the remaining four per cent are uncertain (see Appendix Table VIII.1).

Among the three major ethnic groups, there are higher proportions of minority ethnic groups than the majority ethnic group saying that their present neighbourhoods are better than their previous neighbourhoods. As shown in Appendix Table VIII.1, 47 per cent each of the Malays and the Indians, compared to 40 per cent of the Chinese, say that their present neighbourhoods are better than their previous ones. Seventeen per cent of the Indians, 18 per cent of the Chinese and 19 per cent of the Malays say that their present neighbourhoods are worse than their previous ones.

In terms of age group, the middle-age group, i.e., those between 30 and 49 years old, is the one which has the highest percentage saying that their present neighbourhoods

1. In this question, the views on neighbourhoods are an overall assessment of the neighbourhoods in terms of neighbours, facilities and security considerations.

are better than their previous ones. On the other hand, the older age group, i.e., those aged 50 years and above, has the highest percentage saying that their present neighbourhoods are worse than their previous neighbourhoods. (see Appendix Table VIII.1)

The percentages of voluntary and involuntary relocatees saying that their present neighbourhoods are better than their previous ones are exactly the same, i.e. 42 per cent each. However, more involuntary relocatees (27 per cent) than voluntary relocatees (15 per cent) indicate that their present neighbourhoods are worse than their previous ones. (see Appendix Table VIII.1).

Among the various income groups, their views towards whether their present neighbourhoods are better or worse than their previous ones vary very little. The difference is between three and six per cent. Moreover, the percentages among the various income groups saying that their present neighbourhoods are better than their previous ones are higher than the percentages saying that their present neighbourhoods are worse than their previous ones. (see Appendix Table VIII.2).

In terms of length of residence in the present neighbourhoods, those residents who have been living in the estates for less than three years have the lowest percentage of them (38 per cent) saying that their present neighbourhoods are better than their previous ones. The highest percentage of residents who said that their present neighbourhoods are better than their previous ones are,

however, not those who have been living in the estates for the longest period, but those who have been living there for three to six years (see Appendix Table VIII.2). Generally speaking, residents who have been living in the estates for more than six years are those who were living in the estates, when the survey was conducted, built under the first and second Five-Year Building Programmes, which emphasised merely quantitative considerations and little attention was given to the social environment of the estates. Therefore, this group of residents, compared to those who have been living in the estates for three to six years, are less satisfied with their present neighbourhoods.

However, community facilities and environmental factors are not sufficient criteria for building up a good neighbourhood. Extent of acquaintance with neighbours and interpersonal relationships are equally important. This explains the reason why there are differences in opinion towards their neighbourhoods between those who have been living in the estates for three to six years and those who have been living there for less than three years. Both of these two groups of residents are living in new estates which provide better community facilities than those built in the 1960s.

Among respondents from different types of flats, those living in one-room flats have the lowest proportion, and those living in three-room flats have the highest proportion saying that their present neighbourhoods are better than their previous ones. One of the possible reasons for the

sharply different opinion between these two groups is due to the fact that all residents of one-room flats are tenants who rent the flats from the HDB and some of them are waiting for their turn for balloting for a bigger unit of flat. While residents of the three-room flats mostly own their flats. Moreover, almost all one-room flats are located in the old housing estates which are poorly equipped with community facilities, whereas three-room flats spread over in both old and new housing estates. Compared to residents in all other four types of flats, the five-room flat dwellers have the highest percentage saying that their present neighbourhoods are worse than their previous ones (see Appendix Table VIII.3).

Some interesting findings from the present study are that more ex-villagers than urbanites, and more residents whose previous residences were low-rise housing than those residents whose previous residences were high-rise housing, say that their present neighbourhoods in public housing estates are better than their previous ones. This finding confirms the fact that facilities provided in the community is one important criterion for the comparison of neighbourhoods. To the ex-villagers, the moving into public housing is a shift from rural areas to urban or suburban areas where modern facilities are provided. Moreover, most people moving from low-rise to high-rise housing in the past are shifting their residence from attap-houses to HDB flats, and most attap-houses were poorly equipped with sanitary and other facilities.

In terms of types of previous housing, 44 per cent of those whose previous residences were low-rise housing, compared to 40 per cent of those whose previous residences were high-rise housing, say that their present neighbourhoods are better than their previous ones. The percentage of the former group saying that their present neighbourhoods are worse than their previous ones is, however, higher than the latter group (see Appendix Table VIII.3).

Forty-eight per cent of the ex-villagers living in public housing estates, compared to only 38 per cent of the urbanities, say that their present neighbourhoods are better than their previous ones. The proportions of these two types of residents saying that their present neighbourhoods are worse than their previous ones are 16 per cent for the urbanites and 19 per cent for the ex-villagers respectively. These findings again contradict the common belief that the relocation of people into public housing estates causes more adaptation problems for the ex-villagers than the urbanites.¹

Among the nine public housing estates included in the present study, Jurong is the housing estate which has the highest proportion of its residents saying that their present neighbourhoods in the estate are better than their previous ones, it also has the lowest proportion of its residents saying that their present neighbourhoods are worse

1. This issue has been discussed in Chapter 1 and Chapter 7.

than their previous ones. This is because, among other reasons, most of Jurong's residents are working in the estate as the Jurong housing estate is also the largest industrial estate in Singapore.

The housing estates which have high proportions of their residents saying that their present neighbourhoods are worse than their previous ones are Telok Blangah (29 per cent), Bedok (24 per cent), and Ang Mo Kio (22 per cent). All these three estates are new public housing estates. It is interesting to note that new housing estates are, in general, provided with better community facilities than the old estates¹, and yet there are higher percentages of residents in the new estates than in the old estates saying that the present neighbourhoods in these new estates are worse than their previous ones.

This points out one important fact that facilities alone are not sufficient to make the neighbourhood a better one. Apart from community facilities, the social environment and interpersonal relationships among people in the neighbourhood are important factors. Furthermore, length of residence among residents in the neighbourhoods is also an important factor in creating a sense of community. As pointed out by Vere Hole, in the Scottish experience it takes at least one year for the tenants to develop some identification with the estate (Hole, 1959), whereas Elizabeth Colson points out that in the African experience,

1. This point has been discussed in detail in Chapter 6.

it takes about five years for the relocatees to develop a sense of community attachment to the estates (Colson, 1971). Based on the information obtained from the interviews with the 27 relocated families selected for the in-depth study in Singapore, it takes about three years for the relocatees to develop a sense of attachment to the housing estates. This observation is confirmed by the data obtained from the sample survey, which show that those residents, who have been living in the estates for three to six years, have higher levels of neighbourliness and satisfaction with the neighbourhoods than other residents (see Table 10.7).

The above findings provide some evidence to support Hypothesis 5, which states that adaptation to the new high-rise public housing environment is a function of time.

B. Views on Neighbourly Contacts

Although more than 40 per cent of the residents in the housing estates say that their present neighbourhoods are better than their previous ones, less than 20 per cent of the residents say that there are more neighbourly contacts in their present neighbourhoods than their previous neighbourhoods (See Appendix Table VIII.4).

More people aged 50 years and above and more people of the minority ethnic groups say that there are less neighbourly contacts in their present neighbourhoods than in their previous ones. But the minority ethnic groups at the same time have higher proportions of them, than the majority ethnic groups, saying that there are more neighbourly

contacts in their present neighbourhoods than in their previous ones (see Appendix Table VIII.4). Thus, we cannot derive from the above data any conclusive findings in relation to the comparison of neighbourly contacts in their present and previous neighbourhoods among various ethnic groups.

Data clearly show that more involuntary relocatees than voluntary relocatees, and more new residents than old residents in the estates, say that there are less neighbourly contacts in their present neighbourhoods than in their previous ones. For instance, 53 per cent of the involuntary relocatees compared to only 34 per cent of the voluntary relocatees, and 45 per cent of those residents who have been living in the housing estates for less than three years, compared to only 26 per cent of those residents who have been living in the estates for seven years and more, say that there are less neighbourly contacts in their present neighbourhoods than in their previous neighbourhoods (see Appendix Table VIII.4). These findings are consistent with the observations made in the preceding chapters. One observation is that the longer the person lives in the community, the stronger is the sense of belonging. The other observation is that involuntary relocatees are generally constrained by the time factor and other circumstances and so they have less opportunities than voluntary relocatees to get the public flats in the estates of their own choice. Thus, involuntary relocatees are less happy with the neighbourhoods in public housing estates than

the voluntary relocatees.

Data presented in Appendix Table VIII.5 and Appendix Table VIII.6 show that the higher social class people have higher percentages of them, compared to the lower social class people, saying that there are less neighbourly contacts in their present neighbourhoods in public housing estates than in their previous neighbourhoods. For instance, 45 per cent of those residents whose monthly family incomes are S\$1,500 and above, compared to only 32 per cent of those earning less than S\$500, say that there are less neighbourly contacts in their present neighbourhoods than in their previous neighbourhoods (see Appendix Table VIII.5).

Similarly, those who live in the larger units of flats have the higher proportions of them saying that there are less neighbourly contacts in their present neighbourhoods than in their previous ones. Fifty-three per cent of the five-room flat dwellers and 52 per cent of the four-room flat dwellers complain that there are less neighbourly contacts in the public housing estates. But, only 24 per cent of the two-room flat dwellers and 29 per cent of the one-room flat dwellers express the same view (see Appendix Table VIII.6).

Apart from the socioeconomic factors, physical environment and previous experience are also important factors which affect residents' perceptions of neighbourly contacts in their present and previous neighbourhoods. As shown in Appendix Table VIII.6, more ex-villagers than

urbanites, more people living on higher floors than those living on lower floors, and more people whose previous residences were low-rise housing than those whose previous residences were high-rise housing say that there are less neighbourly contacts in their present neighbourhoods in public housing estates than in their previous ones. For instance, 50 per cent of the ex-villagers, compared to 34 per cent of the urbanities, say that there are less neighbourly contacts in their present neighbourhoods than in their previous ones. In terms of types of previous residence, 44 per cent of those whose previous residences were low-rise housing, compared to 33 per cent of those whose previous residences were high-rise housing, say that there are less neighbourly contacts in their present neighbourhoods than in their previous ones.

The higher the floor levels the residents live on, the higher the percentages of them say that there are less neighbourly contacts in their present neighbourhoods than in their previous ones. For instance, 50 per cent of those living on the thirteenth floor and above, compared to 34 per cent of those living on ground floors¹ and second floors, say that there are less neighbourly contacts in their present neighbourhoods than in their previous ones. As shown in Appendix Table VIII.6, the height of eleven storeys seems to serve as a demarcation which sharply divides the views of residents with respect to neighbourly contacts in

1. The housing authorities have since the mid-1970s stopped building dwelling units on the ground floors.

the neighbourhoods. The proportions of residents living on various floor levels below eleventh floors who say that there are less neighbourly contacts in their present neighbourhoods than in their previous ones, range between 34 per cent and 38 per cent. But the proportions of residents stating the same opinion increase to 46 per cent for those living on eleventh and twelfth floors, and to 50 per cent for those living on the thirteenth floor and above.

III. Neighbourly Interaction in Public Housing Estates

In this section we shall focus our discussion on neighbourliness in public housing estates in Singapore. For the analysis of neighbourliness, we use four indicators to measure this concept. The four indicators are: (1) exchange of visits, (2) borrowing things, (3) number of neighbours the respondent knows, and (4) frequency of contacts with neighbours.

We shall first analyse the general characteristics of neighbourly interaction in the public housing estates and then analyse the differences in terms of the degree of neighbourliness among the various sub-groups of the residents in the public housing estates.

A. Characteristics of Neighbourly Interaction

In general, residents in public housing estates are living peacefully¹ with each other. This is the view expressed by the majority of respondents in the nine public housing estates. As shown in Table 8.3, 91 per cent of the respondents say that people in public housing estates get on harmoniously with each other, only four per cent say that people in public housing estates do not get on harmoniously with each other, and the remaining five per cent are uncertain. The percentage of respondents who say that people in the whole republic get on harmoniously with each other is exactly the same as the percentage of respondents saying that residents in public housing estates get on harmoniously with each other.

However, findings from the sample survey show that most residents only know some neighbours living in the same blocks of public flats or in certain parts of the same blocks, very few of them know neighbours living in different blocks of the housing estate. Data show that 31 per cent of residents in the nine public housing estates say that

1. Although the survey data show that the majority of the respondents said that HDB residents live together peacefully and harmoniously, this, however, does not tell us about the intensity of neighbourly interactions. Moreover, some residents are interacting more frequently and more intensively with certain neighbours than others. Their interaction patterns are affected by factors such as ethnicity and social class. Results from the in-depth study, however, reveal the fact that residents usually maintain a certain distance from their neighbours to avoid any misunderstanding and conflict. In other words, residents usually adopt an attitude of non-involvement.

Table 8.1 Neighbourly Interaction in Public Housing Estates

(in Percentage)

	With people of different ethnic groups	With people in the housing estates
Exchange of greetings	87.5	97.8
Talking on neutral territory	71.2	92.7
Visiting each other's flat	36.7	73.3
Going out together	20.3	32.7
Borrowing things	21.9	47.9
Helping with household chores	18.3	44.0
Discussion of personal problems	11.5	19.5
Sample size	1,200	1,200

Table 8.2 Mutual Assistance in Public Housing Estates

(in Percentage)

	Yes	No	No answer	Total (N)
1. Will you seek help from your neighbour?				
a. When there is nobody to take care of the small children	50.2	21.3	28.5	100.0 (1200)
b. When there is financial difficulty	11.1	79.9	9.0	100.0 (1200)
c. Sudden illness or injury when no other family member at home to help	73.9	19.5	6.6	100.0 (1200)
d. Party/wedding/funeral	53.0	34.2	12.8	100.0 (1200)
2. Do you think you can turn to your neighbours for help in time of emergency?	75.9	20.1	3.9	100.0 (1200)
3. Would you say your neighbours are cooperative and helpful?	81.7	5.2	13.1	100.0 (1200)
4. Have you ever helped your neighbours in household chores?	53.8	43.0	3.2	100.0 (1200)
5. Have you ever borrowed household necessities from your neighbours or vice versa?	53.5	45.0	1.5	100.0 (1200)

Table 8.3 The Way People Get Along With Each Other
in Singapore and in Public Housing Estates

	Singapore	Public Housing Estates
Getting along harmoniously	91.2	91.0
Getting along unharmoniously	3.4	3.8
Uncertain	5.4	5.2
TOTAL	(%) 100.0 (N) 1200	100.0 1200

Table 8.4 Kind of Neighbours and Preferred Neighbours
in the Neighbourhood

	Neighbours in the neighbourhood	Kind of neighbours Preferred
1. Don't contact each other/ with maximum privacy	8.3	2.2
2. Mutual assistance/frequently visit each other	32.6	67.9
3. Know each other but maintain certain distance	59.1	29.9
TOTAL	(%) 100.0 (N) 1200	100.0 1200

they know most of their neighbours, 67 per cent know a few of their neighbours, and two per cent do not know any neighbours at all (see Appendix Table VIII.7). Most of the neighbours they know are, however, their immediate neighbours. Fifty-four per cent say that their familiar neighbours are living next door, 31 per cent say that their familiar neighbours are living on the same floors, 10 per cent say that their familiar neighbours are living on different floors but in the same blocks, and only five per cent say that their familiar neighbours are living in different blocks of flats in the housing estates.

What kind of neighbours do the respondents have in the public housing estates? Data presented in Table 8.4 show that eight per cent of the respondents say that their neighbours do not contact each other, 59 per cent say that their neighbours know each other but maintain a certain distance, and 33 per cent say that their neighbours frequently visit each other and exchange mutual assistance. The kind of neighbours the residents would like to have, is quite different from that of neighbours they have in their neighbourhoods. For instance, 68 per cent of the respondents say that they would like to have the kind of neighbours who frequently visit each other and exchange mutual assistance among them. But the majority of the respondents (67 per cent) say that they do not have such neighbours in their neighbourhoods (see Table 8.4).

Although two-thirds of the respondents say that they do not have the kind of neighbours they would like to have, the

majority of the respondents still think that their neighbours are, in general, quite cooperative and helpful. As shown in Table 8.2, 82 per cent of the respondents say that their neighbours are cooperative and helpful.

As shown in Table 8.1, the patterns of neighbourly interaction among residents in public housing estates are mainly at the informal neighbourly level¹, and there is less neighbourly interaction among people of different ethnic groups than among people of the same ethnic group. Ninety eight per cent of the residents have exchanged greetings with their neighbours and 93 per cent have talked to their neighbours on neutral territories, but only 54 per cent have borrowed household items from neighbours or vice versa, and 20 per cent have discussed with neighbours about their personal problems. These findings show that although the degree of neighbourly interaction in the public housing estates is relatively high, the percentages indicating various types of neighbourly interaction drop dramatically from those at the informal neighbourly level to those at the personal neighbourly level.

Moreover, there is a great difference in the degrees of neighbourly interaction in relation to differences in ethnic background. As shown in Table 8.1, the percentages of all

1. Informal neighbourly level refers to all types of spontaneous interaction among neighbours occurring on neutral territories, whereas the personal neighbourly level refers to a closer and more intimate friendship pattern which involves closer interpersonal relations and mutual assistance among neighbours in the neighbourhoods.

the seven indicators of neighbourly interaction are much lower for residents interacting with people of different ethnic groups than for residents interacting with people of the same ethnic background. This difference is particularly obvious among those indicators at the personal neighbourly level. For example, 73 per cent of the residents have visited their neighbours, ^{regardless} ¹ of ethnic background, but only 37 per cent of the residents have visited neighbours of different ethnic backgrounds. Similarly, 44 per cent of the residents have helped neighbours of all ethnic backgrounds on household chores, but only 18 per cent have helped neighbours of different ethnic backgrounds on household chores.

One possible explanation for this difference is that in some blocks of public flats in the estates there are very few residents of minority ethnic groups, as the Chinese constitute 80 per cent of the total households in all public housing estates in Singapore. ² Therefore, there are not many opportunities for some residents to meet neighbours of different ethnic backgrounds in their neighbourhoods.

But, as revealed by the findings obtained from the in-depth study, even if residents have the opportunities to meet neighbours of different ethnic backgrounds, their relationships are in general closer with neighbours of the same ethnic group than with neighbours of different ethnic

1. This includes both people of the same ethnic background and people of other ethnic groups.

2. See, Khoo, 1982, No.6, p.56.

groups. This is because the language barrier and the cultural and religious differences among various ethnic groups usually set the boundary for enhanced interaction. As pointed out by Mr. A B (Case 6), a Malay resident in the Ang Mo Kio housing estate, his family has more intense interaction with neighbours of its own ethnic group while interaction with other neighbours is usually limited to neutral territory. He adds that cultural and religious differences have become a major obstacle for developing closer interaction with neighbours of different ethnic backgrounds.

Members of the H family (Case 2), a Malay family living in the Toa Payoh housing estate, have a similar friendship pattern with their neighbours as that of the A B s. Both Mr. and Mrs. H say that they only visit the Malay families in the housing estate. They are not well-acquainted with most of their Chinese neighbours; they know their Chinese neighbours by sight and greet them on sight, but apart from that they have nothing else to do with them. One of the reasons for this lack of close ties is, as explained by Mrs. H, the lack of a lingua franca between her Chinese neighbours and herself.

The views of the A B s and the H s are shared by the Y family (Case 10), a Chinese family living in the Clementi housing estate. As pointed out by Mrs. Y, she prefers to have Chinese neighbours as they speak the same language and can understand each other better. She feels that "Malay neighbours with their different culture are at

best only understood half the time and the other half is guesswork." But if their neighbours happen to be people of different ethnic groups, the Yongs do not mind as long as they are friendly, and mind their own business as far as possible.

The views and attitudes of the A B s and the Y s towards neighbours of different ethnic groups are confirmed by the K s (Case 12), a Malay family living in the Ang Mo Kio housing estate. Mr. K feels that although people of all different ethnic groups in Singapore live together quite harmoniously, there are still undercurrents of "ethnic consciousness". Moreover, he adds, "everyone in the housing estate seems to be cordial on the surface, but deep down there is no strong unity."

The above findings point out the fact that although public housing programmes have brought people of all different ethnic groups to live together in public housing estates, a strong integration among the various ethnic groups is yet to be developed.

B. Length of Residence

Data presented in Appendix Table VIII.7 and Appendix Table VIII.11 show that length of residence is an important factor affecting the degree of neighbourly interaction among residents in public housing estates. Survey findings show that 46 per cent of those residents living in the estates for seven years or more say that they know most of their neighbours, but only 31 per cent of those living in the

estates for three to six years and 22 per cent of those living in the estates for less than three years say that they know most of their neighbours (See Appendix Table VIII.7).

If we use the frequency of visits to neighbours as an indicator of neighbourliness, findings show that 37 per cent of those residents living in the estates for seven years or more and 35 per cent of those residents living in the estates for three to six years, say that they often visit their neighbours, but only 27 per cent of those residents living in the estates for less than three years say that they often visit their neighbours (see Appendix Table VIII.11).

The above findings confirm the observation made by Hole (1959), Colson (1971), and Chen and Tai (1977) that length of residence is a contributing factor for the development of a sense of community among residents in housing estates.

This observation is also confirmed by the views of most respondents of the in-depth study. For instance, in spite of a great improvement of community facilities in the Clementi housing estate over the Telok Blangah housing estate, Mrs. Y (Case 10) still prefers her flat at Telok Blangah to her present flat at Clementi. Mrs. Y attributes her preference for Telok Blangah to the longer period of residence there and to the numerous friendship links established with her neighbours over her four years' stay at Telok Blangah. The same opinion is expressed by Mrs. L. (Case 20), who has stayed in the Clementi housing

estate for about two years. Before moving into Clementi, the L s had lived in the Redhill estate for thirteen years. Although Redhill does not have the modern facilities of Clementi, Mrs. L still prefers the neighbourhood in Redhill as she knows many neighbours there. She adds, "over here in Clementi, people keep much to themselves and everyone's door seems to be shut all the time." She, however, feels that closer relationships among neighbours in Clementi can be established when they have stayed in the neighbourhood longer and everyone knows the others better.

Our findings are confirmed by those of the Household Survey conducted by the housing authority in 1981, one year after the sample survey of the present study was conducted. The findings of the Household Survey show that "familiarity with neighbours improves considerably with length of stay."¹ For example, the proportion of residents who know at least five neighbours is 44 per cent for those who have stayed less than one year in the public housing estates as compared to 58 per cent for those who have stayed for two to three years and 72 per cent for those who have stayed for more than three years (see Table 8.7).

The findings derived from the sample survey and the in-depth study support Hypothesis 6, which states that the extent of neighbourliness is a function of time, the longer the residents live in the estate, the greater the degree of neighbourliness they develop.

1. Housing and Development Board, Our Home, June 1982, p.4.

C. Physical Constraints

Physical constraints are important factors which affect the degree of neighbourliness among residents in public housing estates. In the present study, we only use the floor level of flats as the indicator of the physical constraints on human behaviour.

Data presented in Appendix Table VIII.8 show the remarkable differences among residents living on the various floor levels with respect to the number of neighbours they know. Thirty-nine per cent of those residents living on ground and second floors say that they know most of their neighbours. The percentages of respondents expressing the same experience drop to 38 per cent for those living on third and fourth floors, 35 per cent for those living on fifth and sixth floors, 30 per cent for those living on seventh and eighth floors, 28 per cent for those living on ninth and tenth floors, 26 per cent for those living on eleventh and twelfth floors, and only 12 per cent for those living on thirteenth floors and above.

With regard to the frequency of visits to neighbours, there are also remarkable differences among residents living on various floor levels. Residents living on lower floor levels visit their neighbours more often than those living on higher floor levels. For instance, 35 per cent of those residents living on ground and second floors have often visited their neighbours. But, only 27 per cent of those residents living on thirteenth floors and above have often visited their neighbours. While 20 per cent of those

Table 8.5 Neighbourly Interaction by Ethnicity and Area of Public Housing Estate

(in Percentage)

	Talk on neutral territory	Visiting each other's flat	Borrowing things
<u>Ethnic Group</u>			
Chinese	92.7	71.5	47.2
Malay	93.8	80.4	51.9
Indian	91.2	72.8	48.5
Other	90.0	65.0	30.0
All groups	92.7	73.3	47.9
<u>Housing Estate</u>			
Ang Mo Kio	94.7	74.7	43.3
Bedok	94.0	62.7	36.0
Bukit Ho Swee	94.0	83.0	81.0
Clementi	79.0	54.0	27.0
Marine Parade	84.0	56.0	40.0
Queenstown	95.3	68.0	36.0
Telok Blangah	88.0	73.0	50.0
Toa Payoh	96.0	85.5	59.0
Jurong	98.0	90.0	58.0
All estates	92.7	73.3	47.9
All Respondents (%)	92.7	73.3	47.9
(N)	1200	1200	1200

Table 8.6 Neighbourly Interaction by Age, Household Income, and Type of Flat

(in Percentage)

	Talk on neutral territory	Visiting each other's flat	Borrowing things
<u>Age Group</u>			
Under 30	87.6	72.4	47.1
30 - 39	93.4	71.1	42.4
40 - 49	95.2	74.7	53.2
50 and above	93.3	75.7	50.0
All groups	92.7	73.3	47.9
<u>Household Income</u>			
Below \$500	96.5	80.1	48.3
\$500 - \$749	95.5	73.8	56.9
\$750 - \$999	91.5	75.8	46.2
\$1000 - \$1499	91.4	73.6	47.5
\$1500 and above	88.8	63.5	39.8
Not applicable	83.3	50.0	16.7
All groups	92.7	92.7	47.9
<u>Type of Flat</u>			
One-room	94.4	79.2	56.8
Two-room	98.6	79.5	59.5
Three-room	97.8	76.9	49.5
Four-room	89.1	65.3	44.3
Five-room	65.8	52.0	21.6
All types	92.7	73.3	47.9
All Respondents (%)	92.7	73.3	47.9
(N)	1200	1200	1200

Table 8.7 Number of Neighbours Known by Length of Stay

(in Percentage)				
	1 year or less	2-3 years	4-5 years	More than 5 years
<u>Number of neighbours known</u>				
None	10.8	5.7	3.6	6.1
One to four	45.2	36.0	24.2	22.1
Five to more	44.0	58.3	72.2	71.8
Total	100.0	100.0	100.0	100.0

Source: Housing and Development Board, Our Home, June 1982, p.5.

Table 8.8 Percentage Distribution of Public Housing Residents by Inter-Ethnic Familiarity and Ethnic Group

	Chinese	Malay	Indian	Others
Knowing at least one Chinese neighbour	NA	79.0	74.3	66.8
Knowing at least one Malay neighbour	30.2	NA	57.3	47.3
Knowing at least one Indian neighbour	14.0	45.7	NA	29.2
Knowing at least one Eurasian neighbour	2.4	10.2	11.4	NA

Note: Readers must bear in mind that the opportunities to know individuals of other ethnic groups are determined by the proportion of ethnic distribution as a whole.

Source: Housing and Development Board, Our Home, June 1982, p.5.

residents living on ground and second floors have never visited their neighbours, 32 per cent of those residents living on thirteenth floors and above have never visited their neighbours (see Appendix Table VIII.13).

The above findings are consistent with the findings presented in Appendix Table VIII.6 that more people living on higher floors than those living on lower floors say that there are less neighbourly contacts in their present than in their previous neighbourhoods.

Relationships with neighbours are usually established through a series of unplanned, spontaneous interactions. It usually starts from exchange of greetings and talking to each other, and then closer relationships such as visiting each other and extending mutual assistance to the neighbours may further be developed.

In general, the informal and spontaneous types of neighbourly interaction occur on the neutral territories such as in the corridors, in the lifts, on the playgrounds or in the markets. Moreover, people living in high-rise buildings seldom go to other floors of the building without a purpose. For instance, a person living on, say, the seventh floor will not walk up or take a lift to the ninth or tenth floor unless he has a purpose in mind. If he has no specific purpose and simply wants to take a walk, it is most likely he will go down to the open space on the ground level. However, because of the psychological barriers such as fear of lift breakdown or inconvenience of going up and down from the flats, people living on higher floor levels

tend to confine themselves to their flats more often than those living on lower floor levels.

This type of attitude is apparent among residents living on higher floor levels of the public flats. As stated by Mr. K (Case 22), a resident living in a flat situated on the ninth floor, he prefers to stay in his flat most of the time. He says, "it is not convenient to go down to the open space. Moreover, I do not want my neighbours to see me wondering along near the block. They may think that I have a quarrel with my wife." Says Mr. C. (Case 16), another resident living in a flat on the tenth floor, "unless it is necessary, I seldom go down to the ground floor as I am afraid that I have to climb up to the tenth floor if there is a lift breakdown."

These attitudes reflect the fact that people living on the higher levels of the building are constrained by free movement in the vertical direction. For those who are living on lower floors, they do not need to worry about lift breakdowns. There are also less psychological barriers for those living on lower floor levels to worry about the "distance" between their flats and the open space on the ground floor, and the "inconvenience" of going out of the flats to the nearby open space.

Both the findings obtained from the sample survey and the in-depth study, as discussed above, support Hypothesis 7 that the degree of neighbourliness is greater among people living on lower levels of the public housing buildings than those living on higher levels.

D. Socioeconomic Status

I use two indicators for the measurement of socioeconomic status.¹ The two indicators are monthly family income and type of flat. The higher social classes are those who have higher family incomes and live in larger units of flat. The extent of neighbourly interaction is measured by the four indicators, namely exchange of visits, borrowing things, the number of neighbours the respondents knows, and the frequency of contacts with neighbours.

Survey findings show that people of a lower socioeconomic status, compared to those of a higher one, have higher degrees of neighbourly interaction. If we compare the lowest income group (i.e. those whose family incomes are less than S\$500) and the highest income group (i.e. those whose family incomes are S\$1,500 and more), the differences are apparent in all the four indicators. With respect to exchange of visits among neighbours, 80 per cent of the lowest income group, compared to only 64 per cent of the highest income group, have ever visited their neighbours. Forty-eight per cent of the lowest income group, compared to only 40 per cent of the highest income group, have ever borrowed household items from their neighbours (see Table 8.6). Thirty-two per cent of the lowest income group, compared to only 25 per cent of the highest income group, say that they know most of their neighbours (see Appendix Table VIII.8). Moreover, 42 per

1. There are of course other important indicators such as education and occupation.

cent of the lowest income group, compared to only 26 per cent of the highest income group, say that they have frequent contacts with their neighbours (see Appendix Table VIII.9).

