MOBILITY, HOUSEHOLD CHANGE AND HOUSING

A Study of the Owner-Occupied Sector of the Housing Market of Palmerston North in 1979

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ABSTRACT

An analysis of the owner-occupied sector of Palmerston North's housing market over the period from January 1979 to December 1979, shows high levels of mobility and household movement. The study provides a conceptual framework to aid understanding of the links between mobility, household change, and housing. It looks at how economic and social forces operative in New Zealand during 1979 influenced the national and local housing markets, describes Palmerston North's housing stock, and proceeds to delineate and map submarkets for the city based on age and value of housing.

Estimates are made of the relative magnitude of the components of household change associated with mobility, including household formation. Data is presented on reasons for moving, and on search and movement patterns of people and households moving into, within and out of Palmerston North City during the year in question. As well, some attempt is made to describe the spatial nature of intra-city movement. The study provides evidence, using the submarket concept, about what types of households have recently been able to move into what kinds of housing. It also considers whether people moving house are "improving" their housing circumstances by doing so. Hints are offered about the types of households which may have less "choice in housing" in the future.

Finally, some implications are drawn about housing outcomes under particular conditions of mobility and population growth, net migration, construction, interest rates

and so forth. Questions are raised about the present decline in the volume of rental housing stock in New Zealand, and about the nature and direction of future governmental policy in the housing sector.

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CHAPTER 1

INTRODUCTION AND ORIGINS OF THE PROBLEM

Household movement is a widespread phenomenon in New Zealand, with over 10 percent of individuals changing their residence each year. Residential mobility may be the major means by which households adjust their housing consumption to changes in housing need or demand. However, mobility is a mechanism for achieving adjustments, not just in individual welfare, but in aggregate social and spatial organisation; in other words, it is the way in which new social forces come to be reflected in space.

The following thesis is a study of mobility and household change in their association with housing stock turnover. The setting is the owner-occupied sector of the Palmerston North housing market in 1979. While the primary aim of the research was to compile facts on the magnitude of the various components of the problem, collection and interpretation of the empirical evidence required an adequate conceptualisation of underlying processes operating in the housing system. The framework developed, and the interrelationships revealed, show the central place of mobility and household change in the housing system. They provide hints about how the system is structured at this point in time, what kind of changes are occurring, and how rapidly this is happening. Although the results obtained are to some extent locationally specific, the local setting was found to reflect national trends fairly

accurately, and in fact had little influence on the methods adopted. The generality of the findings is restricted less by the characteristics of the particular urban area studied than by the time scale of the study.

The period chosen for investigation, from January to December 1979, represents a tradeoff between the acquisition of data about "the state of affairs" and the appropriateness of a twelve month snapshot of patently ongoing processes of change. Assumptions about the state of socio-economic change in New Zealand in the late 1970s and early 1980s are an essential backdrop to the study, but inevitably constrain the applicability of the results to the medium run. The power of the conceptual framework as an explanatory device rests on a full knowledge of the trends embodied by the assumptions. Not withstanding this, the study has validity for temporal and spatial comparisons. It is able to demonstrate the content of change inherent in the housing system, following mobility. As the origins of mobility vary, so will the housing implications, while the relation of the housing system to the wider social system will have an important effect on the housing outcomes resulting from moves.

The processes at work in the housing system in New Zealand are complex, incompletely described, and poorly understood. Not unexpectedly, few facts are available for policy-makers to use in assessing the impact of mobility and household changes upon the housing scene. During the 1970s major changes occurred in New Zealand

society, and by the end of the decade it was evident that most, if not all of the assumptions guiding housing policy should come under scrutiny.

New Zealand housing research in the early 1970s looked chiefly at "housing need", and attempted, by estimating the number and type of future households, as well as assessing the standard of accommodation required and the ability of the housing stock to meet these needs, to define housing goals and objectives. Problems had arisen, however, because of lack of knowledge (and lack of adequate definitions) of the relevant processes operating or about how changes in parameters might affect the system. The prevailing political concern with quantitative targets such as the number of houses built per year had diverted concern from qualitative issues, such as what constituted an "acceptable minimum housing standard". A further framework for research, the "resource or output constraint" approach, sought to explain how the housing system might perform under a range of conditions. This approach does not seem to have been extensively used in New Zealand in the 1970s, but is likely to be much more important in the future, as economic and financial constraints receive increasing emphasis.

The National Housing Commission (NHC) was established in 1974 to sponsor research which might fill some of the gaps in knowledge. Its Five Yearly Report, published in 1978, put forward four main assumptions:

"1. that every New Zealander has a right to decent housing and that the community as a whole is prepared to accept part of the responsibility

for ensuring that this right is fulfilled;

2. that home ownership is still the goal of the majority of New Zealand households, and will remain so in the foreseeable future;
3. that the social and demographic forces which are the fundamental cause of change in the housing situation develop slowly and are essentially unaffected in the short-to-medium term by changes in general economic conditions; and
4. that the housing market has the ability to satisfy most of the diverse housing needs and aspirations of the majority of people"

(NHC, 1978, 2)

Recent events and fresh information have called even these seemingly straightforward assumptions into question. Although New Zealand society has been noted in recent decades for its emphasis on welfarism and collective consumption, these values coexist uneasily with those of individualism and private enterprise. The policy of emphasising the latter values and reducing the role of the state in the housing arena, for example by the scaling down of the state housing system, raises doubts about the extent of government commitment to improve access to housing. This is especially true at a time when the private rental sector is under pressure, (see later chapters) and given the fact that a proportion of individuals or households will never have the means to own their own home. Research has also questioned the unerring preference for home-ownership by most New Zealand households, (Chapman, 1979; Davey, 1980b; Thorns, 1980a) and suggested that it may be more a function of government

policy and circumstance than of deliberate choice. Social and demographic forces may be developing much more rapidly than in the past, and it is likely that economic conditions have a strong influence on the mobility which enables these forces to be expressed as changes in the size and type of households. As well, the nature of the link between the emergence of housing needs and aspirations and social and demographic (as well as economic) changes has been unclear up till now, as has the quantitative importance of these factors (Davey, 1977; Johnston, 1978; Johnston, 1979). During the late 1970s a reversal of economic prosperity and population increase brought with it unfamiliar conditions of slow growth, which demanded new perspectives and policies, and meant that traditional assumptions were often inapplicable. Equally, summary national and regional statistics available have not yet been able to show how and to what extent household demands, needs, or preferences are catered for by the available housing stock. The assumption that the housing market is able to satisfy the needs and aspirations of the majority of the people is merely that - an unproven assumption.

Areas of information shortfall are also evident in the literature. Research on residential mobility has identified three main reasons for moves. These are changing space needs, inter-city job transfers, and home-ownership aspirations, the latter being significant in particular historical and locational contexts. Ideas about who moves and why, through what kinds of housing are being combined with concepts of choice and constraint,

and less distinction is being made between mobility at different scales. Yet an integrated theory of mobility and its effects on housing and social systems is still lacking. The study of household change, as a part of wider social change, is still very recent. Declining birth rates, high net emigration, changes in the role of women and in the size of families and households, increasing diversity of household types and more complicated life-cycle patterns for individuals are now being observed. Little is known about the stability of some of these changes, or about how alterations in the membership of individual households (primarily connected with mobility) translate into aggregate changes in living and housing circumstances. An enormous amount of work has been done on housing in recent years. Some of it has attempted to explain how the housing market operates through models of demand and supply, filtering, vacancy chains and turnover, but these explanations have been only partial. Concern with constraints, access and choice (as with mobility) is now leading researchers to direct attention to the role of the state in housing and the importance of such factors as ability to accumulate wealth in determining people's housing and social opportunities. This has suggested the need to focus on the way in which the housing market facilitates or constrains shifts in the housing consumption patterns of subgroups.

The present study attempts to fill some of the gaps which are evident in the understanding of the links between mobility and the housing and social systems in New

Zealand. The origin of the problem was National Housing Commission interest in the housing outcomes connected with household formation, one of the components of household change. Doubts had been expressed about the amount and pace of household formation and its housing impacts in this country (Johnston, 1979). In the event, household formation turned out to be less important than expected under the conditions of high emigration prevailing in 1979. It was only one way (albeit an important way) in which households could change as they moved house. The study revealed that changes in housing demand were not dependent solely on rates of household formation, but on the difference between household formation plus immigration and household cessation plus emigration (see Chapter 3 for definitions). The framework developed then, allows a range of conclusions to be drawn about the conditions under which household formation will have major housing outcomes, and how people might behave if significant parameters change, as in altering migration or construction or interest rates. The components of change will be similar in different towns or regions, although their magnitude may vary under different growth conditions. In faster growth areas, such as the larger cities, changes in any of the parameters will be traced through the housing system much more quickly than in smaller towns and slower growth, mainly rural areas, because housing stock turnover is likely to be more rapid.

There had also been a paucity of information about mobility processes in the New Zealand context, and the

extent to which overseas findings might be applicable here had not really been established. Neither had the precise nature of the relation between mobility and housing ever truly been demonstrated. Important by-products of the present study were the collection of a large amount of information about mobility in relation to a New Zealand city, and the compilation of age and value surfaces for the housing stock of Palmerston North. This enabled housing submarkets to be defined for the city, and thus information collected on search patterns and housing outcomes of house purchase, for both inter- and intra-urban movers, was able to be much more meaningfully evaluated.

The fact that the study focused primarily on the owner-occupied sector, as a result of using dwelling sales as a data base, inevitably placed certain restrictions on the investigation. For example, mobility rates are known to be higher in the rental sector (Speare et al, 1974; McCarthy, 1976; Thorns, 1980a) and household change may also be more rapid in that sector, although little evidence is available on this point. However, significant practical advantages were conferred by this limitation. Households were more easily identifiable and traceable and the character of the sector was able to be adequately described. As well, the merits of this approach were evident in that the complexities of the relationships were able to be untangled, and estimates of components, parameters and variables were obtained, without the frequency of change being so great as to confuse rather than

clarify. At the present point in time little is known about the relative magnitudes of components of change within the rental sector, but the relationships sketched in this study are likely to hold for the whole of the housing market.

An important contribution of the present study is that it offers a framework and empirical evidence which bridges the gap between inter-urban and intra-urban traditions found in the geographical literature. The latest publications argue for a synthesis between the two, but do not really show, except from a mobility stance, how this can be done. By virtue of this study's focus on housing, it is forced to handle the duality of process between the two traditions.

The value of this study then, rests on a careful formulation of the processes under scrutiny, the selection of an appropriate part of the housing market for initial investigation, and an extensive field study designed to generate pertinent facts about the total system, and its components, parameters, variables and relationships.

Chapter 2 of the thesis looks at residential mobility, household change and housing studies in greater detail, while Chapter 3 presents definitions and an explanatory framework. The housing scene in New Zealand and Palmerston North in 1979 is then examined briefly in Chapter 4, and a preliminary analysis of sales data for 1979 is undertaken. Chapter 5 considers Palmerston North's housing stock and proceeds to delineate submarket categories. Methods used are described in Chapter 6, and

results of the interviews and mail questionnaires are presented in Chapter 7. Attempts to interpret these results and draw conclusions are made in Chapter 8.

CHAPTER 2

THE EXISTING STATE OF KNOWLEDGE

The following chapter reviews in three sections, literature relevant to the thesis problem. The first section deals with residential mobility, the second with household change, and finally, literature on housing is considered.

(A) RESIDENTIAL MOBILITY

Two main traditions are evident in the literature on residential mobility. These distinguish between inter-urban and intra-urban movements, primarily on the grounds of scale. The terms "macro-scale", "aggregate patterns", "objective philosophy" (the belief that migration can be explained by associating it with measured characteristics of both physical and cultural landscapes) and "economic considerations", as well as "total displacement" (of daily reciprocal movement patterns) have been loosely associated with inter-urban studies (Roseman, 1971b; White, 1980). In contrast, "micro-scale", "disaggregated", "behavioural", "cognitive philosophy" (migration can be explained by analysing human cognition of origin and destination factors, intervening obstacles and personal factors), "sociological and housing considerations" and "partial displacement" are terms which have been used in intra-urban studies.

According to Golledge (1980), much less distinction

between the two traditions now exists in the literature, as it is being increasingly recognised that a change in scale does not necessarily imply the need for a completely different set of explanatory variables. This is reflected in a recent paper by Weinberg (1979) who has demonstrated that most households make their residential and workplace mobility decisions interdependently. He states that the probability of residential mobility increases with a change of workplace, with family size and with changes in family size and decreases with age and housing market tightness. On the other hand, the probability of workplace mobility increases with change of residence and labour market tightness and decreases with age. For particular individuals in specific situations, workplace location may be dominant (e.g. for career movers, or for people living in large cities where accessibility to workplace may strongly influence residence), whereas for others (e.g. married women) residential location may have important implications for workplace. However, in the light of the recent melding of explanations of inter-urban and intra-urban mobility, less emphasis than usual will be placedon the distinction between the two in the following discussion.

Early explanations of migration were couched primarily in terms of economic betterment and dealt with movement up the urban hierarchy to large towns (Ravenstein, 1885 & 1889). Lee's (1966) model of push and pull factors at origin and destination, with the influences of intervening obstacles and personal factors, emphasises the migrants attempt to improve his (economic) position and

expand his opportunities, which often involves movement from slow-growth, primarily rural areas to the "bright lights". However, motives of economic gain have not always adequately accounted for migration (McInnis, 1972) especially if regional income differentials are only weak. It may be that certain occupational or educational groups (e.g. professionals) are in a position to be more concerned about economic gains through migration than others. (Lansing and Mueller, 1967).

The frictional effect of distance has been considered to be one of the obstacles impeding migration. Various gravity model formulations have been developed to express both the attractive power of large cities and a distance-decay effect (the volume of migration is directly proportional to the populations of the source and destination areas and inversely proportional to the distance between them) (e.g. Rogers 1967). However, gravity and other mathematical models (e.g. regression equations) which attempt to explain migration in terms of distance factors, have not resulted in particularly high levels of prediction. This may be because distance is not particularly important per se, except in its link with the familiarity or "information effect" of "awareness" or "action spaces" focused on the individual's present and perhaps past residential locations (Brown and Moore, 1970; Brown and Malecki, 1977). In long distance migration, much movement is associated with career-cycle movements within organisations and between centres in the urban hierarchy (Keown, 1972; McKay and Whitelaw, 1977), and thus to some extent is forced. In this case

distance may be much less important as an explanatory variable and familiarity with the destination will have little effect on the probability of a move.

The "family life-cycle" hypothesis has been a major influence on migration literature, chiefly in the intra-urban context. Rossi (1955) in "Why Families Move" stated that migration is a mechanism by which families bring their housing into adjustment with their housing needs. Housing needs are primarily those of space and are determined by the composition of the household and changes in the family size. A typical family life-cycle might be: pre-marriage, marriage, pre-child, child-bearing, child-rearing, child-launching, post-child and widowhood. Mobility is highest at the stages of marriage, child-bearing and child-launching and especially in the first decade of marriage (Foote et al, 1960), because of changing space needs. According to Rossi, the family life-cycle explanation achieved 75 percent accuracy in predicting mobility inclinations in his study.

Researchers have often uncritically accepted the family life-cycle explanation of mobility. However, there are several problems associated with its use and Morgan (1973) and others have argued that it may not deserve the importance placed on it. Firstly, space needs are not absolute. Sabagh et al (1969) point out that the realisation of mobility aspirations depends partly on such factors as the size and adaptability of the housing unit and the way in which changes in family structure are evaluated. Increases or decreases in household size (especially decreases) may be accommodated within the existing dwelling unit,

whereas in some cases a need for more space will prompt a family to move even when there has been no change in its composition (e.g. growing children may need more room) (Morgan, 1973). There is no way of objectively measuring space "needs" per person, for example some families might consider a "rumpus room" on essential space need. A second problem is that mobility inclinations may not equate with actual mobility patterns. For example, an Open University (1975) publication suggests that the total number of people who express a desire to move each year is about three times the actual rate of mobility. Therefore, even if the family life-cycle hypothesis can explain inclinations to move, important constraints must be operating. Further, an increasing number of individuals are not experiencing a "normal" life-cycle (see section on household change). Speare (1970) quotes a study by Uhlenberg in which only 57 percent of a cohort of Massachussetts women born in 1920 went through such a life-cycle.

Some commentators have argued that life-cycle stage may be no better as a predictor of mobility than other factors such as age. For example, Speare (1970) argues that both age and life-cycle stage have important independent effects on migration. There is considerable variation in mobility rates by life-cycle stage within age categories; and by age within life-cycle categories. Smith and Thorns (1978) argue that changes in the composition of households as they move through stages of growth and contraction may be a poor predictor of household movement and are only one of a whole complex of factors influencing mobility.

On some household characteristics affecting mobility there is fairly general agreement. Mobility generally declines with age. Simmons (1968) states that mobility rates per year for children less than five years are about 20 percent, for teenagers 12 percent, are at their maximum of about 30 percent in the 20-29 year age group, and drop to less than 10 percent per year for those older than 45. Mobility rates may increase at ages 60-70 years (peak retirement ages), then decline, but often increase again during the final stage of old age with loss of independence (Wiseman and Roseman, 1979). Simmons' low mobility figures for teenagers tie in with Long's (1972) observation that married couples without children are more geographically mobile than those with children, (especially in the year following marriage (Chevan, 1971), and that age of children has an effect, in that school age children represent a set of ties to a particular community or neighbourhood, which has an inhibiting effect on mobility.

Education as a mobility variable is somewhat ambiguous, (Long, 1973) in that a U-shaped relation exists between the number of years at school, and lifetime residential mobility. Both extremes of education have about equal mobility, with those in the modal educational category being the most residentially stable. The effect of occupation on mobility is even more difficult to determine, although it is correlated with education. Persons in certain occupations may be more mobile than others, e.g. civil servants, bank and insurance staff and some professionals. Yet other professional, administrative or

business people may exhibit low mobility because their occupations depend on a build-up of clientele over time. Long considers that education is more important than occupation in predicting mobility, since within the same age and occupational groups, highly educated people in his study were two to three times as migratory as less educated people. Yet this may depend to a certain extent on societal context, e.g. the importance and extent of educational differences within and between occupations.

Tenure has an important independent influence on the likelihood of mobility occurrence (Pickvance, 1973). Several authors have noted the high mobility of renters compared to owner-occupiers (Foote et al, 1960; Speare, 1970, Johnston, 1971; Thorns, 1980a). In a study by Speare, mobility rates of renters were as high as four to five times those for owner-occupiers. Grigsby (1963) found a 40 percent annual turnover of renters (although this may be overestimated) compared to a 6 percent figure for owner-occupiers. Differences in mobility rates based on tenure are usually explained by lower cost and effort of moving for renters. On the whole they have fewer possessions, experience lower transaction costs and have no responsibility to sell the property once vacated. Equally valid reasons, however, may be that they are younger, generally at a point where life-cycle changes are close together, may be looking for or changing jobs, have a generally less settled life-style and may be forced to move through lack of tenurial security. Owner-occupiers are usually older and more settled. In fact households move fairly rapidly into ownership with the birth of first or

or subsequent children, and with increasing age, if they are financially able to do so (Davey, 1980b).

Important developments in the field have occurred in the last twenty years, with many analysts taking a "behavioural" approach to mobility inclinations, partly as a response to cross-disciplinary work. Concepts such as decision-making and choice, place utilities and preferences, perception, mental maps, and search patterns have become popular, with the recognition that people are not necessarily rational or optimizing in their residential decision-making (Golledge, 1980). They do not always seek to maximise utility as in some of the micro-economic models (Goodman, 1976, Clark and Moore, 1978). Two important behavioural concepts are place utility and locational stress. Wolpert (1965) postulated that the individual has a threshold of net utility, or an aspiration level which he uses as an evaluative mechanism in deciding whether or not to move. Place or locational utility is defined as the net composite of utilities which are derived from the individual's "integration" at some position in space (or alternatively defined as expressed satisfaction or dissatisfaction with respect to a place). Brown and Longbrake (1970) see place utility functions as being based on family status, housing quality, income differentials, residential density, and rates of population turnover in particular parts of the city (see also Lieber, 1978).

The concept of locational stress (Brown and Moore, 1970) has been looked at in the New Zealand setting by Clark (1975). The five stressors used by Clark which might prompt movement were size and facilities of the dwelling,

access to work, proximity to friends and relatives, the "kind" of people in the neighbourhood, and air pollution (or alternatively the availability of parks and playgrounds). Stress factors in overseas studies have included neighbourhood change, especially decline or decay, particularly in larger cities. Individuals are differentially vulnerable to different types of stressors, however. Brown and Moore state that stress may be reduced or controlled by adjusting the needs of the household, or "restructuring the environment relative to the household so that it better satisfies the household's needs". Either of these courses of action would result in a decision not to migrate, but to adjust "in situ". Relocating the household is therefore only one of three possible reactions to stress. Disparity between the needs of the household and the characteristics of the housing available might be reflected in lower levels of "place utility", yet the household might still postpone the decision to move, becuase the net benefit of moving (an assessment of the costs and benefits of moving) is not high enough (Adams and Gilder, 1976).

Brummell (1979) has postulated a general model of mobility behaviour which defines and interrelates these concepts of place utility and stress with needs and aspirations, within the framework of consumer choice. The main theme of the model is that a household decides to move in response to a perceived difference between what a household has (its "experienced place utility") and what the household believes it could have through relocation (its "attainable aspirations"). The level of utility associated with this is its "aspiration place utility", and the deci-

sion to move is based on the difference between experienced and aspired place utilities, or residential stress.

A further factor which may determine whether or not mobility occurs, has been termed "cumulative inertia". (Myers et al, 1969). Resistance to moving is likely to increase with duration of residence. Johnston (1971) looked at aspects of kinship networks as possible inhibitors of mobility, but the scale and intensity of kinship and other inter-personal networks is difficult to measure and they vary enormously between individuals and groups.

Once the decision to move either within or between cities has been made, the next stage is the choice of a destination location and residence. The potential migrant has firstly to formulate his "aspiration region" (Brown and Moore), or decide on criteria for evaluating alternative locations. Factors considered may include size and design of the dwelling and the land associated with it, newness, accessibility to relevant amenities and the type of neighbourhood. It will almost certainly include the cost of the dwelling. Different individuals may evaluate the same dwelling in a slightly different way, depending on their respective "place utilities".

The search process will initially be "space-covering" and later "space-organising", at least in a large city. That is, migrants will first select an area and then search intensively within that area (Short, 1977). Even in a smaller city where people could be familiar in varying degrees with all of the housing areas, they are likely to display limited search patterns, look at only a few vacancies, and make decisions based on incomplete information.

Information possessed initially by the searcher, along with information gained during the search, will determine the individuals "awareness space" with respect to vacancies (Brown and Holmes, 1971). Awareness space is a composite of the individual's "activity space" (those locations with which he is personally familiar) and his "indirect contact space" (locations about which information has been gained from talking to friends or from more formal sources such as the media). The searcher's use of information sources such as newspapers or real estate agents will depend on his subjective evaluation of the probability of success (finding a suitable vacancy) through using those channels, the perceived cost and effort involved, and the amount of time remaining before he must make a decision (Brown and Holmes, 1970; Flowerdew, 1976). Time might also be important in deciding when to move since the housing market and available vacancies can change rapidly over a short time. Search spaces may be revised as time passes, or the decision to move may even be re-evaluated. The mover thus makes his decision on the basis of observations of a set of vacancies. After each observation, he must choose whether to make another observation, or stop and make a decision, based on his predetermined or re-evaluated criterion valves (Flowerdew, 1976).

One of the reasons for the constrained search space of potential movers is directional or sectoral biases, according to Adams (1969) and Donaldson (1973). A directional bias expresses the degree to which a move is more likely to end in a place that is a particular direction away from the origin; whereas a sectoral bias expresses

the degree to which a single movement is more likely to end in a place that is along a single axis through the origin (Brown and Holmes, 1971). These spatial biases are considered to derive from restricted mental maps. Adams considered the typical mental map to be wedge-shaped and pointed at the Central Business District, because of the influence of radial transport routes. Thus he predicts that most migrants will move sectorally towards and out from the CBD.

Several authors consider that too much emphasis has been placed on spatial biases in the literature. Brown and Holmes (1971) found a tendency towards sectorality, but it was not as strong as Adams suggested; Poulsen (1977) felt that restricted sectoral movement could be a result of locational attachments and the particular form of the urban area, rather than of a restricted image. Spatial patterns might also be confused by age of the housing area, the pattern of which is usually roughly concentric around the central area; further, the pattern of socio-economic status over the city might influence directionality of moves, as people usually move between areas of similar type, which are often similarly located with respect to the CBD (Johnston, 1971). In fact, Simmons (1968) states that about 80 percent of intra-city moves are within census tracts of the same or adjacent classes. The fact that most moves are short distance also implies that small angles will usually result from moves. Thus even if there is a strong sectoral component to intra-urban moves, this may have little significance in itself.

Two further factors have been postulated to influence residential choice. Accessibility factors have been stressed as important, mainly in relation to place of work (e.g. location in relation to major transport routes), but these have not proved as significant as initially thought. For example, Johnston (1971) quotes a study by Weiss, Kenney and Steffens (1966) in which the only feature that was important in accessibility was nearness to schools. The degree of importance of accessibility would probably depend on the extent of centralisation of jobs in the CBD, the level of development of public and private transport systems and the size of the city in question. Daly (1968) considers that only those with high incomes could afford to place a premium on nearness to employment, by paying a higher price for a more central residential location. On the other hand, those with lower incomes, least able to afford transport costs, would find a relatively central location a necessity.

The other factor postulated to affect the destination of migration, both at the inter- and intra-urban level, is the location of "the friends and relatives network" (Nelson, 1959). Friends and relatives may form an indirect "awareness space" which is "grafted on" to the primary awareness space. As well, particular groups of movers, especially some elderly persons, may limit search space to areas close to their children's residences, as they may rely on kinship ties for assistance (Wiseman and Roseman, (1979).

Some major gaps still exist in the literature on residential mobility. On the whole studies have tended to

concentrate too much on established explanations of why and how people or households might move, without questionning their applicability in varying situations or considering alternative explanations. They have generally assumed that migration is voluntary (thus excluding consideration of a large proportion of "forced" moves such as eviction, break-up of households and many job-related moves), and that anyone who wants to move can do so.

Authors virtually always assume a "normal", nuclear family household structure, and very few investigators have looked at the movement of single persons, non-family households, non-nuclear family units, such as female-"headed" households and childless couples, or minority and disadvantaged groups (Morgan, 1973). Implied in this is that studies usually deal with relocation of a complete household unit, and hardly ever take account of mobility associated with household formation (except in connection with marriage), cessation, splitting, or compositional change. This means that as households and living arrangements become increasingly diverse, traditional explanations of mobility will have increasingly less validity for a large proportion of movers.

A more serious gap in the literature is the inadequate emphasis placed on, and the under-researched nature of, internal and especially external constraints on the process of residential mobility. Internal constraints "arise ultimately from the individual" (White, 1980) and result in decisions not to migrate based on perceptions of the objective environment. These might be attitudinal factors

or simply lack of information about relevant vacancies which the individual can or wants to assimilate, based on a constrained awareness space, or resistance to the perceived effort involved in moving.

External constraints however, are factors not controlled by the individual, such as the availability of jobs or of housing opportunities at various locations. Morgan (1973), Clark (1976) and White (1980) amongst others, have remarked on the importance of intervening external obstacles in preventing migration, or in determining the destination of the move(s). For example, the availability of suitable housing vacancies has an important effect on the probability of the move, and on its destination, but the household can only consider those vacancies that are within its price range, or submarket. The capacity to purchase housing is made up of present income streams, of wealth in the form of accumulated capital from past income streams (often equity from the sale of a previous property), which usually increases over an individual or household's life-cycle, and of access to mortgage credit, which depends to a certain extent on future earnings prospects (Walker, 1976). A household's disposable income generally, but not always, increases over its life-cycle through job seniority and a relative or absolute decrease in housing costs (aided by inflation), and it is then able progressively to adjust its housing to its needs at that point in time. However, many households have low or reduced income streams (e.g. one-parent households) and may thus be prevented from accumulating equity or moving

to more suitable housing. Alternatively, they may be constrained in the choice of housing location and type of neighbourhood by cost factors, or may be forced to downgrade housing quality. Thus, Clark (1976) states that it is possible that "the constraints placed on mobility by the socio-economic structure of the city can be specified with simplicity and accuracy by examining income and housing costs data alone".

It appears then, that individuals have varying degrees of choice in the matter of residential mobility, based on their income, and on accessibility to housing finance. No matter which factors might influence the household's relocation process, if income and wealth, actual or borrowed, is insufficient to enable a household to purchase alternative housing services elsewhere, then mobility cannot occur and the household is trapped in its present housing. In contrast to this, households or individuals which have attained a high level of economic wellbeing, may have a very wide choice between alternative areas and dwelling units (though they may restrict themselves to certain areas of high status or resale value). These households may in fact move house for entirely non-economic, "higher level" reasons.

It is unlikely that the "determinants" of residential mobility will ever be able to be completely identified. Some movements may be difficult to explain at all in objective terms (individuals may simply be chronically restless). However, Moore and Harris (1979) and Webber (1980) offer some hints as to how social scientists should proceed in

this area. Changes in household status, income, preference structures and tastes are likely to receive more emphasis in future, rather than simple states or circumstances. While on the one hand, studies are more likely to stress the locational and societal specificity of their findings, as well as prevailing economic and housing market conditions, on the other, attention will need to be turned more towards the consequences of mobility, in terms of individual well-being and in terms of the structure and organization of society in space.

(B) HOUSEHOLD CHANGE

Social research in the 20th century has relied heavily on the importance of the family as the unit of analysis. In the last two decades, however, far-reaching alterations have occurred in living arrangements, reflecting broader social changes and having important housing impacts. These changes have meant that the nuclear family is no longer as numerically important as it once was, and this is reflected in the increasing use of the term "household" in describing the person or person(s) living in a particular dwelling unit. Literature on household change has concentrated primarily on what is happening to people's living and housing circumstances in the aggregate, while very little attention has been paid to the way individual households change as they move.

Changes in living arrangements are occurring in the Western world as a result of several interrelated social and demographic forces. Recent census figures have shown a continuing decline in birth rates in New Zealand, from

a peak in 1961/62. Lowe (1979) states that birth rates for women in the 20-29 year age group have nearly halved, for women 30-34 years have actually halved, and for women 35-49 years have more than halved. This has meant a declining proportion of the population under 15 years, a general ageing of the population, and an increase in the proportion of people entering the workforce and "household formation" age-groups, as the "baby boom" children of the late 1940s and of the 1950s mature. Declining birth rates can be partly explained by increased efficiency of birth control methods, but also have important links to changes in the role of women, rising female participation in the labour force, changed patterns of marriage and timing and spacing of births, and considerations of the substantial cost of rearing children (Davey, 1977; Johnston, 1978; Swain, 1979). For example, the Auckland Family Planning Service gives an estimate of $130,000 as the likely cost of raising one child to the age of seventeen years in the near future, and this does not even allow for inflation. Family sizes have dropped; fewer people are having children, and those who are having children are having fewer of them. (The mean number of children for New Zealand households with children was 2.2 in 1976). The average childbearing span is now only just over four years (Swain, 1979), and childrearing is occupying a much smaller proportion of women's adult lives.

In addition to low birth rates, high net emigration rates were experienced in New Zealand in the late 1970s. These two factors, one a long term trend in most Western countries and the other a shorter term reaction partly to

economic and political circumstances in one particular country (Barrington and Davey, 1980), have combined to produce a substantial slowing in the rate of population growth, and even a decline in total population in some areas. Lowe (1979) predicts that if birth rates do not rise and given low future net immigration, New Zealand's population may never rise above four million and may not even reach that figure. He also points out that if urban areas are to grow at all, then decline in most other regions is virtually inevitable. This has major ramifications for housing demand as in the long run a constant or declining population will constrain household formation. Johnston (1978), however, points out that the demographic and socio-economic characteristics of emigrants and immigrants may be very different and this may be important in estimating housing demand. Emigrants are more likely to be young people coming from the rental sector (Barrington and Davey, 1980), while immigrants are more often families and may be moving into the ownership sector.

Marriage patterns and preferences have changed significantly in many Western countries in the last two decades. During the latter part of the 19th century marriage rates were quite low in Australasia, reflecting a male surplus in the population, and women married relatively late in life (Borrie, 1973). However, after the Second World War marriage became much more popular and by the 1960s a pattern of almost "universal marriage" was being experienced. Earlier age at marriage become common; in 1926 only 29.8 percent of New Zealand non-Maori women 24 years or under had ever been married, whereas in 1966 this proportion had

risen to 60.6 percent. Overseas evidence, though (e.g. Miron, 1979) suggests a decline in the popularity of marriage during the 1970s, with a sharp drop in marriage rates for people in the twenties age group and a preference for later marriage (e.g. at 25-29 years) if at all.

A decline in the popularity of marriage has been accompanied by rising proportions of families with one parent absent, and climbing divorce rates, at all ages, but especially among 25-34 year olds. Swain (1979) cautions that crude divorce figures may be overestimated, and states that "cohort survival analysis" is the only accurate way to measure the proportion of marriages which end in divorce. While most divorced people remarry at some stage, during the 1970s remarriage tended to be de-delayed and there was an overall decline in remarriage rates for virtually all cohorts, especially those less than 40 years (Miron, 1979). Some studies have assumed that a decline in "formal" marriage rates will be compensated for by an increase in "de facto" marriages, but there is little evidence available on this point.

During the last few decades there has been a remarkable increase in the number of people living alone. In the United States in 1950 only 9.3 percent of households consisted of one person only, whereas in 1973 this had increased to 18.5 percent (Masnick and Bane, 1980). The New Zealand figure was slightly lower than this at 15.6 percent in 1976. (The difference is probably a result of fewer young people living on their own than in the U.S.) Kobrin (1976) has identified two distinct types of single-person household. There has been an increasing tendency for

young 20-34 year old males to live alone (more so than females of the same age group). The other type of single person household is predictably older women, often those who have been widowed or divorced. Mortality declines have increased the number of years couples have together after children leave home; but a differential in death rates still exists between men and women. Single older women are now more frequently choosing to maintain independent living arrangements than in the past, when they may have moved in with children or relatives. It may be that tolerance for non-nuclear members of a household, or the necessity to be a non-nuclear member of a group has declined, or both. Kobrin suggests that increased real incomes over time have enabled people to "buy" privacy, for example the phenomenon of boarding has declined greatly recently, as has the incidence of parents and married children living in the same household.

Flatting, or the sharing of a dwelling by unrelated individuals, is an interesting trend in living arrangements which seems to be more common in New Zealand than overseas. It occurs mainly among young people in the late teens or 20-29 age groups, who are leaving the parental home at an earlier age, attracted to a relatively cheap and independent lifestyle. Thorns (1980) has demonstrated a contraction in the period of boarding with parents over time and an increase in the period of premarriage residential movement. For example, persons presently in their 50s or over usually spent seven years living in their parent's household after leaving school, while the average for people leaving school now is less

than two years.

The combined effect of these demographic and social changes has been to produce an increasing diversification of household and family structures. The "typical" nuclear family household is becoming increasingly less typical. For example, in New Zealand in 1971 only 41.4 percent of households were husband and wife plus children families and a further 19.2 percent were couples only (a total of only 60.6 percent). Thus a substantial proportion of households are other than the nuclear family form, and this proportion has been increasing over time (Department of Statistics, 1977). Masnick and Bane (1980) predict that by 1990 no one household type will be typical in the USA, while almost two-thirds of all households will contain no children. Some of these "non-typical", but increasingly socially acceptable living arrangements, may be more temporary than others; but very little is known about how these household types evolve and how they have fared in attaining their housing preferences.

More complicated life-cycle patterns for individuals are now being observed in connection with changes in living arrangements. People may be part of several families throughout their lifetime, may have more than one set of children or may never go through some of the stages. On the whole then individuals are spending less time in nuclear families and more years living alone or with flatmates/roommates. They are delaying marriage, having fewer children, divorcing more and not remarrying as fast.

The strong desire for independent residence, perhaps even more than general fertility declines, has produced a

decline in average household size. (Davey, 1977; Johnston, 1978). By 1976 45 percent of households in New Zealand consisted of only one or two persons and the average household size had declined to 3.2. Further declines in average number of persons per household are likely, if the above trends continue. There may be a limit to the decline though, as people seek for a balance between independence and dependence, and between privacy and companionship. One process which will not be as important in the future as in the past in decreasing household size, is household "undoubling" (see Chapter 3), a process which Miron (1979) suggests has already reached a discernable conclusion.

Despite slow rates of population growth in recent years, which might have been expected to result in decreased demand for housing, household formation rates have continued at high levels, as social changes have led to more smaller separate households being established, and as a population "bulge" enters "household formation" age groups (Johnston, 1978; Runeson, 1980). Population growth and migration rates may in fact bear little relation to household formation.

The rate of household formation (rather than "family formation") has been seen to be important in predicting incremental housing demand (although less emphasis has been placed on the equally important variables of household cessation and net migration). Several studies in the "Housing Need" tradition (e.g. Brown, 1975) have attempted to project future rates of household formation and consequent demand for houses or for increments to urban land. Projection or prediction methods are usually based on pre-

vailing "head-of-household" or headship rates, without allowing for subsequent socio-economic changes.[1] In this method a new household is formed when a new "head" is identified (someone who has not previously been "head" of a household). This applies even when there has been no mobility or change in housing demand, for example when the "head of household" dies and the headship passes to the spouse. It could be argued that the method makes little contribution to understanding the dynamics of how a household comes together as a separate entity. Household formation estimates have been made using a slightly different method by Riner and Bingham (1975) for Melbourne, and their approach has been used elsewhere (e.g. by the Auckland Regional Authority and other New Zealand local authorities). The authors considered marriage and immigration to be the main components of household formation, and assumed, rather unrealistically, that other household types such as people living alone, de facto couples or groups of unrelated people had an "insignificant impact on the demand for additional land and services". Gross household formation was calculated as the marriage rates of females plus half the marriage rates of divorcees. The latter part of the equation is an arbitrary figure based on lack of information about the housing impact of divorce and remarriage. Household cessation was calculated as the deaths of all widowed persons plus half the

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1 Head of household rates are also used in official definitions: each household has one "head", and the number of "heads" and households is equal to the number of occupied dwellings.

deaths of divorced persons, and was subtracted from gross household formation to arrive at net household formation rates. This approach is an interesting starting point for projection, but it has the danger that it is likely to underestimate household formation severely, because it excludes from consideration increasingly important non-traditional household types. Marital status is also a less reliable indicator for estimation as people experience increasingly complicated life-cycles, and are likely to be participants in a greater number of household formations and cessations over their lifetime.

Of course, prediction of household formation or other such variables is extremely difficult, since prediction places extraordinary demands on a knowledge of the relative importance of factors. Frieden and Solomon (1977) have attempted to provide profiles of United States households and housing needs in 1991, and in the process have taken household formation into account. Despite the high rates of household formation predicted in the next few years by most commentators, they consider that the combined effects of six factors may result in a slowing of these high rates. While there may be fewer marriages and more divorces, as well as slow growth in income and wealth, both resulting in gains in household numbers, fewer large families will mean less pressure on space, the fact that some households are "over-housed" may encourage household mergers and it may become more expensive to form households. The last three factors will have a "negative" effect on household formation (the sixth factor, proximity to relatives, has a neutral impact as this is not likely to change) and may

outweigh the first two "positive" factors.

In sum then, social research on household change is at present only in its infancy. What is happening to households in terms of their membership is not well understood; even less is known about the interrelation between "new" household types, household change factors, and housing demand and supply considerations.

(C) HOUSING STUDIES

Knowledge of the composition and distribution of housing stock in different regions and nations constitutes base information in assessing the adequacy of people's housing situations. Perhaps because of the enormous data difficulties encountered, very little work has been carried out in this area.

In New Zealand a start is being made with the compilation of inventories of urban housing stock for various regions by the National Housing Commission (Nana, 1980). Data on sales trends for housing is obtainable in Valuation Department publications (e.g. Valuation Department, 1980). Some small studies have been done on particular aspects of housing stock, such as Nahkies (1974) who found that multi-unit residential development ("sausage flats") catered primarily for people of higher socio-economic status at either end of the age scale, or Grant (1976) and forthcoming work by the Housing Corporation on medium density housing. Although such studies exist for many urban areas (often produced by local body planners e.g. Ross and Fischer, 1973), few integrated studies exist of a whole city's housing stock (e.g. Morrison, 1973).

So far as age and condition of housing stock are concerned, Putterill and Bartlett (1980) have looked at urban renewal and rehabilitation in Auckland. Rehabilitation was found to be mostly private and spontaneous, and occurred soon after dwelling purchase. Persons doing alterations were usually families with 35-50 year old parents, with average to high incomes, and who raise loan money but still contribute large labour inputs themselves. General repair work was mostly done by older and younger households on low to middle incomes. The study did not, however, provide clear evidence of the effect of rehabilitation on mobility. Overseas work in this area includes a study by Duncan (1971) on various methods of measuring housing quality (a major problem being how to define a "tolerable house" or "satisfactory environment) and research by Nutt et al (1976) on obsolescence in housing. Obsolescence was defined as a process by which a dwelling becomes increasingly useless, and the term could be applied to physical, financial, functional, locational, site, environmental or style obsolescence.

Various groups of people have different housing stock requirements. Davey and Barrington (1980) have looked at special housing needs in New Zealand. They argue that policies are needed to protect large old houses near the centre of cities for emergency housing, and for such groups as young workers and students, old people, immigrants, transients and possibly the handicapped. There is evidence that this kind of low-cost accommodation is frequently replaced by medium and even high-cost housing if demolished. (Thorns, 1980a).

The interrelation between supply and demand in housing markets has been the subject of several enquiries, usually of an economic nature. For example, Charles (1977) gives the demand for housing as a function of income, prices, rents, availability of credit, wealth and demographic factors, while the supply of housing is seen as a function of mobility, prices, costs, availability of credit, availability of other building work, seasonal factors and delays in the building process. Social factors are only indirectly specified, as are vacancies and their distribution in various submarkets and areas.

The demand for housing in New Zealand has been modelled by Burtt (1978). Demand for houses is condensed to a function of the level of mortgage funds, and the proportions of these going to new houses, and of a change in wealth factor multiplied by an elasticity coefficient. The change in wealth is taken as a realised capital gains component (measured as the accumulated price differential between existing and new house price increases). Supply of houses is condensed to a function of demand for houses (the most important factor), materials and labour constraints, and expectations. A regression model of total number of dwellings completed in a particular year is developed. This includes an adjustment factor for government influence through changes in the stockholding requirements of savings banks and a political dummy variable to account for the effect of different political parties being in power.

Micro-economic models of housing markets (e.g. Muth, 1961) have usually been based on an analysis of the price

mechanism linking land and location, and on neo-classical theories about the behaviour of households and firms. The results of such models are a market equilibrium of location rents (or housing prices), and an equilibrium residential pattern based on maximisation of individual utility (subject to a household's budget allocation). But Bourne (1976) comments that much of the spatial variation in housing prices observed within cities escapes such simple measurement or explanation. He suggests that the determinants of prices are primarily the characteristics of the dwelling unit itself in terms of size, design etc., and only secondarily the type of neighbourhood and location and accessibility. This is especially true for smaller, less residentially differentiated cities.

As well as looking at demand and supply aspects of housing, researchers have turned their attention to the mechanisms by which changes are transmitted from one part of the housing market to another. The filtering hypothesis was popular in the past and has been used as a justification for housing policies in several Western countries, for example for the policy of constructing dwelling units for medium and high income earners rather than for low income groups. Robson (1975) has defined filtering as a process of occupancy change by which houses are progressively devalued (decline in price) through time. As the standard of people's housing generally improves with each move, successive in-movers in any house generally tend to have lower incomes than out-movers. The filtering process is thus postulated to begin with a high income household moving in to a new house, and as the price decline referred to

results, along with mobility of households, low income households are able to improve their housing circumstances (Grigsby, 1963; Nutt et al, 1976; Maher and Williams, 1979).

The concept of vacancy chains has largely superceded that of filtering, mainly because it is applicable in a greater number of situations[1]. As households exchange dwelling units, usually to achieve better housing standards, opportunities are created for further movement, as other households move into the dwelling units vacated further back in the chain. Since households are formed or "undouble", and other households cease or dissolve, and new construction, demolition and conversion alter the stock of housing at any point in time, chains created by vacant houses will in the end be truncated, with no vacancy being left behind. There has been some controversy over the length of vacancy chains and thus the multiplier effect of a single move. Lansing (1969) has calculated the average length of chains started through new construction of private housing in a U.S. study at 3.5, while a British study (Watson, 1973) has produced lower figures of 2.0 for owner-occupied housing and 1.6 for local authority housing (with greater demolition rates). Several commentators also consider that longer chains would result from private, higher value housing (e.g. Dzus and

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1 Models of occupancy change (e.g. Moore and Gale, 1973) attempt to show for small areas, how housing market processes such as filtering and vacancy chains are reflected in and modify the characteristics of an area.

Romsa, 1977). Sharpe (1978) states that average chain lengths in vacancy chain investigations are between 1.3 and 2.5. However, the length of the chain is likely to be largely a reflection of local housing market conditions, and in smaller areas with higher rates of household formation or immigration, chains will be shorter and more likely to be truncated by movement across boundaries.

Filtering and vacancy chain hypotheses are similar concepts but should not be confused. Filtering is a long run supply concept which looks at changes in the price and quality of particular dwellings over a period of time, but vacancy chain analysis looks at prices, rents and income at one point in time. Whereas filtering is only one outcome of turnover, vacancy chain studies measure housing adjustments occurring for a great variety of reasons (Maher and Williams, 1979).

A number of problems have been identified in respect to filtering and even vacancy chain concepts. While price change occurs as dwellings age, household characteristics may alter as the household moves "up the ladder", making measurement of the housing opportunity impact of filtering difficult. There is evidence that the multiplier effect of housing turnover is often small on the local scale (Sharpe, 1978), and the multiplier may not penetrate the lowest levels of the housing market, especially if there are poorly developed links between different submarkets. New, expensive housing is often occupied by newcomers to the area in question, thus transmitting the vacancy elsewhere. Adams (1973) found that for the Twin City Area of Minnesota, 36 percent of those moving into new houses in

higher income areas came from out of town, compared to only 9 percent of people moving into similar new houses in working class and middle-class suburbs . Thus the major beneficiaries of new construction may be those who move into it rather than those people affected by vacancy chains and size, type, location and especially price range may have important effects on turnover and thus indirectly on the housing opportunities created by moves. Sharpe (1978) also notes that there has been too much concentration both in theory and policy on new units, as vacancies can also be caused by movement out of the area or household cessation. He also states that it is not clear whether distant links in the chain really are related to initial links. In sum then, while "cumulative mobility" resulting from housing turnover may provide some people with opportunities to move, these may not be the people who really need them. A further possibility of downward filtering in the market has been largely ignored by theorists, because of the widespread assumption that moving is voluntarily undertaken and that people who move necessarily improve their housing conditions by doing so.

The usual hypothesis is that there is a progression from rental to owner-occupied housing over the life-cycle (Davey, 1980 has already been quoted on this point for New Zealand). Implied in this is that owned dwellings usually offer better housing circumstances than rented ones. In Britain, Donnison has found a movement from furnished to unfurnished housing and from private rental housing to Council or owner-occupied housing, though there is little movement between the latter two, suggesting that for many

British households, Council housing is a long-term situation (see Ravetz, 1971; Murie, 1974). This may be linked to the long term decline of the private rental market in Britain.

In New Zealand, Whiteley (1979) and Thorns (1980a) have also found a flow from renting to mortgage holding to owning outright, as the "head" of household ages. The private rental sector, though, has not been as important as in some other countries, because of the historically high level of ownership here. Thorns found high expected mobility amongst renters in Christchurch (82 percent of private renters expected to move within the next five years, as did 63 percent of other renters, compared to 27 percent of owner-occupiers). Since 80 percent of renters desired ownership (especially those over 25 years with generally higher education and occupancy status - see Davey, 1980), an important influence on the likelihood of attaining this goal is financial constraints. Some people who desire to own are "trapped" in the rental situation, especially older renters. (Other people may also be "trapped" into ownership, but this is more likely to be a result of supply factors than of ineffective demand). Thorns estimated that 39 percent of those desiring ownership were in this position, and half of these had been, or were involved in marriage breakdown or were widows. (It is likely that state tenants include a disproportionate number of such people e.g. Hunt, 1970 along with the commonly noted larger than average household sizes). Over time, it appears that the usual length of time spent by people in rental accommodation has been increasing and this

may be partly a result of relative increases over time in the cost of owning or buying a home (Pennance and Gray, 1968; Carrie, 1976; Burtt, 1979a; Building Industry Advisory Council, 1980). However, property prices as a multiple of average weekly earnings have fluctuated over time, and government housing policy is a significant consideration (Page, 1974; NHC, 1978; NHC, 1979).

Easton (1976) and Chapman (1979) have argued that renting is "a poor deal" in New Zealand economically, because of direct and indirect subsidies given to homeowners and that this is a significant variable in the widespread desire for home ownership in New Zealand (Dao and McMurray 1977). They argue that renting could be a viable long-term alternative, selected by choice, if housing "subsidies" (such as low mortgage interest rates and lack of tax on imputed rental value of owner-occupied housing) were distributed more equitably between the rental and ownership sectors.

It appears that constraints are operating within the housing system which mean that desired housing situations cannot always be attained, and choices have to be made. Smith and Thorns (1978 and 1979) list societal constraints such as economic structure, housing policy and financing, building activity and planning, and household constraints such as residential history, capital accumulation, income, number of income earners, and household structure (membership and stage in family life-cycle) as important. People may perceive areas in which they are at a relative disadvantage with respect to their peers, and attempt to turn the situation into one of equality by moving ("deficit

compensation"). Age of "head of household" seems to be related to occupational stability and achievement (having an important influence on income level and capital accumulation), and this partly determines the "submarket" into which people move. A household's income level and degree of capital accumulation are seen by the authors as the keys to initial and subsequent movement, meaning that those on higher incomes or who have accumulated wealth through property sales or inheritance have an enhanced ability to "trade-up" in the market.

If the "housing market" is defined as a set of arrangements for bringing together buyers and sellers for the purposes of exchange (Bourne, 1976), then a "submarket" is a small section of the market in which units are potentially substitutable, one as an alternative for another. Grigsby (1963) notes that there is usually no clear cut-off point between two submarkets, with the chain of substitution being a continuum. Households moving from one dwelling to another are seen as the links between submarkets, and groups of submarkets will be related to one another in varying degrees. Submarkets may be defined on the basis of location, tenure, value, age, type, size, condition of housing stock, or on age, family status, income or ethnic origin of household, as well as on many other variables catalogued by Bourne (see also Palm, 1978). In practice though, potential substitution of dwelling units may be limited because of price, location, legal restrictions or barriers to mobility, and households may have quite different evaluations of boundaries of particular submarkets. Bourne states that most attempts at

delineating submarkets turn out to be inadequate because they fail to take into account the ways in which households acquire and use information about housing vacancies, and the way they match themselves with these vacancies.

The argument for greater integration of work on housing and mobility processes is not without foundation. A common feature of housing market studies is that the households whose movement results in turnover of dwellings are virtually ignored; nor is discussion of prevailing conditions in the housing market or of characteristics of the housing stock usually at the forefront of attempted explanations of mobility. Two major investigations undertaken in Britain in the 1960s, the Rowntree Trust Housing and Housing Policy Survey and the West Yorkshire Movers Survey, have been slightly more satisfactory in this respect. The former has been utilized by Donnison (1961) and the latter by Murie (1974) in studies of household movement. Both authors distinguish between "continuing household" movers and newly formed households (including immigrants) in terms of age, housing history, and housing preferences, and stress the importance of tenure and price in determining mobility destination. Estimates for household formation within a one-year migration period are 28 percent by Donnison and 19.4 percent by Murie, while Grigsby (1963) in a migration-related housing market survey in Philadelphia made an estimate of 16 percent. The exact figure would be influenced by societal context, definition of household formation and size of the area under consideration. A further extensive study by the Urban Research Unit of the Australian National University (1973) has looked at post-

war urban development in Melbourne, thus providing an opportunity to consider how the movement of households relates to changes over time in ownership and tenure.

Nor is the relationship between housing and labour mobility well understood. While in many cases job moves may be "constrained decisions", Cullingworth (1969) considers that the rate of [labour] mobility is considerably influenced by the presence or absence of appropriate housing at places with job vacancies, although the influence may be difficult to quantify in relation to other factors. (The ability to sell an existing house may also be a pre-requisite to job movement out of an area).

Government housing policies in most western countries have traditionally been fairly conservative, usually aiming to "provide a decent living standard for all" (Murieand Forrest, 1980). Stephens (1976) suggests that typical objectives for housing policy for the "urban poor" in New Zealand have been: (a) an individual or household housing expenditure which is not "excessive", (b) a reasonable quality of housing, (c) security in tenure, and (d) a reasonably stable construction industry (see also Easton, 1976). Hardship occurs, Stephens considers, mostly among lower income people in rented accommodation (although those paying off mortgages may also be in a difficult financial situation). This is because rents have to be paid for one's whole life, even if real income declines in later years. Renters are not in a position to accumulate wealth from capital gains, while owners who may be able to do this are also subsidised in various ways by the state. Grigsby (1975) lists twelve possible housing deprivations

which can occur for low-income groups:

1) Substandard accommodation structurally, and in terms of equipment and services
2) Insufficient indoor space
3) An "unsatisfactory" neighbourhood environment
4) Excessive housing expense in relation to income
5) Lack of choice of tenure
6) Racial discrimination in housing dealings
7) Inadequate furnishings
8) Restricted locational choice in housing
9) Excessive expenditure in relation to the quality and size of the dwelling
10) Lack of security of occupancy
11) Stigma attached to the delivery of housing services
12) Housing-related problems stemming from illness or poor health.

Kilmartin and Thorns (1978) have gone so far as to assert that "the influence of government on the housing market is to aid property interests to maintain and enhance the value of their investment". Murie and Forrest (1980) also consider that "housing policy has for many years directly contributed to differential accumulation of wealth", because the system of owner-occupation encouraged by governments allows opportunities for accumulation and property inheritance, which can actually create, rather than merely perpetuate inequalities. Stone (1977) and other radical commentators (e.g. Harvey, 1974) maintain that the interests of social stability are served in a capitalist society by an increase in the burden of residential mortgage debt, since this gives people a "stake" in the system.

Such considerations have led housing researchers to direct their concern at questions of access, mobility and choice, to emphasize the need to look at the mechanisms through which housing resources are allocated (Duncan, 1975), and to ask such questions as how the system works, who pays and who benefits. Access to housing resources appears to be through an eligibility structure which presupposes that an individual has had the ability to make savings out of his income, and has been residentially stable for a period of time, to have built up a "savings history" (Pitt, 1977). The concept of "housing class" (originally postulated by Rex and Moore (1967) and based on six or seven tenurial categories) has been put forward to explain differences in the capacity of people to compete for and attain their desired housing. Pitt (1977) defines a class as a "group of people possessing relatively the same amounts of power, income, wealth or prestige". Thus a housing class could be seen as "a group of people experiencing similar degrees of access to housing resources as a result of their economic status".

Housing classes, though existing in Australia and New Zealand, do not yet seem to be developed enough to form a basis for political action (Kilmartin and Thorns, 1978) partly because of the individualistic nature of our society. Whether or not recent research directions in the field of housing are seen as valid, there is little doubt that "an effective housing strategy can only be based on an understanding of the relation of housing problems to the distribution of income, the structure of capital markets, the role of the state, and the signifi-

cance of private ownership of land and housing production" (Stone, 1977). Housing situations and opportunities, while important and relevant objects of investigation, will increasingly be seen as only "one element in a total system undergoing transformation" (Duncan, 1975).

CHAPTER 3

DEFINITIONS AND EXPLANATORY FRAMEWORK

The definitions employed in this study were chosen to assist the inquiry into housing matters in general. They were selected early in the project and some have been used already in the previous two chapters. Definitions such as those for housing stock and dwelling have been used frequently by housing researchers. Others reflect the dictates of the problem at hand, for example, those for types of households, or break new ground (changes in households, changes in household membership). Like many definitions, a certain degree of circularity is found in the units of analysis (households, dwellings). Once defined, these units of analysis are used to build up definitions of processes centred on households and household types.

(i) Definitions

Household:

> One person living alone, or a group of persons living in a permanent, self-contained dwelling (whether owned or rented), and usually having one or more meals together daily.

The definition of household rests on the occupants of a dwelling over a particular period. This definition is neither dependent on the attributes of any member of the household nor does it require the designation of a particular member as "head" of household, nor is it defined by a particular dwelling. If the "head" of household dies the household continues to exist (unless that person was

living alone). Similarly a combination of persons in a household can change or the dwelling can be changed. The convention of designating a "head" of household rests on the premise that if a "head" can be designated than changes in the total number of households can be calculated directly from changes in "heads". This has the major disadvantage that many household types (not yet defined here) can only designate a "head" on a very arbitrary basis. Because a major interest of the research is concerned with describing and estimating mobility according to household types, it is necessary to avoid using a yardstick which could potentially discard information relevant to an interpretation of observed patterns.

Dwelling:

> The living accommodation of a household, generally a single, self-contained accommodation unit complete with at least most of the basic amenities.

A distinction can be made between private and non-private dwellings and private and non-private households.

Housing Stock:

> The number of dwellings in existence at any point in time.

These may be added to by new construction, creation of new dwelling units by subdivision of existing houses, or conversion from non-residential uses, or diminished by demolition or conversion to non-residential uses.

Family:

> Married or de facto couple with or without unmarried children of any age, or a lone parent with one or more unmarried children.

The individuals in a family are not necessarily the entire

biological family, but those members present, related by blood, marriage or adoption, who normally live together as a single family unit in the same household.

Residential Mobility:

> Residential mobility is any normally permanent change of usual residence that involves movement by individuals or households from one dwelling unit to another.

Residential mobility operates at two different scales: a local scale involving change of usual residence within the same region or city, and migration where the change of usual residence involves movement between regions and countries.

Type of Household:

As noted above it was considered unrealistic to define households by a particular individual or "head" of household.

The classification of households developed (Table 1) is consequently based primarily on empirically observed living arrangements. However, the categories have been arranged so that they can be collapsed into a census-type classification (Table 2). Relationships within the household are described with respect to those adult(s) who own or rent the dwelling, rather than with respect to a "head" of household. Marital status receives much less emphasis in this classification than normal (e.g. Masnick and Bane, 1980), especially in categories 5-7 and 15-33, and it could even be argued that it should be ignored altogether. This position is taken because evolving social change has meant that it is becoming increasingly difficult to differentiate between the housing circumstances of identical

TABLE 1: CLASSIFICATION OF HOUSEHOLD TYPES

Category Number	Description of Household Type
1.	Husband & wife only.
2.	De facto couple.
3.	Husband & wife & children (of either or both partners).
4.	De facto couple & children (of either or both partners).
5.	Woman & children (one parent permanently missing).
6.	Man & children (one parent permanently missing).
7.	Other incomplete families (one or more children semi-permanently or permanently missing).
8.	Husband & wife & others (non-related).
9.	Husband & wife & others (related).
10.	Husband & wife & children & others (non-related).
11.	Husband & wife & children & others (related).
12.	De facto couple & other relatives.
13.	De facto couple & children and other relatives.
14.	De facto couple & children & one other non-related person.
15.	Woman & children & others (related).
16.	Woman & children & others (non-related).
17.	Man & children & others (related).
18.	Man & children & others (non-related).
19.	Other incomplete families & other persons.
20.	Multi-family.
21.	Multi-family & other persons.
22.	Single person.
23.	Siblings alone.
24.	Siblings & others (related).
25.	Siblings & others (non-related).
26.	Flatmates, communal owership.
27.	Flatmates, non-related, no couples, all rent.
28.	Flatmates, non-related, no couples, one owns, others rent.
29.	Flatmates with nucleus of de facto couple (may also be children) plus two or more non-related persons, all rental.
30.	Flatmates with nucleus of de facto couple (may also be children) plus two or more non-related persons, rental-ownership combination.
31.	Flatmates, non-related, no couples, all rent, but parent(s) of one or more flatmates own the flat or have a substantial financial share in it.
32.	Flatmates with nucleus of de facto couple and two or more non-related persons, all rental, but parent(s) of one or more flatmates own the flat or have a substantial financial share in it.
33.	Non-private institutional household, e.g. hostel, motel, old folk's home.

TABLE 2: CENSUS-TYPE CLASSIFICATION OF HOUSEHOLDS

Type of Household	Category
Private households	
One family only (complete)	1, 2, 3, 4
One family only (incomplete)	5, 6, 7
One family with other persons (complete)	8, 9, 10, 11, 12, 13, 14
One family with other persons (incomplete)	15, 16, 17, 18, 19
Multi-family	20, 21
Non-family	
Single person	22
Sibling centred	23, 24, 25
Flatmates	26, 27, 28, 29, 30, 31, 32
Non-private households	33

Source: Table 1

households whose adults differ in marital status. In addition, individuals of similar marital status may no longer be living in the expected household form. For example, as some de facto liaisons become more permanent, and some marriages less permanent, there will be little difference in their housing "careers". As well, married or previously married individuals may now be living on their own, as solo parents, or with other adult flatmates, with housing demands and preferences identical to those of their single counterparts. It is postulated that marital status, as a discriminator of housing situations, will be much less important in the future than access to wealth.

From an empirical viewpoint, it was considered necessary to differentiate in flatting situations between different tenurial circumstances, on the grounds that certain of these would enable easier access to desired housing services for particular persons, rather than others. An operational problem which arose in the development of the classification was the differentiation between a family and a flatting situation, particularly in the case of households consisting of de facto couples and other persons. It was decided that after counting the number of adults in a household, those households with a majority of adults living as couple(s) would be classified as families and those with a majority or equal number of adults living as single persons would be classified as non-family flats. Where household size/number fluctuated, the classification was based on the number of permanent residents.

Household Relocation:

> This refers to a situation when all members of a household move to another dwelling, without the concurrent or immediate addition to the household of new members.

Changes in Households:

> Changes in households can be examined first in relation to their formation and cessation and then in terms of alterations in membership which accompany their existence.

Household Formation:

> Occurs when a new or different combination or set of persons come together in a different dwelling unit to the one(s) they previously occupied, concurrent with or immediately following the residential mobility of all members of the new household.

This definition departs from traditional methods of measuring household formation, such as changes in "headship" rates, or projection of marriage rates. Instead, it is, empirically derived and process-orientated, is therefore unlikely to underestimate the amount of household formation, and is not based on unreliable assumptions about socio-economic parameters. The only disadvantage of the definition is that it is difficult to use it directly to predict household formation. However, field study using the definition reveals the various components of household formation operating at a point in time, and knowledge of the elements involved and their relative importance, is likely to provide a fairly detailed, accurate basis for prediction.

Several situations are excluded by the definition e.g. (1) household relocation; (2) compositional changes in an existing household without mobility of original mem-

bers; and (3) movement of persons to join existing households. Thus by definition, household formation can only occur if mobility has occurred. It may only occur without mobility in the rare case of an existing household splitting into two households through the conversion of the existing dwelling into two separate and self-contained dwellings.

Immigration from overseas to New Zealand of an existing household, while not necessarily an instance of household formation, could be defined as such for convenience, because the study is limited to New Zealand.

Household Cessation:

> This occurs when the last person of an existing household dies, or all members of a household change residence at a single point in time to join another existing household(s).

Again, this definition excludes situations of household relocation to an empty dwelling, or compositional changes in a household such as the death of the "head" of the household, when other members of the household are left. Thus, a multi-person household is <u>not</u> defined by a particular member. By definition, then, in a flatting situation where turnover of tenants occurs only gradually (with part of the household moving out and being replaced at a time), households do not dissolve, or new households form, even if there has been a complete change in tenants over time, unless this complete change occurs at a given time.

The analysis of one urban area means household formation and cessation are most appropriately defined in relation to mobility across the urban centre's boundaries. Accordingly, all movement in and out of an urban area can, for accounting

purposes, though not in process, be either household formation or cessation rather than household relocation or a variant of changes in household membership.

Changes in Household Membership:

> These fall into three categories: (1) household expansion following an increase in size of a household through the permanent addition of extra members; (2) household contraction arising from a decrease in the size of household due to the permanent departure, or death, of some of its members; and (3) household compositional change where an alteration in membership occurs by the replacement of one member of the household by another person.

Household compositional change is in reality a combination of contraction and expansion, both often taking place simultaneously. Combinations of household expansion and compositional change can occur if more persons arrive in the household than depart. In contrast household contraction and compositional change is seen if more persons leave the household than join it.

Changes in household membership may or may not be concurrent with mobility of the whole household. For instance, changes in membership may occur in an existing dwelling without the nucleus of the household moving, or they may be a factor actually prompting mobility and occur immediately before, along with, or immediately after mobility of the whole household.

Household Split:

> This occurs when an existing household splits into two or more parts e.g. separation/divorce, or split of a flat, with mobility of at least some of the household members, if not all.

It can be seen as a form of household contraction of the

original household. However, if a part of the original household then goes on to occupy a separate dwelling unit and does not join existing households, then household formation may also be occurring (since there are now two or more separate households where there was only one before). A particular kind of household split is the situation of "undoubling" (see below).

Household Doubling:

> This occurs when two households double up in the one dwelling unit after the residential mobility of one or both previous households.

If only one household has moved to join the other this would be called household cessation as there is one less household than before; the household which was joined has expanded. However, when both households move at once to a different single dwelling (e.g. remarriage) although this is still household cessation, a kind of household formation is occurring at the same time and housing demand is being created.

Turnover in Housing Stock:

> This occurs only when a dwelling is sold, either on the open market, or through a nominal sale to a family member.

Such a sale is denoted when the statutory "notice of change of ownership" is filled in. By definition, turnover in housing stock takes account only of the owner of the property, not of the occupants or household living in the dwelling. Thus a rental property may experience a change of tenants fairly frequently (the mobility of tenants probably being greater than that of non-tenants), but a change of owners only infrequently.

Turnover of Household:

> This comes about when there is a complete change of occupants of a dwelling at a given time, following the out-movement of all members of the previous household.

Both turnover in housing stock and turnover of households can be seen to occur at both ends of the housing transaction e.g. at the point of sale, or out-movement and at the point of purchase, or in-movement. For convenience, they are both defined in relation to the housing transaction at the point of sale or out-movement, so that each household is associated during a single move, with only one instance of housing stock turnover.

Housing Demand:

The quantitative demand for housing at any point in time in its aggregate aspatial form arises from the mobility of households. The spatial form is arrived at by specifying a particular area and its boundaries. The demand is composed, definitionally, of the following elements:

Demand for housing

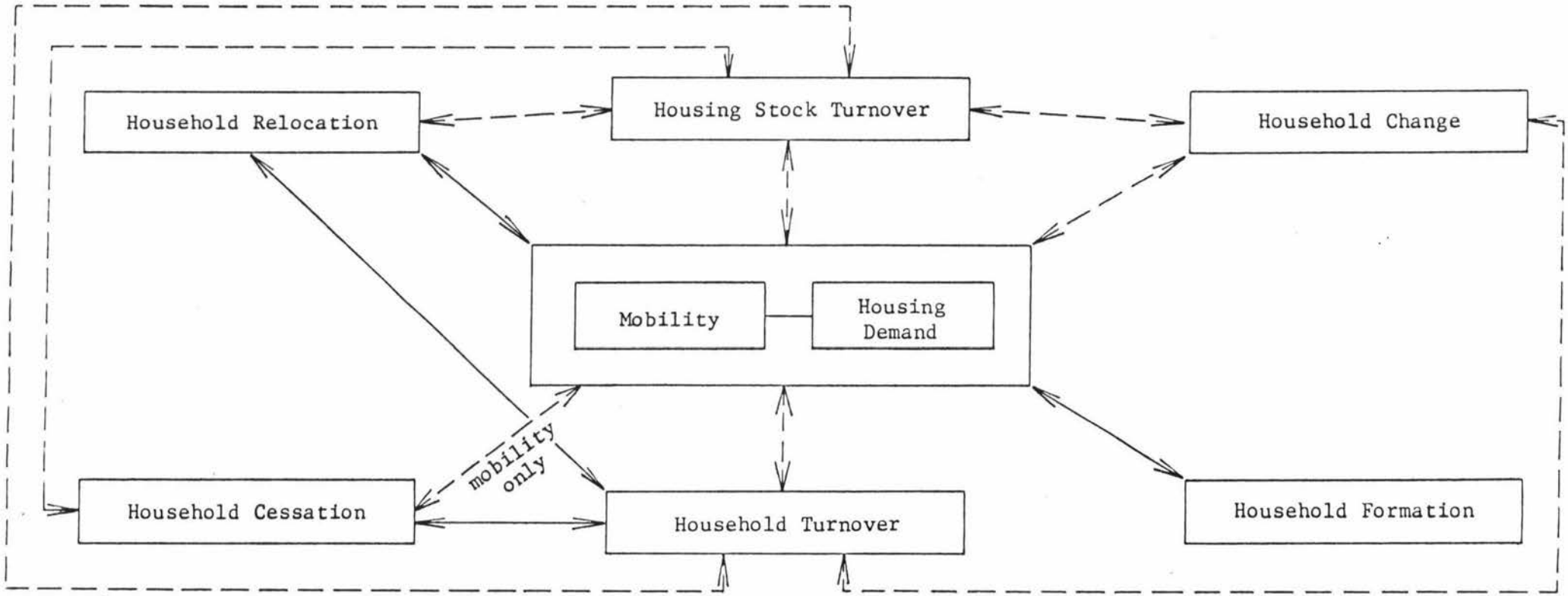
= *household formation (including immigration to the area being considered)*
\+ *household relocation*
\+ *net household movement associated with changes in household membership*
\- *household cessation (including emigration from the area in question).*

(ii) Relationships Consistent with the Definitions

Figure 1 shows the associations amongst the terms just defined. Mobility occupies a central place in the figure, in keeping with its importance to the definitions. A distinction is made between associations which spring from the definitions and those which are conditional. The

FIGURE 1

ASSOCIATIONS BASED ON DEFINITIONS



— — Conditional association

—— Association by definition

associations illustrated in the figure are summarised below. Problems arise when attempts are made to ascribe more than an association between terms. In some instances the nature of the relationships are well known or obvious whereas in others the connections are unclear or perhaps even tenuous.

(i) An association exists between housing demand and mobility.

(ii) Associations are present between household formation, mobility and housing demand. However, no association is postulated between household formation and household turnover or household formation and housing stock turnover.

(iii) Associations can be seen between household relocation, mobility and housing demand; household relocation and household turnover; but household relocation may or may not be linked with housing stock turnover, depending on whether a sale occurred when the household moved out of the previous dwelling.

(iv) Changes in household membership (household change) may or may not be associated with mobility and housing demand. Further, changes in household membership which are linked with mobility and household turnover may or may not in turn, be associated with housing stock turnover since this depends on whether or not a sale occurred when the household moved out of their previous dwelling.

(v) Household cessation may or may not be associated with mobility, but if it is, then mobility is not associated with housing demand, except in that demand is lessened. Household cessation is linked with household turnover, but a connection may or may not be made to housing stock turnover as this hinges on whether or not a sale takes place.

(vi) Conditional associations are drawn between mobility housing stock turnover, and household turnover. Mobility may or may not be associated with housing stock turnover (a sale may occur without mobility, or mobility could occur without a sale, the latter chiefly in the rental sector). Mobility may or may not be tied to household turnover (individual mobility between households complicates the picture). Finally, housing stock turnover and household turnover may or may not be connected depending on the outcome of a sale.

(iii) Approaches to the Research Problem

The dimensions of the empirical aspects of the study can be understood by examination of Figures 2-6. Taken together, the figures reveal the multi-pronged nature of the inquiry. Each figure however, approaches the research problem from a different perspective, so highlighting quite a different set of relationships and relevant information.