In terms of types of flat, those who live in larger units of flat have lower degrees of neighbourly interaction. For example, 79 per cent of the one-room flat dwellers, compared to only 52 per cent of the five-room flat dwellers, have ever visited their neighbours. Fifty-seven per cent of the one-room flat dwellers, compared to only 22 per cent of the five-room flat dwellers, have ever borrowed household items from their neighbours (see Table 8.6). Thirty-four per cent of the one-room flat dwellers, compared to only 18 per cent of the five-room dwellers, say that they know most of their neighbours (see Appendix Table VIII.8). Forty-one per cent of the one-room flat dwellers, compared to only 17 per cent of the five-room flat dwellers, say that they have frequent contacts with their neighbours (see Appendix Table VIII.10).

The above findings support Hypothesis 8, which states that the degree of neighbourliness is negatively correlated with the socioeconomic status of the residents in the neighbourhood, and that the higher social classes have lower degrees of neighbourliness than the lower social classes.

E. Ethnicity and Age

Among the three major ethnic groups in Singapore, the Malays have the highest degree of neighbourliness, followed

by the Indians, while the Chinese have the lowest degree of neighbourliness. Eighty per cent of the Malays, compared to 73 per cent of the Indians and 72 per cent of the Chinese have ever visited their neighbours. Fifty-two per cent of the Malays, compared to 49 per cent of the Indians and 47 per cent of the Chinese, have ever borrowed household items from their neighbours (see Table 8.5). Forty-five per cent of the Malays, compared to 36 per cent of the Indians and 26 per cent of the Chinese, say that they know most of their neighbours (see Appendix Table VIII.7). Again, 46 per cent of the Malays, compared to 41 per cent of the Indians and 32 per cent of the Chinese, say that they have frequent contacts with their neighbours (see Appendix Table VIII.9).

The above findings are consistent with the findings of the HDB¹ presented in Table 8.8. As shown in the table, there are higher percentages of the minority ethnic groups, compared to the majority ethnic group, who know at least one neighbour of another ethnic group. For instance, 79 per cent of Malay residents in public housing estates know at least one Chinese neighbour and 46 per cent know at least one Indian neighbour. Among Indian residents, 74 per cent know at least one Chinese neighbour and 57 per cent know at least one Malay neighbour. But, among Chinese residents, only 30 per cent know at least one Malay neighbour and 14 per cent know at least one Indian neighbour.

1. The findings are derived from the large-scale Household Survey conducted by the Housing and Development Board during May and June of 1981.

The differences among the three major ethnic groups, in terms of the number of neighbours of other ethnic groups they know, may be attributed to the fact pointed out by the HDB that "the opportunities to know individuals of other ethnic groups are determined by the proportion of ethnic distribution as a whole."¹ But, we can also argue that the opportunities for individuals of a minority ethnic group to know residents of another minority ethnic group are as limited as, if not less than, the opportunities for individuals of the majority ethnic group to know residents of a minority ethnic group. This is because the chances for people of different minority ethnic groups, say, the Malays and the Indians, to live together in the same blocks of public flats or the same neighbourhoods in public housing estates are more likely to be less than the chances for people of the majority ethnic group to live together with people of a minority group in the same blocks of public flats or the same neighbourhoods in public housing estates. However, the percentages of the minority ethnic groups, who know neighbours of the majority ethnic group or neighbours of another minority ethnic group, are all higher than the percentages of the majority ethnic group, who know neighbours of any one of the minority ethnic groups. The above findings, therefore, demonstrate the fact that residents of the minority ethnic groups in public housing estates not only have higher degrees of neighbourliness, but

1. Housing and Development Board, Our Home, June 1982, p.5.

also have higher extents of inter-ethnic neighbourly familiarity as compared to residents of the majority ethnic group. The reasons for this difference will be discussed in Chapter 9 and Chapter 10.

In terms of age group, the older people have a higher degree of neighbourliness than the younger people. For example, 76 per cent of those residents aged 50 years and above, compared to 72 per cent of those residents aged under 30 years, have ever visited their neighbours. Fifty per cent of those aged 50 years and above, compared to 47 per cent of those aged under 30 years, have ever borrowed household items from their neighbours (see Table 8.6). Thirty-four per cent of those residents aged 50 years and above, compared to 23 per cent of those aged under 30 years, say that they know most of their neighbours (see Appendix Table VIII.7). Again, 35 per cent of those residents aged 50 years and above, compared to 33 per cent of those aged under 30 years, say that they have frequent contacts with their neighbours (see Appendix Table VIII.9).

IV. Concluding Remarks

The social functions performed by neighbourhoods are determined by the neighbourhood patterns and the social structures of the neighbourhoods. All these three variables, namely, the neighbourhood patterns, the social structures of the neighbourhoods, and the neighbourhood functions are interrelated. They are also the important factors which determine the degree of neighbourliness in

the neighbourhoods.

In the first section of this chapter we used Warren's classification of neighbourhood functions to study the social functions performed by neighbourhoods in public housing estates in Singapore. The findings of the present study show that the neighbourhoods in public housing estates perform all the six types of neighbourhood functions, though there are differences in the extent of each of the six functions performed by the neighbourhoods.

Among the six neighbourhood functions, the organisational function of the neighbourhoods appears to be the most significant in terms of the need as perceived by the residents in public housing estates and the efforts put forward by the government. Whether the modern type of community organisations promoted by the government in recent years can play the role in fostering neighbourliness in public housing estates is, however, still too early to be assessed.

When residents in public housing estates compare their present neighbourhoods with their previous ones, more than two-fifths say that their present neighbourhoods are in general better than their previous ones, but only less than one-fifth say that there are more neighbourly contacts in their present neighbourhoods than in their previous ones.

This finding clearly demonstrates the fact that good community facilities alone are not sufficient conditions for fostering neighbourliness among neighbours in the community.

It is the culture of the people, who live in the housing estates, which determines the nature and extent of neighbourly interaction. The culture of the people is, however, influenced by many factors including the social structures and government policies.

Among the various sub-groups of the relocatees, those who have higher proportions of them saying that their present neighbourhoods are worse than their previous ones are the older people, the involuntary relocatees, the higher income groups, and those living in larger units of flat. These sub-groups of relocatees also have higher proportions of them, compared to their respective counterparts, saying that there are less neighbourly contacts in their present neighbourhoods than in their previous ones.

However, more ex-villagers than urbanites, and more residents whose previous residences were low-rise housing than those residents whose previous residences were high-rise housing, say that their present neighbours are better than their previous ones; and yet the ex-villagers and those residents whose previous residences were low-rise housing have higher proportions of them saying that there are less neighbourly contacts in their present neighbourhoods than in their previous ones. This finding again confirms the fact that a neighbourhood equipped with better facilities does not necessarily result in a higher degree of neighbourliness.

Although the majority of the respondents would like to have neighbours who frequently visit each other and exchange

mutual assistance, most respondents say that they still do not have such neighbours in their neighbourhoods. However, residents in public housing estates are, in general, cooperative and helpful. The patterns of neighbourly interaction among residents in public housing estates are mainly at the informal neighbourly level. The degree of neighbourly interaction is greater among residents of the same ethnic background than among residents of different ethnic groups. As demonstrated in this and the following chapters, there is evidence to show that public housing has successfully brought people from different social and ethnic groups to live together in public housing estates, but the objective of ethnic integration is still a long way off.

Findings from the sample survey and the in-depth study show that length of residence among neighbours in the neighbourhoods is an important factor affecting the degree of neighbourliness in the neighbourhoods. Another important factor affecting the degree of neighbourliness is physical constraints of the building, for which the floor level of flats is used as the indicator. The third important factor affecting the degree of neighbourliness is socioeconomic status, which is measured by indicators such as monthly family income and type of flat. The findings in relation to these three contributing factors to neighbourliness provide empirical evidences to support Hypothesis 6, Hypothesis 7, and Hypothesis 8.

FIVE CASE-STUDIES

I. Introduction

The preceding three chapters examined the effects of the relocation and public housing schemes, the problems faced by the affected population, and aspects of neighbourliness in the public housing estates. These and other related problems have been discussed in the light of the empirical evidence collected from the sample survey of 1,200 families. The survey results can provide useful baseline data for analysis at the macro-level. Such an analysis, however, can hardly examine the dynamics of adaptation and other problems faced by the individuals in the relocation process at the individual family level, nor can it reveal the true feelings and attitudes of the public housing residents towards their neighbours, especially towards those of different ethnic backgrounds. These dimensions can be examined better through intensive in-depth interviews with a small number of selected families.

It was with this objective in mind that the following case studies of five families were undertaken. These families were carefully selected and they represent the broad spectrum of the sample families. Initially, 27 relocated families were chosen for intensive interviews. The particulars of these families are presented in Table 9.1. After interviewing each of these 27 families twice,

five were chosen for more intensive interviews.¹ These five case studies consist of one Indian family, two Malay families and two Chinese families. Two of the families reside in a three-room flat, while each of the three other families resides in a one-, two-, and four-room flat respectively. The information collected from the intensive interviews, supplemented by data obtained through participant observation, are analysed in the following sections of this chapter.

II. The Indian Family

A. Case Study 1: A Three-room Flat Family

The M family resides in a three-room HDB flat on the tenth floor of an eleven-storey block in the Ang Mo Kio housing estate. Their home is located next to the corner flat. The lift is three flats away. Mr. and Mrs M are ethnic Indians, 53 years and 40 years of age respectively. They have six children, three boys and three girls. Their ages range from 13 to 22. The eldest daughter is married and is residing at her husband's home. All the other five children are unmarried and living together with them.

Mr. and Mrs. M were married in 1956. Mrs. M was then an Indian national residing in India. After their wedding, she accompanied her husband to

1. Table 9.2 provides the characteristics of these five cases.

Table 9.1 The 27 Relocated Families of the In-depth Study

Case Number	Identification	Ethnicity	Type of Flat	Housing Estate
1	P	Chinese	one-room	Bukit Ho Swee
2	H	Malay	one-room	Toa Payoh
3	M	Indian	one-room	Telok Blangah
4	W	Chinese	one-room	Toa Payoh
5	K	Chinese	two-room	Queenstown
6	A B	Malay	two-room	Ang Mo Kio
7	C	Chinese	two-room	Bukit Ho Swee
8	L	Chinese	two-room	Bedok
9	S	Chinese	two-room	Jurong
10	Y	Chinese	three-room	Clementi
11	M	Indian	three-room	Ang Mo Kio
12	K	Malay	three-room	Ang Mo Kio
13	W	Malay	three-room	Ang Mo Kio
14	T	Eurasian	three-room	Clementi
15	O	Chinese	three-room	Marine Parade
16	C	Chinese	three-room	Queenstown
17	C	Chinese	three-room	Jurong
18	P	Indian	three-room	Bedok
19	T	Chinese	four-room	Marine Parade
20	L	Chinese	four-room	Clementi
21	L	Indian	four-room	Ang Mo Kio
22	K	Chinese	four-room	Telok Blangah
23	Y	Chinese	four-room	Bedok
24	L	Chinese	five-room	Toa Payoh
25	L	Chinese	five-room	Jurong
26	W	Eurasian	five-room	Telok Blangah
27	K	Chinese	five-room	Marine Parade

Table 9.2 Particulars of the Five Families Selected for Case Studies

Case No./Identification	Ethnicity	Type of Flat	Household Size	Household Income (Per Month)
1. M	Indian	Three-room	8 Persons	S\$1,200
2. H	Malay	One-room	7 Persons	S\$ 560
3. K	Malay	Three-room	8 Persons	S\$ 780
4. K	Chinese	Two-room	5 Persons	S\$ 700
5. T	Chinese	Four-room	4 Persons	S\$1,500

Singapore, and acquired Singapore citizenship status. Neither of the couple has had any formal education. Besides Tamil, Mr. M speaks fluent Hokkien and Malay, while Mrs. M only speaks halting Malay. Although all the children have obtained some formal education in English stream, members of the family communicate with each other in the Tamil language. The children, however, usually speak English to their fellow students, friends and colleagues.

The family appears to be devout Hindus. They have a prayer altar at home and worship the Hindu god Lord Murugan and goddess Lakshimi (wealth) and Saraswathy (education). Moreover, they only consume a vegetarian diet on Tuesdays and Fridays, as is the usual Hindu practice.

Mr. M is employed by a private firm as a tractor driver-cum-mechanic. But is from time to time required to drive other heavy vehicles like lorries and cranes. Although he has worked for different employers for the last thirty years, he has done the same kind of job. His work takes him all over the island, wherever his employer secures a contract. Currently, he is working in the Ang Mo Kio area, which is very near to his residence. Mrs M is unemployed, remaining at home to attend to the household chores.

Mr. M 's basic salary is S\$750 per month but with overtime, his take-home salary is usually S\$900. Besides Mr. M , two of his children also contribute to the family's monthly income. His second daughter who works in a factory as a production operator, brings home S\$250. His

third son, who is serving his national service, earns S\$150 per month but he contributes very little to the family. The family's total income is about S\$1,200 per month.

Compared to other families living in the same block, the M family is financially better off. They are quite happy with their way of life.

1. Relocation and Neighbourhood

The M family moved into their flat at Ang Mo Kio in May 1976 and has since been living there. Before moving into the Ang Mo Kio housing estate they were residing at Jalan Tavi Idlin, off Jalan Kayu, for about twenty years. Their dwelling then was an attap house with two rooms and one hall located in a kampong. It was only served with piped-water and had no electricity or gas supply. When the area came under a government development project, they were resettled in Ang Mo Kio. However, they have no idea about the nature of this governmental project.

Before 1975 Mr. M was the sole breadwinner. He recalled that "bringing up six children on one man's income was hard." The family's main concern at that time was fulfilling their basic needs, and putting aside a small amount as savings for any unforeseen expenses. The only luxury they could afford was a battery-operated transistor radio. They used kerosene lamps for lighting and coal for cooking and ironing clothes.

Things changed in 1975. His two elder daughters went to work. The eldest daughter joined the Singapore Armed Forces (SAF) while the second daughter secured a job as a production operator in a factory. Their contributions increased the family's total income. Working made the children realise the need of and accessibility to a more comfortable life, with more electrical home appliances. New expectations and an improved income encouraged greater savings for a better home in the future. Consequently, when the government served notice for resettlement, they were able to purchase their present flat through their CPF contributions and past savings. Mr. M remembered that moving into their new home was initially a financial strain. Renovations alone cost them a few thousand dollars. The whole flat was furnished with tiled flooring - terrazzo and mosaic. And not having much furniture in their former home they thus had to acquire new items, which meant spending even more money. Within the first few weeks of resettlement, they bought many new electrical appliances such as refrigerator, television, cooker, and hi-fi stereo. Most of these household items were bought on hire purchase which required monthly instalments. Their former savings were inadequate to meet this sudden accelerated expenditure. Thus, in order to cope financially, they had to borrow from some close friends and relatives. Lack of financial resources did not deter them from acquiring the things and comforts they yearned for. Mr. M, who manages the household income and expenditure, pointed out that it took

them about two years before they could settle their debts and instalments.

Relocation from their rural home to a HDB flat altered the family's monthly expenditure. In their former residence they only had to pay for refuse collection and water used, which usually amounted to about S\$10 per month, but now they have to pay S\$20 for refuse disposal alone. Moreover, their electricity and water consumption amounts to about S\$40 per month. Mrs. M added that over the last four years, their food bills had also increased significantly. She felt it was due to inflation and the increasing appetite of the children, who were growing up. She added that, having a higher income meant eating better quality food too. However, she was unable to provide the difference in figures.

On the whole Mrs. M felt that the increases in fixed and variable expenditure did have an adverse effect on their financial situation. But she was quick to mention that the family's total income had also increased. They did not feel the pinch now as much as they did in the first two years of their relocation.

2. Satisfaction with the Housing Estate and Their Flat

In comparing their present residence to their former home, there is not much change in terms of floor area, water supply or privacy. The high locality of their flat makes it airy. Moreover it is supplied with electricity

and amenities which they did not have before. According to Mr. M , the only setback of their present home is noise - caused mainly by vehicles passing the main road nearby and partly by their immediate neighbours. He added that their former home in Jalan Kayu was about 150 metres from the main road but it used to be very quiet. Initially, the family had problems adapting to the noise where sleep was concerned.

The couple did not have much problem adapting to high-rise living. Mrs. M could remember two incidents with her neighbours within the first week they moved in. Their neighbour living directly above their flat used to go about doing her household chores in a pair of wooden clogs right up to midnight. The noise was very irritating and disturbed the family's sleep. In fact they could, by the footsteps, even tell which part of the flat the neighbour was in. After putting up with the noise for two or three consecutive nights, Mrs. M approached her neighbour upstairs. To her surprise, the neighbour was hostile and told her that if she could not put up with such noise, she should not have moved into a flat. Mrs. M advised her neighbour to wear rubber slippers or at least walk with softer steps. After some reasoning the neighbour agreed to the proposal.

The second incident involved a misunderstanding with the family living below their flat. One day Mrs. M used her grinding stone (called "Ammi" in Tamil) to make some chilli paste. The grinding stone was raised on a

platform three feet from the floor. Despite this, the grinding created a lot of noise which permeated to the flat below. To make matters worse, the family below had a baby, who started crying. The neighbour approached Mrs. M about it. She apologised to the neighbour for the unintentional disturbance. After this incident, she purchased an electric blender to aid in her cooking.

Apart from these two incidents, they had no other problems adapting to high-rise living. The noise and unpleasant incidents had not undermined their satisfaction with the overall living conditions. Mrs. M considers themselves lucky to get a flat which is just one floor below the highest, which makes it cleaner and more airy. She felt that people living on the first floor usually have a littered surrounding and have to put up with the stench that sometimes emanates from the rubbish points. She quipped that by being on a high floor, there is less need to worry about leaking sewer pipes. Mr. M remarked, "if it is noisy up here at the tenth floor you can imagine how bad it would be on the lower floors." So far the block has had no major lift breakdowns, which are a common feature in most public housing estates. Generally the family is very satisfied with the floor location and living conditions of their flat.

Even if given a choice, Mr. and Mrs. M would prefer to live in a high-rise public flat. This is because they feel that they lack the financial means to acquire or upkeep a private flat, semi-detached or terraced house. Mr.

M laughed, "maintaining a private flat or a semi-detached bungalow would leave us nothing to eat or wear!"

The M family had actually applied for a flat in the Seletar Hills housing estate, which is about one and a half kilometres from their former home. However, as they were fully allocated, they were allotted a flat in Ang Mo Kio. The family has no regrets about this.

The Ang Mo Kio housing estate has a community centre, swimming pool, park, market, and shopping centre. Despite the availability of the above facilities, Mr. M never gets a chance to enjoy them because of his long working hours. However, proximity to the shopping centre and market makes it very convenient for Mrs. M to do her daily shopping and marketing. Moreover, prices there are reasonable. The children, however, do take advantage of most of these community facilities, especially the community centre and swimming pool.

According to the M family, residents in Ang Mo Kio are well served with a wide network of bus services, covering many parts of the island. Within the housing estate, travel is facilitated by three feeder-services. There is a bus stop near their flat. Moreover they have a police station and post office within walking distance. The clinics found around their area are all privately owned. They would prefer a public out-patient dispensary nearby.

In Mr. M 's view, Ang Mo Kio housing estate has a large Indian community compared to many other housing

estates. And since most Indians are Hindus, he feels that there should be a Hindu temple within the housing estate. Mrs. M also felt that involvement in religion would keep the younger generation from engaging in undesirable activities. Mrs. M usually goes to the Srinivasa Perumal Temple at Serangoon Road for prayers. She felt it would be more convenient if there was one within the estate.

On the whole, members of the M family are satisfied with their housing estate in general, and their flat in particular. They feel that their housing estate has more or less all essential institutions and facilities within acceptable distances. Moreover, having schools and factories within the estate has reduced commuting time and travel expenses. They feel that Ang Mo Kio housing estate is a very safe place for the children - even for the girls to go out alone at night.

3. Neighbourly Interaction and Leisure Activities

Mr. M said that their former area of residence at Jalan Kayu was more or less ethnically divided into Malay, Chinese and Indian kampongs. For about 20 years they lived in a predominantly Indian neighbourhood. Most of the residents of their kampong in Jalan Tari Lilin were of the same 'Thevars' (i.e. warrior farmers) clan and had remote kinship ties through marriage. Their roots originate from Thirunelveli, a district in Tamil Nadu State of South India. Within the kampong they even had an association hall

called the Thirunelveli Welfare Association, where marriages and national day celebrations were carried out. Mrs. M said they had a sense of emotional security there because they felt that there were relatives residing nearby who would rush to help them in the event of an emergency. Despite this, the family was often troubled by frequent quarrels with their immediate neighbours. Mr. M said that their family only maintained close ties with a small number of their clan members. Moreover frequent quarrels had led them to dislike many of their immediate neighbours.

When the kampong came under governmental development projects, most of the clan members were resettled in Ang Mo Kio. However, others were dispersed elsewhere and their welfare association had also been dissolved.

In contrast to their former neighbourhood, the M's new neighbourhood at Ang Mo Kio is multi-ethnic in character although the majority of the residents there are Chinese. They did not have any problem adjusting from a predominantly Indian neighbourhood to one that is multi-ethnic in character. Mrs. M felt that good neighbours and friends can come from any ethnic group. Said she, "tolerance, character, kindness and co-operation are what matters and not race." The couple felt that generally, people in Singapore got along quite harmoniously, so do people in the Ang Mo Kio housing estate. Mr. M attributed this to the fair and firm actions of the government who did not favour any particular ethnic group in

their implementation of their public housing programme policies.

The M s are flanked by the P family on the right corner flat and the T family on their left. Within the M family, how members interact with their neighbours varies, depending on the nature of their occupation, working hours, and educational levels.

Mr. M starts work at eight o'clock in the morning till seven o'clock in the evening, seven days a week. It is only during Chinese New Year and Deepavali that he gets a total of about ten days leave from work. He also gets days off on rainy days. Since most of his time is spent at work, his interaction is very much limited to his working colleagues. Moreover, his proficiency in the Hokkien dialect facilitates easy communication among his colleagues, who are predominantly Chinese. Sometimes when they are given a day off because of a mid-morning shower, they would usually spend the rest of the day chatting and joking at some nearby coffee-shop. Mr. M appears to be very attached to his job and workmates. He finds it difficult to stay away from work even for a single day. Thus his interaction with friends other than workmates, neighbours and relatives is minimal. In fact, he has never visited any of his present or former neighbours and only visits friends and relatives on important occasions.

Mr. M had been a heavy drinker till a year ago. He used to spend about S\$15 on liquor every day. Until

then, he seldom returned home before ten o'clock at night. He was therefore further isolated from his neighbours and friends. This thirty-year habit came to a halt when he developed a serious urinary disease. Since then, he has been coming home by half-past seven in the evening. Mr. M said that he had never cultivated the habit of mixing with and visiting his neighbours, friends and relatives often. His world has all along been limited to his home and work-site. Thus he has some adjustment problems in the evening. He manages by watching television, listening to stereo music and talking to his family. Nevertheless he has exchanged greetings with his neighbours whenever he meets them along corridors or while waiting for the lift. He knows some people living in the block of his flat superficially and some of his former neighbours now living in the Ang Mo Kio housing estate.

Mrs. , who is a housewife, has more time to interact with her neighbours, and knows them better. She visits quite frequently some of her neighbours (about five families within the block) and some of her relatives and friends who reside within the same housing estate.

Mrs. M seems to have established a cordial relationship with the P s, the Chinese family who lives next door to their right. According to her, Mr. P works as a technical teacher and his wife is a nurse who works shift duties. The couple has three children ranging from four to eight years of age. Whenever Mr. P leaves his flat while his wife is out, Mrs. M takes custody of

the key and the P children. Mr. P , with his knowledge of electricity, helps the M family to change bulbs and repair minor faults. Once in a while, Mrs. P and Mrs. M engage in a casual chat and sometimes even discuss their family problems. Moreover, when they run out of some household necessities like chillis, onions or potatoes, they usually borrow from each other. Mrs. M has taught Mrs P how to cook chicken curry in Indian style as Mr. and Mrs. P enjoy eating Indian delicacies. The M children usually get a treat when Mrs. P has something special in her kitchen.

4. Crowding and High-density Living

Mr. M feels that Singapore has changed remarkably during the last ten or fifteen years. One of the most significant changes is an ever increasing number of public high-rise flats and new roads. He considers it a sign of modernisation and affluence. He said, "Since Singapore is small in terms of land area we need to go along with high-rise buildings. Sure, terraced, semi-detached and detached houses are ideal. But they take so much land." He added, "where are we going to find so much land for building such luxury low-rise houses?"

He feels that the prices of private houses are well beyond the reach of many people. Therefore, the only solution for Singapore is for the government to build a lot of low-cost public flats. He said, "we have no choice. We

cannot blame our government for opting for high-rise buildings. After all, it is not too bad to live in public flats. My wife and the children like our HDB flat. I like it too. We have no intention of moving out of the HDB flat."

The couple is not conscious of or disturbed by the crowding situation around their flat. In fact, both of them and their children like to have many people around their home. Mrs. M said that "silence around the home can be very lonely, and loneliness is frightening." When asked about the level of noise and crowding around the housing estate, their 19-year-old son said that "noise around the block can sometimes be very irritating, but noise also brings with it life. We are quite tolerant toward noise and crowding. These are characteristic in all public housing estates. If we want to live in HDB flats, we have to live with them. There is no other choice!"

III. Two Malay Families

A. Case Study 2: A One-room Flat Family

Mr. and Mrs. H are ethnic Malays living together with their five children - one daughter and four sons aged between five and nineteen. They live in a one-room HDB flat in Toa Payoh East of the Toa Payoh housing estate. The flat is on the ninth floor and to the right of the lift. The block has two lifts, each situated at one end of the building.

The passageway of the entire row of thirty-two flats on each floor is well illuminated in the day. According to the Hassans, the lights of the passageway are turned on at night, but even without them, the passageway has enough light coming from the flats. As one comes out of the lift one is struck by the number of people present, either minding their children or generally just sitting outside the doors of their flats and watching the human traffic along the floor. The passageway is also quite cluttered with slippers and shoes of the various residents. Each flat has its own collection of shoes at the doorways and nobody seems to worry that children might take them away or somebody might steal them. The H s says that every child here is quite well behaved.

Mr. H is 52 years old, his wife 38 years old. He is the breadwinner in the family and he works as a Housing and Development Board sweeper, from eight o'clock in the morning to two in the afternoon. He earns about S\$260 per month and has been in this job for nearly seven years. He also holds a second job as a petrol-kiosk attendant in a station in Lorong Four, Toa Payoh. In this job, he earns about S\$200 a month. Added to about S\$100 contributed by the eldest daughter, the total household income is approximately S\$560 per month.

Mr. H has completed only primary school education, but he said he realises that nowadays, education was everything and had therefore always encouraged his children to study as hard as they could. Mr. H believed that

education was the only available and effective means for their children to improve their social status in the future. He therefore asked his eldest son to pursue a vocational course when he could not manage his academic studies.

Mrs. H is a housewife. She has completed only primary education in the Malay stream. She is quite free most of the day because her children are able to take care of themselves. She only has to prepare breakfast for her husband and the eldest daughter when they leave for work in the morning. In the evening, cooking is left to her eldest daughter when she comes home after work. In the afternoon if there is anything to occupy her attention, it will usually be the activities of her youngest son.

The eldest daughter is nineteen years old. She has completed her 'O' level in the English stream with Malay as her second language. She is currently working as a machine operator in an electronics factory in Toa Payoh and earns S\$180 per month. She gives most of her earnings to her parents.

Their first son is sixteen years old. Like his sister, he completed his 'O' level in the English stream with Malay as his second language. He is currently studying at Bukit Merah Vocational Institute. The second and third sons are fourteen and seven years old respectively. Both are studying in the English stream at the adjacent schools nearby. The youngest son is five years old. He is attending a kindergarten class, which is situated within the

housing estate and organised by the People's Action Party (PAP).

1. Relocation and Neighbourhood

The H family has lived in the Toa Payoh housing estate for over seven years. Before moving into the estate, their residence was in one of the numerous kampongs in the Aljunied area. They had lived there for nearly 20 years. The house in Aljunied was an attap house, which was shared by three families. They paid a monthly rent of S\$30. Conditions there were squalid. When their former residence was affected by the development project carried out by the housing authority, they applied for a flat in Toa Payoh and were subsequently allotted their present flat two years after their application.

The H s did not have any relatives or friends already living in Toa Payoh when they first moved in. Most of their friends and neighbours from Aljunied, had applied for housing at Toa Payoh when they were affected by the resettlement programme but were eventually allotted flats in different parts of the estate. After having lived here for seven years, the H s now plan to move out of their flat in the near future. They applied for a three-room flat in the same housing estate six months ago. The reason given was that they need more space for the growing children. Should they be able to choose their new flat, the H s prefer it to be in Toa Payoh because of Mr. H 's and his daughter's jobs. Both of them work in Toa Payoh, so

should they shift to a new estate, they will either have to change their jobs or face the problem of increased transport expenses should they decide to retain their old jobs.

Mr. H changed his job as a foreman mechanic with the bus company, to his present job as a HDB sweeper and petrol kiosk attendant when the family moved to the present estate because of the distance involved in travelling from Toa Payoh to Aljunied. Moving to Toa Payoh, however, resulted in an increase in the expenditure of the Hassan family. For instance, the rental at Aljunied was only S\$30 per month but is S\$45 at Toa Payoh. At Aljunied, the H s only had to pay S\$8 to the landlord for their Public Utilities Board (PUB) bills whereas their PUB bills in their present flat range from S\$40 to S\$50 a month. Food bills for the H s have also increased a great deal. As for transport expenses, there has been not much change as Mr. H used to cycle to work when he was a foreman with the bus company at Aljunied. Now he walks to his place of work in Toa Payoh Central (in his main job) and also to the petrol kiosk in Lorong Four (where he holds his second job), which is only a few minutes' walk from his residence in Lorong Five. The only additional transport expense is incurred by his eldest son who is studying at a school in another housing estate.

Mr. H said that such changes have not much effect on the family's overall financial situation although the

family budget has always been very tight. With his combined salary, he now earns more than he did in his previous job. Moreover, his working daughter is now self-supporting and contributes part of her earnings to the family income. Mr. Hassan expressed satisfaction with his present jobs and the working conditions. He felt that things have changed for the better since they moved into their present home. He attributed this mainly to the general improvement of the nation's economic conditions. However, he is now apprehensive of the change that is to come should he be allotted a new flat.

Mrs. H also expressed her satisfaction with her flat in Toa Payoh. Comparing the present neighbourhood with that of Aljunied, Mrs. H observed that in Aljunied the area was dirty and when it rained, the dirt road became muddy and the water from the drains tended to overflow, causing a flood. Mrs. H said that usually after a rain, they would have to clean the house as sand would have been splattered all over the external wall of the house, and if there was a flood, then a general house cleaning was necessary. She added that "with flats, one is not afraid of floods unless, of course, one is unfortunately situated on the ground floor. But even then, floods seldom happen in HDB estates."