Figure 2 shows that for a comprehension of household change and mobility, moves by some households must be seen alongside non-movement by others. The problem can then be subdivided according to whether household moves are associated with housing stock turnover, confined to moves between existing households or occur without housing stock turnover. A further subdivision can be made to take into account differences in tenure. Moves can be within either the owner-occupied sector or rental sector or occur between sectors. When moves are examined over a fixed time period (e.g. 1979) households will be living in a slightly different set of dwellings at slightly different locations at the end of that time. The present study, based on property

FIGURE 2

MOBILITY AND THE HOUSING SYSTEM

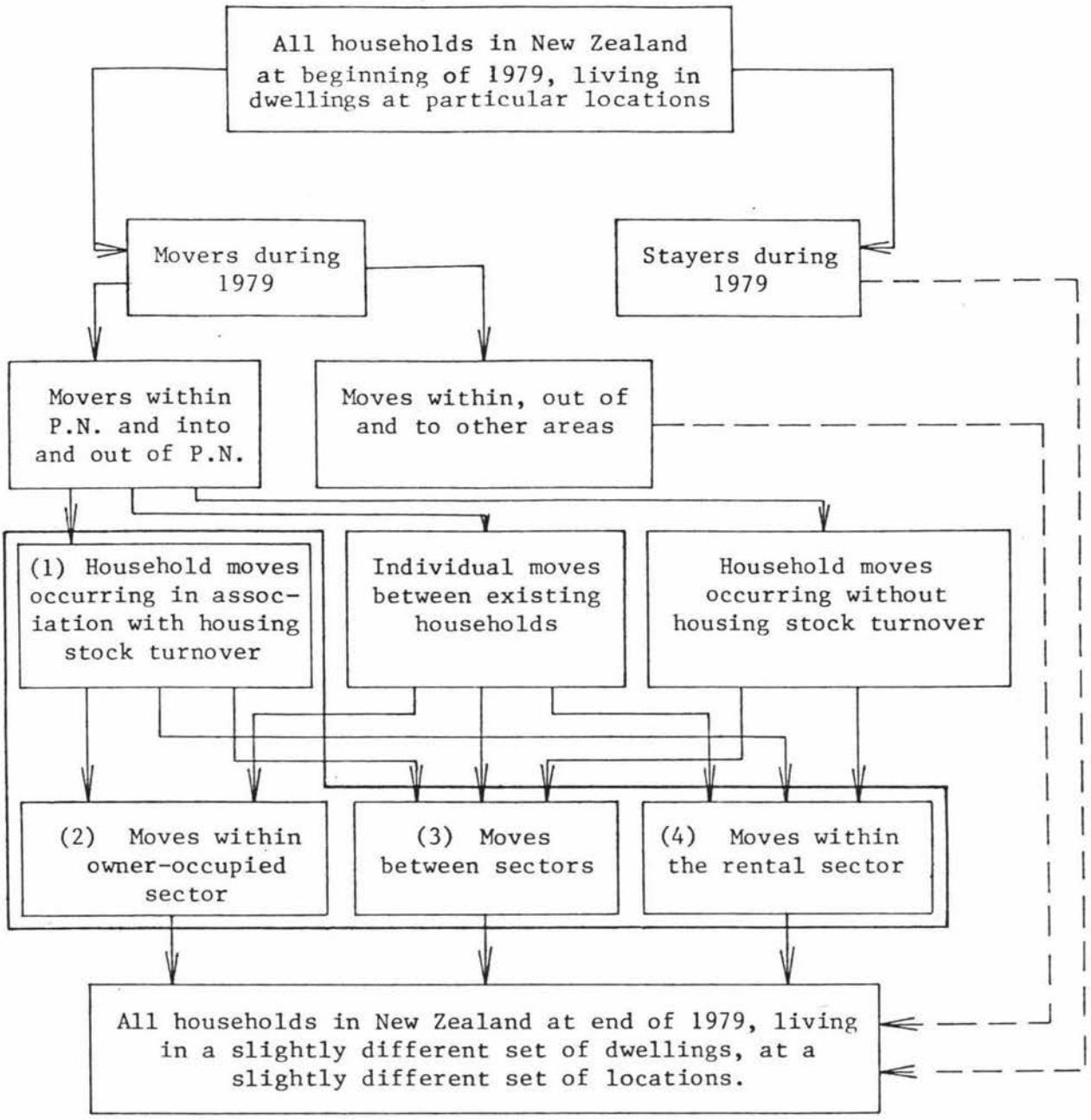
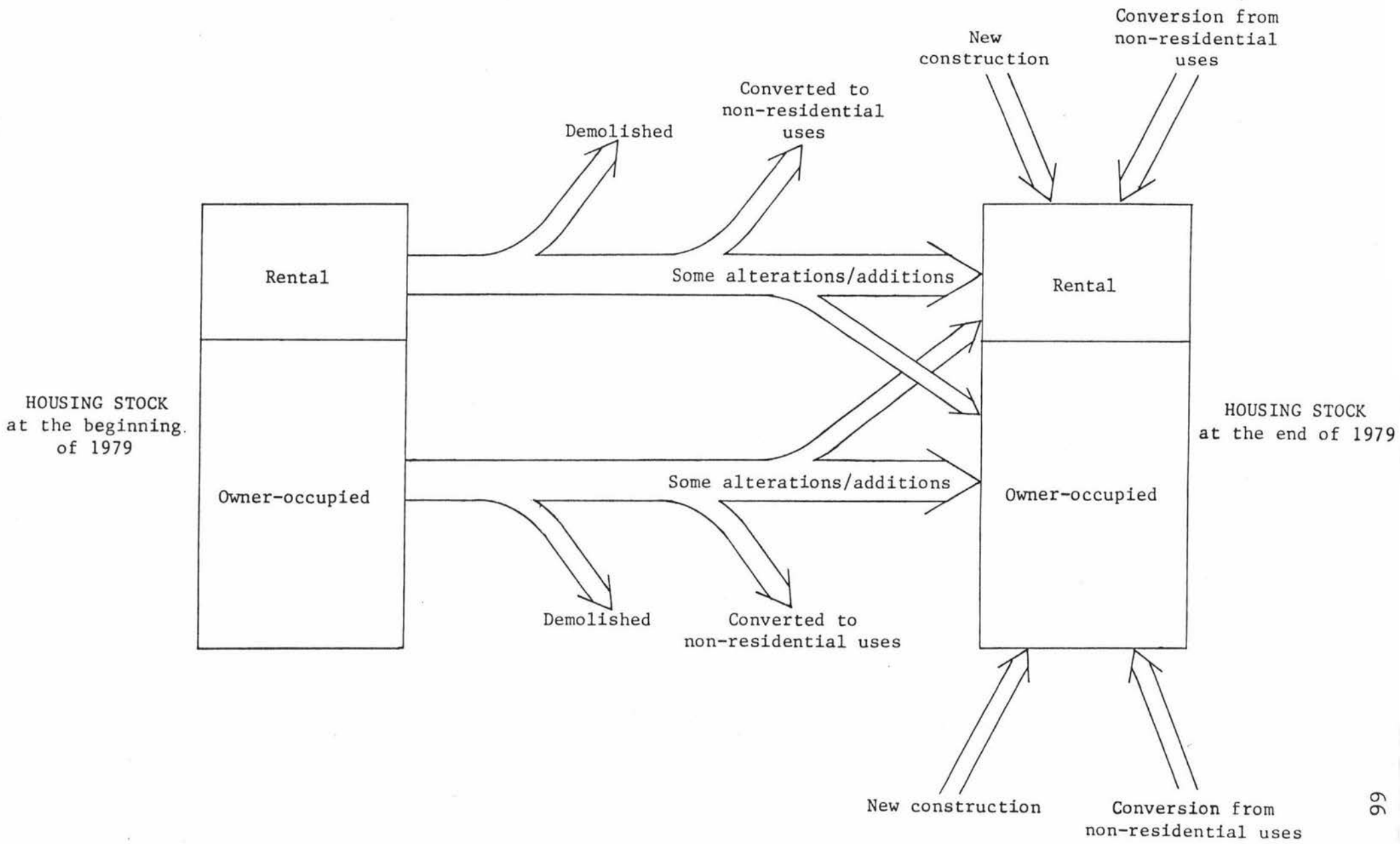
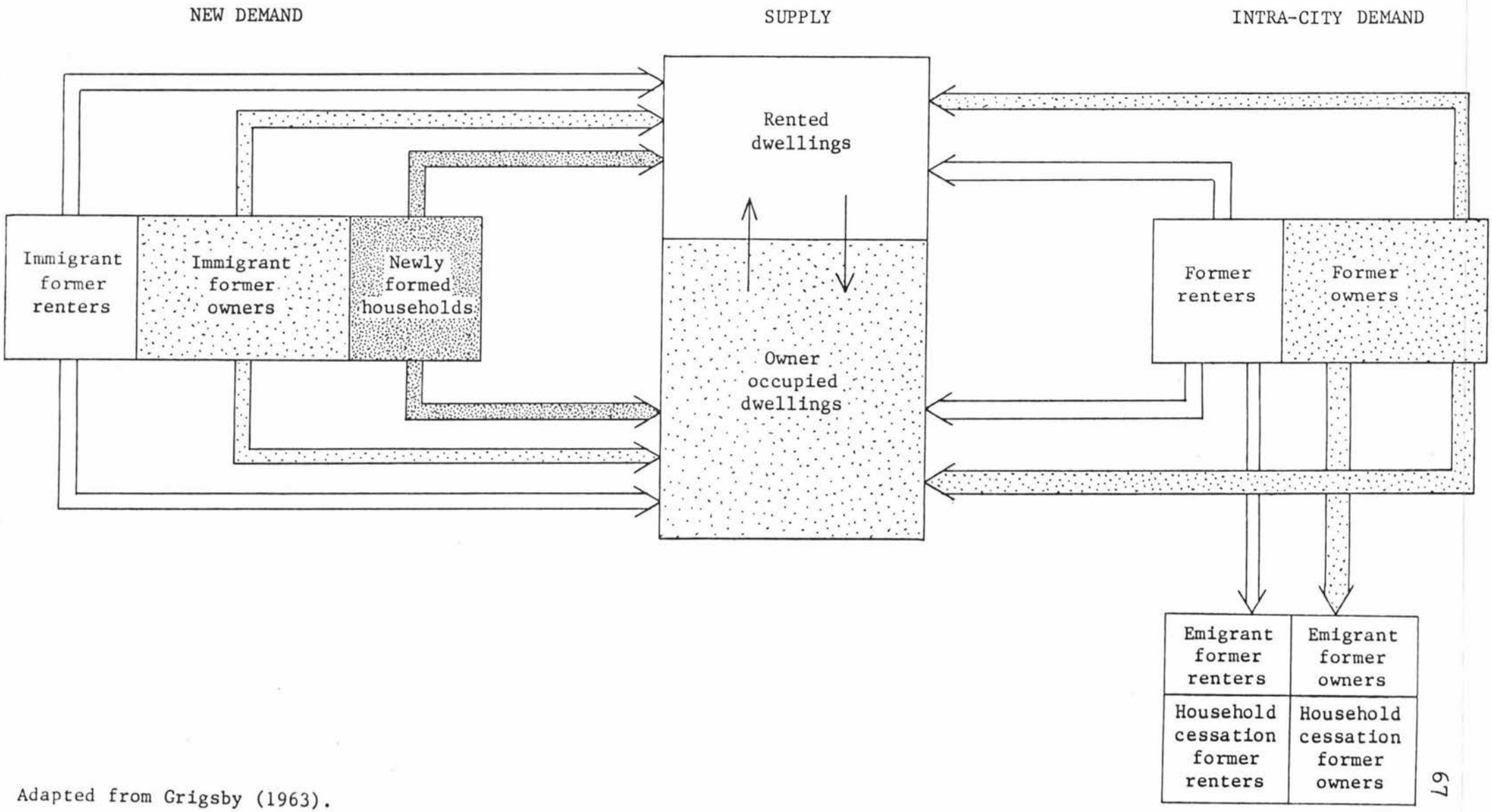


FIGURE 3

CHANGES OCCURRING IN THE HOUSING STOCK



HOUSING DEMAND AND SUPPLY IN PALMERSTON NORTH



Adapted from Grigsby (1963).

sales in Palmerston North in 1979, is only able to "cut into" the system at (1) and therefore deals only with mobility which is directly associated with the completion of a sale. In practice this means most but not all moves in the housing market shown as (2), (3) and (4) (which are contingent on the link to housing stock turnover) can be ascertained. The central role of mobility, however, ensures that an examination of what happens when a sale occurs can span the breadth of processes already set out in Figure 1.

It has been argued that changes in housing stock constrain the opportunities for mobility and household change, especially the possibilities for household formation. Figure 3 outlines the components of change in each sector. The prime source of information on such changes is local building statistics which allow a compilation of details.

Figure 4 analyses the housing market in terms of supply and demand. The supply of dwellings is depicted as a composite of rented and owner-occupied dwellings. Demand is considered to arise from both existing households and new households. Looking first at intra-city demand, former renters and owner-occupiers may demand alternative dwellings, may leave the city housing market through out-migration, or no longer enter as a component of demand because of household cessation. New demand, in contrast, has dual origins, in the form of immigrants into the city (and its housing markets) and household formation. The breakdown of demand in Figure 4 embraces various components that were defined earlier.

The dynamics of household change and the impact of

FIGURE 5

OCCUPANCY CHANGE OF OWNER-OCCUPIED DWELLINGS

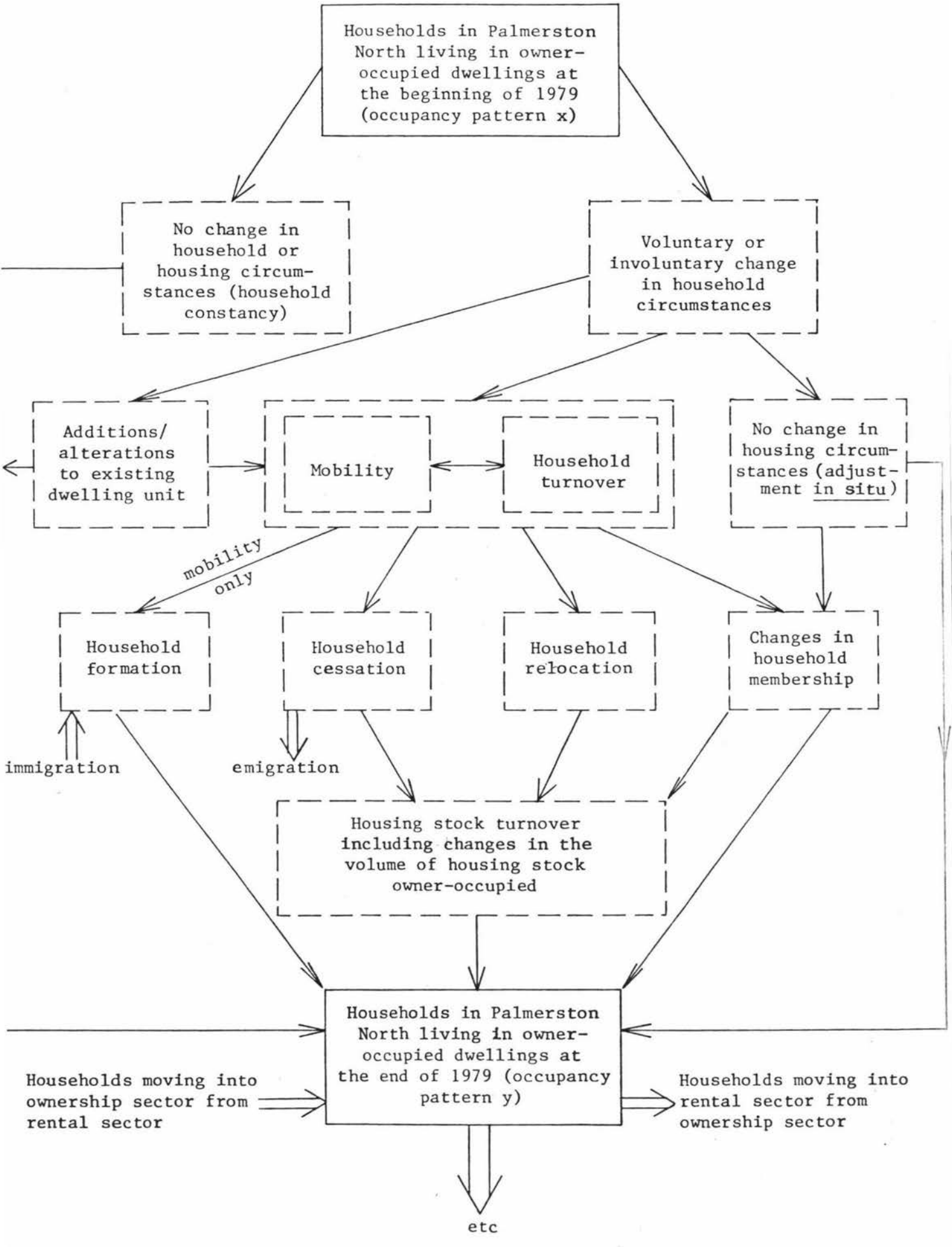
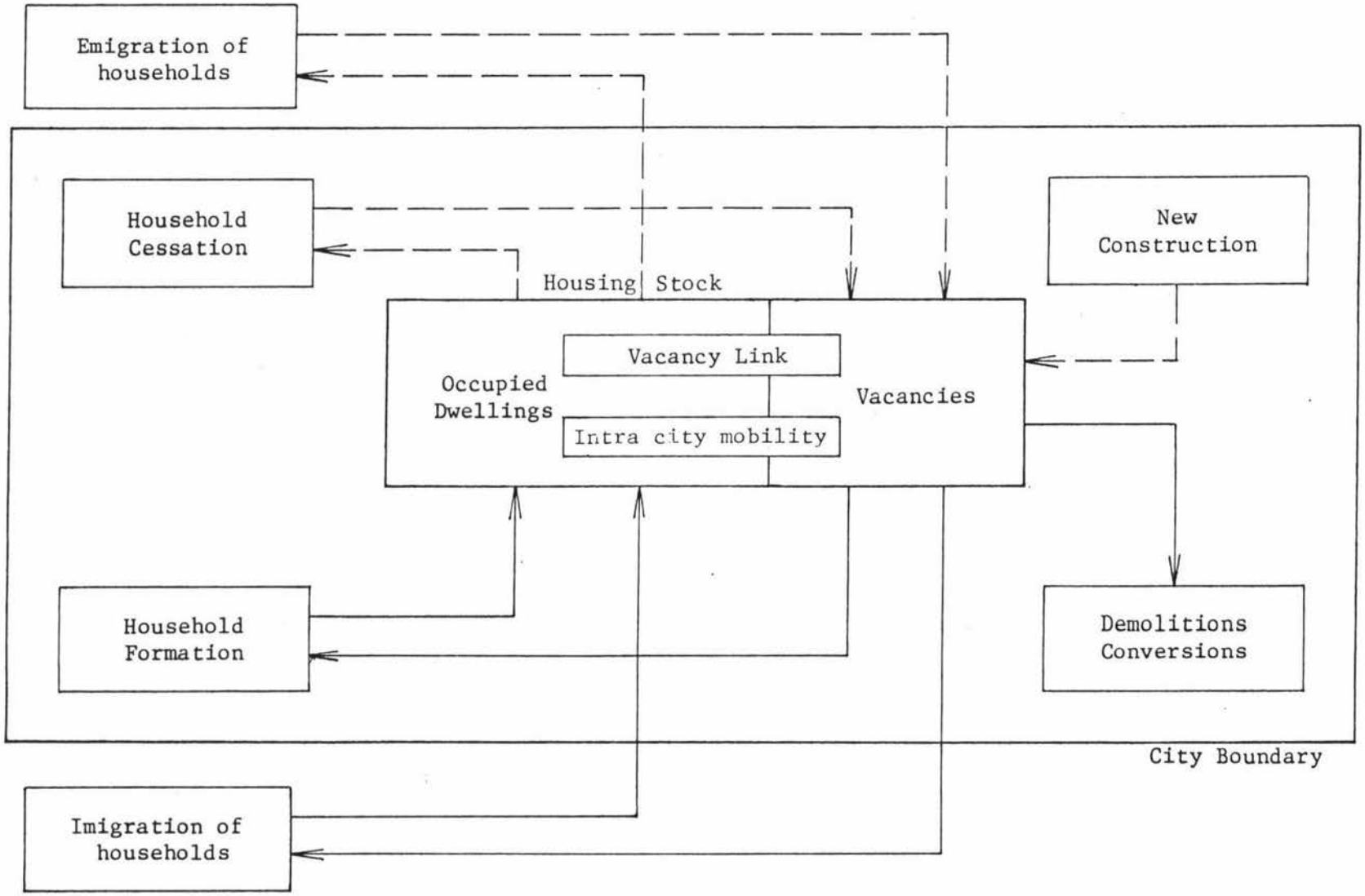


FIGURE 6

VACANCY CHAINS AND DWELLING OCCUPANCY



— — deletions from occupancy and additions to vacanies; additions to vacancies only

—— deletions from vacancies and additions to occupancy; deletions from vacancies only

Developed from Maher and Williams (1979)

this upon housing is illustrated in Figure 5 for owner-occupied dwellings. The figure is organised to display changes over time in the city's housing occupancy pattern and employs terms already defined.

Figure 6 shows how dwelling vacancies facilitate intra-city and in- and out-migration across the city's boundaries. In the study the assumption is made that vacancies caused by mobility of households following sales of properties in 1979 set in motion a sequences of moves (Dzus and Romsa, 1977; Maher and Williams, 1979).

(iv) Use of the Framework

Given assumptions on parameters such as birth rates, death rates, net migration, and the role of government, a variety of national and regional housing scenarios can be painted, by reference to the framework outlined.

The volume and composition of housing demand in various cities or regions will depend to a large extent on the rate of population growth, including migration influences, occurring in those areas. In those areas which have experienced reasonable growth rates in the recent past (for example the Auckland urban areas and cities in the northern North Island), due to either high rates of natural increase because of the population structure, or to immigration from other areas, or both, it is likely that dwelling construction rates would be higher than elsewhere. Rates of household formation would be fairly high, and household relocation to these areas would be likely to be important component of mobility, although of course rates of household cessation and emigration might be a confounding

factor. Housing stock turnover would be fairly rapid, though lower than in the early and mid 1970s, and vacancy rates would probably be increasing slightly.

Those New Zealand cities which have recently been experiencing low population growth (for example those in the lower half of the North Island, including Palmerston North, and cities such as Christchurch), are likely to be experiencing slowing construction activity, and possible increased rates of out-migration to overseas and to faster growth areas than in the past. Rates of household formation would be moderate, with household relocation still an important component of housing demand for those cities on the "career circuit" (although this latter element may be slowly decreasing over time as economic activity becomes more centralised). Vacancy rates are probably increasing, with rates of housing stock turnover slowing, and houses remaining on the market for longer periods of time than in the past.

The last group of cities or regions are those which have been experiencing a stabilizing population or actual population decline, such as South Island centres and smaller towns in the North Island. In these areas construction rates are probably very low, and low rates of household formation due to ageing population structures and little household relocation to these areas would result in a long "turn around time" for houses on the market. Vacancy rates would probably be highest in such areas.

These comments should not be taken to mean that all types of housing will be "fast" or "slow-moving" in any particular area. As demand patterns change, some types

or price ranges of housing will be in greater demand than others because of a relative shortage, for example two-bedroomed dwellings. Location in relation to job opportunities and amenities will also have an important influence. Resource development programmes planned for the 1980s are a good example of special conditions altering the general statements made above. A further factor to be remembered is that mobility rates will fluctuate from year to year as a result of short-term alterations in such variables the amount of mortgage finance available.

A retrospective investigation such as the present study is faced with trying to reconstruct the mobility patterns and changes in households associated with sales, as well as the situation in the respective households before and after the sales. In the next chapter the background situation in the New Zealand and Palmerston North housing markets in 1979 is briefly described. This is later followed by a discussion of the methods used to compile information about the character and situations of former and existing households in the dwellings that changed hands.

CHAPTER 4

THE HOUSING MARKET DURING 1979

The New Zealand housing market was characterised in the 1979 year by a particularly high turnover of properties, (especially in the early part of the year), with sales volumes at the highest level since June 1974 (see Table 3).

This situation appears to have been the result of a complex set of factors. One of these was the change in Housing Corporation policy, dating from April 1st 1979, to allow lending on existing houses for first home seekers (this followed a substantial increase in loan limits dating from February 1978). Section sales reached an all-time low for the latter half of 1979, indicating little new house construction and it became considerably cheaper and easier to obtain an existing house than to build one. More people than in each of the preceding five years found themselves in a position to realise their aspirations of owning a property and the diversion of demand from new, largely peripheral areas, to older and cheaper housing stock placed considerable pressure on the rental market. Landlords responded to the increased demand for owner-occupied properties and to the increasingly poor returns for rental investment compared to other forms of investment, by selling older inner city houses. In many cases blocks of rental flats were split up and sold with separate title for owner-occupation. Thus over the 1979 year, while

TABLE 3: DWELLING SALES (HOUSES AND OWNER-OCCUPIED FLATS ONLY) FOR 38 URBAN AREAS, 1970-1979

Half year ending	Sales
June 1970	14141
Dec. 1970	15440
June 1971	15157
Dec. 1971	16323
June 1972	17597
Dec. 1972	19655
June 1973	21257
Dec. 1973	24398
June 1974	20528
Dec. 1974	15792
June 1975	14557
Dec. 1975	16811
June 1976	17785
Dec. 1976	19320
June 1977	18150
Dec. 1977	15041
June 1978	16881
Dec. 1978	19971
June 1979	21623
Dec. 1979	20707

Source: Department of Valuation, 1980.

TABLE 4: HOUSING CORPORATION MORTGAGE REGISTRATIONS 1979, PALMERSTON NORTH OFFICE (REGIONAL FIGURES)

Period	Erect Loans	Purchase Loans	Total
9/1/79- 5/2/79	8	34	42
6/2/79- 6/3/79	5	49	54
7/3/79- 31/3/79	3	33	36
1/4/79- 1/5/79	38	105	143
2/5/79- 29/5/79	29	107	136
30/5/79- 26/6/79	51	90	141
27/6/79- 24/7/79	70	103	173
25/7/79- 21/8/79	29	47	76
22/8/79- 18/9/79	30	40	70
19/9/79-16/10/79	30	43	73
17/10/79-13/11/79	31	63	94
14/11/79-11/12/79	31	63	94
12/12/79- 8/1/80	12	22	34
Total	367	799	1166

Source: Palmerston North Office, Housing Corporation.

The effect of tight government lending (restriction of loans to couples with three or more children) shows in the first three months. April to July reflect a new policy of lending on existing houses to single people and first home owners. During this period erect loans also increased because of a $2500 suspensory loan offered from April onwards. However, income restrictions were introduced in June for purchase loans, to curb overspending. The effect is seen in later months. The figures cover the regional area and not just Palmerston North city.

housing stock increased only slowly in volume, there was a large amount of movement within the existing housing stock. The total of completions and creations via conversion of dwelling units was 16830. Figures for demolitions and reconversions are not readily available but would reduce the total.

Traditionally, mobility rates have been high in New Zealand, and much of this movement is intra-urban, although there has also been a significant proportion of inter-urban moves. On Census night 1976, of the persons who lived in the 24 main urban areas of New Zealand, only 50.5 percent had not changed residence in the preceding five years.[1] Of the remainder, 21.6 percent had moved within their particular urban area, and 18.7 percent had moved from elsewhere in New Zealand. (These figures are cast in individual, rather than household terms).

Changes in external migration rates also had a significant effect on the housing market in New Zealand in 1979. It is likely that high net out-migration rates (a loss of 40200 people in 1979) took some of the pressure off housing demand and meant more vacant houses were available for others to move into, probably facilitating extra mobility within the system. Although the Planning Council survey of migrants (Barrington and Davey, 1980) states that most migrants moved out of the rental sector, and that owners giong overseas did not always sell their houses, it is nevertheless true that owners going overseas and selling

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1 Figures for the year 1975-76 are not available, because the question on movement within the last year was not asked in the 1976 Census.

properties would have contributed to a higher sales volume in 1979. As well, those already overseas who had initially rented out their property due to the relatively slow housing market prior to 1979, may have been able to dispose of the property in the 1979 year. (This point may be equally applicable for those who moved within New Zealand from slower turnover areas).

Two further influences on the national housing market in 1979 which should be noted here are the factors of changing accessibility, and unemployment. The cost of travel has been increasing fairly rapidly in recent years and it is probable that during 1979 this increase contributed to an ongoing process of population concentration at the regional level as well as concentration of population (at a national level), in the larger cities. As well as adding to differential demand for housing in different regions of New Zealand, there is evidence that some of the moves made within cities or towns, and thus sales, resulted partly from a perceived need to improve accessibility, especially by lower income earners. The effect of unemployment is difficult to quantify in the absence of any real understanding of its links with mobility, but it may well be that unemployment in some regions (if coupled with geographical movement, and given local labour markets which are not equally tight) affected housing stock turnover in both source and destination areas.

Another factor having an impact on the New Zealand housing market during 1979, was the Matrimonial Property Act (1976), which requires permanently separating couples to divide matrimonial assets equally. Although this has

resulted in some sales of half shares of properties to the other partner, which are recorded at the "historical price", and are excluded from official aggregate sales figures (but recorded), most dwellings involved in matrimonial property settlements have been sold on the open market, with both partners moving out of the property. This has added a new component to housing turnover, the magnitude of which is not readily identifiable, except by observation in the field.

Over the 1979 year household change in particular and social change in the aggregate, probably continued apace. Very little accurate up-to-date information is available for New Zealand on such aspects as increasing diversity of household types and living arrangements, changing size of households or changing life-cycle patterns, (e.g. relating to marriage, birth of children, earlier establishment and later maintenance of independent households and so on). The 1976 Census figures are already nearly five years out of date, and change may have been relatively rapid since that time. However, what information is available (Davey, 1977; Department of Statistics, 1977; NHC, 1978; Johnston, 1979; Swain, 1979) tends to confirm overseas trends towards a greater number of smaller households containing fewer children and a greater diversity of household types (recent increases being particularly in the direction of single person households, families with one parent absent, and non-family households). Smaller average household size (declining from 3.4 in 1971 to 3.2 in 1976) has undoubtedly added to the recent demand for and turnover of dwellings.

Thus during the 1979 year, social and demographic trends which had already become apparent continued to make a considerable impact on the New Zealand housing market, and some new factors combined with these to produce a high turnover of dwellings and a considerable amount of household movement.

(i) The Palmerston North Housing Market in 1979

The local market reflected, during 1979, most, if not all of the national trends discussed above. During the year the volume of sales increased to 1280, involving 1258 residential properties (20 properties were sold twice during the year and two properties were sold three times), and 1322 dwelling units. This estimate is derived empirically from the sales records and differs slightly from official figures. The latter include sales which actually occurred at the end of 1978 but were reported in 1979 and exclude non-market transactions.

There has traditionally been a fairly high turnover of properties in Palmerston North, due to the widely recognised effect of an above average proportion of the population being "on transfer" (staff of government departments and private firms), with Palmerston North seeming to be a kind of "stepping stone" between smaller towns and larger cities. As well, Massey University especially and the Palmerston North Teachers Training College, have an important impact on the city's housing market. The influence of Massey University in terms of staff and student expenditure and demand for accommodation is perhaps more marked than in any other University city in New Zealand, because

of the city's moderate population (57931 at the 1976 Census).

For the Palmerston North Urban Area, of the persons residing there in 1976, only 47.1 percent had lived at the same address five years previously (compared to an average for the main urban areas of 50.5 percent); and while intra-urban movement was average, (22 percent of 1976 residents, compared to 21.6 percent for the main urban area average), movement from elsewhere in New Zealand made up the difference (24.3 percent compared to an 18.7 percent average for the main urban areas).[2] For Palmerston North, therefore, migration from elsewhere in New Zealand has in fact been more important than intra-urban migration, which is the reverse of the national situation.

Reasons for the particularly high turnover in the local housing market in 1979 are much the same as those for New Zealand as a whole. Easier availability of mortgage finance for existing houses led to a virtual doubling of Housing Corporation mortgage applications in the months after April (see Table 4). A high number of properties were sold from the rental stock for owner occupation, which probably put more pressure on the rental market in Palmerston North than it would have elsewhere because of higher than average demand for rental accommodation in the city. Matrimonial Property Act legislation, external migration, unemployment, and smaller average households all had their impact, although some of these factors are difficult to quantify. There is evidence that some households were moving into Palmerston North from areas sur-

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2 Migration into Palmerston North from overseas was less important than the average for the main urban areas.

rounding the city in 1979 because of increasing petrol costs coinciding with availability of mortgage finance. A further factor, which may have precipitated some movement, was that lease payments on some of the city's leasehold land (at most 2 percent of the city's housing stock), increased substantially in 1979, following the October 1978 property revaluations.

(ii) Sales Data for Palmerston North

Information on dwelling sales in Palmerston North city for 1979 forms the baseline for the study. The sample frame used to identify the population of households which moved into, within and out of Palmerston North city in 1979, was official change of ownership/sale notices for the properties concerned.

A sales book listing addresses of properties sold, and identifier numbers was used to access the record of properties in the files. Information on age of property, subjective condition, sale price, capital and land values (as as 1st October 1978) was obtained, along with names of previous and present owners and years of sale of the property. Also obtainable from property records, but not used in the study, is such information as legal descriptions of the layout and area of the property.

The following discussion briefly analyses the information obtained from the Palmerston North sales records for 1979. Some comments are also given in Appendix 1, on the adequacies/inadequacies and completeness of the housing and household information obtainable directly from this source.

Table 5 shows the age/class of the properties sold in Palmerston North during the year. Most sales were of newer housing stock, including a significant number of own-your-own flats. There were also quite a number of older houses sold which were built between 1914 and 1929. Table 6 shows dates of first sale in 1979 (the only sale in the year for all except 22 properties). The table shows a fairly uniform pattern except for a slight peak in September and a decline in sales numbers over the summer/Christmas period.

Tables were calculated (but are not presented) showing frequency of turnover of properties sold in 1979, in the 1960s and 1970s decades. The average frequency of sale for these properties in the 1960s was 0.49 and for the 1970s, 1.84, reflecting the fact that a large proportion of the properties sold in 1979 were built in the 1970s anyway, but also that many of the properties sold in 1979 were sold quite frequently in the 1970s for some reason. (During the life of a property, it appears to be fairly typical for it to be sold once from the builder/developer to the first occupant, who has generally not owned a home before and then resold after 5-6 years as the first occupant moves house).

Table 7 shows sale prices for the first sale in 1979. The modal category is $25-30000, with the table skewed towards the lower priced properties because of the nature of the city's housing stock (see later discussion). For properties resold in 1979, none were priced at less than $20000, as resale value on these properties may not be immediate if the property is to be improved.

TABLE 5: AGE CLASS OF PROPERTIES SOLD IN PALMERSTON NORTH IN 1979

	Houses			Flats	
Age	Number	Percent	Type	Number	Percent
Pre-1914	78	6.2	Own-your-owns	186	14.8
1914-1929	137	10.9	Converted houses	21	1.7
1930s	81	6.4	Purpose-built rental flats	15	1.2
1940s	92	7.3			
1950s	194	15.4			
1960s	225	17.9			
1970s	229	18.2			
	1036			222	

Source: Change of Ownership Notices and Property Records.

TABLE 6: DATES OF FIRST SALE IN 1979

	Number	Percent
January	65	5.2
February	116	9.2
March	102	8.1
April	104	8.3
May	113	9.0
June	120	9.5
July	83	6.6
August	113	9.0
September	149	11.8
October	94	7.5
November	95	7.5
December	100	7.9
Indeterminate	4	0.3
	1258	

Source: Change of Ownership Notices and Property Records.

Table 7 also shows capital value of the properties sold. The counts given include capital values of properties involved in "abnormal sales". A regression analysis of sale price (dependent variable) on capital value (independent variable) gives a least squares equation Y = 1630 + .962X and a correlation coefficient of 0.79. The average deviation of sale price from capital value is just over $2000 above, although lower priced properties are more likely to be sold closer to capital value than this or even below capital value, whereas higher priced properties are more likely to be sold further above capital value.

Table 8 shows abnormal sale categories. Note that several of the half-share sales which appeared to involve divorce subsequently turned out to be non-divorce transfer of part ownership transactions; also note that the actual number of property sales resulting from separation or divorce is much higher than this (see results section). Leaseholding sales are generally at prices reflecting the value of improvements only rather than capital value.

Tables showing number in apparent tenure classes before and after sale (whether the owner's address was shown as the property or otherwise) were calculated but are not shown because estimates were later found to be quite unreliable (see Appendix 1). The only meaningful trend which appeared was an obvious movement of properties from the rental to owner-occupied categories although this cannot be accurately quantified. Similar problems were encountered in examining tables of address of owner before and after the sale (Palmerston North or other places), although the trend of properties to be increasingly owned by Palmerston

TABLE 7: SALE PRICE AND CAPITAL VALUE OF PROPERTIES SOLD

$	Count of Sale Price[1]	Count of Capital Value
0-4999	59	0
5000-9999	6	6
10000-14999	29	41
15000-19999	128	168
20000-24999	263	310
25000-29999	277	305
30000-34999	167	148
35000-39999	105	95
40000-44999	82	83
45000-49999	56	44
50000-54999	35	22
55000-59999	17	6
60000-64999	12	15
65000-69999	9	5
70000-74999	4	2
75000-79999	5	4
80000-84999	0	1
85000-89999	2	1
90000-94999	1	0
95000-99999	0	1
100000 and over	1	1

Source: Change of Ownership Notices and Property Records.

1 The main reason for a large number in the first category of sale price is the inclusion there of "abnormal" sales, such as divorce settlements and transfer of part ownership.

TABLE 8: TYPES OF ABNORMAL SALES

Description	Number
Divorce sales	17
Leaseholding sales	17
Freeholding sales	2
Sale of part interest (non-divorce)	5
Sale of part lot (subdivision)	2
Company sale (non-market)	2
Gift	1
Family sale	2
Miscellaneous (includes sale of two properties together, demolition soon after sale)	11
Total	59

Source: Change of Ownership Notices and Property Records.

TABLE 9: AGE AND SALE PRICE COMPARISON

Sale Price Classes	Age Classes							Flats[1]			Total
	Pre-1914	1914-29	1930s	1940s	1950s	1960s	1970s	Purpose built	Converted houses	Own-your-owns	
Less than $20000	54	49	22	18	25	12	1	3	6	32	222
$20000-$24999	17	36	28	35	61	31	17	0	7	31	263
$25000-$29999	3	23	16	22	47	60	53	3	2	48	277
$30000-$39999	2	16	7	12	35	69	75	4	5	47	272
$40000-$49999	1	7	5	3	13	45	41	2	0	21	138
More than $50000	1	6	3	2	13	8	42	3	1	7	86
Total	78	137	81	92	194	225	229	15	21	186	1258

Source: Change of Ownership Notices and Property Records.

1 The figures for purpose-built flats and converted houses show price by property rather than by dwelling unit.

North people confirms the above statements about owner-occupiers.

Table 9 shows age against sale price (of first sale). Sale price is collapsed into six groups using the categories discussed in the next chapter. There is an obvious association between the two variables, filtered somewhat by lower priced newer houses. Sale prices for own-your-own flats show the variation in quality that is possible.

As well as looking at characteristics of sales, it is important to compare those properties sold in 1979 with the total housing stock. Chapter 5 discusses the nature of Palmerston North's housing stock. This information is subsequently used to develop the concept of sub-markets.

CHAPTER 5

PALMERSTON NORTH'S HOUSING STOCK

Very little information appears to be available on the amount, nature and location of the housing stock of Palmerston North City. What is available (Nana, 1980 for the Palmerston North Urban Area) covers such variables as percentages of detached houses versus multi-unit dwellings, age of those different types of dwellings and floor area statistics, but not that of location. The 1976 Census gives some information on tenure and type of dwelling (house, flat etc.) broken down for census areas, but even the local authority does not have adequate records which show exactly what age, value, condition and type of dwelling is located where.

In order to obtain information which would enable a mapping of age and value patterns of housing for submarket analysis and to obtain an approximate estimate of how much of what kind of housing exists in particular parts of the city, a 10 percent systematic sample was taken of residential property records, using maps showing subdivision of land in the city.

The method used was to select what appeared to be every 10th residential property (since records for residential, commercial, industrial and vacant land are filed together) and record location, age and value. It was found that the most practicable method of doing this was to count residential titles (each of which has its own

record). This meant that although own-your-own flats with separate title were counted individually as separate dwelling units, those blocks of flats built for rental and owned by one individual or a group of people under one title, as well as converted houses, were counted as only one unit. However, since the number of units was also recorded at the same time in these cases, consequent adjustments in totals have been made.

Tables 10 and 11 show the estimates of housing stock arrived at for Palmerston North, by age and value, broken down by valuation district (see Figure 7). Arbitrary names have been assigned to some of the districts where names of suburbs did not appear to be immediately obvious (since districts are usually identified by numbers). The total number of dwelling units for Palmerston North City as at the end of 1979 is estimated at 17670.

Looking first at age in Table 10 and in the map following (Figure 8), it appears that the pattern of development of the city's housing stock over time has been, logically enough, roughly concentric, except that development in a complete circle has been truncated by the positioning of the city with regard to the Manawatu River. The central core of the city's housing stock, covering much of South Takaro, "Papaeoia" and areas around Fitzherbert Avenue leading to the river crossing, as well as extending up Main Street to Terrace End, was built prior to the 1930s, especially in the years between 1914 and 1929. Growth and sprawl slowed in the 1930s and early 1940s although by the end of the 1940s several new areas of land had been opened

TABLE 10: AGE OF TEN PERCENT SAMPLE OF TOTAL HOUSING STOCK BY DWELLING UNIT

Area	Age Classes							Estimated Total in Each Area
	Pre-1914	1914-1929	1930s	1940s	1950s	1960s	1970s	
1447-Kelvin Grove	-	-	-	-	2.8	22.2	75.0	360
1448-Outer Awapuni	-	-	-	-	-	3.8	96.2	260
1450-Cloverlea	1.7	-	-	-	5.1	47.7	45.8	590
1451-Milson	1.0	2.1	3.1	5.2	11.5	12.5	64.6	960
1452-Highbury	1.7	-	1.7	1.7	5.2	72.4	17.2	570
1453-Westbrook/ West Highbury	-	-	-	-	-	3.5	96.5	570
1454-North Takaro	-	1.9	8.6	4.8	55.2	18.1	11.4	1050
1455-Takaro City North	2.0	28.0	36.0	12.0	14.0	4.0	4.0	510
1456-City North/ Florence/Stanley	5.9	41.2	17.6	16.2	11.8	4.4	2.9	680
1457-Hospital	6.7	4.4	2.2	26.7	37.8	15.5	6.7	470
1458-Roslyn	-	5.9	-	13.7	49.0	19.6	11.8	510
1459-Outer Milson	-	-	-	-	-	-	100.0	250
1460-South Takaro	25.8	37.1	7.9	5.6	11.2	11.2	1.1	870
1461-Central/Papaeoia	35.5	27.4	8.1	6.5	3.2	6.5	12.9	630
1462-Terrace End	4.1	6.9	2.7	58.9	20.6	2.7	4.1	730
1463-Central Awapuni/ Dittmer	2.5	2.5	-	7.5	33.8	38.8	15.0	800
1464-Awapuni	-	-	-	1.4	25.0	55.6	18.0	720
1465-West End	17.1	13.4	23.2	17.1	11.0	8.5	9.7	820
1466-Park/Batt/Ongley	20.9	26.7	10.5	4.7	10.5	15.1	11.6	840
1467-Victoria/Colombo/ Manapouri	12.5	16.4	17.2	17.2	11.7	9.4	15.6	1260
1468-South Terrace End	17.7	21.5	7.6	5.1	17.7	19.0	11.4	790
1469-Brightwater	6.7	5.0	3.3	15.0	10.0	48.3	11.7	600
1470-Aokautere	5.9	-	-	11.8	35.3	17.6	29.4	170
1471-Collingwood/ Lagoon	8.3	13.9	-	16.7	30.6	11.1	19.4	360
1472-Hokowhitu	1.8	0.9	1.8	11.6	38.4	36.6	8.9	1120
1473-Riverdale	1.1	1.1	-	-	13.8	56.3	27.6	870
1474-Central	53.6	25.0	3.6	3.6	3.6	7.1	3.6	310
Percent in Age Class	8.4	11.1	6.7	10.2	18.7	22.4	22.3	
Estimated Total in Age Class	1490	1970	1190	1810	3310	3960	3940	17670

Source: Derived from 10 percent sample of property records.

TABLE 11: VALUE OF TEN PERCENT SAMPLE OF TOTAL HOUSING STOCK BY DWELLING UNIT

Area	($000s) <15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60+	Estimated Total in Each Area
1447-Kelvin Grove	-	-	22.2	69.4	5.6	2.8	-	-	-	-	-	360
1448-Outer Awapuni	-	-	11.5	34.6	19.2	7.7	3.9	3.9	11.5	3.9	3.8	260
1450-Cloverlea	-	-	25.4	35.6	18.6	11.9	3.4	3.4	1.7	-	-	590
1451-Milson	2.1	9.4	17.7	43.7	12.5	7.3	5.2	1.0	-	1.0	-	960
1452-Highbury	10.5	14.0	54.4	12.3	5.3	1.8	-	-	1.8	-	-	570
1453-Westbrook/ West Highbury	-	-	14.0	56.1	14.0	3.5	3.5	5.3	1.8	1.8	-	570
1454-North Takaro	6.7	27.6	42.8	15.2	4.8	1.0	1.0	1.0	-	-	-	1050
1455-Takaro City North	15.7	13.1	33.3	27.5	3.9	2.0	3.9	-	-	-	-	510
1456-City North/ Florence/Stanley	8.8	14.7	33.8	17.7	10.3	2.9	4.4	1.5	2.9	1.5	1.5	680
1457-Hospital	21.3	36.2	21.3	12.8	2.1	4.2	-	2.1	-	-	-	470
1458-Roslyn	2.0	37.2	33.3	19.6	5.9	2.0	-	-	-	-	-	510
1459-Outer Milson	-	4.0	32.0	56.0	-	8.0	-	-	-	-	-	250
1460-South Takaro	28.7	31.0	32.2	5.8	2.3	-	-	-	-	-	-	870
1461-Central/Papaeoia	20.6	20.6	23.8	17.5	4.8	6.3	3.2	1.6	-	1.6	-	630
1462-Terrace End	8.2	35.6	31.5	11.0	8.2	2.7	1.4	-	-	-	1.4	730
1463-Central Awapuni/ Dittmer	3.7	8.7	17.5	21.3	15.0	7.5	11.2	8.8	2.5	3.7	-	800
1464-Awapuni	1.4	9.7	44.4	30.6	11.1	2.8	-	-	-	-	-	720
1465-West End	14.6	35.4	22.0	18.3	4.9	3.6	-	1.2	-	-	-	820
1466-Park/Batt/Ongley	14.3	15.5	21.4	16.7	8.3	10.7	5.9	3.6	1.2	-	2.4	840
1467-Victoria/Colombo/ Manapouri	12.0	11.2	22.4	12.0	14.4	9.6	4.8	4.0	1.6	2.4	5.6	1260
1468-South Terrace End	8.9	24.0	25.3	16.4	5.1	6.3	8.9	3.8	1.3	-	-	790
1469-Brightwater	5.0	20.0	18.3	26.7	18.3	5.0	1.7	3.3	-	1.7	-	600
1470-Aokautere	-	-	5.9	11.8	11.8	5.9	35.3	17.6	-	5.9	5.9	170
1471-Collingwood/ Lagoon	2.8	-	8.3	25.0	11.1	22.2	2.8	5.6	-	2.8	19.4	360
1472-Hokowhitu	0.9	8.0	25.0	23.2	14.3	9.8	5.3	4.5	3.6	2.7	2.7	1120
1473-Riverdale	-	2.3	6.9	20.7	21.8	17.2	17.2	4.6	3.5	2.3	3.5	870
1474-Central	35.5	32.2	9.7	6.5	6.5	3.2	-	3.2	-	-	3.2	310
Percent in Value Class	8.5	16.3	25.5	22.7	10.0	6.3	4.2	2.7	1.2	1.1	1.5	
Estimated Total in Value Class	1500	2880	4500	4010	1770	1120	750	470	210	190	270	17670

Source: Derived from 10 percent sample of property records.

up for subdivision. A fair proportion of the housing built in the 1930s and 1940s was built by the state, for example the Savage Crescent development and much of the higher parts of Terrace End around Rangiora Avenue. The 1950s saw a further surge of development on the outskirts, chiefly in West End/Awapuni, North Takaro, Roslyn and parts of Hokowhitu (state housing also made up some of this).

About 45 percent of the total housing stock has been built in the last two decades. In the 1960s Awapuni and Hokowhitu were more or less completely built up, and the suburbs of Highbury especially, and Cloverlea, Kelvin Grove and Milson (also Aokautere) experienced initial housing development. These suburbs began to sprawl outwards in the early 1970s (e.g. Westbrook), but the most significant development of the 1970s has been of a multi-unit nature ("sausage flats", "own-your-own" units). While some of this building activity is still taking place on the periphery, some of the older inner city areas have been extensively built over during the 1970s, complicating the age pattern. (For example, inner parts of Terrace End, some parts of West End, and the area just south of the city centre). During the 1979 year specifically, very little housing development took place on the periphery (except in higher-value brackets) and most construction was concentrated on own-your-own units (many of these also in higher value groups).

Despite the reasonably ordered pattern, some smaller areas of Palmerston North experienced fairly continuous and incremental growth through the last decades (or have

been extensively and frequently built over). These are shown in the table as areas with fairly even proportions of housing in each of the age categories. In these areas the age and style of housing can vary tremendously along the same street, so that very little pattern can be discerned. In order to simplify the map of age some of the more recent development has been ignored because of its spotty nature, and isolines have been based primarily on the decade in which the area was originally built up.

Table 11 and the map of capital value (Figure 9) show that the value pattern has quite a strong association with that of age. The older, inner city areas are on the whole the lowest valued, with much of the housing stock valued at less than $20000 and with some of the houses in poorer condition worth less than $15000 (this, of course, includes land value). However, another source of percentages of low capital value is small, low value dwelling units, often the multi-unit kind, as well as converted houses which are fairly widespread around the central and middle areas of the city. Again, some of these have been left out of the value map to avoid distorting the predominant pattern of value for some areas. Apart from the inner city area, there are a few discrete "troughs" of housing values less than $20000, which are predominantly associated with state houses and flats (e.g. the Highbury state flats in the area between Brentwood and Coventry streets, the Crewe Crescent and Savage Crescent areas, and the patch of state housing in Terrace End around Rangiora and Andrew Avenues, and Vogel Street).

A large proportion of the city's housing stock (48.2

Compiled by
City Planning Department
Palmerston North City Corporation

FIGURE 7
BASE MAP AND VALUATION DISTRICTS

Scale
0 200m. 400m. 600m. 800m. 1km.

Latest revision: August 1980

FIGURE 8

AGE PATTERN OF HOUSING STOCK

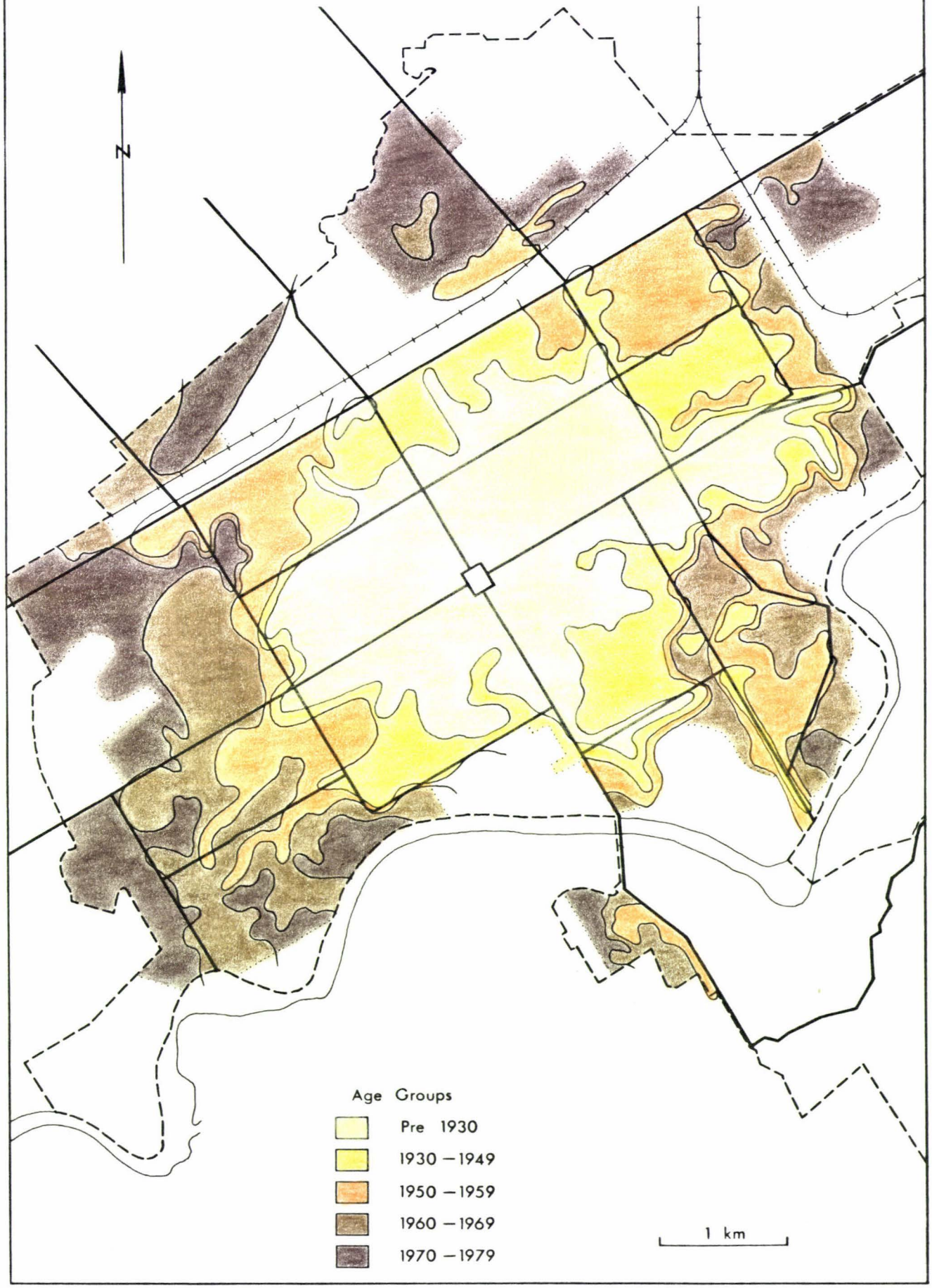
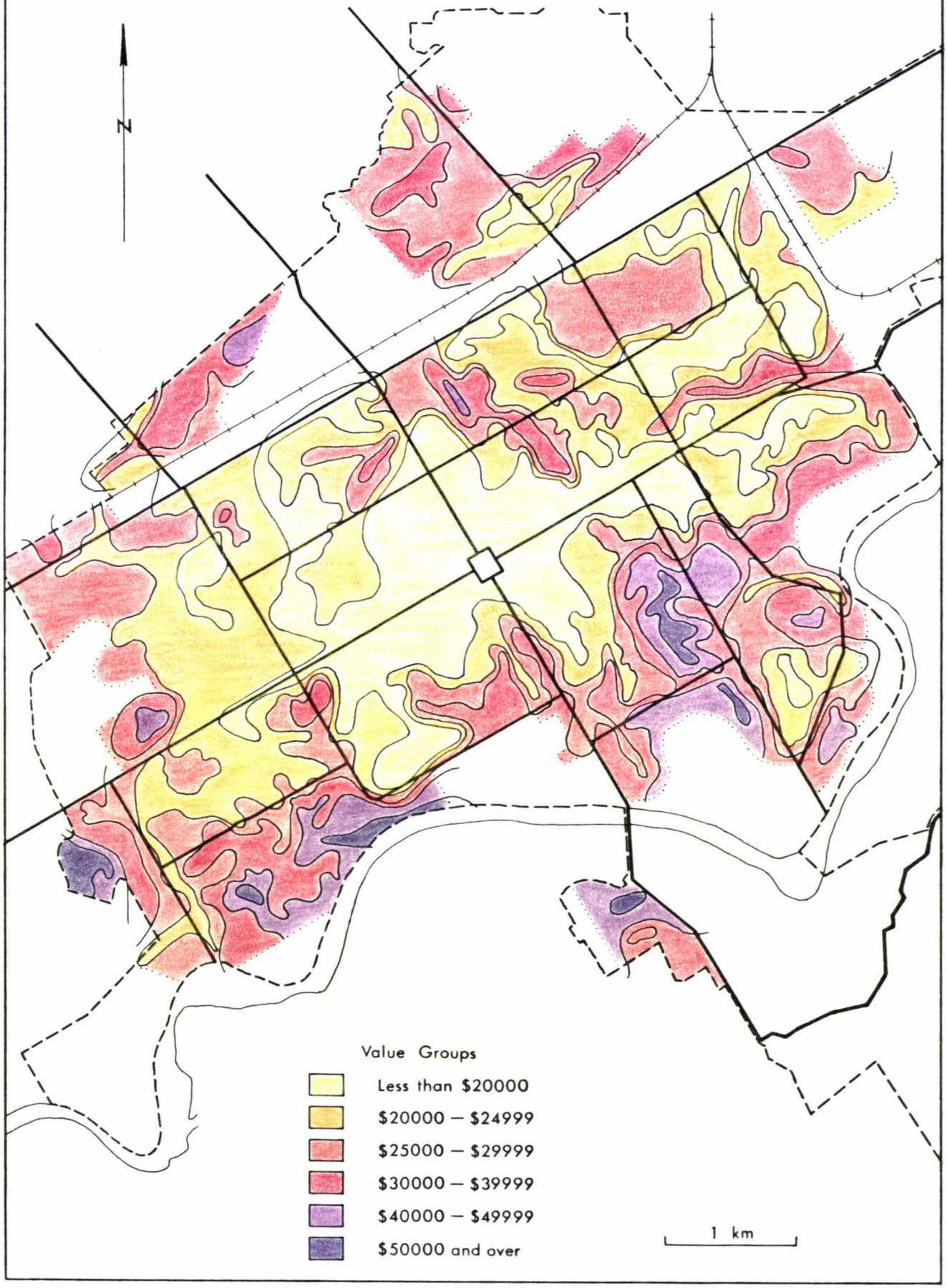


FIGURE 9

CAPITAL VALUE PATTERN OF HOUSING STOCK

(As at 1st October 1978)



percent) is, however, valued in the $20-30000 range. Most of the housing in the earlier developed parts of Highbury is in the range between $20000 and $25000, along with much of the remainder of Takaro, the older parts of Awapuni containing state housing, parts of Brightwater, and quite a lot of the northeast sector of the city. The $25-30000 range is mainly that of the newer peripheral areas such as Milson, Cloverlea and Westbrook, where group housing is quite extensive. The remaining quarter of the city's housing stock with capital values of over $30000 has a distinctly non-concentric spatial pattern. Some small patches of older, higher-valued housing are found amongst the older housing areas, for example, just northeast of the city centre. On the whole, however, higher capital values (especially those over $40000) are concentrated on the river side of the city in the areas of Hokowhitu, near the lagoon, Riverdale, peripheral parts of Awapuni (the newly developed Mangaone Park subdivision) and in Aokautere. These are also areas which are regarded as having higher status (See Chapter 7).

Before a more detailed description of submarkets is attempted a comparison is made between the properties sold in Palmerston North in 1979 and the total housing stock as estimated from the 10 percent sample. Tables 12 and 13 show that houses sold were slightly more likely to come from value groups over $25000 than from those below, and that both newer houses built in the last decade and older houses built between 1914 and 1939, were slightly more likely to have been sold than others. Chi-square tests on the distributions presented in each table show

TABLE 12: VALUE OF PROPERTIES SOLD AGAINST PROPERTIES NOT SOLD

(percentages)

	Value Classes ($000s)										
	<15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60+
Sold	9.0	15.1	22.8	22.7	10.7	6.7	6.3	3.0	1.4	0.4	1.9
Not Sold	8.4	16.4	25.7	22.7	10.0	6.3	4.1	2.6	1.2	1.1	1.5

Source: Change of Ownership Notices and Property Records.
Calculations based on 10 percent sample of property records and sales notices 1979.
Chi-square statistic = 29.4, df = 10, p >.01.

TABLE 13: AGE OF PROPERTIES SOLD AGAINST PROPERTIES NOT SOLD

(percentages)

	Age Classes						
	Pre-1914	1914-29	1930s	1940s	1950s	1960s	1970s
Sold	7.3	11.6	7.3	7.4	15.7	21.5	29.1
Not Sold	8.5	11.1	6.7	10.5	19.0	22.5	21.7

Source: Change of Ownership Notices and Property Records.
Calculations based on 10 percent sample of property records and sales notices 1979.
Chi-square = 50.8, df = 6, p >.01.

TABLE 14: TURNOVER IN 1979 AS A PERCENTAGE OF ESTIMATED HOUSING STOCK IN VALUATION DISTRICTS

Area	Total Number Dwelling Units Sold	Total Housing Stock	Percent Turnover
1447-Kelvin Grove	19	360	5.3
1448-Outer Awapuni	24	260	9.2
1450-Cloverlea	44	590	7.5
1451-Milson	94	960	9.8
1452-Highbury	23	570	4.0
1453-Westbrook/ West Highbury	29	570	5.1
1454-North Takaro	60	1050	5.7
1455-Takaro City North	48	510	9.4
1456-City North/ Stanley/Florence	68	680	10.0
1457-Hospital	36	470	7.7
1458-Roslyn	32	510	6.3
1459-Outer Milson	30	250	12.0
1460-South Takaro	73	870	8.4
1461-Central Papaeoia	44	630	7.0
1462-Terrace End	36	730	4.9
1463-Central Awapuni/ Dittmer Drive	49	800	6.1
1464-Awapuni	26	720	3.6
1465-West End	66	820	8.0
1466-Park/Batt/Ongley	73	840	8.7
1467-Victoria/Colombo/ Manapouri	107	1260	8.5
1468-South Terrace End	63	790	8.0
1469-Brightwater	51	600	8.5
1470-Aokautere	12	170	7.1
1471-Collingwood/Lagoon	44	360	12.2
1472-Hokowhitu	83	1120	7.4
1473-Riverdale	72	870	8.3
1474-Central	21	310	6.8
	1322	17670	7.6 average

Source: Derived from Change of Ownership Notices and property records.

significant differences between properties sold and properties not sold at the 99 percent confidence level. (This is partly a function of a larger percentage of housing stock in upper value groups and newer age groups being owner-occupied).[1] The fact that the two populations of properties are significantly different invites scrutiny of whether households with high incomes or substantial capital availability were especially noticeable amongst purchasers (as distinguished from those more able to move), despite the uniformity of the housing market in Palmerston North and the fairly egalitarian nature of institutional access to housing markets.

Table 14 shows turnover in dwelling unit terms as a percentage of estimated housing stock in valuation districts. There is in fact very little variation between areas, with a uniformly high turnover (12 areas were within one standard deviation of the average for the 27 areas). The areas with above average turnover fall into three groups: newly developed areas (1448, 1451, 1459) where the sale in 1979 was often the first, as the original occupants moved out, or merely as the property was sold from the builder to the first occupant, two older housing areas where turnover of existing houses is slightly up (1455 and 1456) and two riverside areas (1466 and 1471) where turnover is probably slightly higher than average anyway (these areas being considered good for resale value along with Hokowhitu and

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1 The larger percentage of sold than non-sold dwellings in the less than $15000 value category is a result mainly of low valued blocks of flats.

Riverdale). The last four areas mentioned are also close to the city centre.

(i) Submarkets

The concept of housing submarkets, within which there is a measure of substitutability of houses by households (Bourne, 1976) has appeared fairly frequently in the literature in recent years (e.g. Smith & Thorns, 1979; Davey, 1980; Thorns, 1980). The term has, however, been used in several different and inconsistent ways. Sometimes it has been used to refer to subsets of people demanding houses, who have different age, life-cycle/demographic, or income characteristics, but mostly it has been used to refer to subsets of houses which might be demanded or sold in the market. This concept of submarket has been based variously on age of houses, value of houses, average sale price and type or design characteristics of houses (for example, people could be looking in the submarket of low maintenance brick houses). Smith and Thorns (1979) attempted to define submarkets for Christchurch based on both characteristics of the area (capital value) and of the residents (social and demographic characteristics). However, only five areas of the city were eventually studied, these being chosen because they were deemed to be representative of Christchurch's submarkets. The use of simple valuation districts as submarkets would in no way give an accurate picture of value "on the ground", if the situation was as complicated and variable from street to street as it is in Palmerston North.

Age and value were selected as delineators of submarkets in the present study, because they were the only relevant and meaningful variables obtainable for the entire housing stock from property records, (no information on households being derivable from this source) and they could be pinned down to particular locations. They are thus not assumed to be the only or necessarily best variables to use in the ideal situation.

After mapping age and value for the total housing stock in Palmerston North, and discovering the patchiness of housing stock categories over space, it was decided that some of the categories would be aggregated on the grounds of smaller amounts of stock in these categories than others, to enable the pattern to become clearer.

The age categories used for the maps of housing stock and in defining submarkets are pre- 1930, 1930-49, 1950s, 1960s and 1970s, while capital value categories used were less than $20000, $20-$24999, $25-29999, $30-39999, $40-$49999, and $50000 and over. Although these categories are to some extent arbitrary, it is also arbitrary to break up a continuum of choices into categories. A certain degree of substitutability between similar value and age groups is assumed, so that some movement will be observed within these groups. Nevertheless it is not assumed that mobility will be only within submarkets. Some "upward" and "downward" mobility will be able to be observed, as well as "sideways" mobility. Neither is it assumed that submarkets should be equated with housing classes.

The combinations of age groups and value groups give

TABLE 15: TEN PERCENT SAMPLE OF TOTAL HOUSING STOCK IN AGE AND VALUE SUBGROUPS

(percentages)

	Value						
	<$20000	20-24999	25-29999	30-39999	40-49999	50000+	Total in each age subgroup.
Pre-1930	9.8	5.2	2.3	1.7	0.4	0.3	346
1930-1949	5.7	6.0	2.4	1.6	0.9	0.3	300
1950s	3.9	7.0	3.9	2.3	1.0	0.4	331
1960s	2.6	5.7	5.6	5.3	2.5	1.3	396
1970s	1.2	3.2	8.2	5.2	2.7	1.4	394
Total in each value subgroup	438	450	401	289	122	67	1767

Source: Derived from 10 percent sample of properties.

TABLE 16: TEN PERCENT SAMPLE OF TOTAL HOUSING STOCK IN COLLAPSED AGE AND VALUE SUBGROUPS

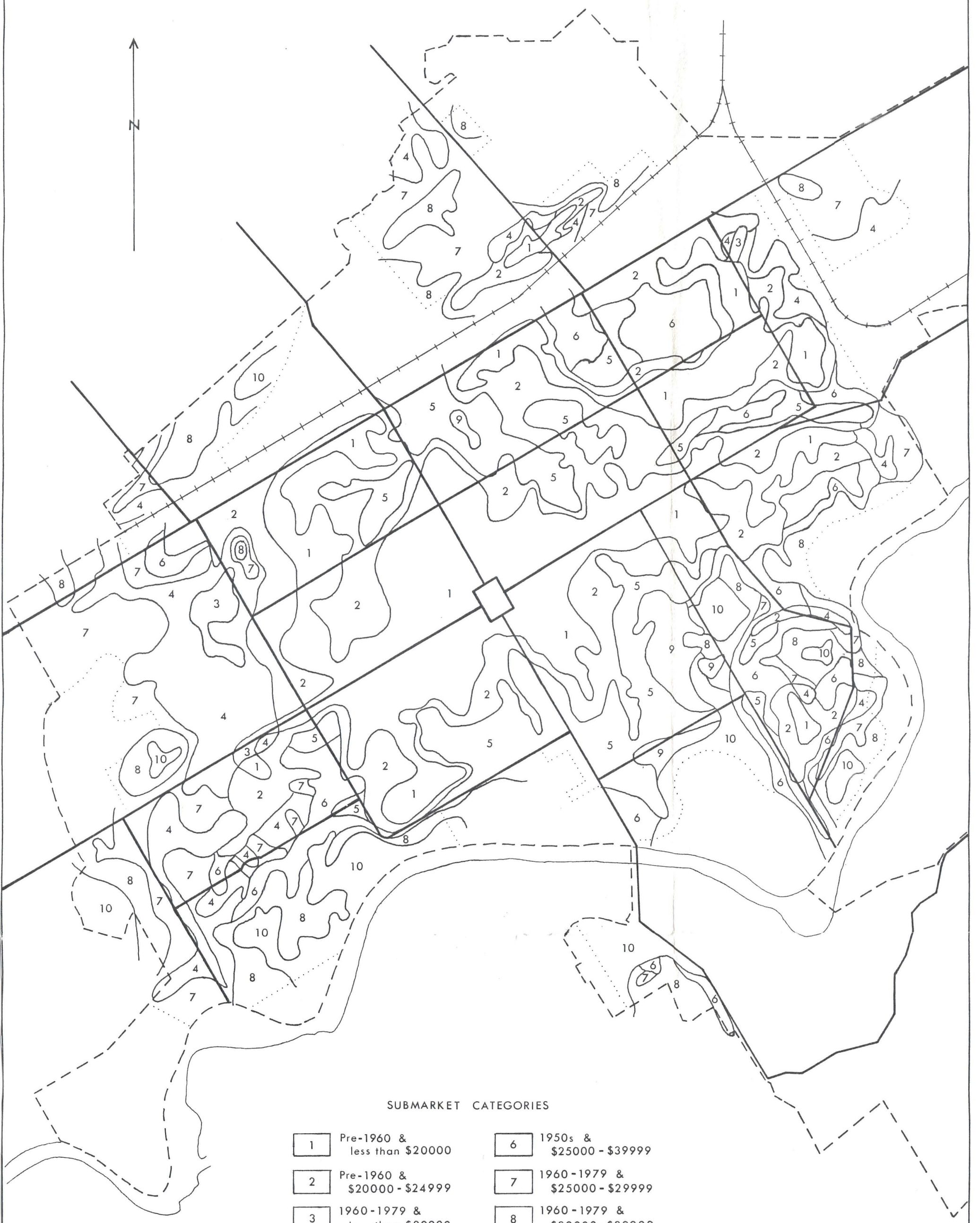
(percentages)

	Value				
	<$20000	$20-24999	$25-29999	$30-39999	$40000+
Pre-1949	19.4 *1*	18.2 *2*	8.0 *5*		1.9 *9*
1950s			6.2 *6*		9.3 *10*
1960-79	3.8 *3*	8.9 *4*	13.8 *7*	10.5 *8*	

Source: Table 15. Figures in italics refer to codes for submarket groups used in the results section.

FIGURE 10

HOUSING SUBMARKETS FOR PALMERSTON NORTH



a range of 30 possible subgroups, some of which are much more common than others. Table 15 shows the percentage of total housing stock in each of the subgroups, while Table 16 collapses these into ten groups, on the grounds of perceived similarity between some of the subgroups. The ten submarkets are mapped in Figure 10. It should be noted that submarkets are not necessarily entirely contiguous, and that there is not always an orderly progression from one submarket category to the next "higher" or lower "category". In addition, since the divisions shown on the map are generalisations for each area, particular dwellings may not actually fit the expected submarket category for their area.

Methods used to collect information on households and their movements are discussed in the next chapter.

CHAPTER 6

METHODS USED IN DATA COLLECTION

(i) The Data Sets

The study is based primarily on interviews of the occupants of a sample of 499 of the 1258 properties sold in Palmerston North in 1979. The properties where an adult was to be interviewed were randomly selected. Interviews covered personal details of the household, present tenure, nature of household change with movement, previous place of residence and previous tenure, reasons for moving, residential preferences, search patterns, recent mobility, and mortgage and income details.

During the interviews the forwarding address of the previous occupants of the property (where there had been out-movement) was obtained where possible, and households which had moved out were then sent brief mail questionnaires covering nature of household change with movement, tenure status and reasons for move.

In addition to the interview data for the 499 households selected in the sample, a brief mail questionnaire was sent out to the households occupying the remaining 759 properties sold in Palmerston North in 1979. The content of this questionnaire was similar to the one sent to households which had moved out, except that a question on previous place of residence was included. The main purpose of the supplementary questionnaire sent to those who had moved in was to establish whether the parameters for selected variables were comparable with those of the interview data,

and to identify other reasons for moving which might not have occurred in the interviews. Details of the interview organisation, along with discussion on the content of the three questionnaires, are included in Appendix 2.

In analysing data collected (Chapter 7), the primary objective was to present information on processes observable at the aggregate, urban level. The examination of the spatial expression of these processes at a "neighbourhood" level was a secondary objective only. A small proportion of housing stock in the smaller valuation districts meant that few sales occurred in some areas, and the difficulty of getting a large sample in some neighbourhoods effectively precluded detailed analysis at this "micro" level. Two further factors militated against emphasis on individual neighbourhood change per se. One of these was the difficulty of defining neighbourhoods or suburbs within which any uniformity of housing existed. For example most of the census areas and some of the valuation districts for Palmerston North (e.g. 1467 or 1472) display a great variety of housing stock within their boundaries (see Chapter 5). Such administrative boundaries have far less meaning in terms of the movement of households than concepts such as housing submarkets. However, even the submarket concept used in the results is not entirely adequate for looking at micro-scale processes, since submarkets can be defined using different variables and categories, and since individual dwellings may not match the predominant submarket category for their area. The other factor to be considered is that for each valuation district the processes of change appear to be operating at roughly the same rate, because

turnover rates are similar (Table 14). This implies that it is not necessary to make adjustments in the random sample to produce exactly equal proportions of sampled properties for each area, as the processes operating are not sufficiently differentiated between areas to alter the results significantly. Thus, although some attention is paid to intra-city movement patterns in Chapter 7, the main focus of interest is still the aggregate spatial picture.

(ii) Representativeness of the Data Sets and Reliability of the Estimates

Appendix 3 shows details of response rates for the interviews and mail questionnaires and looks at possible biases, errors and inadequacies in compiled data sets.

The choice of property as the sample unit, instead of dwelling was made on two grounds. First, a sizeable proportion of multi-unit dwelling sales were sales of rental properties by landlords. Equal chance of selection of each dwelling unit connected with such properties would have shifted the emphasis away in this instance from changes associated with sales (in the owned sector) to one giving more weight to a section of the rental sector. Second, the number of dwelling units was sometimes listed incorrectly on the property records. This applied both to recognizable multiple unit properties such as sausage flats and to subdivided houses which were let as several separate units. The availability of property records on the basis of properties rather than dwellings units was a further reason for the choice of properties instead of the conceptually more appropriate unit of analysis, the

dwelling, as the sampling unit.

The difference between properties and dwellings caused some problems in the study. With hindsight it would have been possible and perhaps conceptually more meaningful to have constructed a sample frame based on dwelling units.

A very high response rate for the interview sample (94.5 percent) was obtained. The representativeness of the interviewed properties was assessed by comparing the sample property age and value characteristics with the remainder of uninterviewed properties. No significant difference was found at the 99 percent confidence level between the age, value and sale price breakdown of sampled and uninterviewed properties. The listed errors and biases for this data set in Appendix 4 reveal only minor errors and biases. It is, therefore, appropriate to conclude that the interview data set, compiled from a random sample of property sales in 1979 is representative of properties sold that year. The eventual sample size of 463 responses for households moving in during 1979 provides a reasonably reliable estimate (Sampled Standard Error is $\pm$ 2.2 percent, with a 95 percent confidence interval of $\pm$ 4.5 percent) of parameters and components of change.

The moved-in mail responses were satisfactory, at 55.1 percent, considering no reminder notice was sent because of time constraints. This data set when compared with the interview set across common variables is largely comparable, exceptions being tenure and second reason for move responses. In the case of tenure this arose from a greater number of rental situations in the returned questionnaires and a corresponding reduction in the count of those owning

with mortgage. A main reason for the former would have been flatmates or renters involved in rental-ownership combinations completing the questionnaire, rather than owners themselves. A shortfall in personal reasons was detected in the supplementary responses, in relation to the interviews. On the other hand forced moves were more often quoted. These features are taken into account at the appropriate stage in the presentation of the results. In spite of the moderate response the moved-in mail questionnaire data set gave a useful cross check of information on a number of key variables and in large part confirmed the patterns identified from interviews.