The H family found the floor space of their flat at Toa Payoh slightly bigger than that at Aljunied. As for ventilation, the H s found it better here as they are on a higher floor than their one-storey house in Aljunied.

The lift service had, however, caused the Hassans some problems, especially during the early days of their resettlement. The lift of their block of flats used to be badly serviced, but nowadays the lift service has improved. This is because the frequent breakdowns of the lift had caused many residents to complain to the Member of Parliament to get the relevant authority to do something about it.

The H family found the facilities around Toa Payoh catered to their needs adequately. Mr. and Mrs. H found the bus services convenient both here and at Aljunied. Mr. H said that for them, taxis were used only for emergencies and during rainy days.

The postal facilities around Toa Payoh are adequate in catering to the needs of residents of the estate. The local post office is at Toa Payoh Central about two streets away from the H s' residence. Moreover, there is a post box at the next block. Going to school for their younger children is only a short ten-minute bus journey. Their schools are situated in Lorong One, which is connected to Lorong Four. For the eldest son to go to Bukit Merah Vocational Institute, however, he has to change buses and the journey usually takes about an hour.

The H s went either to the Wak Tanjong Mosque at Paya Lebar or to the mosque at Mattar Road along Aljunied Road to pray when they were living in Aljunied Road. In Toa Payoh, they go to the mosque along Braddell Road. There are

private clinics and a government clinic in Toa Payoh. The couple claims that they seldom make use of the clinics there because they are seldom sick and even if they are, such sickness is usually minor in nature and does not warrant the service of a doctor. They usually use traditional medicine or self-prescribed Western medicine such as Panadol.

The H family found that cleanliness in Toa Payoh was much better than in Aljunied. Here the HDB authority employs cleaners and sweepers to take care of the buildings. In the housing estate, the stairs are washed once a week, the floors and lifts are cleaned every day, and the entire building is white washed once every five or six years.

Public security at Toa Payoh is satisfactory to the H family. Vigilante Corps' members patrol their block once a week and sometimes more. The VC patrols usually come in the evenings, or around seven or eight o'clock in the night. Mrs. H felt that such patrols were very reassuring to residents and had a deterrent effect on would-be robbers. In Aljunied, there had been no VC members patrolling their neighbourhood but there had been no robberies either. Mrs. H said that this was because the residents there did not have anything worth stealing. Moreover, as it was a kampong, strangers in the kampong were immediately known to the residents.

There was no Residents' Association in the block occupied by the H s at the time of the interviews. The Hassans, especially Mr. H , said that they would not be

interested in any activities even if there should be an association. In the block, however, there is a Muslim association catering for Muslim residents. They have mutual help sessions and other activities organised for the members. It is usually the children who take a more lively interest in the activities of the association, and hence through them the parents become aware of most activities organised by the Muslim association for their block.

2. Neighbourly Interaction and Leisure Activities

The H family felt that people in Toa Payoh got on well with each other, although their relationships were usually superficial. Mr. H remarked that "people are nowadays getting more tolerant of each other's culture because all have realised that we have to work hard toward a harmonious relationship with one another." He added, "racial conflict, especially violent actions, is terrible. It is no good for anyone, no good for the Chinese, no good for the Indians, and no good for the Malays either."

The majority of the H s' neighbours are Chinese. There are only five Malay families and two Indian families living in their block. All the others are Chinese. Mr. H said that he knew his Chinese neighbours by sight and greeted them on sight but apart from such casual greetings, had nothing to do with them. He never visited his Chinese neighbours, even the immediate ones. Similarly, Mrs. H has the same friendship pattern with her neighbours as her

husband. Where Malay neighbours are concerned however, it is a different story. Both Mr. and Mrs. H pay regular visits to their Malay neighbours and they provide mutual help to each other. There are mutual borrowing of things, helping in household chores, and discussion of family problems between the H s and their Malay neighbours.

Mr. and Mrs. H said that they knew almost all the Malay neighbours living in their block and the blocks nearby, and maintained close relationships with one another. Mr. H added that it was very difficult, if not impossible, for his family to establish the same kind of relationship with their Chinese neighbours because of language and other cultural barriers. Said Mrs. H , "it is better to keep some distance from those whom you don't really know what they are thinking about you!"

When Mrs. H engages in casual greetings with her Chinese neighbours, she usually speaks to them in Malay because she does not know any Chinese dialects, whereas Mr. H knows a smattering of Chinese dialects. Mrs. H said that there were more Muslim neighbours in Aljunied than in their present neighbourhood in Toa Payoh. Therefore, interaction with neighbours in their previous neighbourhood was mostly with their fellow-Muslims. It was only in Toa Payoh that the H s were forced to form an acquaintance with their Chinese neighbours. Mr. and Mrs. H only engage in casual greetings and some small talk with their immediate Chinese neighbours. However, their children,

especially the younger ones, play and exchange house visits with their peers of the other ethnic groups. Their conversations are usually in English, with some Malay and Chinese thrown in.

Mr. H felt that people in his housing estate did not know each other well, based on his own observation of neighbourly relationships within his own block of flats. He knows only a few families of the other ethnic groups and only as nodding acquaintances. Mrs. H said that she knew only about five families from the other ethnic groups. She explained that this small number was because of the lack of a lingua franca between Chinese neighbours and herself. Mr. H said he seldom ventured out of doors after coming home from work. For the children, however, interaction with the neighbourhood children was easy because of the presence of a lingua franca, namely, English. The children, especially the younger ones, know most of the neighbourhood children on their floor and some from other floors and neighbouring blocks. They get along well with the neighbourhood children and are treated equally by their predominantly Chinese play-mates in their play-group.

The Hs did not mind if their neighbours were of a different ethnic group. They said that judging from their previous residence at Aljunied, even neighbours of the same ethnic group could quarrel bitterly over small matters. They felt that with neighbours of different ethnic groups, quarrels could be precipitated by a small matter but chances are small. They attributed it to the lack of a

lingua franca between the Chinese and the Malays. Both needed to understand a common language before communication could start but if both sides did not know each other's language, then communication and ultimately quarrels could not happen.

Mrs. H said that their family had always maintained good relationships with their neighbours. Whether in Aljunied or Toa Payoh, the H family had not had a quarrel with any of their neighbours. Mrs. H felt that the mutual borrowing of household items and the helping of household chores served to establish good neighbourliness. However, such a relationship could only be developed if neighbours could communicate with each other in the first place and secondly, they could appreciate the cultural values of each other. She added that a good neighbourhood could be easily established in their previous residence at Aljunied as most of their neighbours were Malays, who shared the same religious and cultural values. Over here in Toa Payoh, the majority of the residents are Chinese, with a small number of Indians and Malays. Added Mrs. H, "although we can live together peacefully, we cannot have the same kind of neighbourly relationship as we did in our previous neighbourhood."

The H s visit the seaside about once a month. They usually bring with them food and snacks and enjoy swimming there. They seldom visit any public parks - not even the park nearby. They have been to the Bird Park and the Zoo

only once. No member of the H family has been to the community centre in Toa Payoh or any other centres. They feel that community centres do not cater to their needs. In their leisure time, the H s would stay at home and read newspapers, watch television and listen to the radio. Mr. Hassan and the other children do take part in sports and games occasionally.

3. Crowding and High-rise Living

The H s felt that density in Toa Payoh was high compared to their previous Aljunied neighbourhood. However, they said that such a high density in their present neighbourhood had no obvious adverse effects on their daily life. Mr. H said, "we are used to being surrounded by many people." He added that the house they lived in at Aljunied was shared by three families with many children. It was crowded in the house, but they could always sit outside. Here at Toa Payoh, it is crowded outside and they are surrounded by many people whom they do not know. The only way to avoid the sense of over-crowding, or to be alone, is to stay in one's own flat.

Mr. and Mrs. H do not enjoy being surrounded by lots of people most of the time, but they are philosophical about it. According to them, people with low incomes cannot choose their environment and hence have to accommodate themselves to what is available as best as possible. They added, "in fact, it is lucky for people like us to have a decent place to live."

Mr. and Mrs. H said that they had never felt the need to be alone by themselves. Their eldest son, on the other hand, confessed that he needed to be alone now and then. But he found it impossible even if he was the only one in the flat because of the noise created by the children playing along the corridor and talking adults. However, he said that he did not mind the awareness of a crowd in his surrounding although he would like the neighbourhood to be less dense than at present. Traffic noise also encroaches upon their peace and is a disturbance to the H s most of the time.

When they were asked to express their views on the regulations imposed by the HDB and certain norms to be observed in the housing estate, Mr. H said that there were so many regulations imposed by the housing authority. However, he could only name three of the regulations, namely no littering, no drugs allowed at the flat, and no vandalism. Said Mr. H , "we are always worried about the children violating any of the HDB regulations because it could mean being forced to move out of our flat by the HDB. If it happens, we will have no place to live." He asked, "Where else in Singapore can one rent a flat for S\$45 a month nowadays?"

Mrs. H said that there were certain norms in the housing estate that residents are supposed to observe, although these were not imposed by the housing authority. For example, the Chinese family living above her flat usually washes their clothes in the morning and hangs them

up outside the window of their flat. If Mrs. H also hangs up her family's clothes outside the window around the same time, their clothes will get wet from the water dipping from the washing above. In order to avoid unpleasant quarrels, Mrs. H therefore washes her clothes at noon. When her young children dirty the corridor in front of her neighbours' flat, she has to clean up the place to avoid quarrelling with the neighbours. She always reminds her younger children not to touch or remove anything, especially slippers or shoes placed in front of their neighbours' doors. Mrs. H remarked that any of these minor incidents could cause quarrels with neighbours and this was what one should always avoid if one wanted to live in a housing estate.

The H s felt that life in the housing estate was quite enjoyable and they were happy with the high-rise environment. However, they felt that one should live each day as it came and not try to plan too far ahead as things changed so rapidly in Singapore.

B. Case 3: A Three-room Flat Family

The K family resides in a three-room HDB flat in the Ang Mo Kio housing estate. Their flat is located on the fourth floor of a ten-storey block.

Mr. and Mrs. K are ethnic Malays and communicate with each other in their mother tongue. They have six children - two daughters and four sons aged between eight

and 20 years old. Besides Malay, Mr. K is able to read, write and speak English. He has completed formal education up to Standard Seven in the Malay stream. His wife is educated up to Standard Five, also in the Malay stream. Both husband and wife were born in Singapore. Mr. and Mrs. K are 49 and 38 years old respectively. The K s are Muslims and observe their religious obligations very strictly.

Mr. K was employed by the British army until 1970. He was a typewriter mechanic with the Royal Electrical and Mechanical Engineering Corps (REME) for 21 years. After his redundancy in 1970 as a result of the British pullout, he joined PATCO Singapore Limited as a production supervisor, earning a monthly salary of S\$650. But ill-luck struck and he lost his job once again recently. He is currently working as a gardener at Ridgewood condominium, earning S\$350 a month. Mrs. K is a housewife. Besides Mr. K , his eldest son and second daughter also contribute most of their earnings to the family's income. On the whole the family's total income is about S\$780 a month currently.

1. Relocation and Financial Constraint

The K family moved into their present home in March 1978 and have since been living there. Before moving into Ang Mo Kio housing estate, they lived in a rented house in a kampong off Whitley Road. It was a big wooden house partitioned into ten one-room plus one-hall units. Each

family was allocated one of these ten-foot by ten-foot units. Thus the house accommodated ten families.

All ten families had to share a single bucket-type lavatory, bathroom and washing area for the laundry. Said Mrs. K , "there was always a long queue outside the lavatory every morning." The sharing of common amenities meant that they had to learn to tolerate their neighbours and to compromise. Moreover, the floor area they had was too small to provide a comfortable accommodation for the whole family. To make matters worse, the surroundings were dirty and smelly from the rearing of poultry by their neighbours and the bucket toilet. Mosquitoes and houseflies were a common form of nuisance and irritation. According to their eldest son, living conditions of their previous residence were deplorable.

The question is what kept them at their unpleasant residence for such a long period. According to Mr. K , it was mainly due to their poor financial situation. Until 1977, Mr. K was the sole breadwinner for the family. His income was hardly enough to meet the family's needs, let alone any savings.

In 1970 Mr K received a sum of S\$7,000 as compensation for his redundancy. However he was apprehensive about investing the whole amount on a flat, fearing any unforeseen expenditure or inability to pay the remainder of the cost. In his own words, "Anything can happen in a family depending on one man's income. I may

lose my job again and we need some financial security." Moreover, his children were very young at that time and the need for their personal privacy was not so pressing. Thus, he put the money in the Post Office Savings Bank, only drawing small amounts to make ends meet. In the meantime he bided his time, waiting to accumulate enough on his CPF to purchase a three-room flat.

When he had accumulated enough CPF contributions and his children were already in their teens, he considered it timely to apply for a HDB flat. They had to wait for two years and eight months before they were offered their present flat at a price of S\$15,800. However, their expenditure for relocation did not stop here.

Before moving into their flat, they had it renovated at a cost of S\$3,000. They had a new kitchen cabinet and window grills fixed. The floor was furnished with terrazzo and the kitchen and bathroom walls were tiled. Mr. K claimed that most of the materials used for renovation were of second-rate quality, otherwise it would have cost them much more than what they had spent. The small floor area in their former home did not allow the space for much furniture. They only had a bunk-bed, an old table and some chairs. But once they had moved into their new flat, they bought a new sofa, a dining table set, and a new bed. From their former home they brought along a refrigerator, a gas cooker and a television set (black and white). To these home appliances, they added a portable radio cassette tape-recorder. Acquiring all these items cost them another

S\$1,500. Therefore, the initial expenditure of their relocation, excluding the cost of their flat, amounted to S\$4,500. Although Mr. K claimed that the relocation did not have obvious adverse effects on their financial situation, his wife added, "ours have always been a hand-to-mouth existence and it is still so."

Having their own flat means being spared monthly rental payment of S\$55. In their former residence, each family had an electrical meter, and payments were made to the landlord according to the amount of electricity used. As for the water bills, the amount was divided by the ten families according to the number of people in each family. The dust-bin and lavatory (bucket removal) expenses were settled by their landlord. Usually their water and electricity bills amounted to about S\$30 a month. They now pay about the same amount for the utilities bill in their new home. In addition, they have to pay S\$20 a month for rubbish disposal and an annual assessment fee of S\$57 for their flat. Food bills have remained fairly constant. There is a slight change in transport expenditure. Formerly the K s had a direct bus service to their respective place of employment. Mr. K and the two working children now need to take a feeder service to the terminus before taking the direct bus services. Formerly, all the K children were either enrolled in the Swiss Cottage Primary or Secondary School, which were within walking distance. Now, two of their children are studying in the same school within walking

distance, but two others have to take a bus to their schools. According to Mr. K , the increase in transport expenditure is about S\$65 a month. Added Mrs. K , "Here we do not pay rent but we have to pay more for other items."

2. Satisfaction with the Housing Estate and the Flat

Originally, the K s had applied for a flat in Toa Payoh but were offered a flat in Ang Mo Kio instead. However, after having moved into Ang Mo Kio, they were quite happy with the housing estate. The children felt that Ang Mo Kio had all the necessary facilities a satellite town should have. Mrs. K added that since Ang Mo Kio was a new estate, it was less crowded and had more community facilities compared to the old housing estates like Kallang, Bendemer, and Bukit Merah.

The Ang Mo Kio housing estate is provided with a wide network of bus services going to many parts of the island. For travel within the estate, the K s have the feeder-services at their disposal. Moreover, there are a number of schools and a post office within acceptable distance. The police station is about three bus-stops away from the K home. Though there are quite a number of private-owned clinics, there is no government out-patient dispensary. Normally they go down to the out-patient dispensary at Jalan Kayu because they cannot afford the luxury of paying more at private clinics. Members of the K family believed that it was only a matter of time before the authorities would arrange for a government out-patient dispensary within Ang

Mo Kio. A mosque within the estate is now under construction. For the time being, the K s perform their Friday afternoon prayers at a mosque in Bukit Timah, which is very near to their former home.

When the family first moved into the estate, they heard about a few thefts. Police patrols around the estate have, however, eliminated any security fears. Mr. K claimed that there were a number of pick-pockets at the market, and had himself witnessed a few incidents. On the whole there had been no cases of violent crimes, assaults or gang clashes, and he considered it quite safe even for the girls to go out in the night.

In their kampong they did not have any market within walking distance. But they had vendors coming in bicycles and vans, selling a wide array of vegetables and fish. On weekends Mrs K would go down to Teka Market at Serangoon Road to get her weekly store of fish and other food. Now in Ang Mo Kio, there are shops and a market within walking distance where she can do her daily shopping. On the whole every member of the K family is satisfied with their housing estate.

In comparing their present home with their former one, there is a vast difference in floor area. In their former home, they only had a ten-foot by ten-foot room-cum-hall. Said Mr. K , "Can you imagine the eight of us crammed in a small room like that." Mrs. K added, "There was hardly any space to put beds for all of us. Only our two

daughters occupied the bunk-bed, while the rest of us slept on the floor at night. There was hardly any privacy for us in our former home." In their present flat at Ang Mo Kio, they have two bedrooms and one family room. The couple occupies one room and their daughters the other. But the four sons still have to sleep on the floor of the family room at night. Though they expressed satisfaction with the living space of their present flat, they preferred a bigger flat - maybe a four-room flat, i.e. three bedrooms and one family room. However, a bigger flat would cost more than what they can afford.

They are satisfied with the floor level on which their flat is located. Since they are living on the fourth floor, they usually do not use the lift. Mr. K considered it good exercise to walk up and down instead of taking a lift. Mrs. K added that they need not worry about lift breakdowns which happened frequently and caused a lot of inconvenience to those who live on the higher floors.

In their present home, the K s have their own bathroom and a modern toilet. Said their eldest son, "There is no more embarrassment, waiting in the queue for your turn to use the toilet or bathroom. Sometimes we had to wake up as early as four o'clock to avoid the queue in the morning." He said their present toilet amenities were excellent, compared to the former smelly, fly-infested bucket toilet. Mrs. K added that, she did not need to wait for the wash area to be free for her to use as she did in her former house. Now she could do her laundry any time she liked.

Mr. K added that they were not bothered by mosquitoes, cockroaches, flies or snakes any more. On the whole it is no more a life of inconvenience and compromise. Now, they are living in a cleaner and better ventilated home.

Mr. K felt that noise was one major problem faced by his family in their present home. Since theirs was the second flat from the lift, he claimed that they could hear the noise made by the people using the lift and the noise that the lift made when moving up and down, which was loud enough to disturb their sleep at night. Initially they had difficulty trying to sleep because of the noise caused by the lift, people walking around the corridors and the traffic from the main road, but they were now used to it.

There is a playground in front of their block. Though it provides their children with a good playground, it is also another source of noise. On the whole, all members of the family felt that they were living in a noisier environment compared to their former home. However this has not prevented them from being satisfied with their flat. The better amenities and living conditions of their present home in comparison to the deplorable conditions of their former home has created a very favourable impression on them. Mr. K asserted, "Though it is noisy, it is ten times better than our former home where we had to tolerate less than desirable conditions for many years. We thus have nothing to complain about our present flat. In fact, we are more than satisfied."

If given a choice, the K s would prefer to live in a house with a small garden. However, the couple felt that given their financial situation, any aspiration to live in such a house was like "building castles in the air."

3. Neighbourly Interaction and Leisure Activities

Mr. K felt that people of different ethnic groups in Singapore lived peacefully with one another. There were, however, still under-currents of 'ethnic consciousness', but it was not at a level dangerous enough to cause inter-ethnic tension or conflict. He added that everyone seemed to be cordial on the surface, but deep down there was no strong unity. Mr. K asserted that the same state of affairs applied to his housing estate.

The family's former neighbourhood was predominantly Malay. Eight of their nine immediate neighbours were Malays and all the Malays living within the kampong knew each other. In the event of a wedding or a funeral they would voluntarily lend their plates, crockeries, 'tikas' (colourful mats) and extend their assistance in cooking and decoration. Moreover nearly all of them attended the same mosque at Bukit Timah. Borrowing household items and cooking ingredients like salt, onions, saws and hammers was a common occurrence in their previous neighbourhood.

When the family moved into their present estate, they were immersed in a multi-ethnic neighbourhood. Initially they felt that the Malays within the neighbourhood were not so close. However it was only a matter of time before the

Malays residing within the block and the adjacent blocks formed an informal organisation. It is not officially registered nor has it a constitution. Mr. K said that it was known as 'Muslim Block Committee'. There are about 30 families participating in this organisation. Mr. K said that most members knew each other. Each member made a monthly contribution of one dollar to an informal president, who handled the financial matters and organised functions. With the collected amount of monthly contributions, they bought some plates, forks, spoons, cups, pots, pans, ladles and a number of 'tikas'. Whenever there was an occasion in a member's family, these items would be loaned to them. Moreover during occasions like weddings and funerals, members were obliged to help each other. In the event of a funeral, members could contribute any amount they wished to the bereaved family. During auspicious days like Hari Raya and Prophet Mohamed's birthday, feasts were arranged by the president.

When asked about the function of such an organisation, the eldest son of the K family explained the rationale behind it. According to him, the level of interaction between Malay neighbours in kampungs is very high, and everybody would be willing to help his neighbours. Thus there is no need for such an organisation to foster or stimulate interaction among neighbours. But in HDB estates, things are different and everybody keeps to themselves. Thus there is a need for an organisation to bring the Malay

neighbours closer and encourage a relationship similar in character to the kampong days. For religious and cultural reasons, it is not open to non-Malays. According to Mr. K the organisation has been successful in meeting its objective. Nevertheless he still felt that they were closer to their neighbours when they lived in the kampong. Being a member, he has been introduced to a large number of Malays living nearby.

While such an ethnic-based organisation effectively promotes intra-ethnic interaction, it may impede inter-ethnic interaction in the housing estate. Mr. K and his eldest son, however, argue that due to language and other cultural factors, the multi-ethnic community organisations can hardly promote neighbourliness in the housing estates, at best they might help achieve some government objectives. His eldest son added, "When we attend activities organised by multi-ethnic organisations such as the community centre, we just sit there and listen and then come home. But when we attend functions organised by bodies such as the Muslim block committee, we talk to each other with ease, we enjoy every moment of being there, we actually participate in, not just attend the function."

Apart from the eldest son, none of the K s has been to the community centre located within their housing estate because they feel that community centres are dominated by the Chinese, although it is a multi-ethnic organisation. Mr. K stated that due to differences in eating habits, they are unable to participate in parties and functions

organised by the community centre. Participation of the minority ethnic group in multi-ethnic functions is further discouraged due to the existence of their own ethnic-based organisation which offers them emotional security.

The K home is flanked on both sides by Chinese families, whose names they do not know. Their relationship is limited to exchanging casual greetings in neutral territories. They have never exchanged home visits with their immediate neighbours. Mr. K wishes that at least one of his immediate neighbours was a Malay family. He feels that by having a Malay neighbour they can provide some mutual help and share household necessities, food and utensils.

The K s are quite friendly with most of their Malay neighbours. They usually visit each other. They are quite close to the M family, who lives on the seventh floor. Mr. M , who is of Javanese origin, is employed as a PUB electrician, while his wife remains at home taking care of the household chores. Mrs. K and Mrs. M usually have a chat in the afternoon at either one of their flats. They do share their family problems with each other. However they do not borrow any household items, or expect financial assistance from each other. Mr. K feels that in the event of an emergency like a fire, sickness or physical injury, he can depend on a number of his Malay neighbours for help, but he is not sure whether his Chinese neighbours would provide assistance as well.

The K .s have a number of friends and former neighbours living in the same housing estate. Mr. and Mrs. K visit them quite frequently. They do not have any relatives living within the estate. Most of their relatives live around the Geylang and Kaki Bukit area. Because of the distance, they only visit each other on important occasions.

The three younger boys of the K family do not play with the other children of their floor. According to the second son, this is because they are mostly girls. Therefore they choose to play with other boys from their block as well as those from the nearby blocks. They usually play at the playground in front of the block where the K s live. The youngsters usually visit each other in their flats, for an indoor game or to watch television together.

Mr. and Mrs. K appear to be very homely people. They never go to any movies, picnics or engage in any outdoor games during their leisure. They normally relax at home by watching television, listening to music, reading newspapers or just chatting with their children.

4. Crowding and High-rise Living

The couple agrees that Singapore has changed a great deal during the last ten to fifteen years, with an increasing number of buildings, cars, factories, etc. They feel that these changes are necessary for a developing country like Singapore to improve the living conditions of its people. They are not bothered by the number of people

living around them. They are more concerned about the comforts of their home. Mrs. K added, "being parents of so many children, we are used to having many people around us."

Moreover, the couple has experienced crowding in their previous residence. However, Mr. K explained, "the state of overcrowding in the public housing estates is different from that in the kampongs. In our former neighbourhood, we spent a lot of our leisure time chatting with our neighbours or friends in nearby coffee shops or some corner store near our house. Children played outside, and women visited each other's house or chatted outside. We did not spend so much time in our home. Thus, we only felt overcrowded at night when we were going to sleep. Otherwise, it was quite alright." But the situation in the public housing estate is different. Mr. K added, "over here in Ang Mo Kio, we have to spend most of our time at home. I confine myself to our flat usually after I return from my work. My wife also spends most of her time at home, and the children too because we do not want our children to go out to play too frequently. This is to prevent the possibility of their mixing with some bad youngsters. You know, nowadays youngsters are really bad. They smoke, they drink, and they take drugs too! We do not want our children to pick up these kinds of bad habits."

I asked the K couple whether they had the same kind of worry about their children being influenced by the

'bad youngsters' when they lived in the kampong. They said that in the kampong they knew where their children were and what they did. Moreover, the neighbours in the kampong also knew what the youngsters were doing. Therefore, the chance for them to pick up bad habits was limited.

The K couple pointed out that one of the most important things to learn when living in a high-rise housing estate is tolerance. Said Mr. K , "you have to tolerate the noise created by the neighbours or the heavy traffic around your home. You have to tolerate the attitudes of some hostile neighbours. You have to tolerate some unpleasant encounters with neighbours you don't understand when they are talking about you or your family. You also have to tolerate the demands of some unreasonable neighbours. Moreover, you have to tolerate and observe all the laws and regulations imposed by the housing authority whether you like it or not." Added Mrs. K , "we are used to all these changes and demands. We have no difficulty adjusting ourselves to the new environment."

When asked how they felt about the regulations imposed by the HDB, the couple hesitated a little and was reluctant to answer the question. Only after I repeatedly assured them that these conversations were strictly confidential and would be used for the present study only did Mr. K say that there were so many regulations and restrictions which they never had when they lived in the kampong, but they now had to observe all of these. Added Mr. K , "we bought this flat from the HDB, but we are

legally considered only as tenant and not owner of the flat. Our flat could be taken back by the government anytime if we violate some regulation imposed by the HDB."

Mr. K recalled two incidents his family had encountered with the housing authority regarding the violation of some HDB regulations. The first incident was when they made some major renovations to their living room two years ago. The renovations were not approved by the HDB and they thus had to demolish the new structures to their original condition. The second incident happened only a few months ago when their relatives, a couple with two children from Malaysia, stayed with them for a few months. When the area officers came to make some routine check, he accused the K s of sub-letting their flat without having permission from the authority. They explained to the officer that they were their relatives and were staying with them for a short while. But the officer came to check again one month later and discovered that their relatives were still living with them. They got a serious warning and they had to ask their relatives to live with someone else immediately because they were afraid that they might lose their flat if the officer came to check again.

Mrs. K added that they had always warned their children not to bring unreliable friends to their flat for fear that they might take drugs at their flat and this may cause them to lose their flat too. They were also afraid that their children, especially the younger ones,

may commit some act of vandalism which - especially if serious - could cause them to lose their flat.

The couple felt that the only way to live peacefully in the housing estate was to obey all the laws and regulations imposed by the authority and to observe all the norms of public housing living. Said Mr. K , "you have to sacrifice some of your freedom if you want to live a peaceful and comfortable life in a public housing estate. You have no choice if you cannot afford to live in private housing."

The couple said that it does not really matter which floor their flat is on, as long it is not too high, because they may need to walk up in the event of a lift breakdown, which is considered by most residents to be a common phenomenon in the public housing estates. They expressed their preference for living in a terraced- or semi-detached house with a small garden.

IV. Two Chinese Families

A. Case Study 4: A Two-room Flat Family

The K s are ethnic Chinese. They live in a two-room flat in Queenstown housing estate. The block of flats which they are living in consists of ten households per floor and altogether there are ten floors. There are therefore a total of 100 households per block. The majority of the flats in this block are three-room dwelling units. In fact, only one dwelling unit on each floor is two-roomed. The K family stays on the ground floor near the staircase.

Mr. K is 35 years old and has been married for about 13 years. His highest level of education is at secondary level. Being educated in the Chinese stream, he can speak Mandarin very well. He also speaks his own dialect which is Foochow and some other dialects such as Hokkien and Cantonese. However, he speaks only a smattering of English.

At present, he is working with the Singapore Bus Service as a car-park attendant at the Alexandra depot. He works permanently on the night shift which starts at 4:30 in the afternoon and ends at two in the morning. He has been holding this job for the past 17 years. Previously he was with the Hock Lee Bus Pte Ltd. When his company amalgamated with the other bus companies to form the present SBS, he stayed on with the company. He earns a monthly income of S\$450. However, he does overtime when the depot is short-handed. This adds to his monthly income by another S\$100 or so. Mr. K has to work on weekends as well but is entitled to a day off once a week according to the duty roster.

Mr. K is the only working member in the family. His wife is a housewife who stays at home to look after the children. To help earn some additional income for the family, Mrs. K helps a young couple to look after their four-year-old boy. Both of them are working and live a few blocks away from the K 's. They send the boy to the K family in the morning when they go to work and pick him up when they return. They pay Mrs. K S\$150 a month for the service.

Mr. and Mrs. K have three children. The eldest daughter is 12 years old. She is doing her Primary Six at Tanglin Girls' Primary School. Their second and youngest sons are ten and seven years old respectively. Both attend classes at Permaisur Primary School. All their children are in the morning session. The two boys walk to school as it is within walking distance. The eldest daughter, however, takes the school-bus to school because it is too far to walk. She pays S\$10 per month for the school-bus fee. The reason for enrolling their daughter in a school which is relatively far from their home is because it is the nearest school available that is not co-educational. They prefer their daughter to be educated in a 'all-girls' environment as they feel that such an environment is more suitable for girls.

Mr. K and his wife are Buddhists and also practise Chinese traditional worship. They have an altar at home and worship at the various Chinese temples on special occasions or during festivals.