A number of probable errors and biases appeared in this data collection exercise (Appendix 3) but when the noted deficiencies were closely examined it was concluded they had no major influence on the characteristics of the compiled data.

To avoid unnecessary duplication in the results chapter, only the findings pertaining to the interview data set are presented and discussed. The adequacy of the interview data (providing due regard is given when necessary to the reliability of the estimates) encourages full interpretation of the results and discussion of their implications.

Appendix 3 shows the moved-out mail responses to be neither very representative nor particularly reliable. Moreover, the low number of households for which useable addresses could be obtained, (226 or 56.5 percent of the 400 interviewed properties where out-movement had occurred), especially for properties which had been rented, greatly

reduced the value of this data set at the outset. It was decided, therefore, to omit reference to results from the moved-out data set unless as in a few instances the information was especially critical or could be satisfactorily interpreted.

Those variables which are considered fairly reliable are destination location, number of households/people forced to move because of household splits or sale of rental properties, number of cases of household cessation (chiefly deaths of older people or movement to join existing households) resulting directly in the sale of a property, and previous tenure before out-movement (a distinction between owned or rented). These variables are dealt with in the following chapter.

Those variables about which no statements can reliably be made are: destination housing submarket, household structure, number in the household, number of children, change in household structure with the move (except for household splits), present tenure since the move, and reasons for moving (except for forced moves). This was due to the fact that in cases where no forwarding address was known, the household which had since moved into the property was unlikely to be able to give this kind of information accurately, and any proportions for variables would be based on haphazard contacts with out-movers.

CHAPTER 7

RESULTS OF THE INVESTIGATION

Certain key facts are essential to an understanding of changes in the Palmerston North owner-occupied housing system during the 1979 year. They cover changes in the housing stock, components of mobility within the housing system, and circumstances of household change connected with mobility.

The total number of dwellings in the housing stock in Palmerston North City showed only a slight increase during 1979. About 320 dwelling units were completed or created by conversion (this figure is for the Palmerston North Urban Area rather than the city), while for the city itself about 34 residential buildings were demolished, and there was probably a slight net increment of dwelling units from previously non-residential uses. Making estimates for Palmerston North with no allowance for conversion to and from residential use, it is likely that the net increase in housing stock in Palmerston North in 1979 was only between 225 and 250 dwelling units (1.3 to 1.4 percent of total dwelling stock).

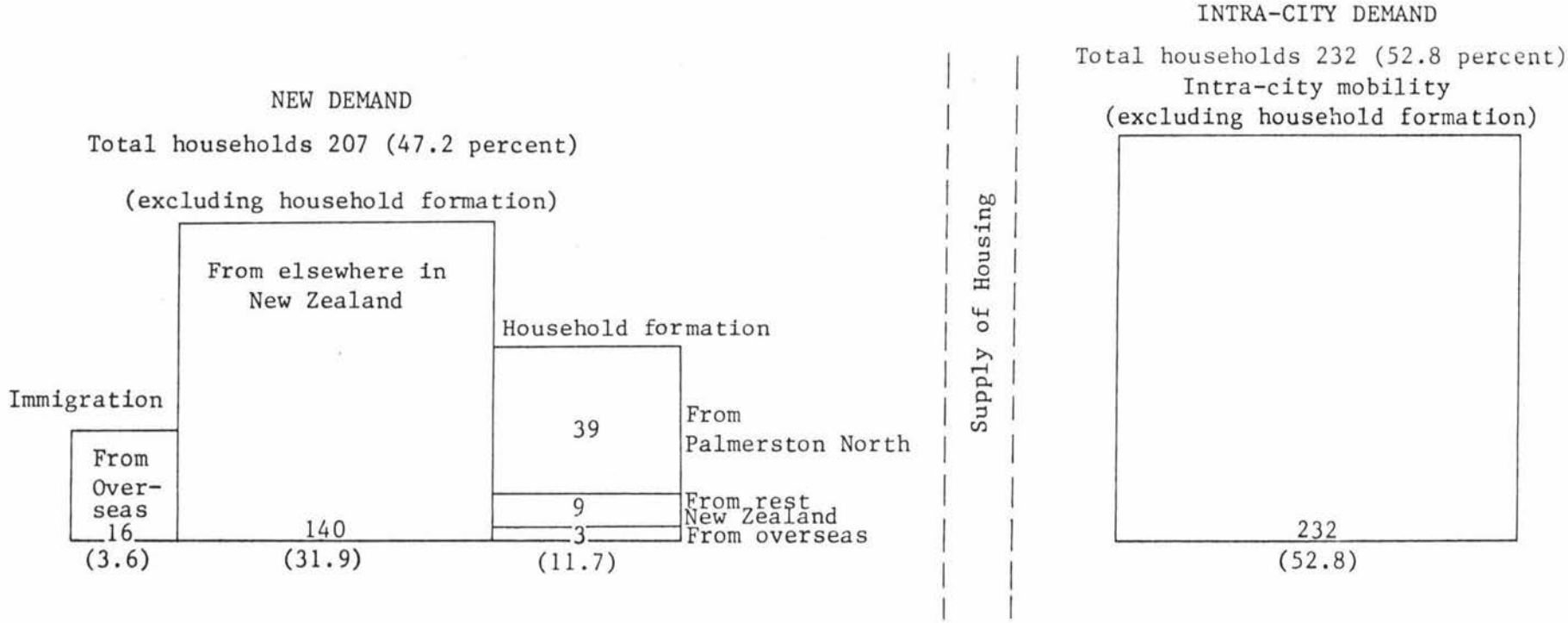
The percentage of dwelling stock which was owner-occupied or rental at the beginning and end of the year is impossible to determine from property records (see Appendix 1) although the percentage owned in the 1976 Census for the Palmerston North Urban Area (not just the city) was a low 65.2 percent with 33.3 percent rented or leased.

During the 1979 year the percentage of owner-occupation undoubtedly increased (probably by about 1 percent) although it is difficult to put an accurate figure on this. For the 439 properties in the interviews which had been sold in 1979 and where the household had moved in during the year, previous tenure of the last household was obtainable in only 276 cases, but out of these, 72.4 percent had previously owned and 24.6 percent had previously rented. However, for the 439 households which moved in, 94.3 percent owned their dwelling in some way, and only 4.1 percent were renting. One of the reasons for this swing to ownership, other than those discussed above in the sections on the New Zealand and Palmerston North housing markets in 1979, was the emergence of a "third" tenure type. This is a rental-ownership combination, where one person owns the property but other members of the household rent from them. (This is associated with an increase in importance of the investment function of housing). Rental-ownership combinations were found in 16 flat situations out of the 463 householdsinterviewed (3.4 percent of the total), and this was also true of the 3 households of siblings. A further reason was the purchase by tenants of 12 properties previously owned by their landlords (2.6 percent of sales). At the same time it should be noted that a movement from ownership to rental of properties would not necessarily be picked up in the sales records if the owner moved out and rented out the property.

The components of mobility within the housing system are set out in Figure 11. Of the 439 movement situations there were 51 instances of some variety of household

FIGURE 11

COMPONENTS OF MOBILITY IN THE HOUSING SYSTEM



Source: Interviews

formation, (11.7 percent of household change), a higher number than expected considering the study was focusing on the owner-occupied sector. Household formation covered formation of 20 non-family flatting groups, 2 sibling households, 9 single person households, and 20 family groups. Previous tenure status for newly formed households was fairly evenly split between rental and boarding with parents (23 ex-rental, 18 ex-boarding with parents, 5 ex-other boarding and 5 ex-other arrangements) although some of those boarding with parents had previously been renting.

Households were formed in both rental and owner-occupied sectors (18 percent and 82 percent of households respectively in the sample). Non-family flatting groups were not always formed in the rental sector as would be expected, because of rental-ownership combinations, and some couples did move into an owned home immediately after marriage (although they usually had help in the form of loans from parents). It is still likely that most household formation occurs in the rental sector in the aggregate. This would not always be picked up by a study using a sample frame based on ownership change.

The other component of new demand in Figure 11 is immigration from outside the area. Excluding household formation, a total of 140 households out of the 439 interviewed who moved into properties sold in 1979 (31.9 percent) came from other parts of New Zealand, (less than Census figures) and 16 (2.6 percent) came from overseas. Thus <u>new demand</u> as a proportion of the 439 interviewees in properties where in-movement occurred, was 207, or 47.2 percent.

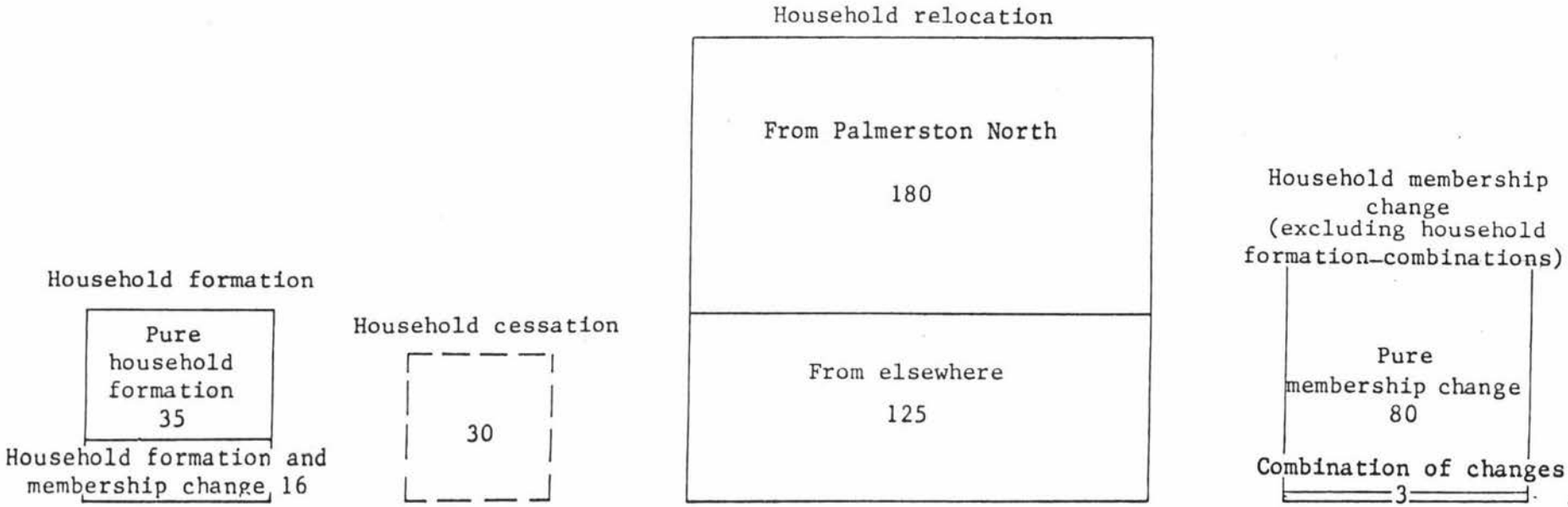
Intra-city demand was more important in 1979 than usual with more people moving for housing-related reasons than normal (as will be discussed later). In total 232 households out of the 439, or 52.8 percent moved from within Palmerston North without household formation. Since household formation was mainly intra-urban, (39 out of 51 households formed came from within Palmerston North) the aggregate percentage of intra-urban moves into the 439 properties was 271, or 61.7 percent of moves, compared to 168 or 38.3 percent of moves being from elsewhere. It should be noted that these movement figures relate to households rather than individuals and are thus not directly comparable with Census figures.

Emigration from the city system is difficult to pin down exactly because of the difficulty of tracking down households which moved out. Of the 242 households where destination locations were obtainable, 22 (9.1 percent) moved overseas and 86 (35.5 percent) moved to other parts of New Zealand. There were 30 cases of household cessa- leading to sale of a property, which is probably a fairly reliable count of the total out of the 439 households (6.8 percent), because this fact was virtually always known to the household which moved in.

It is possible to categorise household change connected with mobility and household turnover, into household formation, household cessation and household relocation (Figure 12). Changes in household membership with mobility (expansion, contraction, and compositional change) can also be identified. As mentioned above, there were 51 instances of household formation in the 439 households (35

FIGURE 12

COMPONENTS OF HOUSEHOLD CHANGE



Household formation and membership change

6 household split then household formation
5 household formation then expansion
1 household formation then cessation
1 household formation then contraction
3 household formation then compositional change (flats)

Pure membership changes

10 household split
3 household doubling up
35 household contraction
32 household expansion

Combination of changes

1 household split then doubling
1 household split then expansion
1 household expansion then contraction

Source: Interviews

being pure household formation and 16 being household formation in combination with other changes) and 30 identifiable instances of household cessation leading to sale of these properties. A further 305 out of the 439 households had experienced no membership change with the move (household relocation), 180 of these moving within Palmerston North and 125 moving into the city from outside. Some 83 households moving into the 439 properties experienced a membership change of some kind which together with the 16 cases of household formation, make a total of 99. Of these 10 were household splits without other membership change, and 3 were doubling up of households. There were 35 instances of household contraction immediately before or immediately after moves, 32 of household expansion and 3 instances of combinations of membership change.

While these figures deal with components of occupancy change mainly in the owner-occupied sector, it should again be stressed that it has not been possible to pick up household change which is not associated with sales of properties. For example, neither household change connected with mobility within the rental sector, nor household change unconnected with mobility could be estimated.

The reasons for moving provide useful backup information on what prompts occupancy change and household turnover. For ease of analysis of this data, 65 reasons were collapsed into 7 categories.

Table 17 shows primary reasons for moving (see Appendix 4 for a full list of reasons quoted) in which housing preferences (matters of less urgency) such as wanted to own, wanted a better house, wanted particular design

features and so forth were the most frequently quoted, followed by job-or study-related reasons and moves associated with household change, such as needed smaller/larger house or marriage/living together. Financial reasons cover satisfactory (or bearable) price, resale value and petrol costs, while forced moves are because of household splits (rental dwellings sold and flat splits up, or divorce/separation). Secondary reasons for moving are also shown in Table 17. Housing preferences are the most important here (this would probably be quoted as a second reason for job-related moves, along with financial reasons such as resale value), and areal/locational reasons were the second most important (convenience for work, nearness to schools, the centre of town, or liked the area,) followed by financial considerations.

Relating these reasons to origin of households, most job moves to Palmerston North were inter-urban or at least originated outside the city, (96 percent of job moves) so that most moves were housing- or household change-related (41.7 percent and 29.2 percent respectively of moves within the city). For moves from the Manawatu area into Palmerston North, all other reasons were as important as job reasons. While it may have been expected that job reasons would be the most important primary move reason because of traditionally high inter-urban migration into and out of Palmerston North, it appears that during 1979, movement for housing-related reasons was much more important than normal, and intra-urban migration more important than inter-urban moves identified.

Reasons for moving out of Palmerston North in 1979

TABLE 17: PRIMARY AND SECONDARY REASONS FOR MOVE

	Primary Reasons		Secondary Reasons	
	Number	Percent	Number	Percent
Job moves	105	24.0	6	1.5
Household change	88	20.1	39	10.1
Forced moves	24	5.5	9	2.3
Housing preferences	125	28.5	122	31.4
Financial reasons	32	7.3	71	18.2
Personal reasons	27	6.2	27	6.9
Areal/locational reasons	36	8.2	115	29.6
	438		389	

Source: Interviews

TABLE 18: MOVED-OUT: PRIMARY AND SECONDARY REASONS FOR MOVE

	Primary Reasons		Secondary Reasons	
	Number	Percent	Number	Percent
Job reasons	55	19.0	4	2.9
Household change	75	25.9	39	28.1
Forced moves	87	30.0	2	1.4
Housing-related	24	8.3	33	23.7
Financial reasons	9	3.1	3	2.2
Personal reasons	19	6.5	13	9.3
Areal/locational reasons	21	7.2	45	32.4
	290		139	

Source: Moved-out questionnaire

TABLE 19: MOVE SITUATION IN INTERVIEWS

	Number	Percent
Moved in in 1979	426	
Moved in in 1980 but sale transacted in 1979	13	94.8
Non-movement sale from landlord to tenant	12	
Divorce connected (transfer of part ownership)	4	
Non-divorce connected (transfer of part ownership)	7	5.2
Freeholding sale	1	
	463	

Source: Interviews

are probably not particularly representative of the total picture because of the difficulty of tracking down people who moved. Table 18 shows the relative importance of primary and secondary reasons obtainable. The count given for forced moves is likely to be somewhere near the entire number out of the 439 households, since this would virtually always be known to the household moving in. Thus a more realistic percentage for forced moves would be 19.8 percent. The 87 forced moves are made up of 30 households where a divorce/separation occurred (at least 6.8 percent of total sales being a direct result of this); 16 households in non-family flats which were forced to move because the landlord sold the property, and which split up to go to separate dwellings and 41 other households (mainly families) forced to move for similar reasons, but which did not appear to split in the process.

Household change is the next most important primary reason for moving, while housing-related reasons are likely to be much underestimated, because these sorts of preferences on the part of those moving out would be less likely to be known by households moving in. Areal/locational reasons are the most quoted secondary reason, mainly by the persons who moved out who could in fact be tracked down.

In summary then, reasons for movement into, out of and within the Palmerston North owner-occupied housing market in 1979 were many and varied. Job reasons were probably about the same in importance as in previous years, along with household change and personal reasons for moving. Housing-related reasons however, could be regarded as more important than usual, as more people had a chance to own

the house they desired. At the other end of the scale there were probably more forced moves than usual as rental houses were sold for owner-occupation. Finally, financial and areal reasons were probably elevated in importance because of a buoyant housing market (with properties more easily exchanged and thus more likely to be seen as financial investments) and a growing interest in selecting properties and areas in terms of accessibility.

(A) TYPES AND CHARACTERISTICS OF HOUSEHOLDS MOVING IN

The following section describes the types of households moving into properties sold in 1979. An earlier comparison of age of property and sale price for the total housing stock and total housing sales in 1979 (Table 13) showed a bias towards houses/flats built in the 1970s. The interview data set reflects this with a modal category for sale price of $25-29999, as in Table 7. Table 19 presents a breakdown of movement circumstances encountered in the interviews, with about 5.2 percent of sales not resulting in any movement either into or out of the property concerned. With divorce connected sales of part ownership, the other partner had usually moved out more than a year before the financial transfer. In an important way these sales can be seen as the last phase of a process which had begun some time earlier.

A full tabulation of household structure is presented in Table 20 along with a collapse into Census categories in Figure 13. A comparison with 1976 Census figures for household types shows an over-representation of one-family only situations amongst those who have just moved into

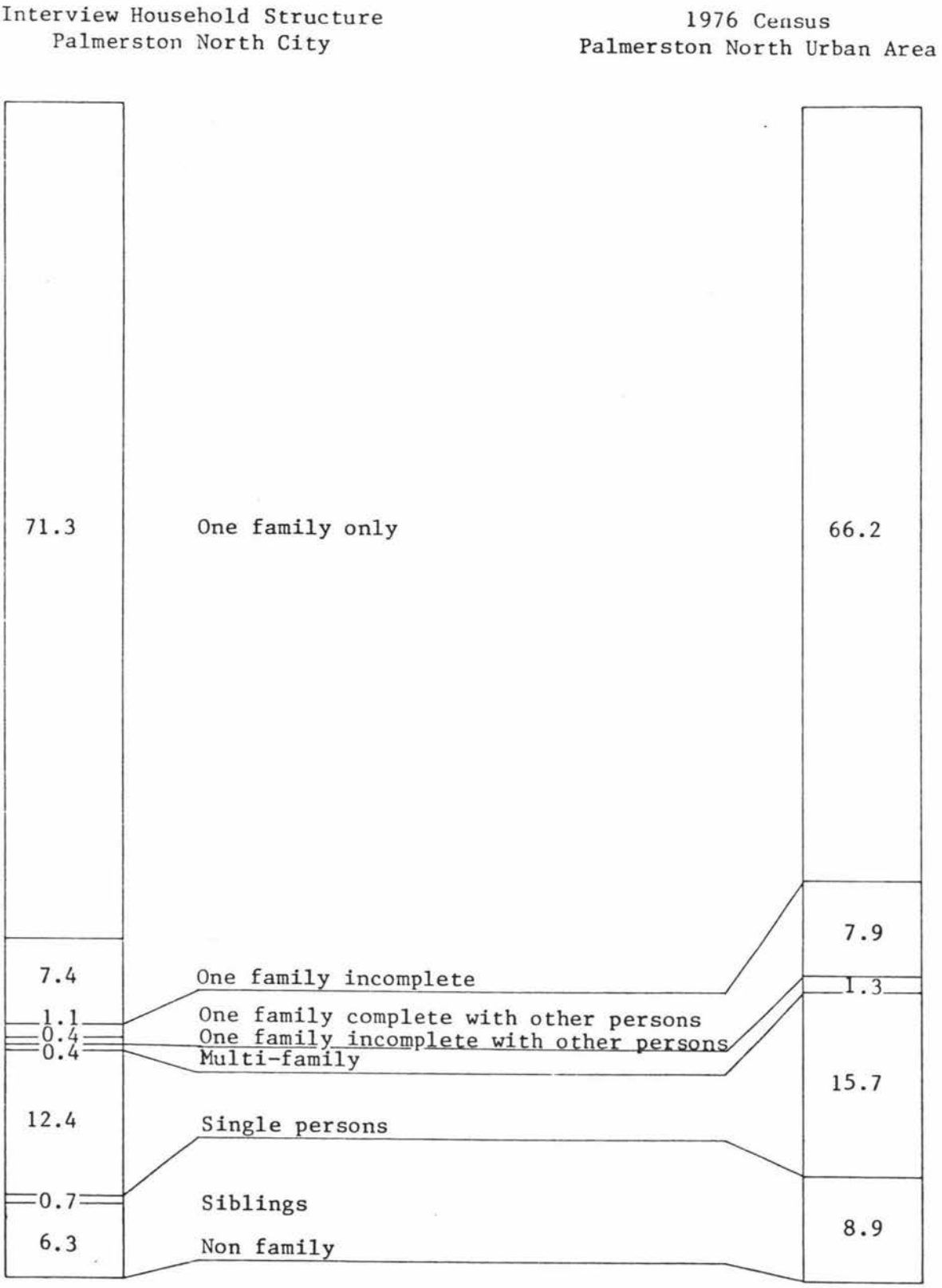
TABLE 20: HOUSEHOLD STRUCTURE FOR INTERVIEWED HOUSEHOLDS

	Household Type	
	Number	Percent
Married couple only	104	22.6
De facto couple	7	1.5
Married couple and children	215	46.7
De facto couple and children	2	0.4
Solo mother and children	21	4.6
Solo father and children	3	0.7
Other incomplete families	10	2.2
Married couple and others (related)	2	0.4
Married couple and children and others (non-related)	2	0.4
Married couple and children and others (related)	1	0.2
Solo mother and children and others (non-related)	2	0.4
Multi-family	2	0.4
Single person	57	12.4
Siblings alone	3	0.6
Flatmates, communal ownership	1	0.2
Flatmates, non-related, no couples, all rent	8	1.7
Flatmates, non-related, no couples, rental-ownership	15	3.3
Flatmates, with de facto couple, all rental	1	0.2
Flatmates with de facto couple, rental-ownership	1	0.2
Flatmates, no couples, rent from parent	2	0.4
Flatmates, de facto couple, rent from parent	1	0.2
	460	

Source: Interviews

FIGURE 13

COMPARISON OF HOUSEHOLD TYPES IN INTERVIEWS WITH CENSUS PROPORTIONS



Source: Interviews and Department of Statistics

(mostly bought) properties sold in 1979. It would appear that this kind of household structure had greater access in 1979 to ownership than the others, especially one family with other persons.

Table 21 shows the number in the households, and Table 22 the number of children per household. The average number of persons in the interviewed households was 3.0, slightly lower than the 3.1 figure for the Palmerston North Urban area in the 1976 Census (3.2 for New Zealand). It is likely that the average for families in the interviews would be lower than this, the figure being raised by the non-family households which moved into ownership. This seems to imply that smaller households (couple only, or couple and one child) are more likely to move into (often first) ownership than larger households, (see following section) and indeed two-person households were the modal category.

Of the 460 properties, 208 of the households had no children (45.2 percent), and although the modal category was two children, a large number had only one child. The average number of children for all 460 households (including those with none) was 1.1 (cf. 1.3 for the whole of New Zealand in the 1976 Census). For only those households with children, the average figure for the Palmerston North interviewed households was 2.1 (cf. a figure for New Zealand as at 1976 of 2.2).

Table 23 shows occupation of first adult on the Elley-Irving (1976, 1977) scale (which attempts to stratify occupation on socio-economic grounds) and Table 24 occupation of the second adult in the household (the only adult in the

TABLE 21: NUMBER IN HOUSEHOLD FOR INTERVIEWS

Number per Household	Number of Households	Percent	Percent 1976 Census (New Zealand)
1	57	12.4	15.6
2	142	30.9	27.9
3	89	19.3	16.1
4	96	20.9	18.5
5	55	11.9	11.8
6	15	3.3	5.7
7	5	1.1	2.3
8	1	0.2	1.0
	460		(9+, 0.9)

Source: Interviews; Department of Statistics.

TABLE 22: NUMBER OF CHILDREN IN HOUSEHOLD

Number per Household	Number of Households	Percent	Percent 1976 Census (New Zealand Total for Under 16 years)
1	79	31.3	29.8
2	99	39.3	37.3
3	52	20.6	20.7
4	15	6.0	8.1
5	5	2.0	2.6
6	2	0.8	0.9
	252		(7+, 0.5)

Source: Interviews; Department of Statistics.

TABLE 23: OCCUPATION OF FIRST ADULT IN HOUSEHOLD

			Number	Percent	Percent (1-6 only)	Elley-Irving Percentage for Urban Areas (Male)
Elley-Irving scale including full-time & part-time	1		54	14.1	16.0	7.0
	2		83	21.7	24.6	11.0
	3		90	23.5	26.7	23.0
	4		58	15.1	17.2	29.0
	5		30	7.8	8.9	21.0
	6		22	5.7	6.5	9.0
Additional categories	7	Retired	30	7.8		
	8	Students	14	3.7		
	9	Housewives	-	-		
	10	Unemployed/ A.C.C. beneficiaries	2	0.5		
Total			383			

Source: Interviews; Elley and Irving, 1976.

TABLE 24: OCCUPATION OF SECOND ADULT IN HOUSEHOLD

			Number	Percent of total workers	Percent (1-6 only)	Irving-Elley percentage for Urban Areas (Female)
Full-time Irving-Elley categories	1		11	2.9	6.2	3.5
	2		26	6.8	14.5	8.5
	3		52	15.4	32.6	23.0
	4		41	13.7	29.0	32.0
	5		9	2.9	6.2	22.0
	6		9	5.4	11.4	11.0
Additional categories	7	Retired	35	8.5		
	8	Students	19	4.6		
	9	Housewives	158	38.6		
	10	Unemployed/ A.C.C. beneficiaries	4	1.0		
Part-time Irving-Elley categories	1		1			
	2		2			
	3		11			
	4		15			
	5		3			
	6		13			
Total			409			

Source: Interviews; Irving and Elley, 1977.

56 households which had no male adult). In making comparisons with the Elley-Irving scale, it must be remembered that the latter percentages exclude the additional categories of retired, students and so on. The upper socio-economic categories do, however, appear to be over-represented as movers into properties sold, especially category 2, including such people as company managers, insurance people and semi-professionals.

The occupation of second adult, nearly always female, (Table 24) shows a bias (cf. Irving and Elley's percentages) towards the upper three categories in the scale, as with males. A large number of women work in part-time occupations, and the most common categories are still 3 and 4 (e.g. shop assistants and clerks.)

Table 25 shows the number of workers in the households interviewed. There may be an over-representation of full-time women workers here, as respondents may not have volunteered that their paid occupation was part-time rather than full-time, but it is evident that a large number of households which moved into properties sold last year did have two income earners, even if one was part-time.

The age of first and second adults in the households is presented in Table 26. There is clearly a "life-cycle" effect on mobility, with the 25-44 age groups for males, and 20-44 year old females, over-represented as movers in the now predominantly owned houses sold last year. These are probably young adults buying first houses (mostly coming from the rental sector) and younger couples with few children buying first and subsequent houses. Table 27 outlines the age of children for the interviewed households, and

TABLE 25: EMPLOYMENT STRUCTURE OF HOUSEHOLD

	Number	Percent
No workers	71	16.2
One part-time worker only	5	1.1
One full-time worker only	199	45.3
One full-time worker and one part-time worker	42	9.6
Two full-time workers	114	26.0
Three full-time workers	7	1.6
Four full-time workers	1	0.2
	439	

Source: Interviews

TABLE 26: AGE OF FIRST AND SECOND ADULTS IN HOUSEHOLD

	MALE			FEMALE		
Age	Number	Percent	Palmerston North Urban Area 1976 Census Percent	Number	Percent	Palmerston North Urban Area 1976 Census Percent
16-19	3	0.8	17.1	9	2.2	17.9
20-24	44	11.4	15.7	74	18.0	13.2
25-29	88	22.8	10.8	78	19.0	10.2
30-34	66	17.1	8.7	64	15.6	7.8
35-39	57	14.8	7.2	54	13.2	6.7
40-44	33	8.5	6.4	35	8.5	6.3
45-49	22	5.7	7.0	16	3.9	6.4
50-54	20	5.2	6.6	23	5.6	6.3
55-59	18	4.7	5.6	15	3.7	5.5
60-64	11	2.8	4.8	14	3.4	5.3
65-69	10	2.6	4.1	10	2.4	4.8
70+	14	3.6	6.0	18	4.4	9.6
Total	386			410		

Source: Interviews, Department of Statistics.

TABLE 27: AGE OF CHILDREN IN HOUSEHOLDS

	Number	Percent	
Preschool only	61	25.8	65.2
Preschool/primary combination	43	18.2	
Primary only	50	21.2	
Primary/secondary combination	30	12.7	
Preschool/primary/secondary	3	1.3	
Primary/secondary/tertiary/working	6	2.5	
Secondary only	16	6.8	
Secondary and tertiary/working	7	3.0	
Tertiary/working	20	8.5	

Source: Interviews

as expected it is strongly weighted toward young children, with families having only pre-school and primary children making up 65.2 percent of the total interviewed family in-movers.

(B) CHANGES IN HOUSING CIRCUMSTANCES OF MOVERS

As households moved in, they changed in membership in ways that have been discussed above. They also frequently moved into a different "kind" of housing than they had lived in before, in terms of age, price bracket, and thus housing submarket, and in terms of tenure.

Table 28 shows age of previous property against age of present property. A large amount of both "upward" and "downward" movement in terms of age of property appears to be occurring. The top right-hand corner of the table shows movement into an older age property, often associated with household formation and/or the desire to own an older home, while the bottom left-hand corner shows movement into newer properties, mostly associated with a general upgrading of living accommodation. Only 83 households out of 415 (20 percent) moved into houses built in the same decade as their previous house, with 191 households (46.0 percent) moving into newer dwellings and 141 (34.0 percent) moving into older dwellings. Thus there is a slight net movement into newer houses. In practice it is likely that houses of similar ages are quite substitutable, given other desired features such as being in the "right" price bracket, or preferred location, or having particular design features.

Price categories of previous property against price brackets of present property are shown in Table 29. This

TABLE 28: AGE OF PREVIOUS PROPERTY COMPARED TO AGE OF PRESENT PROPERTY

Present Residence	Previous Residence							
	Pre-1914	1914-1929	1930s	1940s	1950s	1960s	1970s	Totals
Pre-1914	[5]	4	3	0	2	2	4	20
1914-1929	4	[6]	10	3	4	10	7	44
1930s	2	3	[3]	2	5	6	5	26
1940s	2	3	3	[5]	9	5	6	33
1950s	5	6	11	11	[11]	15	16	75
1960s	10	9	4	5	14	[20]	23	85
1970s	12	12	12	15	16	32	[33]	132
Totals	40	43	46	41	61	90	94	415

Source: Interviews

Note: The table excludes those 48 instances where age of previous residence was not known or not obtained.

TABLE 29: SALE PRICE OF PREVIOUS PROPERTY
COMPARED TO PURCHASE PRICE OF PRESENT PROPERTY

Present Purchase Price	Previous Sale Price						
	Less than $20000	$20000-24999	$25000-29999	$30000-39999	$40000-49999	$50000 and over	Totals
Less than $20000	[0]	4	1	3	1	0	9
$20000-24999	4	[3]	8	5	0	1	21
$25000-29999	1	4	[16]	10	3	0	34
$30000-39999	0	9	14	[16]	8	2	49
$40000-49999	0	3	6	10	[14]	3	36
$50000 and over	0	1	1	8	7	[7]	24
Totals	5	24	46	52	33	13	173

Source: Interviews

Note: This table excludes 204 persons coming from the rental sector (private, state, or house with job), or from boarding arrangements, and refusals to state price previous property sold for, as well as persons presently in the rental sector.

information deals with only those moving within the ownership sector since there were no grounds for asking about value of parent's property or of previous rental property. There were also refusals to state how much the last property sold for. Out of the total 173 households for which this information was obtainable, 56 (32.4 percent) moved within the same price bracket, 49 (28.3 percent) moved into a lower price bracket, (top right-hand corner) and 68 (39.3 percent) moved into a higher price bracket. This information does not show up large jumps in value within the upper price bracket of $50,000 and over, but it does show that although many households moved "upwards" from their initial to subsequent or subsequent to subsequent homes in terms of price bracket, significant proportions of households stayed in similar priced properties or went "down" in value of residence. This latter fact is partly connected with the trend towards buying existing, older and lower-valued houses even among those who have owned before, but probably also is an indication of people moving "down" the system because of inability to afford previous housing or a desire to have more disposable income for non-housing purposes. Examples include solo parents and couples moving into smaller houses after children had left home or after retirement. In cases where movement was to "unit" - type accommodation the shift sometimes involved little change in the price of the property.

Table 30 shows tenure to tenure movement for the households interviewed (rather than houses themselves). A large scale movement into ownership has obviously taken place, with only 48 percent of the households owning free-

TABLE 30: PREVIOUS TENURE COMPARED TO PRESENT TENURE

Present Tenure	Previous Tenure								
	Owned Freehold	Owned with mortgage	Rented	State rental	Leasehold	House with job	Boarded with Parents	Miscellaneous	Totals
Owned freehold	49	12	5	3	0	2	0	6	77
Owned with mortgage	14	125	125	20	1	19	18	5	327
Rental	0	2	9	1	0	0	4	2	18
Leasehold	1	2	3	0	0	0	0	0	6
House with job	0	0	0	0	0	1	0	0	1
Totals	64	141	142	24	1	22	22	13	429

Source: Interviews

Note: Excludes 34 instances where previous tenure (mainly non-movement circumstances) is unknown.

TABLE 31: SUBMARKET TO SUBMARKET MOVEMENT OF HOUSEHOLDS

Present Submarket	Previous Submarket										
Categories	1	2	3	4	5	6	7	8	9	10	Totals
1	[8]	11	1	3	2	0	4	2	0	0	31
2	9	[14]	2	7	5	4	8	2	1	1	53
3	1	3	[1]	2	0	0	4	0	0	0	11
4	7	4	1	[3]	3	1	1	3	0	1	24
5	4	8	1	0	[4]	1	6	5	1	1	31
6	4	4	1	0	2	[4]	4	5	1	2	27
7	8	7	0	6	5	3	[9]	4	0	0	42
8	7	9	0	9	6	5	9	[13]	0	2	60
9	0	0	0	0	1	0	1	0	[0]	3	5
10	2	3	0	3	6	4	8	13	2	[15]	56
Totals	50	63	7	33	34	22	54	47	5	25	340

Source: Interviews

Notes: This table excludes 123 cases where previous submarket was not known.
Submarket categories are explained in Chapter 5. (see also Table 16).

hold, leasehold or with a mortgage prior to moving, while after the move, 95.5 percent of the households owned their dwellings (although some of these were rental ownership combinations).

Movement from "submarket" to "submarket" is shown in Table 31. Because of the large number of subgroups, some of which may be quite substitutable, only 20.9 percent of households moved within the same submarket. A further 30.3 percent moved "down" submarkets while 48.8 percent moved "up" submarkets. Since this table is a composite of Tables 28 and 29 it is logical in relation to those results that there is a slight net movement "up" submarkets into newer and higher-valued properties. More detailed features of the table and relationships of submarkets moved into, and other variables, will be discussed in a later section.

Interviewed households which moved into properties sold in 1979 then, were most likely to move into a newer and higher valued property than they had occupied previously and it was more likely to be owned than their previous dwelling. There were also some instances of moves into older and lower valued properties. The proportion of households moving "down" submarkets was probably greater in 1979 than in recent years, because more people bought existing, often older houses. It is likely that a few people also moved to older and lower valued houses because of an inability to afford previous housing, although it is difficult to make comparisons with previous years on this matter.

(C) VACANCY CHAINS, DIRECTIONALITY AND SECTORALITY

Based on the interview data set and using supplementary moved-in and moved-out information where possible, a set of vacancy chains was able to be constructed, extending both backwards and forwards from the property where an interview took place. This method is not strictly comparable with that in the literature, where chains resulting from moves into new construction are traced backwards as far as possible, but an analysis of vacancy chains was in any case strictly a by-product of the primary research objectives.