1. Relocation and Neighbourhood

Altogether, there are five people living in the flat - the couple and their three children. The K s have lived in this flat for the past 12 years. They moved into the flat one year after they were married. Before the couple moved into their present home, they stayed in the block nearby with Mr. K 's parents and his unmarried brothers

and sisters. However, living with Mr. K 's parents' after their marriage proved an unsatisfactory arrangement as his wife and mother could not get along and there were frequent quarrels between them.

However, the main reason for their moving to their present flat was not because of the conflict between his wife and his mother, but the birth of their first daughter. They realised that they needed more space for their own family. Thus, when Mr. K heard that the previous owner of his present flat wanted to sell the flat, he immediately decided to purchase it. This is because it is quite near to his parents' home and therefore convenient for visiting.

Like all other households, the K s experienced a rise in household expenditure during the first few years of their moving into their new flat. Rental bills do not affect the K family since their flat was purchased. However, there has been an increase in food and other expenses. In terms of transport expenses, there has not been much change. As Mr. K is an employee of the Singapore Bus Service, he travels about free of charge if he takes the public bus. However, there is a slight increase in the transport expenses of his eldest daughter as she has to take the school-bus to school.

The K s do not find any significant difference between their former and present neighbourhoods. This is because there is hardly any change in their environment as they have merely moved from one block of flats to the next block in the same housing estate.

Compared to their previous residence, the present one has less floor space. This is because the previous residence was a three-room flat while their present one is only the two-room type. However, there were many more people - including nine adults - living in their previous flat. There are only five members of the family living in their present smaller flat. They have a bed-room and a living room and the kitchen, all are used by them exclusively. Moreover, there is no longer any friction between Mr. K 's wife and his mother.

In terms of ventilation, there is some difference. Their previous flat was situated on a higher floor, which provided for more air circulation. Their present flat is sandwiched between two other blocks and is situated on the ground floor, so there is hardly any breeze blowing around their place.

Moreover, it is quite a noisy place as many people walk past their flat. It is not possible for them to close the windows all the time, since this will result in poor ventilation and make the rooms hot. Besides, they are not allowed to instal air-conditioning in their flat. Furthermore, the back of their flat faces the main road and there is a bus stop just next to the flat. The noise created by the traffic from the main road and by the people talking and walking around the building can be very disturbing, especially at night. However, the K s are used to the environment and they are quite tolerant of the

noise level.

The K family is planning to move out of the flat and has applied for a four-room flat in the Clementi housing estate. The application was submitted four years ago. The reason for their wanting a new flat is that their children are fast growing up and it would be very cramped if they continue to stay in the present flat. They have so far been notified of their eligibility for balloting three times, but they still cannot get a flat they want.

On the first occasion, they were balloted a flat in their choice estate at Clementi. The flat was situated on the ninth floor, which is also what they wanted. The flat was situated in a mixed block of three- and four-room flats. At first they agreed to have the flat but after much consideration, they finally declined the offer because Mrs. K was not satisfied with the space of the rooms in the flat. She had seen her relative's four-room flat and in comparison, the room areas of the flat offered to them were very much smaller. Thus, she rejected the flat and waited for the next balloting.

A few months later, they were once again notified of their eligibility to participate in the balloting of another block of flats in Clementi. This time, they declined to participate in the balloting because the flats offered were exactly the same as those offered earlier. The third time, they were not successful in the balloting. This leaves them one last chance to participate in another balloting.

Mr. K showed signs of regret that they did not

accept the offer the first time, since it was on the floor level they wanted and if they had accepted the flat, it would have cost them much less at that time. The prices of HDB flats have since then increased several times, by between 5% and 20%. Mr. K was thankful that he was allowed to purchase his present flat with his CPF savings. Had it not been for this ruling he would not have been able to afford his new flat as he is the only breadwinner in the family and all his children are still young and dependent upon him.

2. Satisfaction with the Housing Estate and the Flat

Generally speaking, the K family is satisfied with the housing estate they are living in. It is clean and very well maintained. Their dustbins are cleared every day and thus do not cause much problem to them, especially where houseflies are concerned. Moreover, their staircase and corridor are swept and washed once every week, even the lift is cleaned occasionally. This is very helpful as there are incidents of urination in the lifts.

The K family is also quite satisfied with the living conditions of their flat. However, they do have their complaints. The main complaint is that the living space in their flat is too small. When they first moved into their present flat, it was all right because they had only been married for a year and had only one daughter. Since then, they have had two more children and with the children

growing up, it means that they are in greater need of a bigger flat.

The K family is also not satisfied with their present flat because of its ground floor location. Said Mrs. K, "the greatest headache of living on the ground floor is that it is very dirty and very noisy." Although the buildings in the housing estates are well maintained and periodically cleaned, it is much dirtier on the ground floor compared to the other floors. Residents on the higher floors nowadays do not throw things down from their flats as frequently as before strict regulations were imposed by the HDB. There are, however, still some culprits who throw things down without giving any consideration to those living on the ground floor. The problem of maintaining cleanliness in their block has taken a turn for the worst in the past few months. This is because the HDB has installed another lift for the block where originally there was only one, which the HDB considered insufficient to serve a block with 100 households. Mr. K felt that the installation of an additional lift would result in more noise around the area, and make the area dirty.

The K s are also dissatisfied with staying on the ground floor because it means less privacy for them. Every time somebody passes by, they tend to look into their flat. This is because the K s usually leave their front door open. To make matters worse, they are staying just next to the staircase. This means that people need to pass by their flat in order to reach the staircase. Moreover, it is

rather unsafe to live on the ground floor because people can easily know what is going on in the flat by viewing through the windows or the front door. If the windows are all closed, this means that there is nobody at home and it therefore encourages theft. In fact, the K s have witnessed two burglaries during the past twelve years of their residence at the present flat. Said Mrs. K , "we will never want to live in a flat on the ground floor again if we get another flat."

It is for the above reasons that the K family prefers to live at a higher level if given a choice. Their preference for a ninth or tenth floor unit would not be too high as most new flats now are about twenty-storey high; neither would it be too low to be faced with the problems of noise and unclean environment as they are facing now.

As the housing estate in which the K family is living is one of the first few housing estates built in the 1960s, it does not have many community facilities which are readily found in the new housing estates. For example, there is no community centre near their home. The nearest one is a few kilometres away in another part of the housing estate. Thus, the couple and their children have not involved themselves in any community activities. There is also no playground or park situated nearby. However, there is a swimming pool about a kilometre or two from their block, and they have made use of it occasionally.

Though there is a market within walking distance from their home, Mrs. K does not shop there all the time because the prices there are rather high compared to other places. This does not only apply to prices in the market, but also to food items sold by the provision shops in the estate. As a result, the K s usually do their marketing in some other place where they can find lowest prices.

The K s are very satisfied with the bus services in the housing estate. It is very convenient for them to go to any part of Singapore. Usually they need only travel in one direct bus to get to most places; only certain places such as the new housing estate of Ang Mo Kio are slightly more inconvenient to reach as there are no direct bus routes. However, taxi services in the estate are not as good as the bus services. This is especially so during the peak hours in the weekdays and most of the weekends. This, however, does not pose much of a problem to the K family as Mr. K has free travel on the public buses.

The K family is also pleased with the school facilities in the estate. There is a PAP kindergarten across the road and all their three children had attended the kindergarten classes there. As for primary schools, there are two within walking distance and both their sons are in one of them. Though the daughter is not in either one, it is still convenient for her as she travels on the school-bus.

There are also enough clinics in the estate. Just across the road is a private clinic. However, as it is slightly more expensive to visit a private clinic, the K s usually visit the government out-patient dispensary about a kilometre or two away from their home. There are also many churches and a mosque near their residence. Being Buddhists however, the K s usually go downtown or other places to pray in the temples.

3. Neighbourly Interaction

The people in the estate where the K family is living know each other quite well. They do mix pretty often and this is especially so among the women as the majority are housewives who stay at home most of the time. Moreover, most of the people in this estate have been staying here for more than ten years and they know each other quite well.

Personally, Mr. K does not know his neighbours very well. This is due to the fact that he works on the night shift all the time. He spends his days sleeping and his nights working. Thus, as far as neighbourhood interaction is concerned, it is left mostly to his wife. Mrs. K is a friendly woman and can get along with her neighbours well. She knows most of the neighbours in her block and some from the other blocks.

Though the K family gets along very well with their neighbours, they seldom turn to them for help. This is mainly because Mr. K 's parents and siblings are staying

only in the next block. When they need some help, they usually turn to his parents. For example, the couple would bring their children there when both of them have to go out. The K s visit their parents and Mr. K 's brothers and sisters quite frequently.

The children spend most of the time playing among themselves at home. They are sometimes allowed to play with their neighbours' children outside their home but are confined mostly to the corridor and the small playground in front of their flat. Mrs. K said that the area of her residence is rather safe in the day time but not necessarily at night. Therefore, usually she will not allow her children to play outside in the night. In fact, she was robbed once a few months ago while she was walking home from the bus stop nearby.

As there are only a few non-Chinese residents living in the estate, the K s have little contact with them. In fact, there are only one Indian and two Malay families living in their block. When they meet along the corridor or near the staircase, they usually exchange greetings. This is as far as it goes, especially so for Mrs. K as she speaks only Mandarin and Hokkien.

When asked for their opinion about living near to neighbours of different ethnic groups, the couple replied that they do not mind having neighbours of different ethnic groups. They added that they believed people of different ethnic groups could live peacefully with each other but were

uncertain whether they could really establish close relationships with them. Said Mrs. K , "we do not know all our neighbours. We only select a few good neighbours to be acquainted with. Thus, it does not really matter if more Indians or Malays move in to stay in our block. We can be courteous to each other even if we cannot communicate because of the language barrier. However, I am more concerned with my children. I am afraid they may pick up some bad habits from their children." When I asked her to elaborate this point, Mrs. K appeared to be surprised. She replied, "well, I do not mean that all Indian and Malay children are bad, but some of their parents are not strict enough."

4. Crowding and High-rise Living

Both Mr. and Mrs K have been living in public housing for more than twenty years. All their children were born and grew up in the public housing estate too. All of them are used to the way of life in a high-rise environment and the situation of overcrowding. They are now living in a flat situated on the ground floor, but they have already applied for a bigger unit of flat in another estate and they will not accept any flat located lower than the ninth floor. This is because of their many unpleasant experiences living on the ground floor and they believe that most of these problems can be avoided if they live on a higher floor. They are not afraid of height. Said Mr. K , "the higher

the floor level the better it is."

Regarding the strict regulations imposed by the housing authority, the K s said that they were law-abiding citizens and they would certainly observe all the regulations, "for as long the government will not take away our rice bowl." Mrs. K said that they did not need to worry as much as those living on the higher floors because they did not need to worry about being caught throwing things out of the flat. If they did that, it would only dirty the front of their own flat and they certainly would not like that. Furthermore, they did not have to worry about vandalism committed by their children in the lift because they lived on the ground floor and did not need to use the lift. Mrs. K said that they also did not need to worry about youngsters taking drugs at home because their children were too young to commit such an offence. Moreover, they did not intend to sub-let their flat as they themselves do not have enough room for the children.

When asked about the choice between high-rise and low-rise living, they said they were used to high-rise living and did not know how to compare it with low-rise living. Mr. K added, "I am sure it is much more comfortable to live in a house with a small garden. But, how many people in Singapore can afford to have such a house. I hope our children would one day own such a house when they grow up. But for us, it is only a dream. Thus, we must be content with a HDB flat - but maybe with a bigger unit!"

B. Case 5: A Four-room Flat Family

Mr. and Mrs. T are ethnic Chinese. They live in a four-room flat at the Marine Parade housing estate, one of the new housing estates, which is also considered one of the best-provided estates with modern community facilities. The T family consists of four members, all of whom are Buddhists. It is an extended family in the sense that Mr. T 's mother is living together with them. The T s like Marine Parade very much although I had the impression that they preferred their previous residence at Pebble Lane in Tanjong Katong. The flat of the T family is on the sixteenth floor, on the left corner of the block as one comes out of the lift on the fourteenth floor¹. The T s' flat has a good view of the sea and the ships at anchor. Due to its high level, the flat is well-ventilated and its view of the surrounding areas is also unrestricted.

Mr. T is 49 years old. He has only completed his Secondary Three education in a Chinese medium school. He works as a technical supervisor in the ship-repairing industry. His place of work is at Tanjong Rhu. Mr. T is able to speak English, Malay and Mandarin rather fluently

1. All HDB buildings are provided with lifts which stop only once every three or four floors even while there are two or more lifts for the same block of flats.

because of his need to use these languages in his everyday working life in his capacity as a go-between for the management and the workers. Although Mr. T is a Hokkien, he is able to speak Cantonese well because the lingua franca among the workers is Cantonese. As a technical supervisor, Mr. T earns about S\$1,500 per month, and he has been in this line for over twenty years.

Mrs. T is 43 years old. She has completed only her primary school education in the Chinese stream. She speaks Mandarin, Cantonese, Hokkien and a little bit of Malay. She is a housewife. The couple has been married for nearly twenty years. Their only child is a sixteen-year-old daughter, who is doing her Secondary Four at a Chinese secondary school. The fourth member of the family is Mr. T's mother, who is 74 years old. Thus, the couple occupy the master bedroom, and the other two bedrooms are each occupied by the daughter and the mother.

1. Relocation and Neighbourhood

The T's moved into the present flat at Marine Parade in 1974. Before that, they lived in Tanjong Katong in Pebble Lane. Mr. T had lived in a flat in the Redhill housing estate for over twenty years, which was rented from the HDB under his name. When Mr. T married Madam Kwong, he continued to stay at Redhill periodically so that he would be around when any government officers called to check on the flats. Moreover, as the sole breadwinner of the

family, Mr. T had to stay there sometimes and look after his young unmarried siblings, who were living in his flat at Redhill. In the meantime, Mrs. T lived in the terraced house they had bought in Pebble Lane. She lived there for six years until they were allotted a flat at Marine Parade. They had to wait nearly six years before they were eligible for their present flat.

According to the HDB regulations, nobody is allowed to rent or purchase any public flat if he owns a private residential property. The T s, however, refused to answer to the question of how they managed to own a private house and at the same time qualified to rent a HDB flat under Mr. T 's name. They also refused to say whether they had sold their private house in Tanjong Katong before purchasing their HDB flat at Marine Parade. They had, however, relinquished the flat at Redhill when they were allotted their present flat.

The main reason why the T s applied for a HDB flat was because Mrs. T felt that they did not need such a big house in Tanjong Katong and that HDB flats were much cheaper than private houses. They felt that their present flat was adequate for their needs, and had no plans to move out of the flat in the near future. Moreover, they did not want a bigger house as Mrs. T said that a bigger place meant that a servant would have to be employed to help do the housework and that they could not afford this.

The T s bought their flat for S\$21,500 in 1974, using Mr. T 's CPF savings, with a housing loan. They have now

paid off the loan. The PUB bill when the T s first moved in was around S\$45 a month, now they are paying about S\$110. Mrs. T found the prices of fish and meat to be very expensive at the Marine Parade market. The prices were much cheaper at Tanjong Katong. Their food bills then were between S\$120 and S\$150 a month, but now they had to spend over S\$200 per month. Transport expenses increased only slightly when they moved into their present flat as they did not travel much except on outings during some weekends.

Mrs. T claimed that their budget was quite tight here at Marine Parade. When they were living at Pebble Lane, they had the services of a washerwoman and a general-cleaning woman. The former came to wash their clothes every day and the latter come to clean their house twice a week. Even with their services, expenses there were not so much as over here where, Mrs. T said she did everything herself with some help from her mother-in-law, who was only able to do light work such as cleaning the vegetables. The T s attributed their tight financial situation partly to the increased daily expenses, and partly to the easy spending habit they have acquired since moving into Marine Parade. Having so many shopping centres, eating centres and theatres nearby, the tendency was for one to indulge in one's whims without much thought to the expenses. Mr. T claimed that gambling was another easy way "for money to flow out of one's hand" and said he was speaking from experience for he and his wife regularly bought the government-sponsored 4-D

lottery, Toto, the Big Sweep and some charity draw tickets. All these have cost them a significant sum of money.

The T s claimed that security at Tanjong Katong was better than at their present residence. There, their doors were kept open most of the time as there were grilles in front of the doors and windows. They had never heard of robberies in their previous neighbourhood. Mrs. T said that neighbourly interaction in their old neighbourhood was very good. There was mutual borrowing and lending among the neighbours. They talked to each other quite frequently, mostly over the garden fence, and visited each other's home. The T s knew almost everyone in their previous neighbourhood although closer interaction was only between their two immediate neighbours. Compared to Marine Parade, their previous neighbourhood at Tanjong Katong was much better in terms of neighbourly interaction.

The neighbours at Tanjong Katong were all Chinese while in Marine Parade their neighbours consist of mixed ethnic groups although still predominantly Chinese. Mr. T said that he did not have any preference for any particular ethnic group to be his neighbours. His wife, although able to speak a bit of Malay and could hence carry on a simple conversation, albeit haltingly, preferred to have Chinese neighbours as this would help avoid a lot of communication problems and misunderstanding.

In their previous neighbourhood, community and shopping facilities were very poor. The market was about ten to

fifteen minutes away by bus. There was no community centre around Pebble Lane or anywhere nearby. The Post Office was about ten minutes away by bus along Tanjong Katong Road. The nearest shopping centre to the T 's residence was People's Emporium and the next nearest, the Katong Shopping Centre and Katong Yaohan in Katong. There were no swimming facilities around Tanjong Katong - the nearest public swimming pool was at Tanjong Rhu, the Katong Swimming Complex and the nearest private one was the Chinese Swimming Club.

The community and shopping facilities at Marine Parade are adequate to cater for the needs of the residents. In the Marine Parade housing estate, there are shopping centres, a market, food centres, banks, cinemas and clinics. There is no temple around Marine Parade but this is not so important to the T s because they can go to any temple they wish as they have a car. Behind the theatres, there is an amusement centre where one can play billiards, electronic games and table soccer. The shopping centres are nearby at the town centre. There will be a new community centre in Marine Parade, and it will offer many recreational, games and sport activities to the residents. The T s said that they might participate in some of its activities when the community centre is completed.

Mrs. T found the security in their present neighbourhood tolerable. There were police patrols but such patrols were brief, few and far between - sometimes not even

once a month. Although there had been no robbery around their block, there were frequent incidents of robberies along the beach in front of their housing estate. Mrs. T said she had witnessed Malay boys consuming drugs in the open space below their block. However, she did not disturb them nor did she inform the police about these incidents. She added that the police should patrol the area more often and apprehend these youngsters. The T s felt strongly that more patrols around their estate by the police or Vigilante Corps members were needed, as there were many 'loafers' wondering around their block. Mrs. T said that it was not because they had been creating trouble but that the very presence of these people could heighten the chances of trouble happening. She would worry whenever her daughter came home late although she knew that the area was quite safe, as she did not feel at ease knowing the 'loafers' were hanging around the estate.

2. Satisfaction with the Housing Estate and the Flat

Generally speaking, the T s are very satisfied with their flat and the housing estate. They feel that it is a vast improvement in terms of general conditions over their previous house at Pebble Lane. For example, all the necessary facilities are available in the housing estate. The work done by the HDB contractors on their flat was of an acceptable standard, although they have renovated the whole flat, including the walls and floors of all their

rooms. The T s feel that three bedrooms in their present flat is just nice for their small family. Moreover, they like being situated on the highest floor of the block, i.e. the sixteenth floor, as they feel that the higher the flat, the breezier it is and there would also be a better view of the surrounding areas, especially the seaside. The T s also observed that the higher the flat, the less the chance of mosquitoes or houseflies.

When the T s moved into their present residence, they found it a great difference from their previous one. Although Pebble Lane had been very quiet, Marine Parade was not too far from the ideal in terms of noise level. With the block facing the expressway, they could hear the noise from the traffic though it was more muted at that level. As in Tanjong Katong, the T s' flat at Marine Parade has a lot of privacy. But unlike their previous neighbourhood, there have been very few salesmen coming to disturb them here. In fact, their doors are closed all the time and they will usually not receive strangers who knock on their door whether they are salesmen, people approaching them for donations or perhaps even some neighbours whom they do not know. Said Mrs. T , "if we are not sure we want to see the person, we just ignore him by not opening the door. He would not know whether there are people at home anyway."

One thing the T s disliked about their flat was the insects that often came, including black ants from downstairs. Mrs. T said that the ants were attracted by the scent of flowers planted by their neighbours downstairs.

Hence there is a daily procession of black ants from downstairs to their flat and the roof of the building. Mrs. Tan said that she did not want to complain about it for fear that bad-feelings would arise if the neighbour took offence. Another thing which bothered the T s was the great number of lizards in their house. The T s could not think of any effective way to get rid of them.

If given the choice, the T s preferred to live in a low-rise house, preferably a semi-detached house or a bungalow. However they said that at present they did not have the means to buy such a house but if they could afford it, might buy one in the future. The decision would depend on the need for more space, the availability of ready cash, the distance from Mr. T 's place of work and the facilities available around the residence.

3. Neighbourly Interaction and Leisure Activities

The T s found that their neighbours lived peacefully with each other, although they hardly knew each other. The T s thought that people in their block did not know one another because of the way in which the flats were designed. When one came out of the lift, and unless one's floor was where the lift stops, there was only one neighbour with whom each flat faced. Therefore, there was very little chance for neighbours to meet each other. Should the family opposite be unsociable and hence closed its door all the

time, one would find it difficult to know even the immediate neighbour. The neighbours of other floors would be more difficult to meet unless one made an effort to make friends with them on the lifts but since the time taken for a lift to get from the ground floor to the fourteenth floor was rather fast, there was not much time to make friends.

The T s found it very difficult to make friends with their neighbours in Marine Parade. In all their six years' stay here, they only knew two families - the one directly opposite and the one immediately below them. The T s complained that with flats, people found it easier to avoid their neighbours. They could do it simply by closing their doors or should they meet each other in the lifts, they could pretend not to know the other by looking at the floor indicator above the lift door. However, Mr. T said that he usually engaged in casual greetings with some people living in their block should he meet them going up or down the lift. Apart from these casual greetings, no other form of interaction with their neighbours was pursued by the T family. They had never visited anyone of their neighbours - not even their neighbour opposite whom they considered to be their closest neighbour.

As there had been no mutual exchange of visits among the neighbours, there is similarly no helping with household chores among them. Mrs. T , however, helped to look after the opposite neighbour's children now and then when they were not free or when they have to go out for dinner parties

on wedding functions. These neighbours were very understanding that they would not bother the T s if they could help it and Mrs. T said, although relationships with them were good, there had not been any exchange of social or house visits.

Mrs. T claimed that whenever she washed the stairs outside her flat about once a fortnight, she also washed her neighbour's area, but her neighbour had never once reciprocated. The T s said that they had never borrowed anything from their present neighbours. Mrs. T does not like to borrow things from neighbours and she would not like to be bothered by the neighbours either.

The T s said that there were no Indian or Malay neighbours in their block. Moreover, they did not know any neighbour of different ethnic groups living in the same housing estate. They added that they do not mind if some Indian or Malay families moved into their block, but they were quite sure that it would not be easy for them to establish a close relationship with neighbours of other ethnic groups. Added Mrs. T , "we do not mind having a good relationship with them but it will be very difficult to have a close relationship."

The T s were quite satisfied with the present situation with their neighbours. They would like to know a bit more about their neighbours but did not wish the acquaintance to reach a stage where the neighbours frequently visited one another. They preferred that a

certain distance be kept. This way, there would not be any chance of one unintentionally creating bad feelings; by knowing one another too well, a person was apt to say what he thought and this would create ill-will and cause grievances and grudges to arise. Said Mrs. T, "anyway the neighbours here are difficult to make friends with. People usually ignore each other even when in the lift." Mrs. T added that she could not understand why this sort of behaviour should exist in the housing estate. Mr. T said he would usually try to smile at fellow-residents in the lift and see if anyone would smile back - a very few would. Those who have reciprocated are on nodding terms with him but Mr. T said he has yet to establish a firm relationship with anyone in the block.

When the T s are free, they usually stay at home. Mr. T will either read books, listen to music from the hi-fi set, or watch television. They occasionally go to a cinema nearby. If they stay home and watch television, they like to watch the Mandarin serials, especially those with a martial arts theme. The T s would sometimes go out for a stroll with their dogs¹ or do some jogging along the beach near their estate. Mr. T said that strolling, jogging or just relaxing by the sea helped them to relax and gave them an opportunity to interact with one another. Added Mr. T ,

1. Residents in all HDB estates are not allowed to keep any dogs. The T s, however, manage to keep two Pekinese dogs.

"this will improve communication among members of the family and establish a close family tie."

The T s have never engaged in any leisure activities or social community functions with their neighbours. Even their sixteen-year-old daughter's circle of friends are her schoolmates and those from their previous neighbourhood in Tanjong Katong. Mr. and Mrs. T still maintain close contacts with some of their former neighbours in Tanjong Katong. They hence occasionally visited each other, especially during the Chinese New Year or other special occasions. Contacts with their relatives, friends, and some ex-neighbours are usually by telephone.

4. Crowding and High-rise Living

The T s realise that there are a lot of people living in their block. However, they do not feel the pressure of crowding. They said that this was something people who lived in flats had to face, i.e. the presence of many neighbours or nameless people living together in the same block. The T s said they did not care about other people who lived beyond their immediate physical area. Moreover people living in flats usually closed their doors and this was indicative of their desire not to be disturbed by their neighbours or to mix with others. As everyone in the block was doing this, there was a sense of being cut-off and thereby the sense of crowding was not manifest, although one was conscious of the fact that a lot of people were living in the block.

Mrs. T said that the block was relatively quiet in the daytime because most of the residents were young and working. The relative quiet is also due to the fact that the T s' flat is on the highest floor and therefore spared most of the noise. The T s preferred quiet to the hustle and bustle of life. They could tolerate the presence of many people around them but would not feel very comfortable.

The couple said that unlike their previous residence, they now had to observe all the regulations imposed by the housing authority and the norms of the neighbourhood. According to Mr. T , one of the general norms to be understood was that people want to be left alone. Thus, one should always keep a certain distance from one's neighbours if one wanted to live a peaceful life in the estate. Another important norm was to practice tolerance towards everything - noise, irritating neighbours, or ridiculous regulations.

Mr. T said that there were so many regulations imposed by the authority and some of these were rather unreasonable. For example, residents were not allowed to keep dogs in their flats. Mrs. T said that their daughter loved dogs and they always made sure that their dogs did not dirty any place outside their flat. Another regulation is that HDB residents, whether they rent or own their flats, are not allowed to own any private residential property. The couple was quite unhappy with this regulation. Mr. T

said, "after all we bought our flat. If we have extra savings, we should be allowed to invest our money in another property."

V. Concluding Remarks

The above five families were carefully selected for the intensive study, though I cannot claim that they are representative of all residents in the public housing estates. The findings of these five case studies, however, provide us with interesting insights into the lives of some HDB families and the process of their adaptation to a high-rise environment, which is highly structured and tightly controlled by the government through the housing authority. Some of these findings will be discussed in the following paragraphs.

1. Relocation and Financial Constraints

Two of the five families are involuntary relocatees as their previous houses were affected by the resettlement programmes. The other three families are voluntary relocatees, who applied for the HDB flats because they wanted to upgrade their homes.

Although the voluntary relocatees have better chances than the involuntary ones in terms of the choice of location of the housing estate, there is no significant difference between these two groups in terms of the level of satisfaction with their flats or their housing estates. However, there are significant differences between these two

groups in terms of the financial constraints faced by them after they moved into the housing estates, especially during the first one or two years of relocation. The involuntary relocatees are adversely affected financially as most of them do not have enough savings or earnings to make ends meet. One of the common means for them to cope with financial stress is to borrow money from relatives or some loan associations. But, these means are not usually available to some families. For the voluntary relocatees, they usually have to wait for a period of over three years in order to get a flat. Therefore, they have better financial planning when they move into the HDB flats.

Almost all the five families of the in-depth study experienced an increase in household expenditure after they moved into the HDB housing estates. This is mainly due to the increased basic expenses - utility bills, food and transport expenses. For the T family and the M family, they do not feel too hard-pressed by the increasing expenditure as their household incomes also increased significantly. The other three families, however, find it difficult to make ends meet. The usual way for them to alleviate these financial constraints is for the household heads to take up a second job or do more overtime, or for the wives to take up some part-time job at home.

2. Satisfaction and Perception of Living Conditions

Despite the complaints about noise, overcrowding and the strict regulations imposed on residents in the public

housing estates, all the five families are quite satisfied with their flats and the housing estates. They are more concerned with the general living conditions such as the floor area of their flats, water and sanitary facilities, community and commercial facilities around the estate, and transport convenience to schools and work. Compared to their previous neighbourhoods, all the five families have better living conditions in their present homes and neighbourhoods. For almost all of them, their move from their previous homes to the present ones has greatly improved their living conditions.

Although all the five families prefer low-rise housing over high-rise flats, they all realise that low-rise housing is too expensive and is well beyond their means. To them, a terraced- or semi-detached house is only a dream, and can never become a reality. Thus, they must be satisfied with the public high-rise flats. Their aspiration is, therefore, not to move into a house but to upgrade to a bigger flat and in a better housing estate.

From the above findings, we can conclude that the experience of one's previous living conditions and the perception of one's financial position determine the level of satisfaction with the HDB flats and the housing estates. Thus, the high degree of satisfaction with the HDB flats and the public housing estates does not necessarily mean that the residents in HDB estates are happy with the total environment of the public housing estate, neither does it mean that they prefer to live in the public housing estate.

3. Privacy and Neighbourly Interaction

The perception of privacy among residents in the public housing estates is that they want to be alone in their flats and maintain a certain distance from their neighbours. They are not so much concerned with the high density of population living in the block or in the estate, because they can always shut their doors and ignore all those neighbours whom they do not wish to be acquainted with. As pointed out by Mrs. T , "it is bad to be hostile towards your neighbours but it is not good to be too close either. We must always keep a distance from our neighbours so that we can have our privacy and avoid a lot of misunderstanding and unpleasant encounters with them or their children." Mrs. T 's remark is typical of most HDB residents' attitude towards their neighbours.

According to the opinions expressed by the five families, there are three important factors which contribute to the lack of neighbourliness in the high-rise housing estates. These are, firstly, the design of the flats and the height of the building; secondly, the desire for privacy among HDB residents; and thirdly, the attitude of non-involvement towards neighbours and the community. All these three factors are characteristic of the HDB neighbourhoods, which are not apparent in the low-rise ones, and almost non-existent in the kampongs.

However, most HDB residents are clearly aware of the constraints and circumstance of living in housing estates and thus adopt a pragmatic attitude towards neighbours and

the social norms of the community. They will avoid offending or irritating their neighbours, and will try to establish relationships to the extent that there will be casual greetings when they meet each other on neutral ground such as in the lifts or corridors, but not to the extent of visiting each other's homes or extending mutual help. In this way, they can live peacefully with their neighbours in a high-density community. In the interviews, most HDB residents consider that residents in the housing estates live together peacefully and harmoniously. However, this is not an indication of good and intensive neighbourliness because what they mean by 'peacefully' and 'harmoniously' merely refers to non-involvement and maintaining a superficial relationship with their neighbours.

4. Attitudes Towards Neighbours of Different Ethnic Groups

Almost all the families selected for this in-depth study expressed the opinion that they do not mind having neighbours of different ethnic groups, although some of them indicated that they prefer to have neighbours of the same ethnic background. This preference is, however, not strong.

All the five families said that people of different ethnic groups live together peacefully and harmoniously in the housing estates. All the three Indian and Malay families said that they know some Chinese neighbours and have exchanged casual greetings with them on neutral

ground, but both Chinese families under study pointed out that they do not have any contact with neighbours of other ethnic groups. This is probably due to the fact that over 75 per cent of Singapore's population are Chinese and most HDB residents are Chinese too. Thus, there is less chance for Chinese residents to have an immediate neighbour of a different ethnic origin. However, there is some evidence to support the argument that compared to the majority ethnic group, people of the minority groups seem to put in more effort in getting acquainted with neighbours of different ethnic groups and are more inclined to learn the common language used in the community or the major dialects or languages used by the majority group. For example, the Malays, apart from speaking Tamil, also speak some English, Malay and the Hokkien dialect. The ability to speak various languages makes it possible for them to communicate with neighbours of various ethnic backgrounds. Moreover, they also make a great effort to befriend their neighbours. Thus, they know a large number of neighbours of both Indian origin and other ethnic backgrounds. On the other hand, the Chinese can only speak Chinese and a little bit of English. They do not know any neighbour of another ethnic group.

Although HDB housing estates are multi-ethnic communities and residents of different ethnic groups seem to get along with each other quite well, the neighbourly relationships between neighbours of one ethnic group and

those of another are significantly different. It is evident that residents usually establish a much closer and more intimate relationship with neighbours of their own ethnic group than those of different ethnic backgrounds. This situation is clearly illustrated by the remarks made by the H s and the K s. They frankly admitted that they maintain a very close relationship with neighbours of their own ethnic group but can only establish a superficial relationship with neighbours of other ethnic groups, although they are polite and friendly with everyone. They attribute such a form of discrimination to three main factors, namely the language barrier, different habits and cultural values, and the extent of trust.

The above findings clearly demonstrate the point that HDB housing programmes have successfully brought people of different ethnic backgrounds to live together in the housing estates, but there is still a long way in achieving the objective of promoting ethnic integration; and, our evidence suggests that this objective may never be fully achieved.

5. High Tolerance towards Noise and Crowding

One of the most common complaints among residents of the housing estates is noise. Excessive noise created by the traffic, by people around the buildings, and from neighbours' radios, televisions and video cassettes can be very irritating. However, most HDB residents recognise that this is a constant feature in the housing estates and thus,

they must learn to live with it. Some residents, especially those whose previous residences were low-rise housing, pointed out that they initially had difficulties adjusting to the noisy environment of the housing estates during the first few months of their relocation. But after some time, almost all of them get used to it. A person's tolerance or intolerance towards noise is a learning process, which is determined by his previous experience and can be changed over time.

The same argument applies to the degree of tolerance towards the pressure of overcrowding. A person's feeling of crowding is shaped by his previous experience and the extent of tolerance can be changed over time too. Generally speaking, there are two perceptions of crowding. One refers to the number of people living in the flat, i.e. internal density. The other refers to the high-density of people living in the estate, i.e. external density.

To most HDB residents, they are more concerned with internal density than external density. This is because they can ignore the pressure of overcrowding caused by high external density by simply shutting their doors. However, as illustrated clearly in the case studies, most of the residents experienced an improvement in living conditions in terms of less internal crowding and better facilities when compared to their previous residences. Thus, although the population density of the housing estates is much higher compared to other types of housing, HDB residents do not exhibit a feeling of overcrowding.

6. Regulations and the Normative Aspects

Public housing is one of the development programmes designed by the PAP government to restructure the society, and it can be considered to be a programme which has achieved its objective most successfully.

The HDB has provided accommodation for over 80 per cent of Singapore's population. In 1984, about 76 per cent of HDB residents purchased their flats, the other 24 per cent rented theirs. However, all HDB residents, whether they purchased or rented their flats, are legally regarded as 'tenants'. All HDB flats can be taken back by the housing authority if the tenants violate any regulations imposed by the authority. Regulations can be added or changed any time by the authority and the tenants have no right at all to express their views with regard to the regulations imposed on them. They must therefore closely observe all regulations, otherwise they stand to lose their flats any time. Moreover, almost all the community, commercial, educational and recreational facilities in the housing estates are owned and controlled by the government, mostly through the HDB.

Consequently, the public housing estate is a highly structured community. The lives of HDB residents are affected, or even monitored, by the regulations and social structures designed by the government. This re-enforces the emphasis of conformity among residents in the public housing estates. All the families under study expressed their

concern, and their fear too, of the strict regulations imposed by the authority. Although some are not happy with certain regulations which they consider unreasonable, almost all said that they will make sure that everyone in the family will be aware of and observe all the regulations.

Apart from the official regulations, residents must conform to certain social norms observed in the housing estates. Among the obvious social norms are non-involvement, tolerance towards neighbours, maintaining a distance from neighbours, and respect of people's privacy. The official regulations and social norms in the public housing estates have evidently changed the neighbourly interaction patterns of Singaporeans from less formal and unplanned ones to calculated and well-planned ones.

SUMMARY AND CONCLUSIONS

I. Introduction

Four main questions were posed at the outset in this study, viz. (1) what is the social and political impact of public housing in Singapore? (2) does the massive relocation of people into public housing estates in Singapore have different effects on various sub-groups of the relocatees? (3) what are the problems faced by the relocatees, and how do they adapt to the high-rise public housing environment? (4) what is the extent of social integration and neighbourliness in public housing estates?

The answer to the first question was sought by analysing data and information from government publications, newspaper reports and library materials. This issue was dealt with in Chapters 3 to 5, which form Part II of this thesis.

Answers to the other three questions were sought by analysing data and observations obtained during the fieldwork conducted by myself and my research assistants and by testing the eight hypotheses formulated in Chapter 1. The fieldwork consists of two parts: (1) an in-depth study of 27 relocated families and, (2) the sample survey of 1,200 respondents in nine main public housing estates in Singapore. The findings from the survey and the in-depth study are presented in Chapters 6 to 10, which form Part III of the study.

In the first chapter, relevant findings and observations obtained from the studies in relation to public housing conducted in Singapore and other countries are reviewed; and eight hypotheses formulated with respect to the effects of relocation, the degree of satisfaction with public housing, and the extent of neighbourliness in the public housing estates are tested in Part III of this thesis. Chapter 2 explains the methodology of the present study and outlines the characteristics of the sample population. These two chapters form Part I of the thesis.

The following sections of this chapter will summarise the main findings and conclusions derived from the present study.

II. The Impact of Public Housing in Singapore

Public housing in Singapore is not just planned to solve the problems of housing shortage and to improve the living conditions of the population. It is also planned to redevelop the whole city-state and to reshape Singapore society. This may not have been the original intention (or ambition) of the PAP government when it first launched the large-scale public housing programme in 1960. In the initial years, the main aim of public housing was to provide low-cost housing for the low-income families. The success of the public housing programme, in terms of the great demand by the population and its political effects contributing to the victory of the ruling party in all general elections and by-elections in the years after 1960,

convinced the political leadership of the ruling party that public housing should be given top priority in its national development programmes.

This decision was adopted when the report of the 'Comprehensive Plan'¹ was completed in the early seventies. Its proposals and recommendations were subsequently incorporated into the statutory Master Plan in the mid-seventies. The government has since then set the target to re-house 85 per cent of Singapore's population in public housing estates by 1992. Consequently, all other national development programmes such as the number and location of schools, the type and location of industrial estates, the lines and stations of the mass rapid transit (MRT) system, and the planning for community development were re-adjusted in line with the proposals and recommendations of the 'Comprehensive Plan'. Thus, the effects of the public housing programme in Singapore are multifarious, among which the following are particularly vital.

Firstly, as discussed in Chapter 5, public housing in Singapore has far-reaching political implications. It has since the mid-fifties been an important political issue in almost all general elections and by-elections. The PAP, which has been the ruling party since 1959, has made maximum electoral use of the housing issue by emphasising the achievements of its public housing programmes in all general

1. Refer to Chapter 2 for detailed discussions of the plan.

elections and by-elections.

However, the opposition parties had until the early seventies, also made public housing an election issue to attack the government's public housing programmes; their criticisms have been mainly directed at the compensation and allocation policies. But these criticisms by the opposition parties appear to have been counter-productive on all occasions. Since the early seventies therefore, opposition candidates have avoided public housing as a major election issue; thus the issue has become almost a monopoly of the ruling party to gain the support of the electorate, since public housing had by then become a symbol of success and pride of the ruling party and the PAP government.

Secondly, the policies governing the allocation of flats and regulations concerning ownership, sub-letting and transfers have been instrumental in supporting other government programmes and to promote the social and political values officially endorsed by the government of Singapore. Among the most recent changes in these policies and regulations are the priority allocation scheme given to high ranking officials of the Civil Service for the allocation of HUDC flats in 1981 and 1985 in order to attract able people to serve in the public sector, and

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1. HUDC flats are for the middle income groups, which were until recently managed by an independent organisation. The Housing and Development Board (HDB) has since May 1, 1982 taken over the management of all HUDC flats.

priorities given to the three-tier families¹ with effect from May 3, 1982 in response to a call by the Prime Minister to promote traditional family values.

Thirdly, in the early years of the large-scale public housing programmes, the development of public housing had a significant economic impact by creating jobs for the people and stimulating activities in related economic sectors. This function was profound when unemployment was a serious problem in the sixties. Although this effect has been declining since the early seventies when unemployment was no longer a problem for Singapore, it again played an important role in monitoring the construction sector and generating economic activities in 1985 when Singapore faced its most serious economic crisis in the past two decades.

The public housing programme has also been an important factor in keeping the prices in the property market in check by the building of additional dwelling units, commercial shops, offices, and factories by the authorities for rent or sale to the public. Moreover, the amount of compensation for land acquired by the government in the 1960s and 1970s was only approximately a quarter of the market value assessed by independent valuers,² although this assertion is often disputed by the authorities. Consequently, the

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1. The definition and criteria of the three-tier families are discussed in Chapter 3.
 2. Refer to the detailed discussion on this issue in Chapter Four.

public housing programme had the effect of redistributing income, transferring part of the national wealth from the rich to lower income groups, and possibly from the private sector to the State as well. This is evident from the Urban Redevelopment Authority (URA) which is a profit making body¹ generating funds for other governmental development projects such as the ongoing S\$3 billion MRT project.

Fourthly, as all public housing blocks are high-rise buildings, large-scale public housing programmes have created a massive relocation of the population from low-rise living to high-rise living. The proportion of Singapore's population living in high-rise buildings² increased from 10 per cent in 1960 to 36 per cent in 1970, 71 per cent in 1980, and then 85 per cent in 1985. The dramatic shift from low-rise living to high-rise living has resulted in rapid changes in the life-style of the population, the pattern of human relationships, and social systems of the community.

Similarly, there is a great shift of Singaporeans from the private housing sector to the public housing sector. Less than 10 per cent of Singapore's population lived in

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1. Refer to Annual Reports, 1979-1984 (Singapore: Urban Urban Redevelopment Authority.)
 2. Including both public flats and private flats. In 1980, 67.4 per cent of Singapore's households were in public flats, and 3.6 per cent were in private flats (Khoo, No.6, 1981:49).

public housing estates in 1960. The proportion increased to 80 per cent in March 1985 and it will eventually reach 85 per cent in 1992. The dramatic increase of the population living in public housing makes it easy for the government to discipline, guide or even to some extent control the behaviour and activities of the population. This will have significant social and political effects on the individual and the society.

At the same time, there has been a continuous transfer of land ownership from the private sector to the government as the Lands Acquisition Act of 1966 empowers the authorities to acquire any pieces of land for housing and other national developments. The percentage of land owned by the government in Singapore has therefore increased from 44 per cent in 1960 to 67 per cent in 1979, and 70 per cent in 1985.

Fifthly, the social implications of public housing in Singapore are multifarious. As discussed in Chapters 3 and 4, public housing has been an important factor contributing to Singapore's social stability by providing decent accommodation for the majority of the population, many of whom cannot afford to live in private housing. As reflected in the opinion expressed by almost all families interviewed for the in-depth study, HDB residents are aware of the fact that private housing is well beyond their means and therefore they must be content with their HDB flats. In order to keep their HDB flats, whether rented or purchased, they must observe carefully all regulations imposed by the

housing authority. These regulations can be amended, revised, or added by the authority any time it sees fit without consulting the HDB residents who are eventually affected by them. In addition, HDB residents have to accept certain social norms observed by public housing residents. The need of the HDB residents to observe strictly these regulations and social norms re-enforces the importance of conformity, which is essential for people living in the public housing estates. In fact, conforming with social norms and official policies is usually regarded by the political elite as the duty of the citizen; any criticism and deviation from the official viewpoints are normally deemed as opposition to the government and thus the persons concerned are often penalised.

Furthermore, each housing estate is provided with a wide range of industrial, commercial, community, educational and recreational facilities, most of which are owned and controlled by the housing authority and other government bodies. All these facilities as well as the neighbourhood units of the estate are carefully designed, well planned and tightly controlled by the government to ensure that an 'ideal' environment, as defined by the power elite, is achieved. Consequently, the PAP government has successfully restructured the society through its public housing programme. It has transformed Singapore society from a previously informal, decentralised, disparate, differentiated one to a well-organised, planned and

centralised society.

One of the social objectives of public housing is to promote social and racial integration. This is, however, a controversial issue as it is arguable whether the conventional neighbourhood concept implemented in the public housing estates is promoting or inhibiting social integration. The planning of public housing estates in Singapore is based on the neighbourhood concept. Each neighbourhood consists of tens of building blocks which accommodate between 4,000 and 6,000 families. In general, "there is only one type of flat per building block. This segregation is observed more strictly for the smaller dwelling units. Sometimes, when feasible, the three-room and four-room flats or the four-room and five-room flats are mixed in the same block, since their occupants are known to be socially and economically quite compatible with one another." (Yeh, 1975:137).

The emphasis on the compatibility of the residents based on socio-economic status has, however, resulted in class segregation in terms of distinctly different neighbourhoods between and within public housing estates. Thus, some housing estates are mainly for one- and two-room flats, where others are for three- and four-room flats. In some new housing estates, there may be a combination of all types of flats. But there is again an obvious segregation between one- and two-room flats in some neighbourhoods and three- and four-room flats in others. The consequences of

this tendency have far-reaching social implications and have caused serious concern to some social scientists.¹ It is only after the Prime Minister commented on the issue that steps have been taken to correct the situation. As pointed out by the Prime Minister, "We've made serious mistakes, not intentionally, but nevertheless mistakes that we will avoid in future." (The Straits Times, February 9, 1981).

III. Adaptability and Neighbourliness of the Various Sub-groups

A total of eight hypotheses in relation to problems faced by the relocatees, their attitudes toward public housing and the patterns of neighbourly interaction have first been tested in Chapters 6 to 8, which are based on data collected from the sample survey. These issues are then examined again in Chapter 9, which is based on data collected from the in-depth case studies.

The two dependent variables under study are adaptability (A) and neighbourliness (N). These two

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1. See, for example, Chan Heng Chee and H.D. Evers "National Identity and Nation Building in Southeast Asia," in P.S.J. Chen and H.D. Evers. eds. Studies in ASEAN Sociology (Singapore: Chopmen Publications), 1978: 117-129; P.S.J. Chen and Tai Ching Ling, "Urban and Rural Living in A Highly Urbanized Society," in op. cit., pp. 406-421; P.S.J. Chen and Tai Ching-Ling, Social ecology of Singapore (Singapore: Federal Publications), 1977; and Riaz Hassan, Family in Flats (Singapore: Singapore U Press, 1977).

variables are inter-related, and they are in turn affected by contributory factors such as the respondents' socio-economic status (X1), their previous housing experience (X2), the length of their residence in the estates (X3), design and height of the buildings (X4), and facilities and amenities of the housing estates (X5). The conceptual model of the relationships between the two variables and the factors affecting them is presented in Diagram 1.

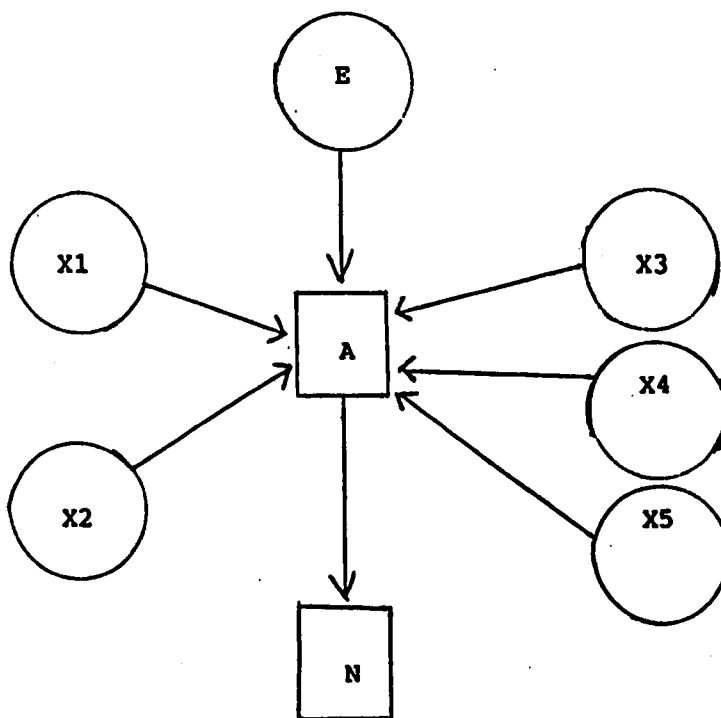
Adaptability is measured by two indicators, namely 'effect' and 'satisfaction'. Satisfaction is a composite index, whereas effect is a single one. Neighbourliness is measured by a composite index which consists of five indicators. As illustrated in the conceptual model, the degree of adaptability is affected by factors such as X1, X2, X3, X4, X5, and E. On the other hand, the extent of neighbourliness is correlated with the degree of adaptability, and it is also affected by the contributory factors.

A. The Composite Indices for Adaptability and Neighbourliness

In this portion of the chapter, I will develop the composite indices for the measurement of the two dependent variables, namely adaptability and neighbourliness. The descriptions and components of the indices are outlined in Table 10.1.

The index for the economic effect (AEF) is a single indicator, which measures the degree of adverse effect on financial situation of the families after they were

Diagram 1: A Conceptual Model of Factors Affecting Adaptability and Neighbourliness



- Note:**
- A** = Adaptability
 - N** = Neighbourliness
 - E** = Financial Effects
 - X1** = Socioeconomic Status
 - X2** = Previous Experience of Housing
 - X3** = Length of Residence
 - X4** = Design and Height of the Buildings
 - X5** = Facilities and Amenities

Table 10.1 List of Indices of Effect, Satisfaction and Neighbourly Interaction

I.	AEF	No adverse effect on financial situation (Table 7.1 and Table 7.2)
II.	SAT(1)	Very and quite satisfied with living conditions of the HDB flat (Table VII.2 to Table VII.4)
III.	SAT(2)	Very and quite satisfied with the housing estate (Table 7.3 to Table 7.5)
IV.	SAT(3)	Present neighbourhood is better than previous neighbourhood (Table VIII.1 to Table VIII.3)
V.	NAT(1)	More neighbourly contacts in present neighbourhood (Table VIII.4 to Table VIII.6)
VI.	NAT(2)	Know most of the neighbours (Table VIII.7 and Table VIII.8)
VII.	NAT(3)	Frequent contacts with neighbours (Table VIII.9 and Table VIII.10)
VIII.	NAT(4)	Have ever borrowed things from neighbours (Table 8.5 and Table 8.6)
IX.	NAT(5)	Frequent visits to neighbours (Table VIII.11 to Table VIII.13)
	% DIFF	% differentials, i.e. the differentials between sub-group percentages and the average percentage of the whole group. If the differential is positive, it indicates that the subgroup has a higher degree of satisfaction or neighbourly interaction compared to the average of the whole group. If the differential is negative, it indicates that the subgroup has a lower degree of satisfaction or neighbourly interaction.

relocated into the public flats.

The index for the extent of satisfaction (SAT) with public housing is, however, a composite one, which consists of three indicators, viz. satisfaction with the living conditions of the public flats (SAT1), satisfaction with the living conditions of the public housing estates (SAT2), and the comparison of the present and previous neighbourhoods (SAT3).

The index for neighbourliness (NAT) is also a composite one which consists of five indicators, namely the comparison of neighbourly contacts in present and previous neighbourhoods (NAT1), the number of neighbours the residents know (NAT2), the frequency of contacts with neighbours in the neighbourhoods (NAT3), the extent of borrowing household items among neighbours (NAT4), and the frequency of visits to neighbours (NAT5).

The extent of economic effect, satisfaction and neighbourliness among various sub-groups of the relocated population are measured by the percentage differentials (referred to as % DIFF in Tables 10.2 - 10.7) between sub-group percentages and the average percentage of the total sample population. If the differential is positive, it indicates that the sub-group has a higher degree of economic effect (or satisfaction or neighbourliness), compared to the average of the total sample population which includes all the sub-groups. If the differential is negative, it indicates that the sub-group has a lower degree of economic

effect (or satisfaction or neighbourliness).

Thus, the larger the number of positive signs for the percentage differentials the sub-group obtains, the greater the degree of satisfaction (or neighbourliness) the sub-group has. For example, among the three major ethnic groups, the Malays have five positive signs for NAT. This means that the percentages for the five indicators of neighbourliness among the Malays are all higher than the average percentage of the total sample population. Whereas, the Indians have four positive signs and the Chinese do not have any positive sign at all (see Table 10.4). The results, therefore, indicate that the Malays have the highest degree of neighbourliness followed by the Indians, and then the Chinese.

The results for the various sub-groups with respect to the economic effect, satisfaction and neighbourliness are presented in Tables 10.2 - 10.8, and will be analysed in the following paragraphs. From the findings presented in these seven tables, we can also summarise in Table 10.9 the test results of the eight hypotheses discussed in Chapters 6 to 8.

B. Ethnicity and Age

Among the three major ethnic groups living in public housing estates, the Chinese as the majority are the ones

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1. These three ethnic groups comprise 98 per cent of Singapore's total population.

Table 10.2 Indices of Effect and Satisfaction with Public Housing by Ethnicity, Age and Income

	% DIFF				Number of positive signs for SAT
	I AEF	II SAT(1)	III SAT(2)	IV SAT(3)	
<u>Ethnic Group</u>					
Chinese	- 3.0	-0.2	-0.1	-2.3	0
Malay	+ 7.3	+2.3	+0.5	+5.1	3
Indian	+ 8.5	-2.3	-0.2	+4.8	1
Other	-10.3	-6.6	-8.3	+13.2	1
<u>Age Group</u>					
Under 30	+ 3.0	-1.4	-0.5	-7.1	0
30 - 39	+ 1.7	+0.7	-1.5	+2.6	2
40 - 49	+ 1.4	+1.3	+2.5	+5.0	3
50 and above	- 5.6	-1.3	-0.6	-2.4	0
<u>Household Income</u>					
Below \$500	- 0.9	-1.6	-1.2	-0.5	0
\$500 - \$749	- 5.2	+1.6	+1.5	-2.4	2
\$750 - \$999	- 1.5	+1.2	+1.2	-0.7	2
\$1000 - \$1499	+ 1.0	+2.1	+2.4	+1.9	3
\$1500 and above	+ 8.1	-5.2	-5.4	+2.9	1

Table 10.3 Indices of Effect and Satisfaction with Public Housing by Type of Flat and Area of Housing Estate

	% DIFF				Number of positive signs for SAT
	I AEF	II SAT(1)	III SAT(2)	IV SAT(3)	
<u>Type of Flat</u>					
One-room	- 0.7	- 6.0	-1.3	- 9.0	0
Two-room	+ 1.6	- 1.2	-0.5	- 2.2	0
Three-room	- 1.6	+ 0.1	+0.9	+ 2.8	3
Four-room	+ 2.4	+ 3.5	-2.2	- 2.2	1
Five-room	+ 3.2	+ 3.3	-0.8	+ 1.9	2
<u>Housing Estate</u>					
Ang Mo Kio	-15.0	+ 3.0	+0.7	- 8.5	2
Bedok	- 5.0	+ 1.7	-1.9	- 2.5	1
Bukit Ho Swee	- 0.3	-14.6	-6.3	- 8.8	0
Clementi	- 4.3	+ 5.4	+0.7	- 2.8	2
Marine Parade	- 1.3	- 1.6	+2.7	+ 2.2	2
Queenstown	- 5.6	- 4.3	+2.0	- 1.8	1
Telok Blangah	- 4.3	- 3.6	-0.3	- 5.8	0
Toa Payoh	+ 3.7	+ 0.9	-0.3	+ 3.2	2
Jurong	+27.7	+ 1.7	+1.4	+19.6	3

Table 10.4 Indices of Neighbourliness in Public Housing Estates by Ethnicity, Age and Income

	% DIFF					Number of positive signs for NAT
	V NAT(1)	VI NAT(2)	VII NAT(3)	VIII NAT(4)	IX NAT(5)	
<u>Ethnic Group</u>						
Chinese	-2.3	- 5.0	- 3.6	- 0.7	- 1.7	0
Malay	+6.7	+13.4	+10.5	+ 4.0	+ 7.8	5
Indian	+2.0	+ 4.8	+ 5.6	+ 0.6	- 1.5	4
Other	+5.6	+18.9	- 0.2	-17.9	-22.6	2
<u>Age Group</u>						
Under 30	+1.0	- 8.4	- 2.7	- 0.8	- 3.8	1
30 - 39	-1.5	- 2.7	- 1.0	- 5.5	- 2.1	0
40 - 49	+2.7	+ 6.7	+ 3.9	+ 5.3	+ 4.6	5
50 and above	-1.7	+ 2.6	- 0.5	+ 2.1	+ 0.4	3
<u>Household Income</u>						
Below \$500	+3.0	+ 1.2	+ 6.1	+ 0.4	- 0.3	4
\$500 - \$749	+1.2	- 0.4	+ 7.8	+ 9.0	+ 3.6	4
\$750 - \$999	-2.5	+ 1.1	- 2.6	- 1.7	+ 3.0	2
\$1000 - \$1499	-0.7	+ 3.1	+ 0.7	- 0.4	- 2.8	2
\$1500 and above	0.0	- 5.9	- 9.5	- 8.1	- 5.5	0

Table 10.5 Indices of Neighbourliness in Public Housing Estates by Type of Flat and Area of Housing Estate

	% DIFF					Number of positive signs for NAT
	V NAT(1)	VI NAT(2)	VII NAT(3)	VIII NAT(4)	IX NAT(5)	
<u>Type of Flat</u>						
One-room	+ 8.6	+ 2.5	+ 5.6	+ 8.9	- 1.8	5
Two-room	+ 2.0	- 0.6	- 1.4	+11.6	+ 3.8	3
Three-room	- 0.6	+ 5.2	+ 6.0	+ 1.6	+ 3.5	4
Four-room	- 4.5	-12.3	-11.4	- 3.6	+ 1.0	1
Five-room	- 4.2	-13.4	-18.1	-26.3	-18.0	0
<u>Housing Estate</u>						
Ang Mo Kio	+ 2.6	+ 5.6	- 5.2	- 4.6	- 3.3	2
Bedok	+ 5.3	+ 8.2	- 9.2	-11.9	- 2.6	2
Bukit Ho Swee	- 5.4	- 3.1	+14.8	+33.1	+ 9.4	3
Clementi	-10.4	-20.1	- 6.2	-20.9	-14.6	0
Marine Parade	+ 4.6	- 5.1	- 5.2	- 7.9	- 9.6	1
Queenstown	+ 4.6	+12.2	- 2.6	-11.9	+ 0.1	3
Telok Blangah	+ 0.6	- 9.1	- 0.2	+ 2.1	- 3.6	2
Toa Payoh	+ 1.1	- 0.1	- 5.2	+11.1	- 4.6	2
Jurong	- 6.7	- 1.3	+22.1	+10.1	+24.1	3

Table 10.6 Indices of Effect, Satisfaction and Neighbourliness by Type of Relocatee and Previous Residential Area

	% DIFF							Number of positive signs for NAT
	I AEF	II SAT(1)	III SAT(2)	IV SAT(3)	Number of positive signs for NAT	V NAT(1)	IX NAT(5)	
<u>Types of Relocatee</u>								
Voluntary relocatees	+3.0	+2.1	+0.2	+0.3	3	+2.0	-0.5	1
Involuntary relocatees	-7.5	-5.7	-0.5	-0.2	0	-5.1	+1.1	1
<u>Previous Residential Area</u>								
City centre	-3.6	-2.5	-0.9	-3.7	0	-1.9	-1.1	0
Suburban area	-1.5	+2.6	+1.9	-0.3	2	+2.3	-4.1	1
Rural	+7.9	-0.8	-2.1	+6.4	1	-1.2	+9.3	1

Table 10.7 Indices of Effect, Satisfaction and Neighbourliness by Duration of Residence at the Present Housing Estate and Floor Level of the Flat

	% DIFF							Number of positive signs for NAT
	II SAT(1)	III SAT(2)	IV SAT(3)	Number of positive signs for SAT	V NAT(1)	VI NAT(2)	IX NAT(5)	
<u>Duration of Residence</u>								
Less than 3 years	+0.9	-2.8	-4.1	1	-1.3	-9.6	-5.6	0
3 to 6 years	+2.1	+1.5	+3.5	3	+2.3	-0.3	+2.4	2
7 years and above	-4.6	+1.5	+0.5	2	-2.1	+14.7	+4.0	2
<u>Floor Level of the Flat</u>								
Ground-2nd floor	-5.5	+0.5	-2.3	1	+2.8	+7.4	+2.3	3
3rd-4th floor	-1.2	-0.3	-1.6	0	+3.5	+6.4	+0.9	3
5th-6th floor	+0.4	+2.2	+1.5	3	-0.8	+4.1	+2.8	2
7th-8th floor	-0.9	-2.1	+4.1	1	+0.2	-1.2	+5.2	2
9th-10th floor	+3.0	-1.9	-0.2	1	-0.9	-3.5	-2.3	0
11th-12 floor	+2.3	-0.5	-3.0	1	-1.0	-5.6	-8.2	0
13th and above	+5.0	+2.4	+1.7	3	-4.6	-19.0	-5.6	0

Table 10.8 The Degree of Adaptability and Neighbourliness
Among Various Sub-groups

	Adaptability	Neighbourliness
	Number of positive signs for AEF & SAT	Number of positive signs for NAT
<u>Ethnic Group</u>		
Chinese	0	0
Malays	4	5
Indians	2	4
Others	1	2
<u>Age Group</u>		
Under 30	1	1
30-39	3	0
40-49	4	5
50 and above	0	3
<u>Household Income</u>		
Below S\$500	0	4
S\$500-S\$749	2	4
S\$750-S\$999	2	2
S\$1,000-S\$1,499	4	2
S\$1,500 and above	2	0
<u>Housing Estate</u>		
Ang Mo Kio	2	2
Bedok	1	2
Bukit Ho Swee	0	3
Clementi	2	0
Marine Parade	2	1
Queenstown	1	3
Telok Blangah	0	2
Toa Payoh	3	2
Jurong	4	3
<u>Type of Relocatee</u>		
Voluntary relocatees	4	1
Involuntary relocatees	0	1

Table 10.8 The Degree of Adaptability and Neighbourliness
Among Various Sub-groups (cont'ed)

	Adaptability	Neighbourliness
	Number of positive signs for AEF & SAT	Number of positive signs for NAT
<u>Previous Residential Area</u>		
City centre	0	0
Suburban area	2	1
Rural	2	1
<u>Length of Residence</u>		
Less than 3 years	1	0
3 to 6 years	3	2
7 years and above	2	2
<u>Type of Flat</u>		
One-room	0	5
Two-room	1	3
Three-room	3	4
Four-room	2	1
Five-room	3	0
<u>Floor Level of the Flat</u>		
Ground - 2nd floor	1	3
3rd - 4th floor	0	3
5th - 6th floor	3	2
7th - 8th floor	1	2
9th - 10th floor	1	0
11th - 12th floor	1	0
13th and above	3	0

Source: Derived from Tables 10.2 to 10.7.