A total of 391 chains were associated with the interviews since 47 interviewed properties were linked to other longer chains. Vacancy chains were somewhat shorter than some of the literature (see Chapter 2) has suggested, averaging 1.58 links, because of several special factors connected with the research design. Chains were truncated forwards because households which had moved out of interviewed properties were not then asked who had moved out of their new property, although in some instances this was able to be ascertained. More usual reasons for forward truncation were movement into a new or vacant property which had not previously been occupied, household doubling, or movement into a property where household cessation had occurred due to the death of the previous occupant. Special reasons for backward truncation of chains were that chains extended back before 1979, and so previous properties had not been considered in the research; or that movement was from rental properties which did not appear in the sales records and could not be traced further. Chains

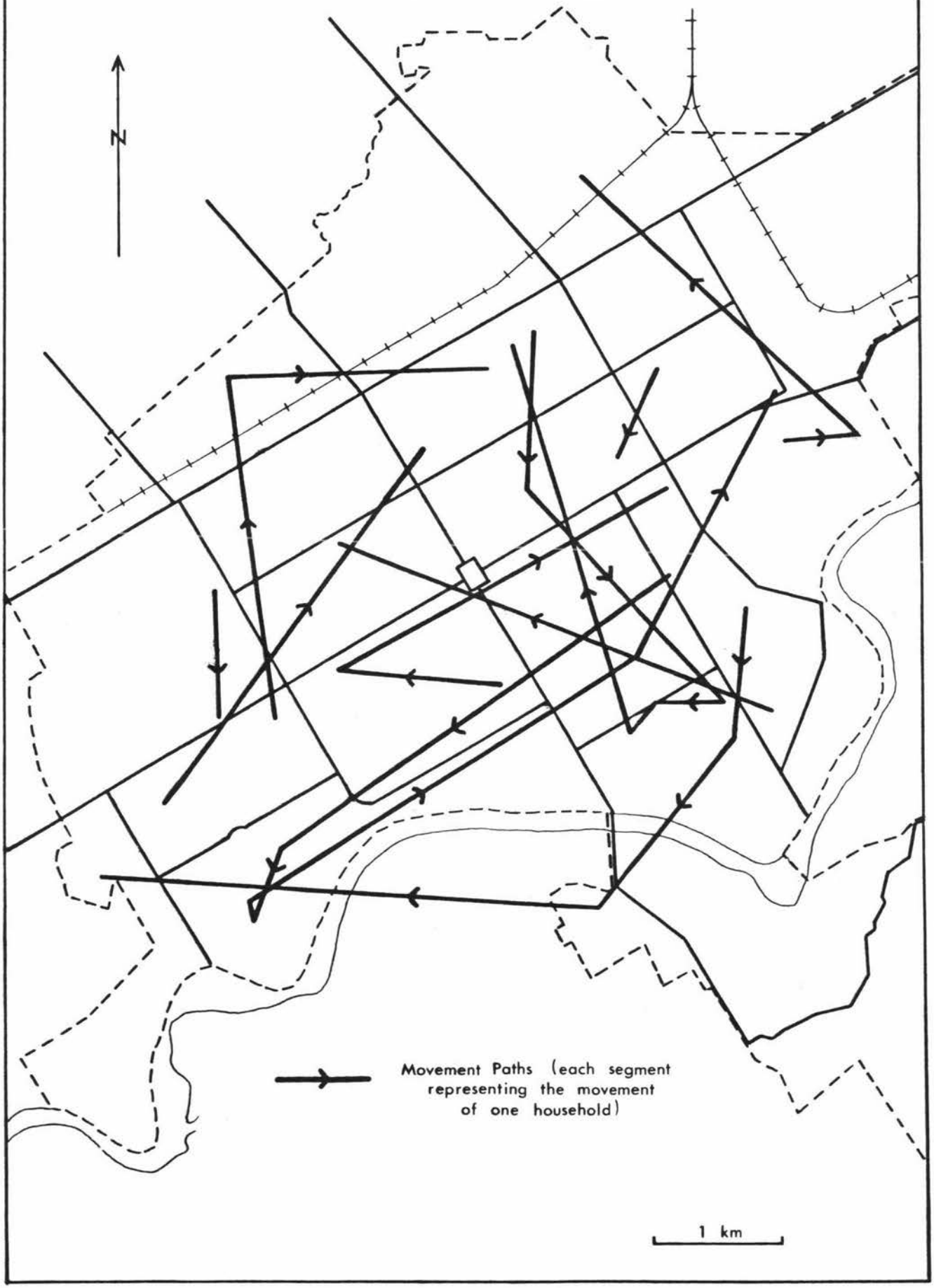
were also truncated backwards because of household formation or household splits where no vacancy was left, or because households moved into Palmerston North from elsewhere and the vacancy was left in another area. Figure 14 shows some examples of the vacancy chains constructed.

Directionality and sectorality of moves (as opposed to search patterns) was measured by calculating angles formed between the origin and destination locations and the CBD, for the 232 intra-urban moves into interviewed properties which originated within the city. The insert in Figure 15 shows space biases diagramatically. If there was no directional or sectoral bias in the move patterns the distribution of move angles in the graph would be rectangular. However, the graph shows a concentration of move angles less than 40^{o} although all angle categories up to 180^{o} are represented. In fact over a third of the moves made (37 percent) are through angles of less than 40^{o}, which is less spatially based than Adams' (1969) figure of a full one-third of angles being less than 10^{o}, (the corresponding figure here being 22 percent), but quite an element of sectoral or directional bias is evident.

Thus, although moves right across Palmerston North take place in any direction a significant proportion of moves are of a short distance (creating small angles) within the same or neighbouring areas. This is likely to be partly due to a familiarity with a particular locality and increased information being available or being sought about vacancies in that area. For example a not insignificant number of moves were made to dwellings in the same street (even right next door) or within a few streets of the

FIGURE 14

SOME EXAMPLES OF VACANCY CHAINS



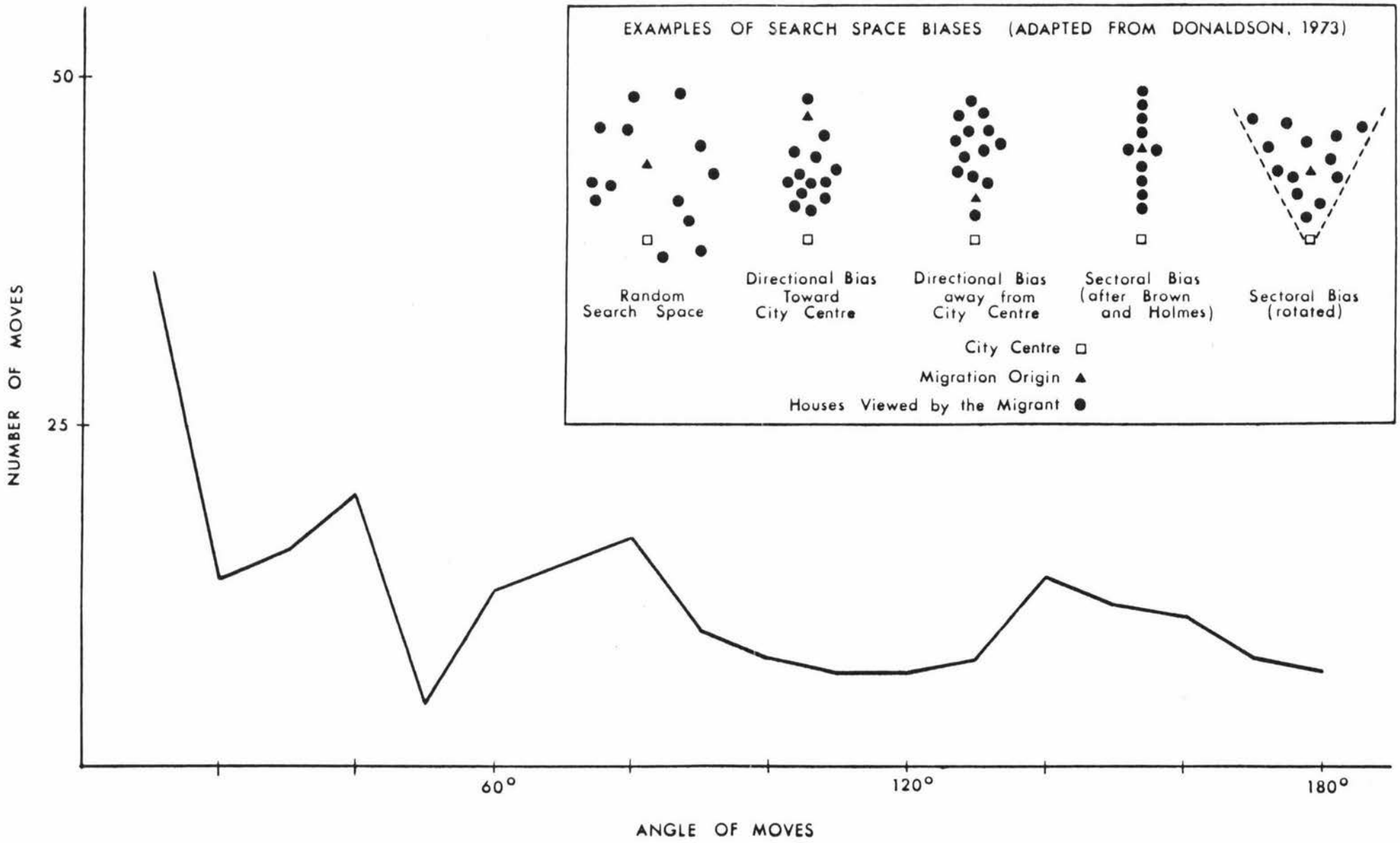


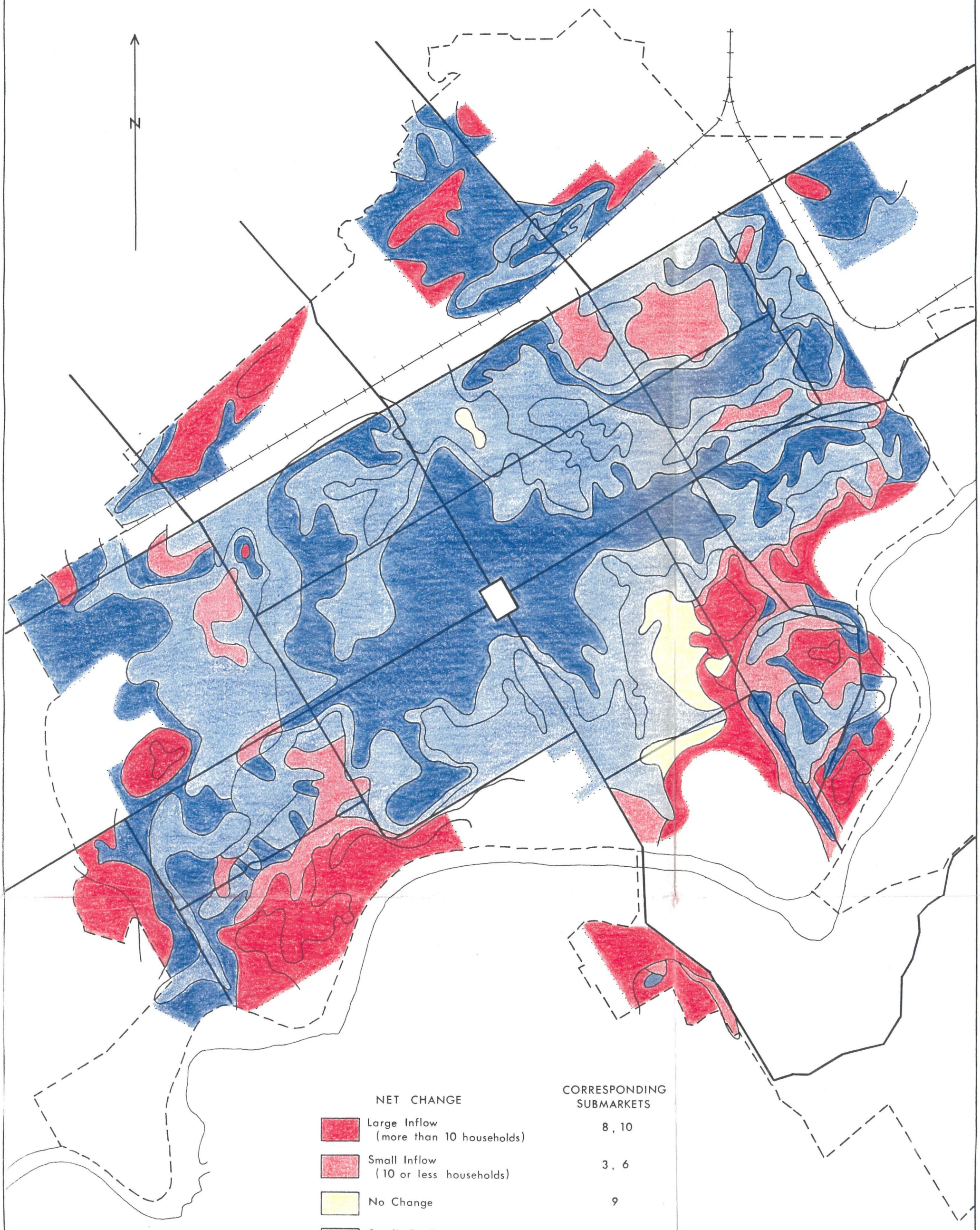
FIGURE 15
SPATIAL BIASES OF MOVES

previous dwelling. A further factor which might facilitate short-distance moves is the variety of housing stock in the city over small areas, which may enable the desired housing type to be obtained without changing jobs, schools, or shopping centres patronised (Roseman's "partial displacement"). However, the proportion of moves over short distances and small angles (not necessarily inwards or outwards from the CBD) is surprising, given the hypothesis that individuals or households might have at least a little knowledge of housing stock in all areas of the city. It appears that even in a city as small as Palmerston North, such factors as constrained mental images may be operating, in that people know much more about their immediate locality than they do about other areas.

Figure 16 shows the submarket areas which experienced a net gain or net loss of interviewed households. The map is based on Table 31, and thus includes consideration of some moves into Palmerston North where the previous submarket was known. Again it should be pointed out that a move from a dwelling which itself falls into one submarket category may not be the same thing as a move from the mapped area corresponding to that submarket, because of dwellings which are exceptions to the predominant character of areas. Figure 16 shows an outflow from submarkets 1, 2, 4, 5 and 7 (chiefly from 1 and 7) and an inflow into submarkets 3, 6, 8 and 10. (mainly 8 and 10). This ties in with the general net movement "up" sub-markets identified in the previous section. People moving out of submarket 1 (built pre-1959 and valued at less than $20000) are likely to be first owners who had previously rented, while

FIGURE 16

NET GAINS OR LOSSES OF INTERVIEWED HOUSEHOLDS



(See Figure 10 for further explanation of submarket categories)

those moving out of submarket 7 (1960-79 and $25000-30000) reflect the declining popularity of new houses on the outskirts of the city, and the availability of loans for existing, more centrally located houses.

In spatial terms, the net movement into submarkets 8 and 10 means a flow of households across the city into riverside areas. The net flow into these areas, however, is only a small part of the total, more complicated picture of gross flows between areas of the city.

The kinds of households moving into submarkets are considered in more detail in section (G) of this chapter.

(D) FURTHER MOBILITY PATTERNS

Mobility patterns have been discussed above (inter-urban versus intra-urban) but Table 32 shows in more detail the source of households moving into the 439 properties. The table should be compared with Table 33 which shows destination locations of households moving out. The overwhelming importance of intra-urban moves in 1979 stands out again. There is also a fair amount of movement into Palmerston North from the Manawatu region (the five counties of Kairanga, Manawatu, Oroua, Kiwitea and Pohangina), as well as from other main ubran areas in the North Island, chiefly Wellington and Auckland. Additionally, the previous address for the second adult in the household if there was household formation was overwhelmingly Palmerston North.

Roughly 10 percent of households (43 out of 439) had any kind of transitional arrangement between permanent

addresses. (This proportion is affected by the definition of all flatting moves as permanent because of inability to distinguish between permanent and temporary situations). These were nearly all families or single persons moving from other towns (or from overseas) on job transfers, who probably did not know the housing market in Palmerston North particularly well, and spent several months in rental accommodation while looking for a permanent house. Three quarters of these households spent six months or less in rental accommodation, but several households spent longer periods in transitional arrangements, principally because of difficulties in selling their previous house in another town and delays while waiting for finance to become available. A total of six households actually lived in more than one dwelling during the transition between permanent addresses. A further reason for longer periods in transitional arrangements was that a few of the households which later bought, had previously intended to rent and could not find suitable rental accommodation. This finding relates back to the pressure on the rental market described in Chapter 4.

Destination locations for those moving out of the Palmerston North properties are not known for all households and should thus be treated with caution. The figures in Table 33, however, show the expected movement to other urban areas in the North Island (especially Auckland) and to overseas. More people moved to boroughs in the southern half of the North Island than from them, and northern North Island counties (including boroughs) were also more important as destinations than sources. Fewer people

TABLE 32: SOURCE LOCATION OF HOUSEHOLD

	Number	Percent	
Palmerston North	271	61.7	
Main Urban Areas in North Island excluding Auckland and Wellington	25	5.7	12.7
Auckland	15	3.4	
Wellington	16	3.6	
Boroughs in the southern half of North Island	17	3.9	
Manawatu	31	7.1	
Area just beyond Manawatu	12	2.7	
Southern North Island counties	6	1.4	
Northern North Island counties	6	1.4	
South Island	21	4.8	
Overseas	19	4.3	
	439		

Source: Interviews

TABLE 33: DESTINATION LOCATIONS OF THOSE MOVING OUT

	Number	Percent	
Palmerston North	195	58.0	
Main Urban Areas in North Island excluding Auckland and Wellington	30	8.9	19.3
Auckland	28	8.3	
Wellington	7	2.1	
Boroughs in the southern half of North Island	15	4.5	
Manawatu	13	3.9	
Area just beyond Manawatu	9	2.7	
Southern North Island counties	0	0	
Northern North Island counties	7	2.1	
South Island	10	3.0	
Overseas	22	6.5	
	336		

Source: Interviews

Note: The table excludes 103 households where destination location was not known, or where there was no outmovement.

In Tables 32 and 33 Manawatu refers to Manawatu, Kairanga, Oroua, Pohangina and Kiwitea counties and Area just beyond Manawatu covers Rangitikei, Horowhenua, Woodville, Dannevirke and Pahiatua counties.

TABLE 34: NUMBER OF YEARS AT LAST PERMANENT ADDRESS

	Number	Percent
Less than 1 year	85	22.8
1-2 years	61	16.4
2-3 years	44	11.8
3-4 years	24	6.4
4-5 years	30	8.0
5-9 years	65	17.4
10-17 years	18	4.8
18-36 years	36	9.6
36 or more years	10	2.7
	373	

Source: Interviews

Note: The table excludes 66 cases where the information was not obtained.

TABLE 35: NUMBER OF MOVES IN LAST FIVE YEARS

Moves	First Adult Number	Percent
One	179	41.1
Two	76	17.4
Three	75	17.2
Four	41	9.4
Five	37	8.5
Six	12	2.7
Seven	10	2.3
Eight	3	0.7
Nine	3	0.7
	436	

Source: Interviews

TABLE 36: NUMBER OF MONTHS DURING WHICH PREVIOUS RESIDENCE WAS ON MARKET

Months	Number	Percent	
1 or less	86	42.4	
2	24	11.8	
3	14	6.9	
4	8	3.9	
5	8	3.9	
6	17	8,4	
7	2	1.0	
8	4	2.0	
9	0	0	
10	1	0.5	
11	14	6.9	22.7
12	13	6.4	
13	0	0	
14	4	2.0	
15	8	3.9	
	203		

Source: Interviews

moved out to the immediate area than moved from it into Palmerston North.

The modal category for number of years spent at last permanent address was recorded as less than one year, largely because of the large proportion of people who moved from the rental sector. There were, however, quite a few households (Table 34) who had lived at their last address for 6 to 10 years, as well as older couples moving from homes they had lived in for 18 to 36 years. The table showing number of moves in the last five years (Table 35) has a modal category of only one move, but this is to be expected considering the number of people who lived at their last permanent address for more than five years. A fairly large proportion of people had moved quite frequently in the last five years, probably again because of the fact that the people who moved into properties sold last year were mostly young.

(E) SEARCH PATTERNS

Because 1979 was a year of rapid housing stock turnover, at least in Palmerston North, few people who moved into the interviewed properties appeared to have much trouble in selling their previous residence. Over 40 percent of people sold their house within a month and often within a few days of putting it on the market, and several people sold privately without even needing to put their house on the market at all (Table 36). Those who did have trouble selling previous houses (e.g. the house was on the market for more than six months or was not sold and rented out) generally came from slow growth areas such as the

Wairarapa or Taranaki where demand for houses was probably not as great as in Palmerston North.

Patterns for the most preferred area and the least preferred area to live in Palmerston North (in the ideal) are a little difficult to interpret, since different people often have quite different conceptions of, and therefore, quite different mental boundaries of, where different suburbs are located. An attempt to classify preferences is shown in Tables 37 and 38. These should be interpreted with caution in the light of the fact that the "boundaries" of the "areas" are likely to overlap. It was quite common for people to cite their own area as the one they most preferred to live in, which may indicate a certain amount of attainment of locational aspirations, but on the other hand may be an "ex post" justification of having selected that house or area. A large number of people were indifferent to where they lived, either because they did not know the city well enough, or because they considered the features of the house more important than the area. Palmerston North is in fact not particularly locationally differentiated (compared to larger cities) and all areas are reasonably accessible to town. Several people quoted more than one area for both most liked and least liked areas, in which case the first stated preference was used. Specific points about Table 37 are that it was noticeable that older people were the main group preferring the broad Hospital/Terrace End/Florence Ave location; and that quite a few people stated that they would not like to live in Palmerston North at all, in the ideal situation.

The responses to the question on the "area least liked

TABLE 37: MOST PREFERRED AREA TO LIVE IN

Area Description	Number	Percent
Indifferent	74	16.9
Hokowhitu	63	14.4
Riverdale/Mangaone Park	60	13.7
Hospital/Terrace End/ Florence Ave area	36	8.2
In the country/out of Palmerston North	29	6.6
Central area	20	4.5
Fitzherbert Ave area	18	4.1
South Terrace End/Brightwater	16	3.6
Lagoon area	16	3.6
Takaro	16	3.6
Victoria Ave area	15	3.4
Milson	15	3.4
Aokautere	13	3.0
West End	12	2.7
Awapuni	10	2.3
Roslyn/Terrace End hill	8	1.8
Outskirts/periphery	6	1.4
Cloverlea	5	1.1
Westbrook	5	1.1
Any established area	1	0.2
Any high area	1	0.2
	439	

Source: Interviews

TABLE 38: LEAST PREFERRED AREA TO LIVE IN

Area Description	Number	Percent
Highbury/Takaro/State houses/ Crewe Cres.	170	38.7
Indifferent	81	18.5
Milson	59	13.4
Central City area	25	5.7
Awapuni	22	5.0
Outskirts/periphery	15	3.4
Kelvin Grove	13	3.0
Any noisy area	8	1.8
West End	7	1.6
Airport area	7	1.6
Roslyn	7	1.6
Cloverlea/Meadowbrook	5	1.1
Terrace End	5	1.1
Hokowhitu	5	1.1
Any low area	5	1.1
Dump area	2	0.5
Brightwater	2	0.5
Westbrook	1	0.2
	439	

Source: Interviews

TABLE 39: NUMBER OF HOUSES LOOKED AT IN SEARCH

Number of Houses	Number	Percent	
1-10	188	46.7	
11-20	69	17.1	
21-30	45	11.2	36.2
31-40	29	7.2	
41-50	27	6.7	
51-60	10	2.5	
61-70	3	0.7	
71 and over	32	7.9	
	403		

Source: Interviews

TABLE 40: NUMBER OF HOUSES SERIOUSLY CONSIDERED

Number of Houses	Number	Percent
1	41	11.0
2	53	14.2
3	98	26.3
4	71	19.1
5	52	14.0
6	26	7.0
7	16	4.3
8	11	3.0
9	2	0.5
10	2	0.5
	372	

Source: Interviews

to live in" were far more polarised than for the most liked areas. The Highbury/Takaro area (specifically state flats) was not unexpectedly the most disliked area, perhaps because of its visibility. State houses as opposed to flats were far less frequently quoted as areas disliked. The next most unpopular area was Milson, for a variety of reasons: closeness to airport and railway noise, a fairly barren environment with few trees, an age structure biased towards young couples and children, and poor clay soil.

Some comments on the submarkets households looked in compared to the submarkets they actually bought in are included in the section on relationships between variables.

Approximate numbers of houses looked at in the search for a new house are shown in Table 39. Sixteen households actually looked at over 100 houses. While the most common number stated was less than 10 (41 people looked only at the house or flat that they bought), the large number of people looking at quite a number of houses shows the extent of choice that was available to house-seekers in 1979. Table 39 includes for the upper ranges, houses driven past but not actually gone into, whereas Table 40 shows houses or flats actually seriously considered, including the one bought. Even where people looked at a large number of houses, they usually looked seriously at less than five of these.

(F) MORTGAGE PATTERNS AND FINANCIAL DETAILS

The difference between sale price of previous house and purchase price of present house is given in Table 41.

TABLE 41: DIFFERENCE BETWEEN SALE PRICE OF PREVIOUS HOUSE AND PURCHASE PRICE OF PRESENT HOUSE

	Number	Percent	
Drop of $10100 or more	20	11.4	
Drop of $7600-10000	12	6.8	
Drop of $5100-7500	4	2.3	39.8
Drop of $2600-5100	15	8.5	
Drop of $100-2500	19	10.8	
No difference	10	5.7	
Increase of $100-2500	13	7.4	
Increase of $2600-5000	17	9.7	
Increase of $5100-7500	9	5.1	54.5
Increase of $7600-10000	11	6.2	
Increase of $10100-20000	37	21.0	
Increase of $20100 and above	9	5.1	
	176		

Source: Interviews

TABLE 42: TYPE OF MORTGAGE

Mortgage Type	Number	Percent
One table	223	67.0
One table and one flat	20	6.0
One flat	32	9.6
Two table	37	11.1
Two flat	3	0.9
One other arrangement	9	2.7
One table and one other	4	1.2
One flat and one other	5	1.5
	333	

Source: Interviews

The table is based on those households remaining in the ownership sector who were prepared to give information on previous sale price. It confirms the picture outlined in the section on changing housing circumstances of movers. While most people bought a house or flat priced within $10000 of their previous house's sale price, 11.4 percent of owners who moved "dropped" more than this in price, and 26.1 percent outlayed more than $10000 above the sale price of their previous house.

Table 42 shows mortgage type for in-movers who are now owners. The overwhelming percentage of mortgagees have a table mortgage, while 79.3 percent have only one mortgage of any type.

Information on mortgage amounts is shown in Tables 43-45. These tables exclude 21 people who refused to or could not give any details of mortgage amounts (only 6.3 percent of mortgagees). In keeping with the large number of people with only one mortgage, most mortgage totals are between $10000 and $25000.

Source of mortgages is shown in Table 46. Similar proportions were found to have Housing Corporation and bank mortgages, reflecting the importance of first home owners in the sample. Banks are the most important source of second mortgages, followed by the Post Office (presumably for first home owners). Since many people who bought properties last year for the first time bought older and cheaper houses, they may not always have needed a second loan in any case. Company assistance into home ownership (mostly of bank staff and company managers) was a noticeable element in 1979. Interestingly, the contribution of

TABLE 43: AMOUNT OF FIRST MORTGAGE

	Number	Percent
Less than $5000	9	2.9
$5100-10000	33	10.6
$10100-15000	61	19.6
$15100-20000	159	51.0
$20100-25000	35	11.2
$25100-30000	12	3.8
$30100-35000	2	0.6
$35100-40000	1	0.3
	312	

Source: Interviews

TABLE 44: AMOUNT OF SECOND MORTGAGE

	Number	Percent
Less than $2000	9	14.8
$2100-4000	20	32.8
$4100-6000	18	29.5
$6100-8000	6	9.8
$8100-10000	6	9.8
$10100 and over	2	3.3
	61	

Source: Interviews

TABLE 45: TOTAL AMOUNT OF MORTGAGE COMMITMENT

	Number	Percent
Less than $5000	9	2.9
$5100-10000	28	9.0
$10100-15000	56	18.1
$15100-20000	132	42.6
$20100-25000	52	16.8
$25100-30000	27	8.7
$30100-35000	4	1.3
$35100-40000	2	0.6
	310	

Source: Interviews

TABLE 46: SOURCE OF FIRST AND SECOND MORTGAGES

	First		Second	
	Number	Percent	Number	Percent
Housing Corporation	122	36.6	0	0
Post Office Savings Bank	0	0	12	18.2
Trading and Savings Bank	117	35.1	26	39.4
Building Society	10	3.0	0	0
Insurance Company	13	3.9	2	3.0
Finance Company	3	0.9	5	7.6
Public Service Investment Society	0	0	1	1.5
Solicitor	31	9.3	6	9.1
Relative or Friend	0	0	4	6.1
Seller "left money in"	5	1.5	7	10.6
Own Company/Employer	17	5.1	2	3.0
Other	15	4.5	1	1.5
	333		66	

Source: Interviews

solicitors to mortgage finance does not appear to be as great as it may have been previously.

Amount and source of money making up the balance to purchase price are shown in Tables 47 and 48. The amount of the balance varies substantially. Most first home owners put in a smaller balance than subsequent home owners who had accumulated equity. The most common sources for money for the balance were savings, a combination of savings and money from sale of previous property, and money from sale of previous property only. Loans/gifts from friends or relatives, and the sale of other personal assets (usually a car) were also important sources of funds, especially for young first home owners, and these points are dealt with in more detail in a later section.

Table 49 summarises mortgage payments per month, the modal payment being between $125 and $175 ($31 to $44 per week). Income categories for household income where such information was volunteered (excluding renters) are shown in Table 50. For families with two incomes, both incomes are added together, on the assumption that both partners are contributing to housing payments. In rental-ownership combinations, however, only the income of the owner is considered, even though flatmates might be contributing indirectly to housing payments. It is thought most refusals to give income were from people with higher incomes. Persons with incomes in the lowest category were usually (although not always) superannuitants or beneficiaries. For the former category of course, present income streams would not be indicative of accumulated wealth.

Further information on the relationships between

TABLE 47: AMOUNT OF BALANCE/DEPOSIT

	Number	Percent
Less than $2000	8	2.6
$2000-3900	41	13.3
$4000-5900	54	17.5
$6000-7900	30	9.7
$8000-9900	38	12.3
$10000-14900	51	16.5
$15000-19900	32	10.3
$20000-24900	17	5.5
$25000 and over	38	12.3
	309	

Source: Interviews

TABLE 48: SOURCE OF BALANCE/DEPOSIT

	Number	Percent
Savings only	89	26.9
Savings and previous property (including sections)	77	23.3
Previous property only	69	20.8
Savings and loans/gifts friends or relatives	32	9.7
Savings and sold assets	19	5.7
Savings and loans/gifts and previous property	7	2.1
Savings and sold assets and loans/gifts	6	1.8
Loans/gifts only	6	1.8
Savings and capitalization of Family Benefit	4	1.2
Capitalization of Family Benefit and loans/gifts	3	0.9
Previous property and loans/gifts	3	0.9
Sold assets only	3	0.9
Savings and lottery win or inheritance	2	0.6
Savings, Family Benefit and loans/gifts	2	0.6
Previous property (sections) and family benefit	2	0.6
Sold assets, savings and lottery win	1	0.3
Sold assets, savings, previous property and loans/gifts	1	0.3
Own labour on house	1	0.3
Inheritance only	1	0.3
Savings, sold assets and previous property	1	0.3
Sold assets and previous property	1	0.3
Sold assets and loans and gifts	1	0.3
	331	

Source: Interviews

TABLE 49: MORTGAGE PAYMENTS PER MONTH

	Number	Percent
Less than $50	8	2.6
$50-74	6	1.9
$75-99	26	8.5
$100-124	39	12.7
$125-149	58	18.9
$150-174	49	16.0
$175-199	21	6.8
$200-224	34	11.1
$225-249	26	8.5
$250-299	30	9.8
$300-350	5	1.6
$350 and over	5	1.6
	307	

Source: Interviews

TABLE 50: INCOME GROUPS

	Number	Percent
Less than $6000	52	13.9
$6000-$9999	40	10.7
$10000-11999	48	12.9
$12000-13999	44	11.8
$14000-15999	37	9.9
$16000-17999	37	9.9
$18000-19999	25	6.7
$20000-21999	34	9.1
$22000-23999	6	1.6
$24000-25999	17	4.6
$26000-27999	9	2.4
$28000-29999	7	1.9
$30000 and over	17	4.6
	373	

Source: Interviews

mortgages and other variables is given in the next section.

(G) RELATIONSHIPS

The results so far have established the absolute and relative orders of magnitude of the components of household change and mobility. The interdependencies amongst many of the components are especially intriguing, since they are likely to offer insight into the effects the components might have on housing outcomes. The accompanying discussion, particularly of how household characteristics played a part in moves and changes occurring in household circumstances, is both selective and tentative in nature. The research design consequences of seeking estimates of household change and mobility effectively made the investigation of relationships a by-product of the primary research exercise. In particular the interview data set, while quite adequate for the estimation of parameters, did not always yield large counts in many categories in a range of variables. This severely limits the extent to which relationships can be realistically postulated or confirmed from the data available. Nevertheless, there is value in a presentation of pertinent interrelations discernible from the data.

(i) Relationships between household characteristics:

When household type is set against age of adults, single person households appear to be spread across age groups but include a significant number of older women. Non-family flatting groups are predictably concentrated in the 16-35 years age groups, especially in the 20-30 years

age group. An inspection of household type in relation to age of children reveals that one-family only (incomplete) situations (a parent missing) appear to have slightly older children (mostly secondary) than complete families. There is no indication that employment structure (number of workers) or occupational level has anything to do with number in household, but as expected, older families are larger. Predictably, households with no children are more likely to have two full-time workers than those with children. Those households with children which are most likely to have only one full-time worker, are in fact those with only one child (perhaps these are younger couples, beginning child bearing).

Relating age to household change shows household relocation to be spread across most age groups. In contrast, household formation occurs mainly in the younger age groups 16-30 years, household expansion mainly in the 20-35 years age groups, and household contraction (not just children leaving home, but older spouses dying) in the age groups 35 years and upwards.

(ii) Other variables and household characteristics:

(a)Present tenure: Table 51 shows tenure against household type. More single persons owned freehold than with a mortgage, because of the effect of older, single person households. The 17 non-family groups which owned with mortgage are rental-ownership combinations.

Nearly all retired persons (24 out of 30) owned without a mortgage. Age appeared to be inversely related to tenure in the sense that a gradually increasing number of proper-

TABLE 51: HOUSEHOLD TYPE AND TENURE

Household Type	Tenure					
	Owned without mortgage	Owned with mortgage	Rental	P.N.C.C. lease	House provided with job	Totals
One-family only (complete)	41	265	4	6	1	317
One-family only (incomplete)	4	25	0	0	0	29
One-family (complete) with other persons	1	2	0	0	0	3
One-family (incomplete) with others	1	1	0	0	0	2
Multi-family	0	2	0	0	0	2
Single person	31	21	2	0	0	54
Siblings	1	2	0	0	0	3
Other non-family	0	17	12	0	0	29
Totals	79	335	18	6	1	439

Source: Interviews

ties are owned freehold with movement through age groups, and fewer properties are owned or rented with mortgages. It should be pointed out, however, that the data applies only to people who moved into properties sold (most of whom bought the properties) and therefore, older people remaining in the rental sector were not likely to be picked up.

Those households presently in the rental sector were most likely to have no children, followed by freeholders (e.g. older couples whose children have left home). Mortgagees were therefore likely to have the most children. This is not surprising since these were more likely to be family situations.

(b)Past tenure and past submarkets: Younger age groups had before their move, lived mostly in lower value older housing submarkets (often rental accommodation), except for those young people moving directly from their parent's homes. Middle-aged groups (30-40 years) came mostly from the owned with mortgage sector. Single person households came more frequently from previous freehold properties, as would be expected with the older age bias. Noticeably smaller households (two and three persons) came from the rental sector, whereas four and five person households (mainly parents and children) were from the owned with mortgage sector.

Socio-economic levels appear to have some influence on tenure. Persons at level 2 of the Elley-Irving Scale (see section (A) of this chapter), rather than 1, had the "highest" previous housing market position in terms of recent age and high value of their previous houses. Socio-

economic levels 5 and 6 were more likely to come from rental than ownership, levels 1, 3 and 4 were split between ownership and rental, and level 2 was twice as likely to come from the ownership sector as from rental.

(c)Moves and Submarkets: Sources of household types other than families were almost all Palmerston North. Job-related moves, as well as moves because of household change were chiefly the province of families and single persons. Housing preferences were important for most household groups, and perhaps more for those coming from lower submarkets, although financial reasons such as resale value were most important for complete families only (these were often job-related moves).

The primary reason for moving was more likely to be job-related for socio-economic level 2 (job transfers) and more likely to be housing-related for levels 4-6, with levels 1 and 3 split between job-related and housing-related reasons. Job or career reasons were more important for movers in the 25-40 years age group, while housing-related reasons for moving were spread across all age groups but concentrated in the 20-35 years age groups. Job movers and people moving because of household change were likely to have more children than those households forced to move (ex-rental).

As expected, younger households with no children (ex-rental) had been most mobile in the last five years, followed by households with young children (often ex-owned with mortgage). Older people who had lived in freehold properties had been least mobile in the last five years (most over 60 years having moved only the once in the last

five years, as a retirement move or move to a smaller house).

Search behaviour showed an interesting relationship with age. Older people appeared to look at fewer alternative houses in their search for a dwelling than younger people. Only a third of people under 30 years looked at 10 or less houses, while the corresponding figure for people over 60 years was over 70 percent. The figures for the 30s, 40s and 50s age groups were 42 percent, 44 percent and 68 percent respectively. This trend may have some relation to the fact that older people may know more accurately what they want in a house, are more likely to be moving from Palmerston North and the local area, and thus are more familiar with the housing market. It is also likely, however, that they are less prepared to go through the process of looking at large numbers of alternative dwellings.

Older people were more likely to look in higher value and newer age submarkets than young people, as would be expected given accumulation of equity. Housing market position of houses looked at in the search was highest for level 2 occupations, followed by levels 1 and 3. Those people moving for job reasons and reasons of household change also searched in "higher" submarkets than others, whereas those people moving for housing-related reasons looked both in older low value and newer average value submarkets. Typical reasons offered were a desire to own an old house to renovate, or simply to own a house.

(d)Present Submarkets: The housing submarkets in which households purchased were often higher than those which were looked at during the search period. This is

surprising given the hypothesis that people might look in a higher submarket, then adjust their expectations in the light of their income or actual accumulated wealth. The picture is complicated by the fact that people often look in several age and value submarkets at once (as stated before, similar submarkets may be quite substitutable). For the first (usually the main) submarket that people looked in, 34.9 percent of people actually ended up buying in the same submarket as they searched, whereas 23.8 percent of people bought in a lower submarket but over 41 percent bought in a higher submarket. In the case of those who inspected properties in a second submarket as well, about equal numbers ended up in lower or higher submarkets (37.4 percent lower, 35.8 percent higher, and 26.8 percent in the same group). A cross tabulation of searched submarket and previous submarket showed that people usually searched "higher" than their previous group, but the above evidence suggests that they then ended up in a higher submarket again.

Some tentative relationships can be established between household types and present submarkets. Higher submarkets (8 and 10) had predominantly one-family only (complete) and single person households, whereas flatting groups and female-headed households tended to be in lower submarkets. Higher submarkets were also the province of occupational category 2, and older and retired persons. Younger people and ex-renters or ex-boarders were usually in the lower submarkets as were present renters, while freeholders were concentrated in higher submarkets. The effect of number of workers in the household on submarket "chosen" is indeterminate.

In an earlier section, Table 31 detailing submarket to submarket movement illustrated that the most obvious upmovement is that into the highest submarket category (value over $40000 and age 1960s or 1970s). The households moving into submarkets 8 and 10 came equally from within Palmerston North and from outside the city. The most common reasons for moving were, for immigrants, job-related factors and for local moves, household change factors (principally space demands) and areal preferences. Households moving into other submarkets were also found to be coming fairly equally from within Palmerston and from elsewhere. In other words, households moving into Palmerston North do not appear, as a group, to have been channelled particularly into newer, higher value submarkets by, for example, the activities of real estate agents (although this may be true for certain occupational groupings). People moving into lower submarkets were found to be moving mainly for housing-related reasons (such as preference for an older house) which ties in with other evidence.

(e)Mortgages: Mortgage circumstances seem to be related most closely to age of adults and previous tenure, especially for source of mortgage and money for the balance. Younger people buying first homes and moving into lower submarkets were more likely to obtain finance from the Housing Corporation as would be expected, whereas older subsequent home buyers (e.g. complete family only situations) moving into higher submarkets were more likely to go to bank sources. All other sources were as important or more important than the Housing Corporation for one family only

(incomplete), single person households, and flatting households (the owner being single). Socio-economic levels 1 and 2 borrowed most often from banks, 3 and 4 were evenly split between banks and the Housing Corporation, and 5 and 6 borrowed mostly from the Housing Corporation. Younger first time buyers had not accumulated equity from the sale of previous property (except from sale of sections), and so as well as using savings they frequently sold assets such as cars and other personal possessions, and were able to obtain or were offered loans or gifts to make up the purchase price, mainly from parents. A great variety of other ways of raising money were also cited. Older and higher income buyers on the other hand most often used equity from the sale of previous property with or without savings.

Total mortgage amounts showed no real relationship to household type, except that single persons tended to have slightly lower total mortgages. Neither is any relation between occupational or income categories and total mortgage noticeable. The effects of having a higher occupational level and correspondingly more income, allowing the accumulation of more equity and the reduction of total mortgage commitment, are blurred by the fact that a higher occupational level and income are often correlated with desiring or being able to afford more expensive housing, and thus often needing a larger mortgage. A similar point holds for the relationship between total mortgage commitment and number of workers in the household. Households with one full-time worker could not be distinguished from other household employment structures (one-and-a-half or two

full-time workers) in being able to support a higher mortgage commitment. This is because the income earner in one-income only family often has a higher than average socio-economic level (level 2 occupations most often had non (paid)-working wives), for movers at least. Older people do appear to have lower total mortgages. Total mortgage commitment seems to reach a peak in the 30s age group, perhaps as people buy subsequent more expensive houses, and decline from then on through the age groups. The fact that older people are more likely to be freeholders complicates the pattern in looking at mortgage commitment in terms of submarket. If anything, however, it appears that people in higher submarkets may have slightly higher mortgages.

The amount per month paid on mortgages is generally dependent on income (higher income groups were sustaining somewhat higher mortgage repayments, as would be expected), but no real links can be seen between the number of workers in the household and mortgage repayments. This is again principally due to the problem of distinguishing between the effects of one higher income compared to two lower incomes.

(f) Differences between previous and present sale prices: A consideration of the difference between previous and present sale price provides an interesting (though admittedly inadequate) surrogate measure of movement up and down submarkets. The main problem with this measure is, of course, that it relates only to those who moved within the ownership sector. Those who moved between tenures would probably be

experiencing even greater "up" or "down" movement. However, some very tentative statements can be made. The largest "down" movement seems to be associated with household relocation or household split (though relocating households more often moved "up" than "down" in the aggregate). Household expansion or contraction are usually associated with slight up movement ("improving" housing circumstances).

The kinds of household most often experiencing up movement are one-family only (complete) situations, socio-economic levels 2 and 3, and age groups 30-50 years (career cycle effects and so forth). Those households most often experiencing down movement (moving to cheaper often smaller dwellings) are one-family only (incomplete) and single person situations, and age groups 60 years and over, especially 70 years and over.

(H)BRIEF COMPARISON OF RESULTS WITH OTHER RESEARCH:

The results obtained in the present study are difficult to compare with those of previous research, because very little work has been done in relating the three factors of mobility, household change and housing. In addition, this study draws on only certain key aspects of each subject's literature. As well, many of the findings of the present research are only tentative at this stage, and some are specific to the particular conditions prevailing in 1979.

However, many of the concepts put forward in the literature do seem to be applicable to mobility and housing patterns in Palmerston North. Whilst home ownership aspirations were very important in the study, life-cycle stage changes appeared to be an important motivator of moves.

Households were moving in response to dissatisfactions, whether or not these were able to be clearly identified. Movers did display somewhat limited or biased search and awareness spaces, although they looked on average at more alternative dwellings than the literature suggests. Accessibility constraints were hypothesised to be less important than in the literature because of the small size of the city, but seem to be becoming increasingly important over time, with increases in the cost of travel. Fairly small households were observed, and the study confirmed the trend towards increased diversity of living arrangements and individual life-cycles identified recently in the literature.

Household formation was shown to be an important component of housing demand under particular conditions. While the investigation did not look directly at internal or external constraints to mobility, it showed that some types of households were much more likely to be mobile than others, and tended to confirm the existence of differential housing opportunities for various subgroups of the population. The importance of societal context and especially governmental housing policies was also recognised in the study.

Smith and Thorns' (1979) publication "Constraints, Choices and Housing Environments", based on research undertaken in Christchurch, is one of the few studies in the New Zealand setting which has looked at both mobility and housing in an integrated manner. Yet even that investigation is not strictly comparable with the present research, since it adopts a temporal, longitudinal perspective in looking at residential mobility over time, and people's "housing careers" over their life-cycle. In contrast to this, the

present thesis employs a cross-sectional approach. However, the kinds of findings put forward by Smith and Thorns do seem to fit with those of the present study. They consider that the factors looked for in a house vary depending on income (higher income groups being able to exercise more choice in terms of design of houses, area etc., than lower income groups to whom price is most important); and that the achievement of future movement and housing goals is related to capital accumulation and income. For example, higher income households or those with access to wealth are more likely to be able to "trade-up" submarkets, which seemsto equate with evidence from Palmerston North. The typical "housing careers" they define for higher and lower income households could be interpreted to fit the data for Palmerston North on characteristics of movers. They note a lengthening of the period of pre-marriage residential movement, and an average period of 2-4 years spent in rental accommodation between marriage and first ownership, although this figure is likely to depend partly on prevailing conditions in the housing market. The finding that rental accommodation will be increasingly important in the future echoes the present concern with depletion of the rental housing stock.

Recent work done in Porirua by a class of third year geography students provides further hints which substantiate findings of the Palmerston North and Christchurch studies. Tocker (1980) was able to rank the evaluative criteria used by households in selecting a new residence. His ranking, in order of declining importance, is: individual site and dwelling characteristics, accessibility, physical character-

istics of neighbourhoods, services and facilities, and lastly social environment. Tocker's results confirm the overwhelming importance of the characteristics of a particular house in the choice of a residence in New Zealand, as against overseas studies stressing differentiation between various suburbs. Daysh (1980) found that home ownership aspirations were behind about a quarter of the moves in 1979, a lower figure than in the present study but one which emphasises the importance of conditions favouring or discouraging such aspirations. Lilburn (1980) looked at subsequent home ownership and found that lower income households were subsequently less mobile upon home ownership than higher income groups, as in other New Zealand studies.

Although it is difficult to attach significance to the findings of this chapter other than at the level of the Palmerston North housing scene in 1979, a number of findings are of potential significance to a wider understanding of the operation of New Zealand housing markets and to an assessment of how far New Zealanders are able to realise their housing apsirations. Some comments on these matters are included in the concluding chapter.

CHAPTER 8

INTERPRETATION AND CONCLUSIONS

This study has focused on the interconnections between mobility, housing stock turnover and household change. As a baseline study it has estimated the magnitude of the various components of these processes for Palmerston North's owner-occupied housing sector in 1979. It has been partial in the sense that it did not address itself to housing situations before and after the 1979 year, nor was it able to address the issues of non-movement, or mobility in the rental sector. Despite these limitations, the study has shed some light on the kinds of changes presently occurring in the housing scene.

The following summary points can be made about the owner-occupied housing sector in Palmerston North in 1979:

(1) Most movement was within the ownership sector, but there was a significant amount of rental to ownership movement by households. A new third tenure type, a rental-ownership combination, emerged as more single persons moved into ownership. The swing to ownership was linked to changing demand patterns, mortgages for first-home owners on existing houses and increased availability of these houses for purchase. It is debatable whether all these households had previously been planning to buy a house at some future date, or whether some of them merely responded to changed market conditions and increased opportunity during the study year.

(2) Intra-urban mobility was slightly more important than inter-urban mobility over the study year. The former was perhaps more important than normal.

(3) Households which moved were most likely not to change in membership. Household relocation was therefore predominant. Changes in household membership in association with moves were, however, substantial and varied.

(4) The total number of households in the city probably increased over the year but only slightly. The total of immigration and household formation was only a little above the total of emigration and household cessation.

(5) Household formation occurred mostly in association with local moves, and involved chiefly younger households. New households were as often flatting groups as families.

(6) One-family only household structures were most important as movers into and within the ownership sector. However, an increasing diversity of household types was evident.

(7) Movers fell into three main groups:

(i) younger, smaller households, with generally higher than average combined incomes, moving within the city, out of the rental sector into ownership;

(ii) job movers, often of socio-economic level 2 and with reasonably high single incomes, living in family households, moving within the ownership sector and into the city from elsewhere.

(iii) a variety of other households making chiefly intra-urban moves to "upgrade" or "downgrade" their

housing conditions, often in association with household change.

(8) There was a slight net "upward" shift in terms of age and price and therefore submarkets, although a significant amount of "down" movement was also observed. Those households most likely to be moving "upwards" were job movers of socio-economic level 2 and their families, as well as older families upgrading their housing conditions. Those households most likely to be moving "downwards" (apart from younger people moving to older, lower-valued houses by choice) were those whose real incomes are acknowledged to have been declining over time - non-family or incomplete family situations, and households containing retired people.

Given the points listed above, several important housing issues emerge. It would seem wise for policy makers to avoid making any assumptions about how household types might evolve in the future, given the fluidity of and frequency of change in present social trends. It is likely that family groups will continue to be one of the most important household types in the future, although the size of this category is difficult to estimate.

While single person households appear to be on the increase, further development in this direction may be limited by people's unwillingness to live alone, higher costs of housing, or by housing stock constraints. These same factors, along with the diversity of living arrangements presently being hinted at, may result in an increase in combinations of for the most part unrelated people living within the same household (e.g. flatting groups, even for

older people). Household size is likely to decline further from its already low mean figure of 3.1 to an average of say 2.7 or 2.5. Smaller houses and sections more suited to constrained urban time budgets may enable a better matching between the sizes of dwellings and households. Marriage is likely to be less popular in future, and birth rates will probably decline further. Increasingly complicated life-cycle patterns of individuals may be mirrored in a higher proportion of "temporary" living or housing situations, with unpredictable consequences for mobility and housing. Thus, as social change continues apace, some individuals may become more restless and unsettled, experiencing a series of important personal relationships rather than one lifelong one. Evidence on whether mobility is in fact increasing over time is, however, inconclusive as yet.

Despite those considerations, the level of mobility prevailing in 1979 is not likely to be maintained in the short run. Abnormally high rates of turnover may have been partly "delayed mobility" resulting from housing market tightness in 1977 and 1978. There seems, therefore, to be a close relation between mobility and conditions in the housing market and in the economy at large. In this regard the effect of high and rising unemployment rates on housing opportunities in the 1980s can only be guessed at.

In the absence of information about the housing adjustment mechanisms of non-movers, it does appear that mobility has recently been the major mechanism used by households to adjust their housing consumption to changes in individual demand. Where turnover rates are very high, for example,

in the larger, faster growing cities, households have more opportunity to use the mechanism of mobility to match housing to their needs, whereas in areas of slower growth and turnover people may have less opportunity, since they may be prevented from moving by difficulties in selling residential property or lack of suitable vacant properties to move into. In this respect Palmerston North is probably about midway along the scale between larger cities and smaller towns.

Mobility also has a spatial and sometimes visual impact on the city system when it acts to alter previous housing patterns. With younger households buying existing rather than new properties they have begun to spread residentially throughout the city, rather than being concentrated on the periphery. The result has been a shift in the balance of age structures in different suburbs.

The present study has shown that mobility and housing stock have a very limited relationship under conditions of static or declining population and high emigration. This is apparent from the fact that although only a moderate amount of new construction took place in New Zealand in 1979, turnover of properties was very high, at least as a percentage of total dwelling stock. In fact at the extreme unless the population and/or the number of households were increasing, there would be no need for new construction at all under the conditions of static population and high emigration except to replace demolished dwelling units, or unless people actually demanded new houses not previously lived in. Given vacancies in the housing stock created by household cessation or emigration, not matched by an

equivalent or greater number of household formations or immigration, endless vacancy chains could begin. Mobility could occur without increments to the housing stock, in a game of "residential musical chairs". When the conditions as outlined occur, the association between vacancies and mobility is far stronger than that between housing stock and mobility. It should be stressed moreover that household formation is not a specific cause of demand for more houses unless the actual number of households is increasing - that is, unless household formation and immigration of households are more important numerically than household cessation and emigration.

If the aforementioned conditions were over a short period of time, to alter significantly, as would take place if net emigration became net immigration, or the rate of household formation were to increase suddenly for some reason, pressure on the housing stock would result. Although some of the vacancies presently existing in the housing stock could be taken up, a higher level of new construction would be necessary, unless household size was to increase, or households were to double up. Both of these developments are likely to be resisted, given a displayed historical preference for and trend towards independent housing circumstances.

The total number of vacancies in the system at any point in time is a composite of vacancies created by emigration or household cessation and those created by mobility within the system (mobility thus fuelling further mobility). The relative importance of emigration/immigration, and inter- and intra-regional movement, will vary from region to region.

Whilst attention might more often be focused on movement into and out of the country, inter- and intra-regional movement are significant contributors to vacancies, and this should not be lost sight of.

It has been shown that mobility and household change, both per se and in their impacts on the housing market are strongly influenced by broad societal factors. An important influence on the housing scene at present and especially on the rental market is a general high level of interest rates. Declining relative returns for investment in rental properties have contributed to a decrease in the absolute volume of housing stock available for rental. Unless the general level of interest rates falls, or the prevailing level of rents rises (which would probably have quite undesirable consequences for many people), rental housing is not likely to become an attractive investment proposition, and the rental sector will continue to be squeezed. In some sense people may already be being "trapped" into ownership when they would prefer to be in the rental sector. If net emigration rates decline, as 1980 figures suggest they will (although it is difficult to see net emigration actually becoming net immigration in the near future), then pressure on rental housing stock is likely to be even greater. Returning migrants may first move into rental housing, and fewer vacancies will constrain mobility in general.

Although the study did not look at mobility in the rental sector, it nevertheless provides some hints about the kinds of people who are likely to have more or less choice in housing in the future. Although in the aggre-

gate, in the owner-occupied sector more people than normal had more choice, in terms of being able to move into the house they desired in the 1979 year, some people had little or less choice. It is possible that increased unemployment, a greater number of households with no full-time workers or only part-time workers, more fluid household structures (fewer family units remaining complete over a relatively long period of time) and lowered real incomes in some households will combine to produce a "housing-deprived" class, unable to move into the houses they desire, or forced to move into poorer quality housing within a diminishing rental stock.

The role of government is acknowledged as very central to the attainment of New Zealander's housing aspirations. Decisions will need to be made in the near future about the extent to which government is prepared to commit itself in the housing sector. The tradition of providing housing for low-income groups through state rental housing programmes is at present in question, and although waiting lists for state housing are not long at the moment, this is very probably only a short run situation related to high net emigration. Equally, government will have to decide whether it should attempt to aid the private rental sector through fiscal or monetary measures, such as changes in tax policy. Further, if the government is to continue its direct and indirect subsidies to owner-occupiers, there may be a need for changes in mortgage conditions to suit a greater variety of circumstances. For example, there does appear to be a need for cheap, owned housing options such as mobile homes. An alternative to consideration of changes

in housing stock as a result of fluctuations in construction, might be to encourage mobility per se by streamlining the process of exchanging properties.

This study has demonstrated the extraordinary complexity associated with the relationships between mobility, household change and housing stock turnover. It is now vitally important that the factors most likely to alter the form of the processes which have been outlined are monitored. Palmerston North's housing market and probably those of other areas of New Zealand have been characterised in recent years by a high volume of mobility, which has played a key role in "fuelling" change. If conditions underlying this mobility alter, either through government intervention or inaction, then policy-makers should be aware that unpredictable housing outcomes are likely to result. Housing developments in New Zealand during the 1980s will reflect the kinds of responses politicians make to this situation.

APPENDIX 1

ADEQUACY OF PROPERTY RECORDS FOR HOUSING RESEARCH

Property records give reasonably good information in formation on the dwellings/sections themselves, in terms of age, capital value, value of improvements, value of land, dates of and prices at previous sales, covering several decades, (in the case of Palmerston North, since c.1945) as well as updated names of property owners. However, they do not provide particularly meaningful information on tenure of properties. Although in most cases where no address other than the property is quoted for the owner, the property is owner-occupied, and where another address is quoted, the property is rental, there are three important cases in which these estimates can be unreliable:

(1) Where address is quoted as a Post Office box, (a fairly common practice) in which case it is impossible to determine tenure.

(2) Where address is quoted as that of the property, but the owner has since moved out, and address has not been changed in the records (the property is rental but appears to be owner-occupied).

(3) Where address is quoted as other than the property, because it was bought by the owner while living at that previous address, but the owner has since moved into the property, and address has not been changed in the records (the property is owner-occupied but appears to be rental).

Problems can also be caused by minor inaccuracies in

the records. Examples of this are inaccurate addresses (generally incorrect number in the street, inadequate specification of subdivisional number e.g. 2 instead of 2A or 2B or no street numbers in new subdivisions) causing difficulties in locating the property; inaccurate record of age/class of property compared to number of units quoted, e.g. a single house (not listed as flats or a converted house) quoted as having several units, or a property listed as flats not having the number of units recorded; or properties wrongly classed as residential when they are in fact other land uses. A specific problem in searching through property titles is that of duplicate records, especially for blocks of flats which originally constituted one property but which now have separate titles. A further minor problem in relation to "abnormal" sales, and names of previous and new owners, is that transfer sales of property or part shares of property from father to son, or brother to sister (family sales) can easily become confused with divorce sales or settlements. There may sometimes be a lengthy delay between the fact of the demolition of a property and the action of this being noted in property records, so that dwellings which are actually non-existent still "exist" in the records in small numbers. (It may be that there is a similar lag between construction of a property and its entry into the records).

APPENDIX 2

INTERVIEW ORGANISATION, CONTENT OF THE QUESTIONNAIRES

The aim of the interviews and the mail questionnaires was to identify general patterns of household change and mobility, and possible determinants of these patterns.

INTERVIEW CONTENT

Section 1 - Move Situation: The first question in the interview was designed to enable the interviewer to ascertain whether mobility had in fact occurred in 1979 (in which case the interview would be continued with) and if not, why the property had been shown in the sales records.

1) Question Form: Did all of you (the people who live here) move in last year (during 1979)?

If the answer to this was negative, the interviewer then tried to determine what the mobility situation had been, by asking supplementary questions such as: Did you in fact move in here this year (1980)? (not interviewed) If so, did you actually buy the property last year? (then interviewed) or Did no-one move in or out last year? (not interviewed) If it appeared that no mobility had in fact occurred, the interviewer would then ask: In that case, why do you think this property would have been recorded as having been sold last year? If the respondent still professed ignorance of the reason, a prompt would be used where reason for sale was known from the records e.g. Would this sale have been a divorce settlement? or Did you buy this property from your landlord?

Section 2 - Household Characteristics: This section was aimed at recording some personal details of the household, in order to determine associations with other variables.

2) Question Form: How many people normally live here? How are they related to one another?

Question 2 was usually answered in two parts - the respondent quoted a number then went on to describe, using his own terms and/or labels how the persons in the household were related. ("Well there's me, my wife and two kids"). This avoided the need for the interviewer to go through a long list of household types and to ask the respondent which one applied to him. It also avoided the embarrassment of the interviewer incorrectly labelling the household type in front of the respondent. Respondents were almost always full and frank in their responses, and the only instance when interviewers had to seek further clarification was when they responded "we are not related". Because the number of people normally living in the household had just been quoted, it was usually obvious whether the situation was a couple-only or a flatting one. A further advantage of allowing the respondent to use his own terms to describe relationships between household members was that the interviewer could then go on to use these terms to refer to people during the remainder of the interview.

3) Question Form: What is your/your husband's/your partner's/flatmate's occupation (job)? Do you/does your wife/partner have a paid job? If so, what do you/does she do? In both parts of question 3, for de facto situations, the

Christian name of the de facto spouse (where mentioned) was usually used rather than any term, as no adequate "label" seems to exist. For this question, specific job descriptions were sought so that if vague replies were given the respondent was asked to specify further. In flatting situations occupations of all flatmates were sought, but occupations of only two adults used. It was decided that occupation was a sufficient variable to determine socio-economic status using the Elley-Irving scale, and therefore, a question on educational level was not asked. It was also considered that respondents would be much less likely to object to/feel embarrassed by a question on occupation than one on education.

4) Question Form: Can you tell me which of these age groups you are in (your husband/wife/partner/flatmate is in)? How old are your children?

Five year age groups were used for adults in the question on age, and the respondents were asked to select which category they fell into. The question on children was asked primarily to determine what age groups children were in (pre-schoolers, primary age etc). It was also felt that this question would be inoffensive to respondents and in some cases they might actually enjoy talking about their children and listing their ages which would help to put the interview on a friendly basis.

5) Question Form: Do you own, are you buying, or do you rent or lease this place? If rented, are you renting from a private landlord or from the Housing Corporation?

Although this question appears to contravene the prac-

tice of asking only one question at a time, in practice if spoken slowly it worked out extremely well, and respondents would readily volunteer their tenure situation. If further clarification was required the interviewer could easily ask a complementary question: Do you own this place outright or do you have a mortgage? etc.

Section 3 - Household Change: This section aimed at determining what kinds of change had occurred in household membership in connection with the move.

6) Question Form: In the last place you lived in, was your household the same as it is now (was there just you, your husband and two children or whatever), or were there other people living there as well?

In question 6 the interviewer would use the information volunteered in question 2, and attempt to determine whether there had been any change with the move. Respondents virtually always volunteered the fact that the number of children in their household had increased since the move (if it had) but sometimes had to be prompted about members of the previous household who were not now living with them. An alternative form of the question for flatting situations was: Were all of you living together in your last house, or did you come from separate households?

In cases where the respondent pointed out that some change had occurred in the membership of the household, the interviewer then tried to determine whether this change had in fact occurred during 1979 (e.g. children leaving home who had lived at the previous house). The next step was to attempt to get an accurate description of previous

household membership (if it was not already obvious). e.g. In the last place that your husband lived in, how many people were living there and how were they related to one another? This was generally easy for all cases of household change except household formation. In this case there may have been up to five previous households in flatting situations, and it was sometimes too tedious (and unnecessary) to gain very exact information on the number of people in non-respondent's former households, because the respondent simply did not know.

Section 4 - Previous Housing: Questions on previous place of residence were asked in this section.

7) Question Form: Where did you/your husband/wife/partner/flatmate live before you moved here? For how long did you/your husband/wife/partner/flatmate live at your previous address?

If it had been established that there had been no change in the household with the move, then it was obviously only necessary to ask this question once for the whole household. However, in cases of household formation place of previous residence of another adult was also asked. If Palmerston North was quoted (intra-urban mobility) the respondent was asked to specify address to enable matching up within the records, and to allow approximate determination of the submarket from which they had come. (This was done by taking answers on age and sale price of previous residence into account as well). A question of length of residence at previous house/flat was also asked partly to determine past mobility, but also to determine whether in fact the last

move had been from a permanent address or was merely a transitional move. Where the answer to this question was only a few months, the address previous to that was asked, especially in family situations.

8) Question Form: Did you own, were you buying, or did you rent or lease that place? How old do you think your last house was (e.g. built in the 1930s, 1950s, 1960s). The structure of this question and the way it was asked was the same as that for question 5, except that it related to past tenure. Again it was asked for two adults if there had been household formation. Where there had been a transitional move, this question was asked in relation to the last permanent place of residence. (While households may have been renting temporarily, they may have owned before etc.) It is possible that some slight inaccuracy may have crept in in responses to the age question, where respondents did not have a particularly accurate idea of the age of their previous house or flat, but usually they were able to make a guess.

Section 5 - Reasons for Move:

9) Question Form: What was the main reason for your move here? Was there any reason (were there any other reasons) why you picked this particular area, or street, or house?

The question dealing with reasons for moving was asked in two separate parts in an open-ended way, allowing the respondents to volunteer his own reasons rather than asking him to fit his reason into a predetermined category. It was found that there was a great variety of reasons for

moving (listed in appendix 4), some of which had not been thought of before the interviews were carried out, and the open-ended nature of the question enabled all these kinds of reasons to be identified and later categorised. Because both inter-urban and intra-urban mobility were being considered, the main reason for moving could have equally been area, street or house-related, or job-related, and so it was thought best to divide the question into two parts, primary move reason and other move reasons. The order in which people quoted other reasons was taken as an order of importance since they were likely to remember and quote the most pressing reasons first.

Section 6 - Areal Preferences and Search Patterns: This section aimed to identify very briefly the kinds of processes people go through in buying a house.

10) Question Form: Is there any area/part of Palmerston North in which you would most like to live (in the ideal)? Is there any area/part of Palmerston North in which you would least like to live?

The aim of question 10 was merely to identify, tentatively, areas of Palmerston North which are considered desirable or undesirable by most people, as a corollary to looking at higher or lower submarkets. A complicated ranking of all areas in Palmerston North in terms of preference would have been unnecessary in relation to the present purpose as well as time-consuming. In any case many people had not formed such exact preferences, and the problem identified in the text (that people did not always have the same mental boundaries for areas) would have made such results

extremely difficult to interpret.

11) Question Form: Previous owners only: For how long was your previous house/flat on the market? How many houses did you look at before buying this one? How many of those would you have seriously considered? Can you remember the streets they were in? (If long streets, whereabouts in the street?)

The first part of Question 11 was designed to establish something about rapidity of turnover in housing markets last year, and to enable comparisons to be made with present sale price and present submarket for those who moved within the ownership sector.

The second part of the question looks at search patterns in buying a house, and provided useful information on searched submarkets (based on streets looked in). Of course, not every house in a street would fall into the same submarket, and the person/household may have looked at a house which was actually in a much higher or lower submarket than the majority of the street, but it was impracticable to ask people to remember exact addresses and a good general impression was gained. It was decided not to ask a question on what the main features looked for in a house were, because this would sometimes have duplicated the question on reasons for move. A question on how long they had spent looking for a house might have been interesting here, although many people volunteered this anyway.

Section 7 - Recent Mobility:

12) Question Form: How many times have you/your wife/husband/partner/flatmate moved house in the last five years

(including the move here?)

This question aimed to summarise recent past mobility briefly so that this could be related to other variables such as life-cycle characteristics of the household.

Section 8 - Mortgage and Financial Information: The penultimate section covered mortgage details and financial information for present owners. The section was placed near the end of the interview to avoid antagonising people early on, and was designed to alternate sensitive with non-sensitive questions, where possible.

13) Question Form: (Mortgagees only) How many mortgages do you have on this house/flat? Do you know what kind of mortgage it is (they are)? Would it/they be a table mortgage(s) (Explanation if puzzled look: when you're paying off interest and principal at the same time) or, another kind of mortgage? (Are you paying interest only at the moment and paying back the principal later?)

Would you mind telling me about how much your first mortgage is for? Where did you get your first mortgage money from?

(If second mortgage): Would you mind telling me about how much your second mortgage is for? Where did you get your second mortgage money from?

To raise the balance or the deposit on this house, did you use any of the following sources: (read): Personal savings? Money from sale of previous property? Conversion of personal assets to cash (for example, did you sell a car?) Capitalization of Family Benefit? Loans or gifts from friends or relatives? Did you raise money in any

other way?

It was decided not to ask a question on interest rates paid on mortgages, although this would have been interesting, because it was felt that the mortgage questions were personal enough already. By taking sale price of the property and total mortgage commitment the amount of the deposit was able to be calculated without having to ask this.

14) Question Form: (Mortgagees only) Would you mind telling me how much you are paying per week or month on your mortgage(s) at the moment?

(All owners) Would you mind telling me which of these income categories you would be in (your household would be in, with both yours and your husband's/wife's/partner's income added together)? (Gross income per year).

The question on income was asked of owners only because it was considered that for renters, knowing income for its own sake without being able to relate it to other variables as with mortgagees, would not be particularly useful. In any case there were only a few renters in the sample and there was no way in which representative information on renter's incomes could have been obtained.

Section 9 - Knowledge of Previous Occupants of House: The aim of this last section was to get forwarding addresses for the people who had moved out of the dwellings sampled. Where this was not possible, it was hoped to find out as much about the previous occupants as the present occupants knew, in terms of where they went, what type of household it had appeared to be, and reasons for moving out. One of the contributing factors to difficulty in tracking down out-movers or even obtaining much information about them,

was that people were quite often shown houses which were already vacant, and they had never met the ex-occupants in person.

15) Question Form: Do you know who lived here before your household? (If so,) would you be able to give me a surname and forwarding address? (If not,) would you have any idea where they went to (even Palmerston North or non-Palmerston North)? You wouldn't by any chance know why they moved out? What about the people who moved out - were they a family or students or what? Did they rent or own this house?

MAIL QUESTIONNAIRES

Both the mail questionnaires (to people who had moved out of interviewed properties, and to people who had moved in to non-interviewed properties) contained basically the same questions, except that the latter also contained a question on where the respondent had lived before the move.

The aims of the questionnaires, as discussed above, were modest, and questions were selected basically to provide some confirmation of simple parameters, as well as in the knowledge that a shorter questionnaire asking non-sensitive questions would be likely to result in a higher response rate. The key facts sought were those concerning household change (what had happened to the household as it moved), and reasons for movement. Since answers to both of these kinds of questions were likely from interview experience to cover a wide range of factors, it was felt necessary to leave these questions fairly open-ended (although a list of

possibilities was given for the reasons question). Despite slight possible information loss because of an interviewer not being there to probe for extra information, this strategy had the advantage that respondents did not have to wade through a long list of alternatives on household structure and possible complicated household changes, to find the one which applied to them.

The first sentence or two of the questionnaire stated the fact that it appeared that that particular household had moved into a house or flat which had been sold in the city in 1979, and included a disqualifier if the household had only moved in in the 1980 year.

1) Question Form: How many people normally live in your household now, and how are they related to one another?

Has the composition of your household (see above) changed, at the same time as your most recent move, or since the move?

If yes, could you specify how many people used to belong to your household (before the move) and how they were related to one another?

If other members of your present household used to belong to different households (before the move), what was the composition of their previous households (how many people normally lived there, and how were they related to one another)?

The first part of question one was based on the proven success of this question in the interviews, and it was found in the mail questionnaires that even for complicated household structures or de facto situations, people would volunteer this information. Because there was no interviewer present

to use the information from the first part of question one, in the second part of the question, the question form as used in the interviews (In the last place you lived in, was there just you and your husband/wife/partner, or were there other people living there as well?) was unfortunately impracticable and a more complicated (and possibly more confusing) alternative had to be used. It was still considered easier, though, for the respondent to describe past and present households than to ask him/her to attempt to categorise the actual change in membership which had occurred, especially when there could have been combinations of changes. Additionally it is difficult to describe what is meant by such terms as household formation in a very simple manner in order to use these as categories. For example, one possible simple description (the people in the present household came from more than one previous household) could be very misleading as it could refer variously to household formation, household transfer then expansion (boarders etc), doubling-up of households, or compositional change within a household.

2) Question Form (not asked in the moved-out questionnaire): Where did you (the person answering the questionnaire) live before you moved here? (If Palmerston North, specify address). This question was used as above to check on duplication, and submarkets as well as proportions of households coming from different source locations. Although only one previous address was asked for, where there may have been several in the case of household formation, it had already been established in the interviews that most household formation was intra-urban. Thus it was considered

unnecessary to obtain previous addresses for all members of the household in a brief mail questionnaire.

3) Question Form (question 2 in the moved-out questionnaire):

Do you own, are you buying, or do you rent or lease the place you live in now? (Alternatives given).

The form of this question was the same as in the interviews, and it was used here as a check on parameters.

4) Question Form (question 3 in the moved-out questionnaire):

What was the main reason for your move here? (Mark 1). Was there any reason (any other reason) why you picked this particular area/street/house? (mark 2, 3, 4, etc. in order of importance- only as many as you consider relevant).
For this question a list of 25 alternatives was given, based on interview responses, with space for adding other alternative reasons. Those dealt with people's own perception of their reasons for move (which is the important factor in their decision). As discussed above, the main reason for moving could equally have been housing-related in some way, or job-related, since both intra-urban and other mobility were being dealt with. It was, therefore, impossible (and unnecessary) to separate out two lists of reasons (e.g. possible main reasons and possible supplementary reasons), and one list was used as alternatives for both parts of question 4.

Other Features of the Mail Questionnaires: The mail questionnaires were sent out with a covering letter briefly explaining the purpose of the whole research project.

While the moved-out mail questionnaire was addressed to specific people who had moved out of the properties sampled, the moved-in questionnaire was addressed only to "the occupants" at a particular address. This was done for several reasons:

(i) Since there was no way of telling accurately from property records whether the person listed there as owner actually lived in the property or not (was an owner-occupier or a landlord), using a name on the envelope would have resulted in questionnaires meant for occupants of properties and/or movers (tenants) being forwarded to landlords;

(ii) The property could quite easily have been resold or experienced household turnover in the time between compilation of the project's files on properties sold in 1979, and the receipt of the mail questionnaire. If a name had been used on the envelope it is quite likely that the new occupant would have returned the envelope unopened via the Post Office, in which case it would have been impossible to determine what the situation was in regard to that property (did the owner as listed move out in late 1979, (before the sale in early 1980) or in 1980; was the questionnaire applicable to the new household or not?). Using an impersonal term "the occupants" in this case at least meant that all envelopes would have been opened, if not returned;

(iii) It was felt that the use of an anonymous term rather than a name would be less likely to make people think that they personally were being specifically looked up in the records and "spied upon";

(iv) Given the decision that the term "head-of-household" was outdated and arbitrary, there was no basis for picking a particular adult in the household to address the questionnaire to. In any case was not considered important that one adult in a household should answer the questionnaire rather than another.