Table 10.9 The Eight Hypotheses Tested by Empirical Data

Hypothesis	Whether the hypothesis is supported by empirical data
1a	No
1b	No
2a	Yes
2b	Yes
3a	No
3b	No
4	Inconclusive
5	Yes
6	Yes
7	Yes
8	Yes

Note: The description of these hypotheses is outlined in Section III of Chapter 1.

who suffer the greatest economic hardship caused by relocation, and who have the lowest degree of neighbourliness and the lowest degree of satisfaction with their flats and the housing estates. As shown in Table 10.2, both the Malays and the Indians have a positive sign for the extent of effect. The Chinese, however, have a negative sign. This means that the degree of adverse economic effect faced by the Malays and the Indians are lower than the ^{for the sample included in the survey} average, whereas that faced by the Chinese is higher than the ^{at} average.

In terms of the degree of satisfaction with their flats and the housing estates, the Malays have three positive signs for the composite index, the Indians one, and the Chinese none (see Table 10.2). In other words, the Malays have the highest degree of satisfaction, followed by the Indians. The Chinese have the lowest degree of satisfaction. Thus, we can conclude from these findings that the minority ethnic groups have a greater degree of adaptability than the majority group. These findings contradict Hypothesis 3, which states that the minority ethnic groups are more adversely affected by relocation and more dissatisfied with the new environment.¹

The degree of adaptability is positively correlated with the extent of neighbourliness. With regard to the composite index of neighbourliness, the Malays have five

1. Refer to Chapters 1 and 7 for a detailed discussion.

positive signs, the Indians have four, and the Chinese have none (see Table 10.4). The data again demonstrate the fact that the Malays have the greatest extent of neighbourliness, followed by the Indians. The Chinese rate the lowest in terms of neighbourliness. This evidence is further confirmed by the findings of the in-depth case studies discussed in Chapter 9.

Based on data collected from the in-depth study, there is a great deal of evidence to illustrate the fact that the minority ethnic groups, namely the Malays and the Indians, usually make more effort than the Chinese to get acquainted with their neighbours. They are able to establish intimate social ties with some neighbours of their own ethnic group, and their relationships are characterised by trust and mutual help. This type of relationship is, however, ethnic-based. The social interaction among both minority and majority ethnic groups with their neighbours of different ethnic groups is usually superficial and transitory and it is confined to casual greetings in neutral territories around the corridors or in the lifts. This type of interaction hardly leads to any meaningful social relationships in which some effective social exchange may take place.

Thus, public housing programmes have brought people of different ethnic backgrounds together in the housing estates, but close proximity alone is insufficient to promote ethnic integration. In the opinion of the political elite, cross-ethnic organisations such as community centres

and residents' committees can function as effective channels to foster ethnic integration. These organisations are managed and tightly controlled by the government. Data obtained from both the sample survey and the in-depth study show that these types of government-based organisations do achieve some official objectives in mobilising public support of government policies, but are ineffective in promoting ethnic integration because most residents, especially the minority ethnic groups regard these organisations as political tools of control. Moreover, they are considered to be dominated by the majority ethnic group. Therefore, many HDB residents, especially the minority ethnic groups, would like to have some sort of ethnic-based social organisation such as the Muslim Block Committees, clan associations or other traditional community organisations in their housing estates. Such social organisations are, however, not encouraged by the government and there is very little room for them to function effectively in the public housing estates. Although these types of social organisation are mainly ethnic-based and promote only intra-ethnic interaction, they can be very effective channels - as they have always been for promoting neighbourliness and mutual assistance among residents in the community.

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As asserted by some local social scientists¹, community development cannot be effectively promoted by government-based organisations alone, it must be supplemented by the traditional community-based organisations which had played a very important role in fostering community spirit and the sense of belonging to the community before the government launched official programmes in the mid-1960s and replaced² them with the government-based community organisations. Therefore, I share the opinion expressed by some local social scientists³ that the government should reassess its policy towards traditional community-based organisations and adopt a more lenient attitude in allowing them to be set up and function independently in the public housing estates, as they can perform an important function to promote neighbourly interaction among the residents.

In terms of age group, the findings presented in Tables 10.2 and 10.8 support Hypothesis 4, which states that the older people find it more difficult to adapt to the high-

1. See, for example, Yon Poh and Lim Chong Yah, eds. Singapore: Twenty-five Years of Development (Singapore: Lianhe Zaobao 1984), pp. 327-327.
2. See, for example, People's Association Bulletin, Vol.4 No. 2 & 3 (March 1966), pp. 5-6; and Peter S.J. Chen, ed. Singapore: Development Policies and Trends (London: Oxford University Press, P. 983), pp. 16-17.
3. See footnote 1.

rise public housing environment than the younger population¹ if we divide the respondents into two age groups, namely the younger population (ie. those below 50 years old) and the older ones (ie. those aged 50 and above).

As indicated in Table 10.8, the degree of adaptability in terms of effect and satisfaction among those residents aged 50 and above is the lowest compared to all other age groups. However, the extent of neighbourliness among this group is only second to that of residents aged between 40 and 49, and higher than those of other age groups. The age group between 40 and 49 has the highest number of positive signs for both adaptability and neighbourliness. In other words, they have the highest degree of adaptability and neighbourliness compared to other age groups.

The above findings have important policy implications. In general, the high-rise public housing is designed for the younger population with little attention paid to the provision of facilities for the physically handicapped and older people, especially the elderly. For example, all HDB buildings are high-rise blocks and they are provided with lifts which do not stop at each and every floor but only at every three or four floors even if there are two or more lifts for the block, in which case they still all stop at the same floors. Therefore, residents living on the floors which do not have lift services have to climb up to the higher floor or down to the lower floor to get lift service.

1. Refer to Chapters 1 and 7.

This makes it extremely inconvenient for the physically handicapped and the elderly. As most HDB buildings have two or more lifts for each block, it seems logical for the housing authority to relax the rigidity of its design with respect to lift services. This can be done by making the lift stop at every floor, or each of the lifts to stop at alternate floors if there is more than one lift for the block. The housing authority has argued that this alternative will cause additional construction costs for the buildings. But economic considerations cannot always dictate any social development programme without giving proper attention to the social costs.

Furthermore, the housing authority should also revise its policy so that some lower floors, say second to fourth floors, are reserved for the older people to be given priority to rent or purchase flats there. This will certainly help the older people a lot in terms of alleviating the constraints to their movement and their fear of lift breakdowns.

Another example is that the housing authority has paid little attention to providing community facilities for the elderly in the public housing estates. There has been an ever increasing demand for community facilities such as day care centres and health care centres for the elderly in the housing estates since the seventies because of the change in the age structure of Singaporeans in recent years. The HDB can provide a great service to the elderly if it can be more flexible in allowing voluntary organisations or even

government organisations to make the use of some void decks to provide day care centres or other community facilities for the elderly. The ground floors of most HDB buildings, especially those built after the early 1970s, are designed as void decks which are usually left empty. If such voluntary organisations can use these void decks on flexible and lenient terms, they can organise meaningful activities and provide useful facilities for the housing estates' elderly community.

C. Income and Type of Flat

Socio-economic status of the respondents is another important factor, which affects the degree of adaptability and neighbourliness among HDB residents. Two indicators are used to measure the respondent's socio-economic status, namely income and type of flat. The higher the income and the larger the flat a person has, the higher his socio-economic status. Data summarised in Table 10.8 show that in terms of socio-economic status, the extent of neighbourliness is negatively correlated with the degree of adaptability. Compared to the lower social classes, the higher social classes have a lower extent of neighbourliness although they have a higher degree of adaptability in terms of financial effect and satisfaction with their flats and their neighbourhoods. This finding supports Hypothesis 8, which states that the degree of neighbourliness is negatively correlated with the socio-economic status of the residents; the higher social classes have a lower degree of

neighbourliness than the lower social classes.

Among the various income groups, those residents earning a monthly household income of less than S\$750 have the highest extent of neighbourliness, although the degree of their adaptability is the lowest. The highest income group, ie. those earning a monthly income of more than S\$1500, have the lowest extent of neighbourliness (see Table 10.8). The data in Table 10.2 show that it is the two extremes, viz the lowest income group and the highest income group, who are less satisfied with their flats and their neighbourhoods. It is understandable that the poorest are less satisfied with their flats and the neighbourhoods as they usually have a larger household size and live in smaller one- or two-room units; and these units are usually concentrated in those housing estates or certain sections of the housing estates which are poorly provided with community facilities. As for people of the highest income group, they usually live in larger, four- and five-room units which are usually better designed and located in those housing estates or certain parts of the housing estates which are well-provided with modern facilities. However, they are the residents who are less satisfied with their flats and their neighbourhoods.

The above findings demonstrate the fact that satisfaction is a relative concept, which is determined by

1. Refer to the lengthy discussion on this issue in Chapter 8.

the class value of the person. Thus, the degree of satisfaction with the flat and the neighbourhood alone is not a good measurement nor an accurate indicator of the standard and the quality of the HDB flats and the public housing environment. Results from the HDB surveys show that the degree of satisfaction among the public housing residents in Singapore is very high and therefore it is argued that the standard and quality of public housing in Singapore is also very satisfactory.¹ Findings of the present study are consistent with the HDB studies, but there is no empirical evidence to support such a generalisation deduced from the HDB surveys. It is only meaningful if the same sample population can compare the degree of their satisfaction with public high-rise housing and that with private low-rise housing. Apparently this cannot be done because most of the HDB residents do not have the opportunity to live in private housing. Moreover, the lower income groups are well aware of their financial limitations, which is reflected by the level of their housing expectation. As expressed by most respondents of the in-depth study, they are satisfied with their HDB flats mainly because they cannot afford to live in private housing, which to them is only a dream.

In terms of type of flat, the data show that those who live in four- and five-room flats have the lowest extent of

1. See, for example, Stephen Yeh, Public Housing in Singapore (Singapore: Singapore University Press, 1973).

neighbourliness. The one-room flat dwellers are adversely affected most seriously by relocation and are most dissatisfied with their flats and neighbourhoods, and yet they have the highest extent of neighbourliness (see Table 10.8). This finding illustrates the probability that adaptability and neighbourliness may be two independent variables; the higher degree of adaptability may not result in a greater extent of neighbourliness. Their relationship is determined by some intervening factors such as class values and physical designs. Those who live in the four- and five-room flats usually belong to the higher social classes who are more individualistic, less dependent on group assistance, and more concerned with privacy. Therefore, they tend to mind their own business and maintain a certain distance from their neighbours. This type of attitudinal and behavioural pattern is reinforced by the physical design of flats in the public housing estates. Privacy is a main concern among all four- and five-room flat dwellers, who usually have their own corridors. There are private portions of the corridors in front of the main doors. Moreover, there are only a few units on each floor for these larger flats. This type of design provides a high degree of privacy but it adversely affects the frequency of neighbourly interaction.

On the other hand, the design of the one- and two-room flats is quite different. There are many units of flats on each floor, and they all share a common corridor. Moreover, the windows and main doors of this type of flats usually

face the common corridor.

Thus, there is no privacy for this type of flat, and neighbours have a lot of opportunity to meet each other on the common corridors. There has been some debate over the issue of which type of design is better. The choice in Singapore is obviously a political one which in turn is determined by economic considerations and the values of the political elite.

D. Ex-villagers and Urbanites

Data in Table 10.6 show that people from the city centre are adversely affected financially by relocation more seriously than those from rural areas. In terms of satisfaction, the ex-villagers are more satisfied with their HDB flats and the neighbourhoods than the urbanites. This finding contradicts Hypothesis 1, which states that the relocation of people to high-rise public housing estates causes more economic hardship and more adaptation problems for relocatees from rural areas than for those from urban areas.¹

One possible explanation for the higher degree of satisfaction among the ex-villagers than the urbanites is reflected in the related finding obtained from the comparison of housing conditions between their present and previous residences. As discussed in Chapter 6, more ex-villagers than urbanites expressed the opinion that the

1. Refer to Chapter 7 for a detail examination on this issue.

conditions of their present residences are much better than those of their previous ones. The ex-villagers are used to the poor conditions of their previous residences. The shift from their rural homes to the HDB flats is in fact a great improvement in their housing conditions. Therefore, they are happy with the HDB flats and the neighbourhoods, which are equipped with modern facilities. We can therefore deduce from the above findings that the degree of one's satisfaction with one's flat and the neighbourhood is affected by one's previous experience and perception of housing.

With respect to the economic hardship caused by the relocation, the study found that the ex-villagers suffered less than the urbanites. There are some explanations for this result. One important explanation is that Singapore is a small city-state which is highly urbanised. Less than three per cent of its total population are engaged in farming and fishing activities. In terms of occupation, there is no clear difference between the ex-villagers and the urbanites. The relocation to public housing estates therefore did not cause more hardship for the ex-villagers than for the urbanites. Moreover, the ex-villagers are used to the poor housing conditions and therefore their expectations of housing and the possession of durable household items are generally lower than the urbanites.

There are, however, different types of settlements between rural and urban areas. Generally speaking, rural

settlements are characterised by attap- and zinc-roofed housing, whereas the urban ones are characterised by shop-houses.¹ More than 60 per cent of all dwelling units in the 1960s consisted of these two types of housing, but the percentage dropped to less than 18 per cent in 1980. According to government policy, all attap- and zinc-roofed houses will be redeveloped by 1990. Therefore, the classification of Singapore's population into three categories viz. the city centre, suburban areas and rural areas, is mainly for the purpose of taking the population census. It does not have any important social significance nowadays.

In terms of neighbourly interaction, the data in Table 10.8 show that the ex-villagers display a greater degree of neighbourliness than the urbanites. However, the ex-villagers still complain that there are less neighbourly interactions in the public housing estates than in their previous neighbourhoods. This finding is consistent with most of the studies conducted by local social scientists²

1. Attap-houses are wooden houses with the roofs covered by attap leaves. Shop-houses are terraced-houses, usually between two and four storeys, whose ground floors are used as shops or offices and the upper floors are used as dwelling units.
2. See, for example, Peter S.J. Chen and H.D. Evers, eds. Studies in ASEAN Sociology (Singapore: Chopmen Publications, 1978) pp. 388-421; Peter Chen and Tai Ching Ling, Social Sociology of Singapore (Singapore: Federal Publications, 1977); and Riaz Hassan, Families in Flats (Singapore: Singapore University Press, 1977).

that there is greater neighbourliness in kampongs (ie. villages) than in public housing estates. It is, therefore, suggested by some prominent architects, urban planners, and social scientists¹ that the HDB should modify its philosophy and policy to incorporate some features of the kampong environment into the planning of public housing. The response of the HDB to this type of suggestions is, however, constantly negative and critical.²

E. Voluntary and Involuntary Relocates

There is no apparent difference between voluntary and involuntary relocations with respect to the extent of neighbourliness, but the degrees of adaptability in terms of economic effect and satisfaction with their flats and the neighbourhoods between these two groups are remarkably different (see Tables 10.6 and 10.8). This finding again suggests that adaptability and neighbourliness may be two independent variables. There is insufficient evidence to demonstrate a causal relationship between them.

In terms of the economic hardship caused by relocation, data in Table 10.6 show that the involuntary relocatees are adversely affected more seriously than the voluntary ones. This is because being affected by government redevelopment programmes, they have to be relocated within a limited

1. Ibid.

2. See, for example, Stephen Yeh, op. cit.; Straits Times, November 21, 1980.

period of time. Therefore, they are unable to wait until they have enough savings or are financially as prepared as the voluntary relocatees. Moreover, a large proportion of the voluntary relocatees are former HDB-flat dwellers, who up-graded their flats by shifting from the smaller units to the larger units. They will not do this unless they have the means to do so.

Similarly, the degree of satisfaction with their flats and the neighbourhoods among the involuntary relocatees is much lower than that for the voluntary relocatees. The voluntary relocatees have three positive signs for the composite index of satisfaction, whereas the involuntary relocatees have none (see Table 10.6). As discussed in Chapters 7 and 9, there is a much higher percentage of the voluntary relocatees than the involuntary ones saying that the floor level of their flats and the location of their housing estates are those of their choice. This is because the voluntary relocatees, unlike the involuntary ones, can afford to wait until they can get a flat on the floor level and in the housing estate of their choice.

The above findings therefore support Hypothesis 2, which states that the relocation of people into high-rise public housing estates causes more economic hardship and more problems of adaptation for involuntary relocatees than for voluntary ones.¹

1. Refer to Chapter 7 for a detail analysis of this issue.

However, the difference between these two groups of relocatees in relation to the degree of satisfaction and the economic effect narrows over time as it is usually in the first one or two years that the relocatees experience the economic hardship caused by relocation. Moreover, there are now nearly 80 per cent of Singapore's population living in public housing estates. Thus, not many people can in future be classified as involuntary relocatees affected by government redevelopment programmes. In the 1960s and 1970s, many applicants for HDB flats were people affected by the resettlement programmes. But, now most applicants are already HDB residents, including both voluntary and involuntary relocatees, who either want to upgrade their flats or want to establish a new family. Consequently, the proportion of involuntary relocatees to the total HDB population will decrease over time. Therefore, it may be significant to study the problems faced and the differences between voluntary and involuntary relocatees in relation to relocation in the 1960s and 1970s. The significance of such studies will, however, decrease in the future.

F. Length of Residence and Physical Factors

The length of residence and physical factors such as height of the building and community facilities are among the important factors which contribute towards the degree of adaptability and neighbourliness. Let us first examine the effects of the length of residence on adaptability and neighbourliness.

Data in Table 10.7 show that residents who have lived in the housing estates between three and six years have the highest degree of satisfaction with their flats and the neighbourhoods, followed by residents living there for more than six years. Residents who have lived there for a period of less than three years have the lowest degree of satisfaction. This finding supports Hypothesis 5, which states that adaptation to the new high-rise public housing environment is a function of time.¹ However, this function is influenced by the availability of community facilities in the housing estates.

Generally speaking, the housing authority was more concerned with providing enough flats than community facilities during its first two Five-Year Building Programmes. It was only from the third Five-Year Programme that the HDB began to pay attention to the qualitative aspects of public housing such as the provision of community facilities. Thus, the newer housing estates have better facilities and amenities than the older ones. Respondents who had lived in the housing estates for more than six years, when the fieldwork of this study was conducted are mostly living in the older housing estates. This explains why the degree of satisfaction among the respondents increases with the length of their residence only up to six years.

1. Refer to a detailed discussion of this issue in Chapter 7.

The extent of neighbourliness among residents also increases with the length of residence. As shown in Table 10.8, residents who have lived in the housing estates for more than three years have two positive signs for the composite index of neighbourliness, compared to none for residents who have lived there for less than three years. This finding supports Hypothesis 6, which states that the extent of neighbourliness is a function of time.¹

The above findings are consistent with studies conducted by the HDB.² These results reinforce the housing authority's belief that neighbourliness and community ties can eventually be fostered and developed in the public housing estates. Some social scientists are, however, less optimistic.³ They argue that the nature and the intensity of neighbourliness in the public housing estates can never be the same as those of the kampong environment.

Apart from the length of residence, physical factors such as community facilities and the height of the flats are also important in affecting the degree of adaptability and the extent of neighbourliness among HDB residents. Unfortunately we do not have comparable data relating to

1. Please refer to Chapter 8 for a detailed discussion of this issue.
2. See, for example, Stephen Yeh op. cit.
3. See, for example, Riaz Hassan, Families in Flats (Singapore: Singapore University Press, 1977); Peter Chen and Tai Ching Ling, Social Ecology of Singapore (Singapore: Federal Publications, 1977).

community facilities for each housing estate in the present study. Therefore, I will confine my discussion to the effects in relation to the elevation of the flats, which is measured by the floor level where the flats are located.

The data in Table 10.8 show that residents living on the fifth and sixth floors and those living on the thirteenth floors and above have the highest degree of satisfaction. However, it is those who live below the fifth floors who have the highest extent of neighbourliness. Those who live above the ninth floors have the lowest extent of neighbourliness. These findings clearly demonstrate the point that the elevation of the flats inhibits the extent of neighbourly interaction. The findings also support Hypothesis 7, which states that interaction takes place in a horizontal rather than vertical direction and as a result, there is a lower degree of neighbourliness among people living on higher floors than those living on the lower floors of the building.

Results from both the sample survey and the in-depth study also show that the majority of respondents prefer to live in low-rise housing rather than in high-rise housing. The main reason which prevents them from making any plans to realise their preference is that most of them are aware that they can only afford public housing which is all high-rise,

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1. Refer to Chapter 8 for a detailed discussion of this issue.
 2. Refer to Chapters 6 and 9.

while private housing remains far beyond the reach of most of Singapore's population.

The above findings provide empirical evidence to support the argument for a combination of both high-rise and low-rise buildings for the public housing programme repeatedly suggested by some social scientists.¹ These suggestions, however, are not accepted by the housing authority for the simple reason expressed by the HDB that Singapore does not have enough land for low-rise housing and that these cost more than high-rise buildings. The official explanations are, however, refuted by evidence provided by both researchers and experts. They argue that low-rise buildings cost less than high-rise buildings. Moreover, Singapore has enough land for a combination of both high-rise and low-rise housing to accommodate a population of over six million.² According to the official population projection, Singapore will never reach a population of six million. The population will stabilise at 3.6 million by the year 2070.³

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1. See, for example, Peter Chen and Tai Ching Ling, Social Ecology of Singapore (Singapore: Singapore University Press, 1977); Rosy Fonseca, "Planning and Land Use in Singapore," Singapore Working Papers No 48 (Singapore: University of Singapore, 1975); and New Directions, Vol. 3 No.1 (March 1976), pp. 4-13.
 2. Rosy Fonseca, op. cit.; New Directions, Vol. 3 No. 1 (March 1976), pp. 4-13; and A. Dondai, "Singapore's United Nations-Assisted State and City Planning Project," Journal of the Singapore Institute of Planners, Vol. 1 No. 1 (September 1971), pp. 4-8.
 3. Yoh Poh Seng and Lim Chong Yah, op. cit., p. 163.

Therefore, it seems that the cost of construction and land scarcity are not the real reasons for the housing authority to exclude low-rise housing as a possible supplementary option for the public housing programme. The real reason may be that high-rise flats, being a well-established feature of public housing in Singapore, which is considered the most impressive and successful programme implemented by the PAP government, is regarded as a symbol of success for the ruling party and the nation's pride. Therefore, such a well-established image cannot easily be changed or undermined.

IV. Concluding Remarks

In this last section of the present study, I would like to make some concluding remarks relating to: (1) planning and participation, (2) restructuring of the society, and (3) the limitations and significance of the study.

Firstly, the planning process for the public housing programme is closely in line with the general pattern of decision-making in Singapore, which is characterised by efficiency, pragmatism and the 'top-down' approach.¹ The rationale for Singapore to adopt this type of interventionist approach is well argued for by the power elite. As pointed out by Goh Keng Swee, the then First Deputy Prime Minister, laissez-faire policies of the pre-1959 colonial era "had led Singapore to a dead end, with little economic growth, massive unemployment, wretched

1. Peter Chen, op. cit., pp. 20-23.

housing, and inadequate education." ¹ Therefore, Singapore ²
"had to try a more activist and interventionist approach."

Public housing is one of the very first concrete programmes to which the PAP government gave top priority and they were determined to make it a show-case when the party first assumed power in 1959. Since then, the planning of public housing has been constantly in the hands of the political and bureaucratic elites without the participation of the masses. Policies and programmes of public housing are made by the housing authority and the cabinet, interest groups and people affected by the programmes are not usually invited to present their views. Typically, then, "information about policy formulation is available only after the fact, at which point the information to be disclosed is a matter of government choice." ³ This type of developmental process, as observed by Riaz Hassan, "is the mobilisation of resources for development without mass participation." ⁴ As a result, mass participation, as Peter Chen put it, "is possible only at the stage of the implementation of development programmes, and not in the

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1. C. V. Devan Nair, ed. Socialism That Works - The Singapore Way (Singapore: Federal Publications, 1976), p. 84.
 2. Ibid.
 3. Peter Chen, op. cit., p.22.
 4. Riaz Hassan, ed. Singapore: Society in Transition (Kuala Lumpur: Oxford University Press, 1976), p. 345.

stage of policy formulation."¹

The 'top-down' approach, however, is a matter of controversy, particularly in relation to public housing programmes. For example, Mary Hollnsteiner argues that the views of the people affected by the policies and programmes are important since they are eventually the people who will participate in the programmes and use the services provided.² They must be invited to express their views and demands according to their own needs, not in terms of what the power elite has ordained is best for them. Therefore, mass participation is essential not only in the implementation stage but also in the stage of policy formulation.

On the other hand, some have argued that mass participation in the planning process may result in substantive losses rather than gains, or in the diversion of the planning process from the accomplishment of its objectives to sustenance of the participatory process. As some planners put it, "when you open up the process to everybody, you no longer have control over it. The more people you get into the act, the less likelihood that you'll be able to travel a straight path to your objective."³ It

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1. Yon Poh Seng and Lim Chong Yah, op. cit., p. 318.
 2. Rolf Vente and Peter Chen, ed. Culture and Industrialization: An Asian Dilemma (New York: McGraw-Hill, 1980), pp. 215-216.
 3. Armand Lauffer, Social Planning at the Community Level (New Jersey: Prentice-Hall, Inc. 1978), pp. 269-270).

is this type of argument that characterises the planning process of the public housing programme with its objectives pre-determined by the power elite. The objectives are not only to provide public housing for the lower income groups but also to restructure the society.

Secondly, the restructuring of the society may not have been an explicit objective of public housing in the early years of the programme; it has, however, become the prevailing and clearly defined objective since the mid-1970s. By then, already more than half of Singapore's population were living in public housing estates. The target for the ultimate population to live in public housing estates by 1992 when the Comprehensive Plan is completed, was raised from an earlier projection of 70 per cent to the current 85 per cent. The backbone of the Comprehensive Plan is the spatial distribution of public housing estates, which in turn determines other features of the physical environment such as the transportation network, the location of industrial estates, and the types of commercial, community, educational and recreational facilities to be provided in the housing estates.

Provisions for the whole physical environmental context of Singapore society are clearly outlined in the Comprehensive Plan and specified in related development programmes. All public housing buildings are high-rise blocks and they are built in accordance with a limited number of standardised designs. Factories, commercial complexes and office buildings within the public housing

estates are mostly constructed and managed by the housing authority, and their designs are also quite standardised. All community and related facilities are provided in the housing estates within a rigid framework of the neighbourhood concept perceived by the housing authority. As a result, all public housing estates in Singapore with respect to their physical environment are quite similar if not identical. As some observers put it, "if you see one public housing estate in Singapore you see all. It does not matter whether it is Ang Mo Kio or Toa Payoh."¹

Physical environment alone cannot change the society drastically. These are only the basic foundations of the potential total environment envisaged by the planners and the policy-makers. As observed by Herbert Gans, it is the social system and culture of the people who are to use it that determine to what extent the 'potential environment' becomes an 'effective environment'.² Thus, the objective of restructuring the society cannot be achieved through the building programmes implemented by the housing authority alone, it needs cooperation from other government bodies as well. In the Singapore context, once a policy is regarded as a national policy, cooperation from all related government bodies to ensure its success is usually expected.

1. This is a familiar expression of many visitors and observers whom I have accompanied in their visits to some public housing in Singapore during the past ten years.

2. Herbert J. Gans, People and Plans (New York: Basic Books, 1968), pp. 4-12.

As public housing is a top priority for national development defined by the ruling party, cooperation and support from all related government bodies are ensured. Moreover, as Chen and Fawcett put it, in Singapore "coordination among the various government ministries is fairly strong, largely because of the relatively small number of people in policy-making positions and their frequent interactions, and the planning mechanism is flexible enough to respond to changing conditions."¹ Therefore, policies, laws and regulations are continually introduced and implemented to change the social system and culture of Singapore's population in general, and the residents in the public housing estates in particular, by both the housing authority and related government bodies. Community organizations such as community centres and residents' committees are also used as important channels to mobilise the support of the masses in the implementation of national policies and development programmes.

More specifically, stringent regulations and laws are imposed by the HDB to regulate and monitor the behaviour and activities of the people in public housing estates. Violation of any regulations or laws may result in losing one's privilege of living in the public housing estates, regardless of whether one's flat is owned or rented. Moreover, policies such as priorities for allocation of flats may be used to reward community leaders of

1. Peter S. J. Chen and James Fawcett, eds. Public Policy and Population Change in Singapore (New York: The Population Council, 1959), p. 256.

the government-based organisations or people who are supportive of government's policies. For example, members of the management committees of community centres (CC) and members of the citizens' consultative committees (CCC) are usually given priority in the allocation of HDB flats. The three-tier family policy and the joint-balloting policy are examples of measures which are used to give priority of allocation to applicants who respond to the government's call to revive the traditional family values. The discriminatory or selective criteria for allowing the use of public premises within the estates by various social and political organisations are powerful tools used by the government to monitor the types of activities provided by these organisations. All these measures and mechanisms are used by the housing authority and other government departments to influence and reshape the social norms and values of the people and to restructure the physical environment and social system of the Singapore society.

Consequently, during the past two decades Singapore has changed from a low-rise living society to a high-rise living society, and from a loosely-structured society to a highly organised one. Singapore nowadays is a tightly planned and highly disciplined society, which is the result of planned programmes of which public housing is the most important and concrete one, designed by the government to restructure the society with the objective of creating an 'ideal' society as perceived by the power elite.

Thirdly, the uniqueness and complexity of the public

housing programme in Singapore make it extremely difficult to have a comprehensive and objective study of the programme. As analysed in the preceding chapters, public housing is a remarkable national development programme, which has been used by the government not only to provide low-cost housing for the majority of the population but also to restructure Singapore society. The government has over the past two decades continually imposed on public housing residents a series of bold measures and strict regulations in order to guide and monitor their activities, behaviour and social values. New measures and regulations have been introduced periodically whenever the government sees fit and these have almost always gone unchallenged by residents or interest groups. Thus, public housing in Singapore has far-reaching social, economic and political implications. All these implications are interrelated and cannot be examined in isolation.

Over the past two decades, studies have been carried out by both official and independent researchers to study certain aspects of the public housing programmes in Singapore. Most of these studies were conducted in the 1960s and early-1970s and their results were published in the early- and mid-1970s. Five major works in book form on the subject have so far been published. Two of them are the results of studies conducted by the HDB. The titles are Homes for the People and Public Housing in Singapore, both were edited by Stephen Yeh and published in 1972 and 1976

respectively. These two books focus on the views and attitudes of HDB residents toward public housing, and they document government policies in relation to public housing and the quantitative achievements of the housing programme.

Among the three major independent works, Robert Gamer's was probably the first to study the rationale, policies and objectives of public housing implemented by the PAP government. The research was undertaken in the 1960s, and its results were published in 1972 in a book entitled, The Politics of Urban Development in Singapore. The other two independent works are Families in Flats by Riaz Hassan and Social Ecology of Singapore by Peter Chen and Tai Ching Ling, both published in 1977. Hassan's book presents an in-depth study of problems faced by the low-income families living in one- and two-room flats in the Bukit Merah Housing Estate, one of the oldest and poorest housing estates in Singapore. Chen-Tai's book focuses on the study of ecological change and social pathologies in relation to the development of public housing in Singapore and the comparison of the different environments and life styles between HDB residents and villagers.

The studies conducted by Yeh, Chen and Tai are all based on the survey method. Hassan's work is also mainly based on the survey method, but it is supplemented by an in-depth study of five families. Gamer's work is primarily based on the analysis of official documents and information obtained from personal interview with some key

personalities. All these studies were conducted ten years ago and are confined to studying certain aspects of public housing in Singapore; no comprehensive study of the complexity of public housing and the inter-relationship of social, economic and political aspects of the programme has ever been made by any researcher or government body. Moreover, there has not been any major study on the subject carried out by researchers or students in the past ten years.

The present study is probably the first attempt to make a comprehensive study of the effects of relocation on the relocated families, the social, economic and political implications of both the policies and the programmes of public housing in Singapore, and their impact on the individual and the society. This of course is not an easy task as the wide scope of the study deals with so many issues, which cannot be examined by using only one research method. Moreover, some of the issues are normally considered as too sensitive for academic research and these issues have been avoided by most researchers. I was aware of this type of difficulty and the sensitivity of certain issues under study when I first designed the framework for the present study. But, I was eventually convinced that I cannot avoid all the difficulties and the danger of dealing with some sensitive issues if I am to attempt to study the subject comprehensively and objectively.

Thus, I decided to use a combination of several

research methods to study the subject of public housing in Singapore quantitatively and qualitatively. The research techniques used in the present study are essentially based on those used by Robert Gamer and Riaz Hassan in their above-mentioned studies, viz. sampling survey method, intensive interviews, and content analysis of documents and reference material. The second part of the present study uses the content analysis technique, whereas the third part of the study uses both the survey method for the sample survey and the intensive interviewing technique for the in-depth study. The combination of these three research techniques have proven to be very useful in studying the various issues covered in the present study. As a result, the present study is not only able to examine the issues of public housing in their complexity but also to study the dynamics and the interlocking effects of the public housing programmes in Singapore. Moreover, unlike many other previous studies, which usually deal only with either the quantitative achievements of the programmes or the problems faced by the relocatees, the present study deals with both the positive and negative aspects of the public housing programmes in Singapore without avoiding the sensitive issues which are important and yet usually avoided by other researchers.

Moreover, empirical data collected from the sample survey and the in-depth study proved to be very useful in

1. See, for example, Stephen Yeh, op. cit.; Iain Buchanan, op. cit.; and Roney K.L. Tan, op. cit.

testing the eight hypotheses in relation to relocation and public housing. As discussed in the preceding chapters, these hypotheses are derived from the assumptions and findings of the major studies on relocation and public housing. Some of these hypotheses are, however, not supported by the empirical data of the present study. The results from the testing of the hypotheses help us clear some misunderstandings and misconceptions with regard to the impact of public housing in Singapore. Based on the results, some important issues relating to public housing are urged for future studies, and recommendations for improvement in public housing are made in the relevant chapters of the present study.

There are, of course, some limitations to the present study. The first limitation is that because most of the published and unpublished research data and surveys conducted by the HDB are confidential, I was unable to use some of these for comparative purposes. It is extremely difficult, if not impossible, for an independent researcher to obtain permission from the housing authority to use these data, although I have read most of the HDB's survey reports conducted during the past twenty years. The only data and information that we can use are those already published in book form or in articles published in the journals, and reported in the newspapers. This of course is a problem faced not only by me but by many other independent researchers as well.

The second limitation relates to the research design. The ideal design for the present study would have been a longitudinal study of the relocated families.¹ By using this method, the researcher can collect relevant data and observations of the respondents' life styles, patterns of social interaction and the living environment of their former neighbourhoods; and a follow-up study after they have moved into the new environment of the public housing estates is then conducted to collect comparable data and information for a comparative analysis. However, due to time and financial constraints, such a research design was not feasible. Thus, I had to use the alternative method which is to study the relocatees and their families at one point in time, ie. after they have moved into the public housing estates, and to collect two sets of data relating to both their former and present neighbourhoods and then to compare these two sets of data. Obviously, such an approach has its limitations. For example, the accuracy of data pertaining to their former neighbourhoods may be questionable as it depends heavily on the extent of their memories and other

1. However, there have not been any longitudinal studies conducted in Singapore by the housing authority or independent researchers. The only attempt to conduct such a study was made by a former lecturer at the Geography Department of the National University of Singapore, who conducted a longitudinal study of the families to be affected by the resettlement programme in the area of Potong Pasir. The study was first initiated in the late 1960s and had progressed till the early 1980s when the researcher eventually abandoned the study three years ago, partly due to his departure from the University.

personal biases rather than the reflection of the real situation. Although attempts have been made to maximise the extent of accuracy by intensive interviewing and participant observation wherever possible, the readers should be aware of this type of limitation.

Another limitation is that data of both the sample survey and the in-depth study were collected between 1979 and 1980. Therefore, there may be some changes in the attitudes and opinions of the respondents today. However, some of the data have since been updated in 1985. All the 27 relocated families covered in the in-depth study had been re-interviewed in early 1985 and it was found that there were no significant changes in the information and observations collected five years ago. Moreover, analyses of the policies and public housing programmes are all based on the most recent data, up to 1985 wherever possible.

Despite the above-mentioned limitations, I believe that the present study has achieved its original objectives. It also hopefully makes some contribution to the understanding of the complexity of the social, economic and political dimensions of public housing; it indicates some crucial issues in relation to public housing for future research, and it examines certain sensitive issues relating to public housing in Singapore which are usually avoided by most researchers. The present researcher, however, does not claim that this study is definitive. I would strongly urge for more comprehensive studies to be conducted by independent researchers in view of the far-reaching social, economic and

political implications of public housing in Singapore, which not only affects individuals and their families living in public housing estates but is also aimed at restructuring the entire Singapore society.

APPENDIX TABLES

Table VI.1 Duration of Residence at the Present Housing Estate by Ethnicity and Area of Housing Estate

	Less than three years	3-6 years	7 years & more	Total
<u>Ethnic Group</u>				
Chinese	36.2	39.4	24.4	100.0
Malay	31.5	48.6	19.9	100.0
Indian	32.1	38.9	29.0	100.0
Other	35.0	55.0	10.0	100.0
All groups	34.9	41.4	23.7	100.0
<u>Housing Estate</u>				
Ang Mo Kio	64.0	36.0	0.0	100.0
Bedok	62.7	37.3	0.0	100.0
Bukit Ho Swee	12.0	26.0	62.0	100.0
Clementi	68.0	32.0	0.0	100.0
Marine Parade	24.0	71.0	5.0	100.0
Queenstown	10.7	30.7	58.6	100.0
Telok Blangah	21.0	72.0	7.0	100.0
Toa Payoh	18.0	39.0	43.0	100.0
Jurong	33.3	48.7	18.0	100.0
All estates	34.9	41.4	23.7	100.0
All Respondents (%)	34.9	41.4	23.7	100.0
(N)	419	497	284	1200

Table VI.2 Duration of Residence at the Present Housing Estate by Age, Income, and Type of Relocatee

	Less than 3 years	3-6 years	7 years or more	Total
<u>Age Group</u>				
Under 30	54.2	35.6	10.2	100.0
30 - 39	40.7	48.5	10.8	100.0
40 - 49	24.7	40.7	34.6	100.0
50 and above	24.0	38.0	38.0	100.0
All groups	34.9	41.4	23.7	100.0
<u>Type of Relocatee</u>				
Voluntary relocatees	34.9	41.0	24.1	100.0
Involuntary relocatees	34.8	42.4	22.8	100.0
All types	34.9	41.4	23.7	100.0
<u>Household Income</u>				
Below \$500	45.3	32.3	22.4	100.0
\$500 - \$749	37.5	37.4	25.1	100.0
\$750 - \$999	30.9	44.5	24.6	100.0
\$1000 - \$1499	30.3	44.4	25.3	100.0
\$1500 and above	32.5	47.1	20.4	100.0
Not applicable	33.4	66.6	0.0	100.0
All groups	34.9	41.4	23.7	100.0
All Respondents (%)	34.9	41.4	23.7	100.0
(N)	419	497	284	1200

Table VI.3 Whether the Flats Are of the Respondents' Own Choice (Ethnicity, Age and Type of Relocatee.)

	Their choice	Not their choice	No special preference	Total
<u>Ethnic Group</u>				
Chinese	79.7	6.1	14.2	100.0
Malay	76.4	7.3	16.3	100.0
Indian	79.6	11.7	8.7	100.0
Other	85.0	5.0	10.0	100.0
All groups	79.0	6.9	14.1	100.0
<u>Type of Relocatee.</u>				
Voluntary relocatees	82.8	7.0	10.2	100.0
Involuntary relocatees	68.4	6.6	25.0	100.0
All types	79.0	6.9	14.1	100.0
<u>Age Group</u>				
Under 30	76.4	9.3	14.3	100.0
30 - 39	81.8	7.2	11.0	100.0
40 - 49	78.2	6.7	15.1	100.0
50 and above	78.3	5.0	16.7	100.0
All groups	79.0	6.9	14.1	100.0
All Respondents (%)	79.0	6.9	14.1	100.0
(N)	948	83	169	1200

Table VI.4 Type of Housing People Would Like to Live in by Ethnicity, Age and Income

	High-rise flat	Low-rise housing	Indifferent	Total
<u>Ethnic Group</u>				
Chinese	36.2	48.9	14.9	100.0
Malay	44.1	35.5	20.5	100.0
Indian	36.9	48.5	14.6	100.0
Other	20.0	70.0	10.0	100.0
All groups	37.7	46.4	15.9	100.0
<u>Age Group</u>				
Under 30	40.0	44.4	15.6	100.0
30 - 39	40.5	46.6	12.9	100.0
40 - 49	35.3	47.1	17.6	100.0
50 and above	35.0	47.0	18.0	100.0
All groups	37.7	46.4	15.9	100.0
<u>Household Income</u>				
Below \$500	47.3	33.3	19.4	100.0
\$500 - \$749	41.2	40.4	18.4	100.0
\$750 - \$999	39.4	43.2	17.4	100.0
\$1000 - \$1499	36.9	49.3	13.8	100.0
\$1500 and above	23.3	65.5	11.2	100.0
Not applicable	16.7	83.3	0.0	100.0
All groups	37.7	46.4	15.9	100.0
All Respondents (%)	37.7	46.4	15.9	100.0
(N)	452	557	191	1200

Table VI.5 Type of Housing People Would Like to Live in
by Type of Flat, Floor Level, Previous Residential
Area and Type of Previous Housing

	High-rise flat	Low-rise housing	Indifferent	Total
<u>Type of Flat</u>				
One-room	40.8	43.2	16.0	100.0
Two-room	42.9	33.8	23.3	100.0
Three-room	40.8	45.2	14.0	100.0
Four-room	31.7	52.5	15.8	100.0
Five-room	20.3	66.5	13.2	100.0
All types	37.7	46.4	15.9	100.0
<u>Floor Level of the Flat</u>				
Ground-2nd floor	34.8	45.2	20.0	100.0
3rd-4th floor	39.3	44.5	16.2	100.0
5th-6th floor	39.7	45.2	15.1	100.0
7th-8th floor	40.2	44.9	14.9	100.0
9th-10th floor	40.0	42.2	17.8	100.0
11th-12th floor	39.8	53.1	7.1	100.0
13th and above	28.7	54.8	16.5	100.0
All levels	37.7	46.4	15.9	100.0
<u>Previous Residential Area</u>				
City Centre	37.9	44.1	18.0	100.0
Suburban area	36.6	47.2	16.2	100.0
Rural	39.1	48.5	12.4	100.0
All areas	37.7	46.4	15.9	100.0
<u>Type of Previous Housing</u>				
High-rise housing	40.6	43.1	16.3	100.0
Low-rise housing	35.4	49.0	15.6	100.0
All types	37.7	46.4	15.9	100.0
All Respondents (%)	37.7	46.4	15.9	100.0
(N)	452	557	191	1200

Table VII.1 Changes in Household Expenditure and Commuting Time after Moving into Public Housing Flats

	Increased	Reduced	No change	No answer/ not applicable	Total
<u>Item</u>					
Rental	36.5	2.3	6.2	55.0	100.0
PUB bill	84.1	1.8	8.4	4.3	100.0
Food expenses	77.7	0.9	16.2	5.2	100.0
Transport expenses	70.1	7.3	17.3	5.3	100.0
Commuting time (to work, school, market, etc.)	52.7	14.3	24.7	8.3	100.0
<u>Housing Estate</u>	(Transport Expenses)				
Ang Mo Kio	70.6	4.6	8.7	16.1	100.0
Bedok	70.6	8.0	17.3	4.1	100.0
Bukit Ho Swee	62.0	11.0	25.0	2.0	100.0
Clementi	77.0	6.0	12.0	5.0	100.0
Marine Parade	83.0	5.0	11.0	1.0	100.0
Queenstown	84.6	6.0	8.0	1.4	100.0
Telok Blangah	56.0	6.0	18.0	20.0	100.0
Toa Payoh	84.0	4.5	10.0	1.5	100.0
Jurong	37.3	15.4	46.7	0.6	100.0
All estates (%)	70.1	7.3	17.3	5.3	100.0
(N)	841	89	207	63	1200
<u>Housing Estate</u>	(Commuting Time)				
Ang Mo Kio	44.7	20.0	14.7	20.6	100.0
Bedok	51.3	14.0	24.7	10.0	100.0
Bukit Ho Swee	50.0	13.0	30.0	7.0	100.0
Clementi	57.0	22.0	14.0	7.0	100.0
Marine Parade	57.0	12.0	27.0	4.0	100.0
Queenstown	55.3	14.0	24.0	6.7	100.0
Telok Blangah	45.0	11.0	22.0	22.0	100.0
Toa Payoh	70.5	9.0	17.5	2.0	100.0
Jurong	36.6	14.0	48.7	0.7	100.0
All estates (%)	52.7	14.3	24.7	8.3	100.0
(N)	632	172	296	100	1200

Table VII.2 Satisfaction with the Living Conditions of the HDB Flat by Ethnicity, Age, Type of Relocatee, Previous Residential Area, and Type of Previous Housing

	Very satisfied	Quite satisfied	Not satisfied	Total
<u>Ethnic Group</u>				
Chinese	16.6	74.8	8.6	100.0
Malay	24.5	69.4	6.1	100.0
Indian	20.4	68.9	10.7	100.0
Other	20.0	65.0	15.0	100.0
All groups	18.6	73.0	8.4	100.0
<u>Age Group</u>				
Under 30	16.0	74.2	9.8	100.0
30 - 39	19.0	73.3	7.7	100.0
40 - 49	20.5	72.4	7.1	100.0
50 and above	18.0	72.3	9.7	100.0
All groups	18.6	73.0	8.4	100.0
<u>Type of Relocatee</u>				
Voluntary relocatees	20.2	73.5	6.3	100.0
Involuntary relocatees	14.3	71.6	14.1	100.0
All types	18.6	73.0	8.4	100.0
<u>Previous Residential Area</u>				
City centre	16.3	72.8	10.9	100.0
Suburban area	20.0	74.2	5.8	100.0
Rural	19.3	71.5	9.2	100.0
All areas	18.6	73.0	8.4	100.0
<u>Type of Previous Housing</u>				
High-rise housing	21.8	71.5	6.7	100.0
Low-rise housing	16.0	74.1	9.9	100.0
All Respondents (%)	18.6	73.0	8.4	100.0
(N)	223	876	101	1200

Table VII.3 Satisfaction with the Living Conditions
of the HDB Flat by Area of Public Housing
Estate and Income Group

	Very satisfied	Quite satisfied	Not satisfied	Total
<u>Housing Estate</u>				
Ang Mo Kio	23.3	71.3	5.4	100.0
Bedok	18.0	75.3	6.7	100.0
Bukit Ho Swee	11.0	66.0	23.0	100.0
Clementi	30.0	67.0	3.0	100.0
Marine Parade	33.0	57.0	10.0	100.0
Queenstown	17.3	76.0	6.7	100.0
Telok Blangah	11.0	77.0	11.1	100.0
Toa Payoh	13.5	79.0	7.6	100.0
Jurong	15.3	78.0	6.7	100.0
All estates	18.6	73.0	8.4	100.0
<u>Household Income</u>				
Below \$500	15.9	74.1	10.0	100.0
\$500 - \$749	20.2	73.0	6.8	100.0
\$750 - \$999	14.4	78.4	7.2	100.0
\$1000 - \$1499	20.8	72.9	6.3	100.0
\$1500 and above	20.4	66.0	13.6	100.0
Not applicable	33.3	66.7	0.0	100.0
All groups	18.6	73.0	8.4	100.0
All Respondents (%)	18.6	73.0	8.4	100.0
(N)	223	876	101	1200

Table VII.4 Satisfaction with the Living Conditions of the HDB Flat by Duration of Residence, Floor Level, and Type of Flat

	Very satisfied	Quite satisfied	Not satisfied	Total
<u>Duration of Residence</u>				
Less than 3 years	18.3	74.2	7.5	100.0
3 to 6 years	23.3	70.4	6.3	100.0
7 years and more	10.6	76.4	13.0	100.0
All groups	18.6	73.0	8.4	100.0
<u>Floor Level of the Flat</u>				
Ground-2nd floor	16.1	70.0	13.9	100.0
3rd-4th floor	21.0	69.4	9.6	100.0
5th-6th floor	17.1	74.9	8.0	100.0
7th-8th floor	17.0	73.7	9.3	100.0
9th-10th floor	13.0	81.6	5.4	100.0
11th - 12th floor	24.5	69.4	6.1	100.0
13th and above	27.0	69.6	3.4	100.0
All levels	18.6	73.0	8.4	100.0
<u>Type of Flat</u>				
One-room	10.4	75.2	14.4	100.0
Two-room	17.1	73.3	9.6	100.0
Three-room	18.6	73.1	8.3	100.0
Four-room	23.8	71.3	4.9	100.0
Five-room	23.4	71.5	5.1	100.0
All types	18.6	73.0	8.4	100.0
All Respondents (%)	18.6	73.0	8.4	100.0
(N)	223	876	101	1200

Table VII.5 Reasons Why People Are Not Happy with Their HDB Flats

	Number	Percentage
<u>Total Sample</u>		
Happy with the Flat	810	67.5
Unhappy with the Flat	390	32.5
Total	1200	100.0
<u>Main Reason of Dissatisfaction</u>		
1. Too small	120	30.8
2. Too noisy	91	23.3
3. Too hot	30	7.7
4. Inconvenient to go up and down	25	6.4
5. Too much time wasted for commuting to work, school, market, etc.	24	6.2
6. Too far away from close relatives	11	2.8
7. Bad neighbours	10	2.6
8. No sufficient playing areas for children	10	2.6
9. Other reasons	69	17.6
Sub-total	390	100.0

Table VIII.1 Comparison of Present Neighbourhood with Previous Neighbourhood (Ethnicity, Age, and Type of Relocatee)

Present Neighbourhood	Better	Same	Worse	Uncertain	Total
<u>Ethnic Group</u>					
Chinese	39.5	37.8	18.1	4.6	100.0
Malay	46.9	32.7	19.2	1.2	100.0
Indian	46.6	31.1	16.5	5.8	100.0
Other	55.0	10.0	20.0	10.0	100.0
All groups	41.8	35.7	18.4	4.1	100.0
<u>Age Group</u>					
Under 30	34.7	40.9	16.0	8.4	100.0
30 - 39	44.4	35.5	16.0	4.1	100.0
40 - 49	46.8	32.1	17.9	3.2	100.0
50 and above	39.4	35.7	23.2	1.7	100.0
All groups	41.8	35.7	18.4	4.1	100.0
<u>Type of Relocatee</u>					
Voluntary relocatees	42.1	39.5	14.9	3.5	100.0
Involuntary relocatees	41.6	25.7	27.2	5.5	100.0
All types	41.8	35.7	18.4	4.1	100.0
All Respondents (%)	41.8	35.7	18.4	4.1	100.0
(N)	503	428	220	49	1200

Table VIII.2 Comparison of Present Neighbourhood with Previous Neighbourhood (Household Income, Area of Housing Estate, and Duration of Residence)

Present Neighbourhood	Better	Same	Worse	Uncertain	Total
<u>Housing Estate</u>					
Ang Mo Kio	33.3	40.0	22.0	4.7	100.0
Bedok	39.3	32.0	24.0	4.7	100.0
Bukit Ho Swee	33.0	49.0	13.0	5.0	100.0
Clementi	39.0	40.0	13.0	8.0	100.0
Marine Parade	44.0	30.0	21.0	5.0	100.0
Queenstown	40.0	44.0	14.7	1.3	100.0
Telok Blangah	36.0	30.0	29.0	5.0	100.0
Toa Payoh	45.0	34.0	18.0	3.0	100.0
Jurong	61.4	24.7	11.3	2.6	100.0
All estates	41.8	35.7	18.4	4.1	100.0
<u>Household Income</u>					
Below \$500	41.3	37.3	18.4	3.0	100.0
\$500 - \$749	39.4	39.0	17.6	4.0	100.0
\$750 - \$999	41.1	37.3	19.5	2.1	100.0
\$1000 - \$1499	43.7	33.1	16.9	6.3	100.0
\$1500 and above	44.7	31.1	19.9	4.3	100.0
Not applicable	33.3	50.0	16.7	0.0	100.0
All groups	41.8	35.7	18.4	4.1	100.0
<u>Duration of Residence</u>					
Less than 3 years	37.7	36.7	19.1	6.5	100.0
3 to 6 years	45.3	33.0	19.3	2.4	100.0
7 years and above	42.3	38.7	15.5	3.5	100.0
All groups	41.8	35.7	18.4	4.1	100.0
All Respondents (%)	41.8	35.7	18.4	4.1	100.0
(N)	503	428	220	49	1200

Table VIII.3 Comparison of Present Neighbourhood with Previous Neighbourhood (Floor Level of the Flat, Type of Flat, Previous Residential Area, and Type of Previous Housing)

Present Neighbourhood	Better	Same	Worse	Uncertain	Total
<u>Floor Level of the Flat</u>					
Ground-2nd floor	39.5	41.1	18.3	1.1	100.0
3rd-4th floor	40.2	33.6	22.7	3.5	100.0
5th-6th floor	43.3	36.7	14.5	5.5	100.0
7th-8th floor	45.9	34.5	15.0	4.6	100.0
9th-10th floor	41.6	36.8	18.4	3.2	100.0
11th-12th floor	38.8	35.7	19.4	6.1	100.0
13th or above	43.5	29.6	20.8	6.1	100.0
All levels	41.8	35.7	18.4	4.1	100.0
<u>Type of Flat</u>					
One-room	32.8	43.2	20.8	3.2	100.0
Two-room	39.6	42.9	13.7	3.8	100.0
Three-room	44.6	34.2	17.4	3.8	100.0
Four-room	39.6	37.6	17.8	5.0	100.0
Five-room	43.7	24.7	25.9	5.7	100.0
All types	41.8	35.7	18.4	4.1	100.0
<u>Previous Residential Area</u>					
City centre	38.1	42.2	15.5	4.2	100.0
Suburban area	41.5	34.6	20.2	3.7	100.0
Rural	48.2	28.1	19.0	4.7	100.0
All areas	41.8	35.7	18.4	4.1	100.0
<u>Type of Previous Housing</u>					
High-rise housing	39.8	42.3	14.0	3.9	100.0
Low-rise housing	43.5	30.5	21.7	4.3	100.0
All types	41.8	35.7	18.4	4.1	100.0
All Respondents (%)	41.8	35.7	18.4	4.1	100.0
(N)	503	428	200	49	1200

Table VIII.4 Comparison of Neighbourly Contacts in Present and Previous Neighbourhood (Ethnicity, Age, Type of Relocatee, and Duration of Residence)

Present Neighbourhood	Less contact	About the same	More contact	Uncertain	Total
<u>Ethnic Group</u>					
Chinese	38.7	40.6	17.1	3.6	100.0
Malay	39.2	33.5	26.1	1.2	100.0
Indian	42.7	33.0	21.4	2.9	100.0
Other	50.0	25.0	25.0	0.0	100.0
All groups	39.3	38.3	19.4	3.0	100.0
<u>Age Group</u>					
Under 30	40.0	33.3	20.4	6.3	100.0
30 - 39	38.8	40.2	17.9	3.1	100.0
40 - 49	34.6	41.0	22.1	2.3	100.0
50 and above	44.3	36.7	17.7	1.3	100.0
All groups	39.3	38.3	19.4	3.0	100.0
<u>Type of Relocatee</u>					
Voluntary relocatees	33.9	41.0	21.4	3.7	100.0
Involuntary relocatees	53.4	31.0	14.3	1.3	100.0
All types	39.3	38.3	19.4	3.0	100.0
<u>Duration of Residence</u>					
Less than 3 years	44.9	32.7	18.1	4.3	100.0
3 to 6 years	42.0	34.6	21.7	1.7	100.0
7 years and more	26.4	52.8	17.3	3.5	100.0
All group	39.3	38.3	19.4	3.0	100.0
All Respondents (%)	39.3	38.3	19.4	3.0	100.0
(N)	472	459	233	36	1200

Table VIII.5 Comparison of Neighbourly Contacts in Present and Previous Neighbourhood (Household Income and Area of Housing Estate)

Present Neighbourhood	Less contact	About the same	More contact	Uncertain	Total
<u>Housing Estate</u>					
Ang Mo Kio	41.3	33.3	22.0	3.4	100.0
Bedok	49.3	23.3	24.7	2.7	100.0
Bukit Ho Swee	18.0	64.0	14.0	4.0	100.0
Clementi	57.0	28.0	9.0	6.0	100.0
Marine Parade	40.0	34.0	24.0	2.0	100.0
Queenstown	20.7	53.3	24.0	2.0	100.0
Telok Blangah	50.0	29.0	20.0	1.0	100.0
Toa Payoh	31.5	44.0	20.5	4.0	100.0
Jurong	51.3	34.0	12.7	2.0	100.0
All estates	39.3	38.3	19.4	3.0	100.0
<u>Household Income</u>					
Below \$500	32.2	44.3	22.4	1.0	100.0
\$500 - \$749	35.6	40.4	20.6	3.4	100.0
\$750 - \$999	42.2	37.7	16.9	3.0	100.0
\$1000 - \$1499	41.2	35.9	18.7	4.2	100.0
\$1500 and above	45.1	32.5	19.4	3.0	100.0
Not applicable	33.3	66.7	0.0	0.0	100.0
All groups	39.3	38.3	19.4	3.0	100.0
All Respondents (%)	39.3	38.3	19.4	3.0	100.0
(N)	472	459	233	36	1200

Table VIII.6 Comparison of Neighbourly Contacts in Present and Previous Neighbourhood (Floor Level, Type of Flat, Previous Residential Area, and Type of Previous Housing)

Present Neighbourhood	Less contact	About the same	More contact	Uncertain	Total
<u>Floor Level of the Flat</u>					
Ground-2nd floor	33.9	43.9	22.2	0.0	100.0
3rd-4th floor	36.3	39.1	22.9	1.7	100.0
5th-6th floor	36.2	41.7	18.6	3.5	100.0
7th-8th floor	38.1	36.1	19.6	6.2	100.0
9th-10th floor	38.4	40.9		2.2	100.0
11th-12th floor	45.9	30.6	18.4	5.1	100.0
13th and above	50.4	31.3	14.8	3.5	100.0
All levels	39.3	38.3	19.4	3.0	100.0
<u>Type of Flat</u>					
One-room	28.8	40.0	28.0	3.2	100.0
Two-room	23.8	51.9	21.4	2.9	100.0
Three-room	41.3	37.1	18.8	2.8	100.0
Four-room	51.5	29.7	14.9	3.9	100.0
Five-room	53.2	28.5	15.2	3.1	100.0
All types	39.3	38.3	19.4	3.0	100.0
<u>Previous Residential Area</u>					
City centre	33.7	45.6	17.5	3.2	100.0
Suburban area	38.2	37.0	21.7	3.1	100.0
Rural	49.6	29.6	18.2	2.6	100.0
All areas	39.3	38.3	19.4	3.0	100.0
<u>Type of Previous Housing</u>					
High-rise housing	32.8	44.2	19.4	3.6	100.0
Low-rise housing	44.4	33.6	19.5	2.5	100.0
All types	39.3	38.3	19.4	3.0	100.0
All Respondents (%)	39.3	38.3	19.4	3.0	100.0
(N)	472	459	233	36	1200