In the covering letter and also in the questionnaire it was stated that information on sales of properties was obtained from change of ownership notices. This information was included because people had often enquired about the source of such information in the interviews.

APPENDIX 3

DETAILS OF METHODS

Identification of Interviewees:

As mentioned in the methods section, interviews were carried out between the hours of 5.00 p.m. and 8.30 p.m. on weekday evenings (usually Monday to Thursday only), and on Saturdays between 10.30 a.m. and 4.00 p.m. Weekday daytime interviewing of women was tried early in the survey period in addition to the above hours, but was soon abandoned due to very low response rates (only a small number of women were found to be at home during the day).

It was initially considered important to interview men and women alternately, and the system used in the Housing Preferences study was tried (for an odd-numbered interview, men were requested to respond, and for even numbered interviews, women). When weekday daytime interviewing was abandoned, however, it was found that males and females were coming to the door at the interview times in almost equal numbers (except that slightly more females were responding for one-adult only households, which is representative of the actual structure of households). Thus it seemed simpler to interview the person who came to the door, than to cause delay by asking for some other member of the household. In any case the person who came to the door was the most likely not to have been engaged in some other more pressing activity when the interviewer knocked, and thus would be more likely to consent to the interview at that point in time.

Tables 52-54 provide further details of the data collection operation.

TABLE 52: INTERVIEW PROPORTIONS FOR PROPERTIES BY AREA

	Area	Interviews	Total Number of Properties Sold	Percent
1447	Kelvin Grove	9	19	47.4
1448	Outer Awapuni	10	24	41.7
1450	Cloverlea	20	44	45.4
1451	Milson	32	94	34.0
1452	Highbury	11	23	47.8
1453	Westbrook/West Highbury	12	29	41.4
1454	North Takaro	25	59	42.3
1455	Takaro City North	16	42	38.1
1456	City North/Florence/Stanley	27	66	40.9
1457	Hospital	10	32	31.3
1458	Roslyn	12	32	37.5
1459	Outer Milson	14	30	46.7
1460	South Takaro	21	55	38.1
1461	Central/Papaeoia	15	39	38.4
1462	Terrace End	16	36	44.4
1463	Central Awapuni/Dittmer	16	49	32.6
1464	Awapuni	10	26	34.5
1465	West End	27	63	42.8
1466	Park/Batt/Ongley	29	66	43.9
1467	Victoria/Colombo/Manapouri	32	95	33.7
1468	South Terrace End	22	59	37.3
1469	Brightwater	20	51	39.2
1470	Aokautere	5	12	41.7
1471	Collingwood/Lagoon	16	42	38.1
1472	Hokowhitu	30	83	36.1
1473	Riverdale	34	72	47.2
1474	Central	6	16	37.5
		499	1258	39.9

Source: Change of Ownership Notices and Interviews.

TABLE 53: DATA COLLECTION METHODS AND RESPONSE RATES

	Moved-in Interviews		Moved-in Mail Questionnaire		Moved-out Mail Questionnaire	
Target population	Purchasers moving in				Sellers moving out	
Sample frame	Change of ownership/sales notices for 1979					
Sampling unit	Property sold		Property sold		Property sold	
Selection strategy	Random sample		Survey of remainder		Haphazard depending on information gained from interviews.	
Time of data collection	July-September 1980 Weekday evenings 5-8:30 p.m. Saturday 10:30 a.m. - 4 p.m.		September 1980		September 1980	
	Number drawn or sent out	528	Remainder of properties	759	Number drawn or sent out	134
	Usable replies	499	Less 18 interview refusals	741	Useable replies	71
	Moved in 1979	463	Less 10 resold	731	Moved out 1979	68
	Moved in 1980	36	Useable replies	403	Moved out 1980	3
	Replacements	29	Moved in 1979	327	Returned by P.O.	11
	Non-contact	7	Moved in 1980	76	Duplicated in moved-in questionnaire or interviews	92
	Refusals	18	Returned by P.O.	12	No previous occupants or non-movement	84
	Demolition after sale	4	Non-movement	4	Untraceable (moved within New Zealand)	167
					Untraceable (moved overseas)	22
Response rate	94.5		55.1		53.0	

TABLE 54 : COMPARISONS OF INTERVIEW AND MAIL RESPONSES

Variables	Chi-square Statistic	Degrees Freedom	Probability	Interpretation[1]
Interview properties and unsampled properties				
Value	5.44	5	$p<.01$	ns
Sale price	2.59	5	$p<.01$	ns
Age of dwelling	7.16	6	$p<.01$	ns
Moved-in interviews and moved-in mail responses				
Sale price	7.65	5	$p<.01$	ns
Age of dwelling	5.46	6	$p<.01$	ns
Number in household	8.74	7	$p<.01$	ns
Household structure	14.20	7	$p<.01$	ns
Present tenure	10.86	3	$.01<p<.05$	s
First reason for move	13.26	6	$p<.01$	ns
Second reason for move	28.32	6	$p>.05$	s
Moved-in interviews and moved-out mail responses				
Number in household	10.99	7	$p<.01$	ns

Source: Change of ownership notices and property records.

1 ns No significant difference between data sets
s Significant difference between data sets

POSSIBLE BIASES AND ERRORS FROM DATA COLLECTION AND LIKELY EFFECTS

Moved-in Interviews

- Women's occupations stated as full-time when part-time: Overestimation of number of households with two full-time workers: Minor.
- Occupational information not always gained for all members of household in non-family situations: Minor.
- Household Change: Slight overestimation of household relocation because interviews did not always record all changes in membership at time of and since move: Minor.
- Lack of information on previous places of residence and tenure for second adult: Minor.
- Respondent's failure to remember or state transitional arrangements between permanent places of residence: Underestimation of this: Minor.
- Respondent's failure to state all reasons for move when several exist: Indeterminate: Minor.
- Respondent's failure to remember streets or number of houses looked at: Indeterminate: Minor.
- Refusal to provide information connected with financial matters, usually by higher income households and self-employed: Underestimate of higher incomes: Minor.
- Respondent's failure to give correct mortgage details: Very Minor.
- Repondent unable to give mortgage details: Very Minor.
- Respondents unable to give estimate of age of previous residence: Most noticeable when from older property: Minor.

Moved-in mail questionnaire

- Overestimation of houses resold in 1980 because sales transacted in 1979, but moved in during 1980 and not separated out: Overstatement of 1980 movement: Minor, not used.
- Disproportionate returns of 1980 moved-in because easy to answer: Indeterminate: Potentially major but information not used.
- Possible disproportionate returns indicating single household structures with little change (easier to answer questionnaire) but not substantiated by analysis of results and comparison with interviews: Minor.
- Use of ticks rather than ranks by respondents when assigning reasons for moves: Information loss in a few cases: Minor.
- Failure to state all reasons for move: Only first and second reasons analysed: Minor.

Moved-out mail questionnaire

- Underestimation of rental moves because fewer households traceable in rental sector: Bias towards family situations.
- Failure to state all reasons for move: Only first and second persons analysed: Minor.
- Use of ticks rather than ranks by respondents when assigning reasons for moves: Information loss in a few cases: Minor.
- Inaccurate or incomplete description of household change because question open-ended: Only general information from question used: Minor at level of analysis.

- When information gained from present occupants of households, inaccuracies may have crept in in the description of household and reasons for move: Disproportionate reporting of household splits as reason for move: Biased towards household splits.

APPENDIX 4

LIST OF REASONS FOR MOVE

The following reasons for moving house were volunteered by respondents and are recorded verbatim. The collapse of these reasons into the seven groups used in the text is to some extent arbitrary and is not postulated to be the only categorisation possible. It is also acknowledged that several of the reasons could equally be fitted into other categories. For example, "closer to friends and relatives" is probably just as much a personal or even life-cycle reason as it is locational - yet it does deal with relative location. Reasons for move should, therefore, be seen in relation to the characteristics of the households under study.

Primary Reasons for Move in Interviews

1) Job-related/Study-related moves:

Job or study related	101
Bought or sold business or farm	4

2) Moves Resulting From Household Change:

Needed larger house	36
Marriage/living together	18
Needed smaller house	12
Death of husband/wife/partner	8
Wanted/needed a smaller section	5
Wanted/needed a larger section	4
Wanted/needed a place needing less maintenance	3
Start a family	1

House too dangerous for small children	1

3) Forced Moves:

Forced to move/last house sold/had to find accommodation in limited time	14
Divorce/household split	10

4) Housing/Section-related Reasons (less urgency)

Wanted to own	101
Wanted a better house	14
Mere fact that house available and suitable at the time (design features)	3
Newer place with development potential	3
Stairs a problem in previous house	2
Forced to buy (lack of rental accommodation)	1
Temporary situation (rent while building house)	1

5) Investment/Financial/Economic Reasons

House seen as investment (resale value etc)	8
Petrol/travel costs too high at previous location	8
Couldn't afford previous housing	5
Price/rent O.K./bearable	4
Inherited some money	2
Capital gains	2
Wanted money to put into other things rather than mortgage	2
Financial problems	1

6) Personal Reasons/Preferences:

Health reasons	7
Independence/go flatting with friends	5
Didn't like farmer neighbourhood/neighbours/ landlord	4
Land agent/buyer pestered them into sale	2
Plans fell through	2

Retirement move	2
Get away from previous household members/family (other than divorce)	2
Wanted to live near outskirts of town/rural view	1
Knew of house/knew former occupants	1
Attempt to find congenial friends and neighbours	1

7) Area/Locational Reasons:

Liked this area	10
Closer to friends and relatives	9
Convenient location	5
Closer to work	4
Liked Palmerston North	3
Looking for a quieter area	3
Better climate	1
Closer to town	1
Better quality of life in Palmerston North	1

Other Reasons Given as Secondary Reasons or in Mail Questionnaires (no count given)

(2) Unable to cope with house/section

Death of someone in family (non-spouse)

(4) Wanted to own but not previous Housing Corporation house

Wanted to do up an older place with potential

Wanted same age housing as in past

Fenced section

Large garage

Safe layout for woman on own (off street flats)

Tenancy problems

Company upgrading employee's accommodation

(5) Built house then sold (builder who lived there)
Moved home to parent's place (cheaper)

(6) Wanted to live in the country
Sick of looking for a house

(7) Didn't like Palmerston North
Closer to particular facilities (e.g. hospitals)
Close to suitable schools
Recreational reasons - parks, watersports
Better soil
Liked age structure of the area.

BIBLIOGRAPHY

Adams, J.S. 1969: "Directional Bias in Intra-urban Migration", Economic Geography, 45, 302-323.

_____ 1973: New Homes, Vacancy Chains, and Housing Submarkets in the Twin City Area. Centre for Urban and Regional Affairs, University of Minnesota.

_____ & K.A. Gilder, 1976: "Household Location in Intra-urban Migration", in Herbert, D.T. & Johnston R.J. (eds.): Social Areas in Cities, vol.1: Spatial Processes and Form. John Wiley, London. 158-192.

Anderson, A.G. 1964: "Aspects of Population Change in Palmerston North", New Zealand Geographer, 165-168.

Auckland City Council, 1976: Housing: A Challenge for Council. Department of Planning and Social Development, A.C.C.

Auckland Family Planning Service, 1981: "The Price of Parenthood", Manawatu Evening Standard, January 16th.

Auckland Regional Authority: "Urban Dwelling Capacities and Household Formation", extract 7A1 - 7A15 of Auckland Regional Planning Scheme Draft.

Babbie, E.R. 1973: Survey Research Methods. Wadsworth Publishing Co., Belmont, California.

Barrington, R. & J. Davey, 1980: Migrants and their Motives: A Study of Migration from New Zealand. Planning Paper No.8, New Zealand Planning Council, Wellington.

Berry, B.J. & F.E. Horton, 1970: Geographic Perspectives on Urban Systems. Prentice-Hall, New Jersey.

Borrie, W.D. 1973: "Recent and Potential Demographic Dynamics of Australasia", in Thomson, K.W. & A.D. Trlin

(eds.): Contemporary New Zealand. Hicks Smith & Son, Wellington. 3-22.

Bourne, L.S. 1976: "Housing Supply and Housing Market Behaviour in Residential Development" in Herbert, D.T. & R. J. Johnston (eds.), Social Areas in Cities, vol.1: Spatial Processes,and Form. John Wiley, London. 111-158.

Brown, A.H. 1970: The Demographic Variable as it Affects Housing Demand in Wanganui City. Unpublished B.A. (Hons.) Dissertation, Department of Geography, Victoria University.

Brown, L.A. & D.B. Longbrake, 1970: "Migration Flows in Intra-urban Space: Place Utility Considerations", Annals of the Association of American Geographers, 60, 368-384.

_____ & E.G. Moore, 1970: "The Intra-urban Migration Process: A Perspective", Geografiska Annaler, 52, B, 1-13.

_____ & J. Holmes, 1971: "Search Behaviour in an Intra-urban Migration Context: A Spatial Perspective", Environment & Planning, A, 3, 307-326.

_____, E.J. Malecki & S.G. Philliber, 1977: "Awareness Space Characteristics in a Migration Context", Environment and Behaviour, 9, 3, 335-348.

Brown, S.E. 1975: Projection of Housing Needs, 1975-81. National Housing Commission, Wellington. Research Paper 1975/1.

Brummell, A.C. 1979: "A Model of Intra-urban Mobility", Economic Geography, 55, 4, 338-352.

Building Industry Advisory Council,1980: "Measuring the

Affordability of Home Ownership", Newsletter, No.131 & 131(a).

Burtt, D.J. 1979a: The Demand for Housing in New Zealand - Part 1: Financial Organisations in the Mortgage Market. National Housing Commission, Wellington. Research Paper 79/4.

_____ 1979b: The Demand for Housing in New Zealand - Part 2: Modelling Housing Demand: Analysis of Economic Variables and a Tentative Demand Model for Discussion. National Housing Commission, Wellington. Research Paper 79/5.

Butler, E.W. et al, 1969: Moving Behaviour and Residential Choice: A National Survey. National Co-operative Highway Research Programme, Report No.81. Highway Research Board, U.S.A.

Byler, J.W. & S. Gale, 1978: "Social Accounts and Planning for Changes in Urban Housing Markets", Environment & Planning, A, 247-266.

Carlstein, T. D. Parkes & D. Thrift, 1978: Timing Space Spacing Time. (3 vols). John Wiley, New York.

Carrie, I.M. 1976: Housing: The Capacity to Buy. Notes on Some Relationships between Prices of Single Unit Housing and Average Weekly Earnings, 1970-75. National Housing Commission, Wellington. Staff Paper 76/1.

_____ & T.C. Clark, 1976: Projected Household Types and Sizes: 1976-86. A note on patterns of future private household formation as they relate to housing requirements. National Housing Commission, Wellington. Staff Paper 76/2.

Chapin, F.S. 1974: Human Activity Patterns in the City. John Wiley, New York.

Chapman, R. 1979: Discussion Paper: Tenure Choices and Access to Housing. Economics Department, University of Auckland.

_____ 1980: Economics of the Rental Market. Progress Report to National Housing Commission, March 1980.

Charles, S. 1977: Housing Economics. MacMillan Studies in Economics, London.

Chevan, A. 1971: "Family Growth, Household Density, and Moving", Demography, 8, 4, 451-458.

Clark, W.A.V. 1975: "Locational Stress and Residential Mobility in a New Zealand Context", New Zealand Geographer, 31, 1, 67-79.

_____ 1976: "Migration in Milwaukee", Economic Geography, 52, 1, 48-60.

_____ & E.G. Moore, 1978 (eds): Population Mobility and Residential Change. Northwestern University Studies in Geography, number 25.

Commission of Enquiry,1971: Housing in New Zealand: Report of the Commission of Inquiry, April 1971. Government Printer.

Courgeau, D.1976: "Quantitative, Demographic and Geographic Approaches to Internal Migration", Environment & Planning, A, 8, 261-269.

Crawford, P.1973: Building in Palmerston North, 1944-72. Report no.41. PNCC Town Planning Office.

Cullingworth, J.B. 1969: Housing and Labour Mobility. OECD, Paris.

Curson, P.H. 1978: "Households and Household Structure in Auckland, New Zealand", New Zealand Geographer, 34, 2, 97-104.

Daly, M.T. 1968: "Residential Location Decisions: Newcastle, New South Wales", Australian and New Zealand Journal of Sociology, 4, 18-35.

Davey, J.A. 1976: Social Aspects of Housing: A Bibliography. National Housing Commission, Wellington. Research Paper, November 1976.

_____ 1977: Social Factors and Housing Need in New Zealand. An Overview. National Housing Commission, Wellington. Research Paper 77/1.

_____ 1978: Provision of Land for Housing. National Housing Commission, Wellington. Research Paper 78/3.

_____ 1979: Home/Workplace Relationships. National Housing Commission, Wellington. Research Paper 79/2.

_____ 1980a: National Housing Commission Research Programme 1976-1979: Digest and Review. National Housing Commission Research and Information Series, Research Paper 80/4. NHC, Wellington.

_____ 1980b: New Zealanders and Home Ownership. National Housing Commission, Wellington. Research Paper 80/16.

_____ & R. Barrington, 1980: Special Housing Needs in New Zealand. National Housing Commission, Wellington. Research Paper 80/2.

Daysh, S. 1980: Residential Mobility through the Life-Cycle. Unpublished 45.305 Report, Geography Department, Massey University.

Department of Statistics: 1976 Census of Population and Dwellings:

- Bulletin number 8: Wellington Statistical Area
- Bulletin number 12: New Zealand Regional Summary
- Bulletin number 22: Internal Migration
- Volume 2: Ages and Marital Status
- Volume 10: Households, Families and Fertility.

_____ 1977: Social Trends in New Zealand. Government Printer, Wellington.

_____ 1980: Monthly Abstract of Statistics. January/February 1980, March 1980. Government Printer, Wellington.

Doling, J. 1976: "The Family Life Cycle and Housing Choice", Urban Studies, 13, 55-58.

Donaldson, B. 1973: "An Empirical Investigation into the Concept of Sectoral Bias in the Mental Maps, Search Spaces and Migration Patterns of Intra-urban Migrants", Geografiska Annaler, 55, B, 13-33.

Donnison, D.V. 1961: "The Movement of Households in England", Journal of the Royal Statistical Society, A, 124, 60-80.

Duncan, S.S. 1976: "Research Directions in Social Geography: Housing Opportunities and Constraints", Transactions of the Institute of British Geographers, NS 1, 10-19.

Duncan, T.L. 1971: Measuring Housing Quality: A Study of Methods. University of Birmingham Centre for Urban and Regional Studies, Occasional Paper no.20.

Dzus, R. & G. Romsa, 1977: "Housing Construction, Vacancy Chains, and Residential Mobility in Windsor", Canadian Geographer, 21, 3, 223-236.

Easton, B.H. 1976: "The New Zealand Housing Market", New

Zealand Economic Papers, 10, 1-29.

Elley, W.B. & J. C. Irving, 1976: "Revised Socio-Economic Index for New Zealand", New Zealand Journal of Educa-Studies, 11, 25-37.

Engels, F. 1887: "The Housing Question", in Marx & Engels: Selected Works. Lawrence & Wishart, London, 1950.

Flowerdew, R. 1976: "Search Strategies and Stopping Rules in Residential Mobility", Transactions, Institute of British Geographers, NS 1, 47-57.

Foote, N, J. Abu-Lughod, M. Foley & L. Winnick, 1960: Housing Choices and Constraints. McGraw-Hill, New York.

Frieden, B.J. & A.P. Solomon, 1977: The Nation's Housing 1975-1985. Joint Centre for Urban Studies of M.I.T. and Harvard University, Cambridge. Massachusetts.

Gale, S. & E. Moore, 1975 (eds): The Manipulated City. Maroufa Press, Chicago.

Gober, P. 1980: "Shrinking Household Size and its Effects on Urban Population Density Patterns: A Case Study of Phoenix, Arizona", Professional Geographer, 32, 1, 55-61.

Golledge, R.G. 1980: "A Behavioural View of Mobility and Migration Research", Professional Geographer, 32, 1, 14-21.

Goodman, J.L. 1976: Housing Consumption Disequilibrium and Local Residential Mobility. Environment and Planning A, 8, 855-874.

Grant, J. 1976: Combined Mt. Albert and Auckland Regional Authority Housing Density Study. Auckland Regional Authority.

_____ & P. Phillips, 1980: "Residential Planning and

Finance and Transport Energy Conservation", in Energy and Transport: The Nature and Sources of Personal Mobility Needs. New Zealand Energy Research and Development Committee.

Grigsby, W.G. 1963: Housing Markets and Public Policy. University of Pennsylvania Press, Philadelphia.

_____ & L. Rosenburg, 1975: Urban Housing Policy. Centre for Urban Policy Research, Rutgers University. A.P.S. Publications, New York.

Hall, A.R. 1961: Housing Trends and Economic Growth. Committee for the Economic Development of Australia.

_____ 1962: Housing Demand: A Second Look. Committee for the Economic Development of Australia.

Harris, R.S. & E.G. Moore, 1980: "An Historical Approach to Mobility Research", Professional Geographer, 32, 1, 22-29.

Harvey, D. 1974: "Class Monopoly Rent, Finance Capital and the Urban Revolution", Regional Studies, 8, 239-255.

Heenan, B.L.D. 1980: "Internal Migration: Inventory and Appraisal" in Neville, R.J.W. & C.J. O'Neill (eds): The Population of New Zealand. Longman Paul, Auckland, 60-88.

Housing Corporation, 1979: Home Finance. Housing Corporation of New Zealand Loans Division, November 1979.

Hunt, R.A. 1970: Takaro: Demographic and Social Characteristics of a State Housing Suburb. Unpublished M.A. Thesis, Department of Geography, Massey University.

Hurst, M. Eliot, 1980: "Geography, Social Science and Society: Towards a De-Definition", Australian Geographical Studies, 18, 3-21.

Irving, J.C. & W.B. Elley, 1977: "A Socio-Economic Index for the Female Labour Force in New Zealand", New Zealand Journal of Educational Studies, 12,2, 154-163.

Johnston, J.A. 1978: Demographic Change and Housing Needs. National Housing Commission, Wellington. Research Paper 78/2.

_____ 1979: Housing Needs Assessment - A Regional Emphasis. National Housing Commission, Wellington. Research Paper 79/8.

Johnston, R.J. 1971a: "Resistance to Migration and the Mover/Stayer Dichotomy: Aspects of Kinship and Population Stability in an English Rural Area", Geografiska Annaler, 53, B, 16-27.

Johnston, R.J. 1971b: Urban Residential Patterns. Bell, London.

Jones, C. 1979: "Housing: The Element of Choice", Urban Studies, 16, 197-204.

Keown, P.A. 1971: "The Career Cycle and the Stepwise Migration Process", New Zealand Geographer, 27, 2, 175-184.

Kilmartin, L. & D.C. Thorns, 1978: Cities Unlimited. George Allen and Unwin, Sydney.

Kilroy, B. 1979: "Housing Finance: Why So privileged?" Lloyds Bank Review, 133.

Kobrin, F.E. 1976: "The Fall in Household Size and the Rise of the Primary Individual in the United States", Demography, 13, 1, 127-138.

Lambert, J, C. Paris & B. Blackaby, 1978: Housing Policy and the State: Allocation, Access and Control. McMillan Press, London.

Lansing, J.B. & E. Mueller, 1967: The Geographic Mobility

of Labour. Institute for Social Research, University of Michigan.

_____ et al,1969: New Homes and Poor People: A Study of Chains of Moves. Institute for Social Research, University of Michigan.

Lee, E.S. 1966: "A Theory of Migration", Demography, 3, 47-57.

Lieber, S.R. 1978: "Place Utility and Migration", Geografiska Annaler, B, 60, 1, 16-27.

Lilburn, C. 1980: Subsequent Home Ownership in the Porirua Basin Area. Unpublished 45.305 Report, Geography Department, Massey University.

Long, L.H. 1972: "The Influence of Number and Ages of Children on Residential Mobility". Demography, 9, 3, 371-382.

_____ 1973: "Migration Differentials by Education and Occupation: Trends and Variations", Demography, 10, 2, 243-258.

Lowe, R.J. 1979: Demographic Change: Long-Term Effects and Some Planning Implications. Town and Country Planning Division, Ministry of Works and Development, Wellington.

Maher, C.A. & P. Williams, 1979: A Review and Analysis of Vacancy Chains. Australian Housing Research Council, University of Melbourne.

Masnick, G. & M.J. Bane, 1980: The Nation's Families 1960-1990: (A Summary). Joint Center for Urban Studies of M.I.T. and Harvard University, Cambridge, Massachusetts.

McCarthy, K.F. 1976: "The Household Life Cycle and Housing

Choices", Papers of the Regional Science Association, 37, 55-80.

MacEachren, A.M. 1980: "Travel Time as the Basis of Cognitive Distance", Professional Geographer, 32, 1, 30-36.

McInnis, M. 1972: Age, Education and Occupation Differentials in Inter-regional Migration: Some Evidence for Canada, Demography, 8, 2, 195-204.

McKay, J. & J.S. Whitelaw, 1977: "The Role of Large Private and Government Organisations in Generating Flows of Inter-Regional Migrants: The Case of Australia", Economic Geography, 53, 1, 28-44.

Mercer, J.C.B. 1969: Growth and Distribution of Building in Palmerston North. Report number 8, P.N.C.C. Town Planning Office.

Michelson, W. 1977: Environmental Choice, Human Behaviour and Residential Satisfaction. Oxford University Press, New York.

Miron, J.R. 1979: Changing Patterns of Household Formation in the Toronto CMA; 1951 to 1976. Centre for Urban and Community Studies, University of Toronto. Research Paper No.106.

_____ 1980: On Household Groups and Housing Occupancy. Centre for Urban and Community Studies, University of Toronto. Research Paper No.107.

Moore, E.G. 1966: "Models of Migration and the Intra-Urban Case", Australian and New Zealand Journal of Sociology 2, 16-37.

_____ 1972: Residential Mobility in the City. Association of American Geographers Commission on College Geography, Resource Paper no.13.

_____ 1973 (ed): Models of Residential Location and Relocation in the City. Northwestern University Studies in Geography, 20.

_____ & R.S. Harris, 1979: "Residential Mobility and Public Policy", Geographical Analysis, 11, 2, 175-183.

Morgan, B.S. 1973a: "Housing Type and the Social Characteristics of Residents: The Case of Exeter, Devon", Geografiska Annaler, 55, B, 57-70.

_____ 1973b: "Why Families Move: A Re-examination", Professional Geographer, 25, 2, 124-129.

Morrison, P.S. 1973: Housing Market Supply: Selected Aspects of the Palmerston North Owner-Occupied Housing Market. Unpublished M.A. Thesis, Department of Geography, Victoria University.

Murie, A. 1974: Household Movement and Housing Choice. University of Birmingham Centre for Urban and Regional Studies, Occasional Paper No.28.

_____ & R. Forrest, 1980: "Wealth, Inheritance and Housing Policy", Policy and Politics, 8, 1, 1-19.

Muth, R.F. 1968: "Urban Residential Land and Housing Markets", in Perloff, H.S. & Wingo (eds): Issues in Urban Economics. Resources for the Future, John Hopkins Press, Baltimore.

Myers, G, G. Masnick & R. McGinnis, 1967: "The Duration of Residence Approach to a Dynamic Stochastic Model of Internal Migration: A Test of the Axiom of Cumulative Inertia", Eugenics Quarterly, 14, 121-126.

Nahkies, G.E. 1974: "Multi-Unit Residential Development in Christchurch", New Zealand Geographer,30, 2, 151-165.

Nana, N. 1980: Urban Housing Stock in New Zealand. Volume 5: Wellington and Taranaki. National Housing Commission Research and Information Series, Research Paper 80/7. NHC, Wellington.

National Housing Commission, 1978: Housing New Zealand: Five-Yearly Report. National Housing Commission, Wellington.

_____ 1979a: Housing Finance Seminar Proceedings. National Housing Commission, Wellington. Commission Paper 79/3.

_____ 1979b: Housing Loans Survey 1978. National Housing Commission, Wellington. Research Report 79/2.

_____ 1979c: The Price of Home Ownership. National Housing Commission, Wellington.

_____ 1980: "Report of the National Housing Commission for the Year Ended 31st March 1980", Appendix to the Journal of the House of Representatives, G.30.

Nelson, P. 1959: "Migration, Real Income and Information". Journal of Regional Science, 1, 43-62.

Nutt, B, B. Walker, S. Holliday & D. Sears, 1976: Obsolescence in Housing. Saxon House, Lexington Books.

O'Neill, C.J. 1979: "Population and the Future: Forecasts and Policy", in Neville, R.J. & C. J. O'Neill (eds). The Population of New Zealand: Interdisciplinary Perspectives. Longman Paul, Auckland.

Open University, 1972: Social Geography. New Trends in Geography, III, Units 9-12. Open University Press.

Page, R.I. 1974: Flexible Lending: The Concept of Variable Mortgage Repayments. State Advances Corporation,

Wellington. Research Report 1974/4.

Palm, R. 1976: "An Index of Household Diversity", Tijdschrift voor Economische en Sociale Geografie, 67, 4, 194-201.

_____ 1978: "Spatial Segmentation of the Urban Housing Market", Economic Geography, 54, 210-221.

Palmerston North City Corporation: District Scheme, City of Palmerston North.

Pearson, D. 1980: Johnsonville: Continuity and Change in a New Zealand Township. Studies in Society. George Allen & Unwin, Australia.

Pennance, F.G. & H. Gray, 1968: Choice in Housing. Institute of Economic Affairs, London.

Pickvance, C.G. 1974: "Life Cycle, Housing Tenure and Residential Mobility: A Path Analytic Approach" Urban Studies, 11, 2, 171-188.

Pitt, D. 1977 (ed): Social Class in New Zealand. Longman Paul, Auckland.

Planning Council, 1979: Migration Survey Preliminary Results. October 1979. N.Z. Planning Council, Wellington.

Poulsen, M.F. 1977: "Sectoral Residential Mobility and the Restricted Image", New Zealand Geographer, 33, 1, 15-25.

Pred, A. 1977: "The Choreography of Existence: Comments on Hägerstrand's Time-Geography and its Usefulness", Economic Geography, 53, 2, 207-221.

Putterill, M.S. & P.J. Bartlett, 1980: Dwelling Rehabilitation in Auckland, Urban Research Unit, University of Auckland.

Ramsay, B. 1972: Urban Renewal Series, Reports 1, 2, 6, 8 and 9. P.N.C.C. Town Planning Office.

Ravenstein, E.J. 1885: "The Laws of Migration", Journal of Royal Statistical Society, 48, 167-235.

_____ 1889: "Laws of Migration", Journal of Royal Statistical Society, 52, 241-305.

Ravetz, A. 1971: "Tenancy Patterns and Turnover at Quarry Hill Flats, Leeds", Urban Studies, 8, 3, 181-205.

Rex, J. & R. Moore, 1967: Race, Community and Conflict. Institute of Race Relations, Oxford University Press, Oxford.

Riner, R. & H.M. Bingham, 1975: Household Formation Projections. Research and Development Division, Planning Branch, Melbourne and Metropolitan Board of Works, Melbourne. Research Report No.2.

Robson, B.J. 1975: Urban Social Areas. Theory and Practice in Geography Series, Oxford University Press, Oxford.

Rogers, A. 1967: "A Regression Analysis of Inter-regional Migration in California", Review of Economics and Statistics, 49, 262-267.

Roseman, C. 1971a: "Migration, the Journey to Work, and Household Characteristics: An Analysis Based on Non-Areal Aggregation", Economic Geography, 47, 4, 467-474.

_____ 1971b: "Migration as a Spatial and Temporal Process", Annals of the Association of American Geographers, 61, 589-98.

Ross, W.D. & P. Fischer, 1973: Housing in the Wellington Region: An Introductory Study. Wellington Regional Authority.

Rossi, P.H. 1955: Why Families Move. Glencoe Free Press, New York.

Rowntree, J.A. 1957: Internal Migration. General Register Office, Stud. Med. Popul. Subj. no.11, London, H.M. Stationery Office.

Runeson, G. 1980: "Yes, We Do Need More Houses", New Zealand Listener, March 22nd, 1980, 44-46.

Sabagh, G, M.Van Arsdol & E.W. Butler, 1969: "Some Determinants of Intra-urban Residential Mobility: Conceptual Considerations", Social Forces, 48, 88-98.

Sharpe, C.A. 1978: "New Construction and Housing Turnover: Vacancy Chains in Toronto", Canadian Geographer, 22, 2, 130-144.

Short, J.R. 1977: "The Intra-Urban Migration Process: Comments and Empirical Findings", Tijdschrift vor Economische en Sociale Geografie, 68, 6, 362-370.

_____ 1979: "Residential Mobility in the Private Housing Market of Bristol", Transactions of the Institute of British Geographers, New Series, 533-547.

Simmons, J.W. 1968: "Changing Residence in the City: A Review of Intra-Urban Mobility." Geographical Review, 58, 622-651.

Smith, B.N.P. and D.C. Thorns, 1978: Housing Need and Demand Characteristics: First-Stage Report. National Housing Commission, Wellington. Research Paper 78/1.

_____ 1979: Constraints, Choices and Housing Environments. National Housing Commission, Wellington. Research Paper 79/1.

Smith, W.F. 1971: Housing: The Social and Economic Elements. University of California Press.

Speare, A. 1970: "Home Ownership, Life-Cycle Stage and Residential Mobility", Demography, 7, 4, 449-458.

_____, S. Goldstein & W.H. Frey, 1974: Residential Mobility, Migration, and Metropolitan Change. Ballinger, Cambridge, Massachusetts.

Stephens, R. 1976: "Towards a Housing Policy for New Zealand", New Zealand Economic Papers, 10, 30-56.

Stone, M.E. 1975: "The Housing Crisis, Mortgage Lending, and Class Struggle", in Peet, R. (ed): Radical Geography. Maroufa Press, Chicago.

Swain, D.A. 1980: "Marriage and Families" in Neville, R.J.W. & C.T. O'Neill (eds): The Population of New Zealand: Interdisciplinary Perspectives. Longman Paul, Auckland.

Thomas, R. & R. Peacock, 1975: Housing. Statistical Sources Course Team, Open University Press, U.K.

Thorns, D.C. 1980a: Rental Housing - Choices and Constraints. National Housing Commission, Wellington. Research Paper 80/3.

_____ 1980b: Residential Mobility Analysis. Report to National Housing Commission Research Meeting, October 1980.

Timms, D. 1971: The Urban Mosaic. Cambridge University Press.

Tocker, C. 1980: Intra-urban Migration in Porirua, Tawa and Johnsonville - Evaluation Criteria and Search Space. Unpublished 45.305 Report, Department of Geography, Massey University.

Urban Research Unit, Australian National University, 1973: Urban Development in Melbourne: Aspects of the Post-

War Experience. Australian Institute of Urban Studies, Melbourne.

Valuation Department 1979: Urban Real Estate Market in New Zealand: Half Year Ended June 1979. Valuation Department Research Paper 79/3, Wellington.

_____ 1980: Urban Real Estate Market in New Zealand: Half Year Ended December 1979. Valuation Department Research Paper 80/1, Wellington.

Walker, J.B. 1976: "Access to the Owner-Occupied and Local Authority Sectors: An Exploratory Analysis", Urban Studies, 13, 311-317.

Warren, R.C. 1969: Geography and Planning in Palmerston North. Unpublished M.A. Thesis, Department of Geography, Massey University.

Watson, C.J. 1973: Household Movement in West Central Scotland: A Study of Housing Chains and Filtering. Occasional Paper 26, Centre for Urban and Regional Studies, University of Birmingham.

Webber, M.J. 1980: "Life Cycle Stages, Mobility and Metropolitan Change", Paper presented at the First World Regional Sciences Congress, Cambridge, Massachusetts.

Weinberg, D.H. 1979: "The Determinants of Intra-Urban Household Mobility", Regional Science and Urban Economics, 9, 219-242.

Weiss, S.F., K.B. Kenney & P.C. Steffens, 1966: "Consumer Preferences in Residential Location: A Preliminary Investigation of the Home Purchase Decision", Research Previews (University of North Carolina), 13, 1-32.

White, S.E. 1980: "A Philosophical Dichotomy in Migration

Research", Professional Geographer, 32, 1, 6-13.

Whiteley, S. 1979: Private Rented Housing in New Zealand. National Housing Commission, Wellington. Commission Paper 2/79.

Wiseman, R.F. & M. Virden, 1977: "Spatial and Social Dimensions of Intra-urban Elderly Migration", Economic Geography, 53, 1, 1-13.

_____ & C. Roseman, 1979: "A Typology of Elderly Migration based on the Decision-Making Process", Economic Geography, 55, 4, 324-337.

Wolpert, J. 1965: "Behavioural Aspects of the Decision to Migrate", Papers of Regional Science Association, 15, 159-169.

Young, A. 1980: Housing Subsidies in New Zealand. A Report to National Housing Commission Research Meeting, March 1980.