Table VIII.7 How Well Do People Know Their Neighbours
in Public Housing Estates (Ethnicity, Age,
Income, and Duration of Residence)

How many neighbours do they know?	Most of the neighbours	A few of the neighbours	No one at all	Total
<u>Ethnic Group</u>				
Chinese	26.1	72.2	1.7	100.0
Malay	44.5	54.7	0.8	100.0
Indian	35.9	63.1	1.0	100.0
Other	50.0	45.0	5.0	100.0
All groups	31.1	67.4	1.5	100.0
<u>Age Group</u>				
Under 30	22.7	73.7	3.6	100.0
30 - 39	28.4	69.1	2.5	100.0
40 - 49	37.8	61.6	0.6	100.0
50 and above	33.7	66.3	0.0	100.0
All groups	31.1	67.4	1.5	100.0
<u>Household Income</u>				
Below \$500	32.3	66.2	1.5	100.0
\$500 - \$749	30.7	68.6	0.7	100.0
\$750 - \$999	32.2	66.5	1.3	100.0
\$1000 - \$1499	34.2	63.0	2.8	100.0
\$1500 and above	25.2	73.3	1.5	100.0
Not applicable	16.7	83.3	0.0	100.0
All groups	31.1	67.4	1.5	100.0
<u>Duration of Residence</u>				
Less than 3 years	21.5	74.9	3.6	100.0
3 to 6 years	30.8	68.6	0.6	100.0
7 years and above	45.8	53.8	0.4	100.0
All groups	31.1	67.4	1.5	100.0
All Respondents (%)	31.1	67.4	1.5	100.0
(N)	373	804	19	1200

Table VIII.8 How Well Do People Know Their Neighbours in Public Housing Estates (Type of Flat, Housing Estate, and Floor Level of the Flat)

How many neighbours do they know?	Most of the neighbours	A few of the neighbours	No one at all	Total
<u>Type of Flat</u>				
One-room	33.6	64.8	1.6	100.0
Two-room	30.5	68.0	1.5	100.0
Three-room	36.3	62.4	1.3	100.0
Four-room	18.8	80.2	1.0	100.0
Five-room	17.7	79.1	3.2	100.0
All types	31.1	67.4	1.5	100.0
<u>Housing Estate</u>				
Ang Mo Kio	36.7	62.0	1.3	100.0
Bedok	39.3	58.0	2.7	100.0
Bukit Ho Swee	28.0	70.0	2.0	100.0
Clementi	11.0	83.0	6.0	100.0
Marine Parade	26.0	73.0	1.0	100.0
Queenstown	43.3	56.7	0.0	100.0
Telok Blangah	22.0	76.0	2.0	100.0
Toa Payoh	31.0	68.5	0.5	100.0
Jurong	30.0	69.3	0.7	100.0
All estates	31.1	67.4	1.5	100.0
<u>Floor Level of the Flat</u>				
Ground-2nd floor	38.5	61.5	0.0	100.0
3rd-4th floor	37.5	62.1	0.4	100.0
5th-6th floor	35.2	63.8	1.0	100.0
7th-8th floor	29.9	69.1	1.0	100.0
9th-10th floor	27.6	70.8	1.6	100.0
11th-12th floor	25.5	69.4	5.1	100.0
13th and above	12.1	82.7	5.2	100.0
All levels	31.1	67.4	1.5	100.0
All Respondents (%)	31.1	67.4	1.5	100.0
(N)	373	808	19	1200

Table VIII.9 Relationship with Neighbours by Ethnicity, Age and Income

	No contact	Incidental talks only	Frequent contacts	Total
<u>Ethnic Group</u>				
Chinese	24.5	43.9	31.6	100.0
Malay	13.5	40.8	45.7	100.0
Indian	22.3	26.9	40.8	100.0
Other	15.0	50.0	35.0	100.0
All groups	22.0	42.8	35.2	100.0
<u>Age Group</u>				
Under 30	24.0	43.5	32.5	100.0
30 - 39	24.8	41.0	34.2	100.0
40 - 49	18.3	42.6	39.1	100.0
50 and above	21.0	44.3	34.7	100.0
All groups	22.0	42.8	35.2	100.0
<u>Household Income</u>				
Below \$500	18.4	40.3	41.3	100.0
\$500 - \$749	19.9	37.1	43.0	100.0
\$750 - \$999	18.2	49.2	32.6	100.0
\$1000 - \$1499	22.9	41.2	35.9	100.0
\$1500 and above	30.6	43.7	25.7	100.0
Not applicable	50.0	50.0	0.0	100.0
All groups	22.0	42.8	35.2	100.0
All Respondents (%)	22.0	42.8	35.2	100.0
(N)	264	513	423	1200

Table VIII.10 Relationship with Neighbours by Type of Flat and Area of Housing Estate

	No contact	Incidental talks only	Frequent contacts	Total
<u>Type of Flat</u>				
One-room	10.4	48.8	40.8	100.0
Two-room	21.4	44.8	33.8	100.0
Three-room	20.8	38.0	41.2	100.0
Four-room	19.8	56.4	23.8	100.0
Five-room	37.3	45.6	17.1	100.0
All types	22.0	42.8	35.2	100.0
<u>Housing Estate</u>				
Ang Mo Kio	19.3	50.7	30.0	100.0
Bedok	28.7	45.3	26.0	100.0
Bukit Ho Swee	13.0	37.0	50.0	100.0
Clementi	36.0	35.0	29.0	100.0
Marine Parade	27.0	43.0	30.0	100.0
Queenstown	24.7	42.7	32.6	100.0
Telok Blangah	31.0	34.0	35.0	100.0
Toa Payoh	20.0	50.0	30.0	100.0
Jurong	5.3	37.3	57.3	100.0
All estates	22.0	42.8	35.2	100.0
All Respondents (%)	22.0	42.8	35.2	100.0
(N)	264	513	423	1200

Table VIII.11 Frequency of Visiting Neighbours by Ethnicity, Age, Type of Relocatee and Duration of Residence

	Often	Seldom	Never	Total
<u>Ethnic Group</u>				
Chinese	30.9	44.2	24.9	100.0
Malay	40.4	44.1	15.5	100.0
Indian	31.1	41.7	27.2	100.0
Other	10.0	45.0	45.0	100.0
All groups	32.6	43.9	23.5	100.0
<u>Age Group</u>				
Under 30	28.8	41.3	29.9	100.0
30 - 39	30.5	42.7	26.8	100.0
40 - 49	37.2	45.8	17.0	100.0
50 and above	33.0	45.3	21.7	100.0
All groups	32.6	43.9	23.5	100.0
<u>Type of Relocatee</u>				
Voluntary relocatees	32.1	44.5	23.4	100.0
Involuntary relocatees	33.7	42.5	23.8	100.0
All types	32.6	43.9	23.5	100.0
<u>Duration of Residence</u>				
Less than 3 years	27.0	39.3	33.7	100.0
3 to 6 years	35.0	42.0	23.0	100.0
7 years and more	36.6	53.9	9.5	100.0
All groups	32.6	43.9	23.5	100.0
All Respondents (%)	32.6	43.9	23.5	100.0
(N)	391	527	282	1200

Table VIII.12 Frequency of Visiting Neighbours by Household Income and Area of Housing Estate

	Often	Seldom	Never	Total
<u>Housing Estate</u>				
Ang Mo Kio	29.3	44.7	26.0	100.0
Bedok	30.0	31.3	38.7	100.0
Bukit Ho Swee	42.0	41.0	17.0	100.0
Clementi	18.0	38.0	44.0	100.0
Marine Parade	23.0	44.0	33.0	100.0
Queenstown	32.7	45.3	22.0	100.0
Telok Blangah	29.0	44.0	27.0	100.0
Toa Payoh	28.0	62.0	10.0	100.0
Jurong	56.7	36.0	7.3	100.0
All estates	32.6	43.9	23.5	100.0
<u>Household Income</u>				
Below \$500	32.3	49.2	18.5	100.0
\$500 - \$749	36.2	41.9	21.9	100.0
\$750 - \$999	35.6	42.8	21.6	100.0
\$1000 - \$1499	29.8	46.8	23.4	100.0
\$1500 and above	27.1	38.8	34.1	100.0
Not applicable	16.7	33.3	50.0	100.0
All groups	32.6	43.9	23.5	100.0
All Respondents (%)	32.6	43.9	23.5	100.0
(N)	391	527	282	1200

Table VIII.13 Frequency of Visiting Neighbours by Floor Level, Type of Flat and Previous Residential Area

	Often	Seldom	Never	Total
<u>Floor Level of the Flat</u>				
Ground-2nd floor	34.9	44.8	20.3	100.0
3rd-4th floor	33.5	44.9	21.6	100.0
5th-6th floor	35.4	44.5	20.1	100.0
7th-8th floor	37.8	42.2	20.0	100.0
9th-10th floor	30.3	45.9	23.8	100.0
11th-12th floor	24.4	48.0	27.6	100.0
13th and above	27.0	40.9	32.1	100.0
All levels	32.6	43.9	23.5	100.0
<u>Type of Flat</u>				
One-room	34.4	53.6	12.0	100.0
Two-room	36.4	48.6	15.0	100.0
Three-room	36.1	41.3	22.6	100.0
Four-room	33.6	42.6	23.8	100.0
Five-room	14.6	41.8	43.6	100.0
All types	32.6	43.9	23.5	100.0
<u>Previous Residential Area</u>				
City centre	31.5	45.4	23.1	100.0
Suburban area	28.5	45.0	26.5	100.0
Rural	41.9	39.4	18.7	100.0
All areas	32.6	43.9	23.5	100.0
All Respondents (%)	32.6	43.9	23.5	100.0
(N)	391	527	282	1200

Case No. _____

RELOCATION AND HIGH-RISE
LIVING IN SINGAPORE

Survey Questionnaire
Singapore, 1980

Interviewer: _____

Date: _____

Classification: _____

PSYCHO-SOCIAL STUDY OF HIGH-DENSITY LIVING IN SINGAPORE

I. BACKGROUND INFORMATION

1. Sex of Respondent

Female 1; Male 2

2. What is your age?

under 20 1
20 - 29 2
30 - 39 3
40 - 49 4
50 and above 5

3. Marital Status

Single 1
Married 2
Divorced/separated/widowed 3

4. What is the highest educational level you have attained?

No formal education 1
Primary education 2
Secondary education 3
Post-secondary education 4
University 5

5. What is your major stream of education?

English 1
Chinese 2
English/Chinese 3
Malay 4
English/Malay 5
Tamil 6
Other 7
Inapplicable 8

6. What is your ethnic group?

Chinese 1
Malay 2
Indian/Pakistanis/Ceylonese 3
Other 4

7. What is your religion?

Buddhist/Chinese traditional worship 1
Catholic 2
Protestant 3
Hindu 4
Muslim 5
No religion 6
Other 7

8. Are you working (studying) now?

Working	1
Studying	2
Not working (and not studying)	3

9. What kind of work (job) do you do? (If retired, your latest occupation).

Professional and related workers	1
Administrative, executive and managerial	2
Clerical and related workers	3
Sales workers	4
Manual work (workers in transport, production process, communication, services and recreational occupations).....	5
Others	6
Inapplicable/DK	9

10. What is your (individual) monthly income?

Below \$250	1
\$250 - \$499	2
\$500 - \$749	3
\$750 - \$999	4
\$1,000 - \$1,249	5
\$1,250 - \$1,499	6
\$1,500 - \$1,999	7
\$2,000 and over	8
Not applicable/N.A.	9

11. What is your household's (total) monthly income on the average?

Below \$250	1
\$250 - \$499	2
\$500 - \$749	3
\$750 - \$999	4
\$1,000 - \$1,249	5
\$1,250 - \$1,499	6
\$1,500 - \$1,999	7
\$2,000 and over	8
N.A./D.K.	9

12. How many people in your family contribute to the household income?

One	1
Two	2
Three	3
Four and above	4
Not applicable/N.A.	9

13. Average income per person (for official coding)



14. What type of house do you live in?
- | | |
|---|---|
| HUDC/HDB (4- and 5-room flat) | 1 |
| Other public housing (HDB, JTC, SIT, etc). | 2 |
| Private flat/apartment | 3 |
| Bungalow/semi-detached house | 4 |
| Terrace house/shophouse/row house | 5 |
| Attap/zinc house | 6 |
| Other | 7 |
15. High-rise or low-rise housing (for official coding)
- | | |
|-------------------------|---|
| High-rise housing | 1 |
| Low-rise housing | 2 |
16. If high-rise housing, which floor do you live?
- | | |
|--------------------------|---|
| Ground - 2nd floor | 1 |
| 3rd - 4th floor | 2 |
| 5th - 6th floor | 3 |
| 7th - 8th floor | 4 |
| 9th - 10th floor | 5 |
| 11th - 12th floor | 6 |
| 13th or above | 7 |
17. How many rooms are there in this dwelling unit?
- | | |
|--------------------|---|
| One room | 1 |
| Two rooms | 2 |
| Three rooms | 3 |
| Four rooms | 4 |
| Five rooms | 5 |
| Six and more | 6 |
18. Number of floors in this block: _____
- | | |
|---------------------------|---|
| 1 - 4 storeys | 1 |
| 5 - 8 storeys | 2 |
| 9 - 12 storeys | 3 |
| 13 - 16 storeys | 4 |
| 17 - 20 storeys | 5 |
| 21 and more storeys | 6 |
19. Is this flat next to the lift and/or staircase?
- | | |
|--------------------------|---|
| No | 1 |
| Staircase only | 2 |
| Lift only | 3 |
| Staircase and lift | 4 |
20. Is this a corner flat?
- | | |
|-----------|---|
| Yes | 1 |
| No | 2 |

II. RELOCATION AND NEIGHBOURHOOD

21. How many people are there living together in this dwelling unit?

22. Type of household

- Nuclear family (parents and unmarried children 1
- Extended family (parents, married children and/or grand-parents) 2
- Joint household 3

23. For how long have you been residing in this flat?

Number of years: _____

- Less than one year 1
- 1 - 2 years 2
- 3 - 4 years 3
- 5 - 6 years 4
- 7 - 8 years 5
- 9 - 10 years 6
- More than 10 years 7

24. How many times have you changed residence during the past five years?

- None 1
- Once 2
- Twice 3
- Three times 4
- Four or more times 5

25. Where did you stay before moving into this flat/apartment? (Note down the name of the street/or area).

- City centre 1
- Suburban area 2
- Rural (villages/kumpungs) 3

26. How long did you live there?

- Less than one year 1
- 1 - 3 years 2
- 4 - 6 years 3
- 7 - 9 years 4
- 10 years and more 5

27. What type of housing unit were you living before moving into this one?
- | | |
|--|---|
| Public housing (HDB, JTC, SIT, etc.) | 1 |
| Private flat | 2 |
| Bungalow | 3 |
| Semi-detached house | 4 |
| Terrace house/shophouse/row house | 5 |
| Attap/zinc roof house | 6 |
| Other (specify) _____ | 7 |
28. For official coding - high-rise or low-rise housing.
- | | |
|-------------------------|---|
| High-rise housing | 1 |
| Low-rise housing | 2 |
29. What was the main reason of your leaving your former residence?
- | | |
|---|---|
| Affected by urban renewal or other development projects | 1 |
| Needed more rooms because increase of household size | 2 |
| Decrease of household size | 3 |
| Formation of new household | 4 |
| Change of job | 5 |
| Increase of household income | 6 |
| Decrease of household income | 7 |
| Did not like the former neighbourhood | 8 |
| Not applicable | 9 |
| Other (specify) _____ | 0 |
30. Did you have any friends or relatives living in this estate before you moved in here?
- | | |
|-----------|---|
| Yes | 1 |
| No | 2 |
31. Is the flat that you are now occupying
- | | |
|--|---|
| In the estate of your choice | 1 |
| Not in the estate of your choice | 2 |
| Allotted by HDB because did not specify preference of estate | 3 |
32. Do you plan to move out of this flat in the near future? If yes, where would you moved to?
- | | |
|--|---|
| No, do not plan to move | 1 |
| Yes, moving to another HDB flat in the same estate | 2 |
| Moving to another HDB flat in another estate | 3 |
| Moving to a non-HDB housing | 4 |
| Uncertain | 9 |

33. What is the main reason of your plan to leave the present residence?

Affected by urban redevelopment projects	1
Need more rooms because increase of household size	2
Decrease of household size	3
Formation of new household	4
Change of job	5
Increase of household income	6
Decrease of household income	7
Do not like the present neighbourhood	8
Not applicable	9
Other (specify) _____	0

34. [Public housing tenants (HDB, HUDC, SIT) only] After you moved into this flat, have there been changes in the following items of your household expenditures?

	<u>Increased</u>		<u>Decreased</u>		<u>No</u>	<u>N.A.</u>
	<u>A lot</u>	<u>A little</u>	<u>A lot</u>	<u>little</u>	<u>change</u>	
Rental	1	2	3	4	5	9
PUB bill	1	2	3	4	5	9
Food bills	1	2	3	4	5	9
Transport expenses	1	2	3	4	5	9
Commuting time (to work, school, market, etc.) ..	1	2	3	4	5	9

35. Do these changes have any adverse effect on your financial situation?

Yes, a lot	1
Yes, a little	2
No	3
D.K./N.A. ,	9

36. Have you changed your job because of changing your residence?

Yes	1
No	2
N.A.	9

37. If yes, did it change for better or for worse?

	<u>Better</u>	<u>Worse</u>	<u>Not much</u>	<u>D.K./N.A.</u>
			<u>different</u>	
Income	1	2	3	9
Travelling time	1	2	3	9
Job satisfaction ...	1	2	3	9
Condition of work ..	1	2	3	9

38. Generally speaking, how would you compare your present neighborhood with the former neighborhood?

Very much better	1
Somewhat better	2
Same	3
Somewhat worse	4
Very much worse	5
Uncertain/N.A.	9

39. Compare to your former neighborhood, do you feel that

there are less neighborly contacts in your present neighborhood	1
about the same	2
more neighbourly contacts here	3
Uncertain/N.A.	9

40. How often do you visit the following people?

	<u>Very frequent</u>	<u>Frequent</u>	<u>In-</u> <u>frequent</u>	<u>Never</u>
Relatives	1	2	3	4
Friends/colleagues .	1	2	3	4
Present neighbours .	1	2	3	4
Former neighbours ..	1	2	3	4

41. Compare to your former neighbourhood, have you been visiting more or less frequently the following people?

	<u>No change</u>	<u>More frequently</u>	<u>Less frequently</u>	<u>N.A</u>
Relatives	1	22	3	9
Friends/colleagues .	1	2	3	9
Neighbours	1	2	3	9

42. Do you engage in the following activities with people of different ethnic groups?

	<u>Yes</u>	<u>No</u>
Exchange of greetings	1	2
Talking on neutral territory	1	2
Visiting each other's flat	1	2
Going out together	1	2
Borrowing of things	1	2
Helping of household chores	1	2
Discussion of personal problems	1	2

43. Compare to your former neighbourhood, do you feel that there are more or fewer people of the other ethnic groups here?

Much more	1
Slightly more	2
About the same	3
Slightly fewer	4
Much fewer	5
N.A.	9

44. Comparing the last place you stayed and the present one, have there been changes in the following?

	No change	Improved	Worsen	D.K./N.A.
Floor space	1	2	3	9
Ventilation	1	2	3	9
Noise	1	2	3	9
Lift service	1	2	3	9
Privacy of home	1	2	3	9
Water supplies	1	2	3	9
Electricity supplies ...	1	2	3	9

III. SATISFACTION WITH THE HOUSING ESTATE AND HOUSING UNIT

45. Generally speaking, are you satisfied with the housing estate you are living?

Yes, very satisfied	1
Yes, quite satisfied	2
Not satisfied	3
Very dissatisfied	4
No answer/D.K.	9

46. Generally speaking, are you satisfied with the living conditions of your flat?

Yes, very satisfied	1
Yes, quite satisfied	2
Not satisfied	3
Very dissatisfied	4
No answer/D.K.	9

47. Are you satisfied with your living space (i.e. area size)?

Yes, very satisfied	1
Yes, quite satisfied	2
No, quite dissatisfied	3
No, very dissatisfied	4
No answer/D.K.	9

48. Would you like to have larger living space?

Yes	1
No	2
D.K./N.A.	9

49. Are you satisfied with the floor on which your flat is located?
If not, which floor would you prefer?

Yes, satisfied 1
 Not satisfied.
 No. of floor preferred: _____
 Ground - 2nd floor 2
 3rd - 4th floor 3
 5th - 6th floor 4
 7th - 8th floor 5
 9th - 10th floor 6
 11th - 12th floor 7
 13th - 14th floor 8
 15th or higher 9

50. What is the main reason for your dissatisfaction with your present flat?

Not applicable, satisfied with present flat.. 0
 Too noisy 1
 Inconvenient to go up and down 2
 Too hot 3
 Too small 4
 Bad neighbours 5
 Too much time wasted for commuting (to
 work, school, market, etc.) 6
 Too far away from close relatives 7
 No playing areas for children 8
 Other (specify) _____ 9

51. If you had the choice, which type of housing unit would you prefer to live in?

High-rise flat (public housing, private
 flat, etc.) 1
 Low-rise house (bungalow, semi-detached
 house, terrace house, etc.) 2
 Indifferent 3

52. Do you have the following facilities around your housing estate?

	<u>Yes</u>	<u>No</u>
a. Community Centre	1	2
b. Playground/park	1	2
c. Swimming pool/sport complex	1	2
d. Market/shopping centre	1	2

53. If you have the following facilities around your housing estate, how often do you use them?

	<u>Often</u>	<u>Occasionally</u>	<u>Never</u>
a. Community Centre	1	2	3
b. Playground/park	1	2	3
c. Swimming pool/ sport complex	1	2	3
d. Market/shopping centre	1	2	3

54. The following is a list of items related to your neighbourhood. How do you find them: satisfactory, acceptable, or unsatisfactory

	<u>Sat.</u>	<u>Accept.</u>	<u>Unsat.</u>	<u>N.A.</u>
Bus service	1	2	3	9
Taxi service	1	2	3	9
Nearness to work	1	2	3	9
Nearness to school for children	1	2	3	9
Nearness to post office	1	2	3	9
Nearness to clinics	1	2	3	9
Nearness to police station ..	1	2	3	9
Nearness to places of worship (church, temple, mosque, etc.)	1	2	3	9
Cleanliness of neighbourhood.	1	2	3	9
Public security in neighbourhood	1	2	3	9
Parking facilities	1	2	3	9
Price of goods in neighbourhood	1	2	3	9

55. Do you think it is a good idea to have voluntary organizations, such as block representatives and residents' association, etc. If yes, are you willing to offer your services?

No need for these organizations	1
Yes, but unwilling to serve	2
Yes, willing to serve	3
Undecided/don't know	9

IV. NEIGHBOURLY INTERACTION AND LEISURE ACTIVITIES

56. Generally speaking, would you say that people in Singapore get on harmoniously with each other?

Yes, very harmoniously	1
Yes, quite harmoniously	2
No, unharmoniously	3
No, very unharmoniously	4
D.K./N.A.	9

57. How about people in your housing estate? Do they get on harmoniously with each other?

Yes, very harmoniously	1
Yes, quite harmoniously	2
No, unharmoniously	3
No, very unharmoniously	4
D.K./N.A.	9

58. Do you think most people in your housing estate know each other well?

Yes, they know each other	1
Yes, they know ... some of them	2
No, they know very few of them	3
No, they don't know each other	4
D.K./N.A.	9

59. How safe do you think it is to go out alone during night time in this area?
- | | |
|-------------------|---|
| Very safe | 1 |
| Quite safe | 2 |
| Unsafe | 3 |
| Very unsafe | 4 |
| D.K./N.A. | 9 |
60. In the past month, have you visited your near neighbours?
- | | |
|----------------------|---|
| No | 1 |
| Yes (How many times) | |
| 1 to 2 times | 2 |
| 3 to 4 times | 3 |
| 5 to 6 times | 4 |
| 6 and more | 5 |
61. Do you know most of your neighbours?
- | | |
|----------------------------|---|
| Yes, most of them | 1 |
| Yes, some of them | 2 |
| No, very few of them | 3 |
| No, no one at all | 4 |
62. How well do you think your neighbours get along with each other?
- | | |
|---------------------------------------|---|
| They do not get along with each other | 1 |
| They are indifferent to each other .. | 2 |
| They get along fairly well | 3 |
| They get along very well | 4 |
| D.K./N.A. | 9 |
63. Do you think you can turn to your neighbours for help in time of emergency?
- | | |
|----------------|---|
| Yes | 1 |
| Not sure | 2 |
| No | 3 |
| D.K./N.A. | 9 |
64. Generally speaking, would you say your neighbours are co-operative and helpful?
- | | |
|----------------|---|
| Yes | 1 |
| No | 2 |
| D.K./N.A. | 9 |
65. Do you (or your family members) often help your neighbours in household chores (e.g. taking care of children, lending household necessities)?
- | | |
|-------------------------|---|
| Yes, quite often | 1 |
| Yes, occasionally | 2 |
| No, never | 3 |
| D.K./N.A. | 9 |

66. Have your neighbours ever helped you (or your family) in household chores?

Yes, quite often 1
 Yes, occasionally 2
 No, never 3
 D.K./N.A. 9

67. How often do you (or your family members) borrow household necessities (e.g. oil, salt, etc) or other small items (e.g. table, chair, etc.) from your neighbours or vice versa?

Yes, quite often 1
 Yes, occasionally 2
 No, never 3
 D.K./N.A. 9

68. Will you seek help from your neighbours if the following kinds of emergencies/important events occur?

	<u>Yes</u>	<u>No</u>	<u>D.K./N.</u>
a. Where there is nobody to take care of the small children	1	2	9
b. When there is financial difficulty .	1	2	9
c. Sudden illness or injury when no other family member at home to help	1	2	9
d. Party/wedding/funeral	1	2	9

69. Where does the neighbour, with whom you are most familiar, live?

Living next door 1
 Living in the same floor 2
 Living in the different floor 3
 Living in the different block 4
 I don't know anyone 5

70. Do you also know some of his/her background such as his/her occupation, family, etc.?

	<u>Yes</u>	<u>No</u>	<u>N.A.</u>
His/her (or spouse's) occupation	1	2	9
His/her family	1	2	9

71. How often do you contact/visit the following people?

	<u>Often</u>	<u>Occasionally</u>	<u>Never</u>	<u>N.A./D.</u>
Relatives	1	2	3	9
Friends/colleagues ..	1	2	3	9
Present neighbours ..	1	2	3	9
Former neighbours ...	1	2	3	9

72. Which of the following statements describes most correctly your relationship with your neighbours?

a. There is no contact, except the exchange of casual greetings 1
 b. The only contact there is consists of an incidental talk on neutral territory (eg. street, staircase)... 2
 c. There are frequent contacts with each other 3

73. What kind of neighbours do you have in your neighbourhood?

- Don't contact each other/with maximum privacy 1
 Mutual assistance/frequently visit each other 2
 Know each other but maintain certain distance 3

74. What kind of neighbors would you like to have?

- Don't contact each other/with maximum privacy 1
 Mutual assistance/frequently visit each other 2
 Know each other but maintain certain distance 3

75. Do you have neighbors of different ethnic group? If yes, would you prefer that they be of the same ethnic group of yours?

- Not applicable, neighbors of same ethnic group 1
 Prefer to have same ethnic group 2
 Does not matter one way or the other 3
 Prefer to have different ethnic groups 4
 No opinion or undecided 5

76. How easy or difficult is it to make friends in your neighborhood?

- Very easy 1
 Somewhat easy 2
 Somewhat difficult 3
 Very difficult 4
 D.K./N.A. , 9

77. Do you have relatives/friends and former neighbors living nearby?

	<u>In the same block</u>	<u>In the same estate</u>	<u>Outside the estate</u>	<u>None</u>
Relatives	1	2	3	4
Friends	1	2	3	4
Former neighbors ...	1	2	3	4

78. How often do you exchange social visits with

	<u>Very frequent</u>	<u>Frequent</u>	<u>In- frequent</u>	<u>Never</u>
Next-door neighbours	1	2	3	4
Other neighbours of the same floor	1	2	3	4
Neighbours on other floors .	1	2	3	4
Neighbours of different blocks	1	2	3	4

79. How many households in your estate do you engage in

	<u>A few (1-5)</u>	<u>Many (6-12)</u>	<u>None</u>
Exchange of greetings	1	2	3
Talking on neutral territory	1	2	3
Visiting each other's flat	1	2	3
Going out together	1	2	3
Borrowing of things	1	2	3
Helping of household chores	1	2	3
Discussion of personal problems	1	2	3

80. If you have children, where do they play most of the time?

	<u>Yes</u>	<u>No</u>
In the house	1	2
In neighbours' flat/house	1	2
Corridor	1	2
Nearby garden/open playground	1	2
Street/shopping area	1	2

81. Usually, how many hours in a day (during weekdays) do your children spend outside your residence (home)?

Less than 1 hour	1
1 to 2 hours	2
3 to 4 hours	3
5 to 6 hours	4
7 hours and more	5
D.K./N.A.	9

82. How often do your children (aged 4-12 years) play with children of neighbours?

	<u>Frequent (several times a week)</u>	<u>Seldom (Once or twice a month)</u>	<u>In-frequent</u>	<u>Never</u>
Next-door children.....	1	2	3	4
Children of the same floor ...	1	2	3	4
Children on other floors .	1	2	3	4
Children in other blocks .	1	2	3	4

83. Do you know (or your parents know) what your children (or younger brothers/sisters) are doing most of the time when they go out to play?

Yes	1
No	2
D.K./N.A.	9

84. Whom do your children usually play with?

	<u>Yes</u>	<u>No</u>
Themselves	1	2
Relatives	1	2
Neighbours	1	2

85. Do your children do the following things with your neighbours' children such as playing, doing homework etc.?

	<u>Yes</u>	<u>No</u>	<u>N.A.</u>
Playing	1	2	9
Doing homework	1	2	9
Watching TV	1	2	9
Visiting each other's home	1	2	9

Case No. _____ Address of Household: _____

Member No.	Sex	Age	Ethnic Group	Relation to Head of Household	Marital Status	Occupation (Specify)	Monthly Income
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

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